WPS 2225

POLICY RESEARCH WORKING PAPER   2225

How Did Highly Indebted Poor Countries Become Highly Indebted?

Reviewing Two Decades of Debt Relief

William Easterly

Theoretical models predict that countries with unchanged long-run savings preferences will respond to debt relief by running up new debts or by running down assets. And there are some signs that incremental debt relief over the past two decades has fulfilled those predictions. Debt relief is futile for countries with unchanged long-run savings preferences.

Summary findings

How did highly indebted poor countries become highly indebted after two decades of debt relief efforts?

A set of theoretical models predict that countries with unchanged long-run savings preferences will respond to debt relief with a mixture of asset decumulation and new borrowing.

A model also predicts that a high-discount-rate government will choose poor policies and impose its intertemporal preferences on the entire economy.

Reviewing the experience of highly indebted poor countries, compared with that of other developing countries, Easterly finds direct and indirect evidence of asset decumulation and new borrowing associated with debt relief. The ratio of the net present value of debt to exports rose strongly over 1979–97 despite the debt relief efforts.

Average policies in highly indebted poor countries were generally worse than those in other developing countries, controlling for income.

The trend for terms of trade was no different in highly indebted poor countries than in other developing countries, not were wars more likely in highly indebted poor countries.

Over time there has been an important shift in financing for highly indebted poor countries, away from private and bilateral nonconcessional sources to the International Development Association and other sources of multilateral concessional financing. But this implicit form of debt relief also failed to reduce debt in net present value terms.

Although debt relief is done in the name of the poor, the poor are worse off if debt relief creates incentives to delay reforms needed for growth.

How did highly indebted poor countries become highly indebted?

Reviewing two decades of debt relief

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The highly indebted poor country of Haiti is not growing. The ratio of foreign debt service to exports has reached 40 percent, well above the 20-25 percent thought to be "sustainable."[2] The debt was accumulated not to finance productive investments, but to finance the government's patronage employment and large military and police forces. Corruption has been endemic, so there is the suspicion that some of the proceeds of foreign loans found their way into the pockets of the rulers. This is a description of Haiti's experience in the '90s. However, the '90s to which these facts refer are not the 1990s, but the 1890s.[3]

The problem of highly indebted countries is not a new one. From the two Greek city-states who defaulted on loans from the Delos Temple in the fourth century BC to Mexico's default on its first foreign loan after independence in 1827 to Haiti's 1997 ratio of debt to exports of 484 percent, debt servicing difficulties have been a feature of the world economy throughout history.[4]

But the problems of the highly indebted poor countries are very much in the news today (in the recent hit movie *Notting Hill,* Hugh Grant even mentions "cancellation of Third World debt" to woo Julia Roberts). Many governments and non-governmental organizations (NGOs) call for a write-off of all debt of poor countries on the occasion of the turning of the millenium (Jubilee 2000). Support for Jubilee 2000 has been expressed by such diverse figures as Bono from the rock group U2, the Pope, Jeffrey Sachs, and the Dalai Lama.[5]

The World Bank and IMF already have a program called the HIPC (Highly Indebted Poor Countries) Initiative to provide debt writedowns – including for the first time, writedowns of IMF

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[2] World Bank 1998, p. 56

[3] Dupuy 1989, p. 116, Lundahl p. 39, 41, 244

[4] Dommen 1989, Winkler 1933, p. 22 and Wynne 1951, p. 5-7

[5] On September 23, 1999, a delegation including U2's Bono, pop entertainment figures Quincy Jones and Bob Geldof, and Jeffrey Sachs met with Pope John Paul II on Third World debt relief. For more on Jubilee 2000, see the web sites www.j2000usa.org and www.jubilee2000uk.org.

and World Bank claims in present value terms -- for poor countries with good policies. The G-7 Summit in Cologne in June 1999 agreed on an expansion of this program, speeding up the process of receiving relief and increasing the amount of debt relief provided for each country. The proposed expansion would increase the total cost – in net present value terms -- of the HIPC Initiative from US$12.5 billion to US$27 billion.[6] (The World Bank defines 41 countries as highly indebted poor countries –HIPCs. The HIPC problem has an Africa slant, as 33 of the 41 HIPCs are in Africa; 4 are in Latin America.) Jeffrey Sachs suggests that that the World Bank, IMF, commercial banks and rich country governments could absorb a write-off of the $106 billion the poorest countries currently owe to them.[7]

I. Introduction

Although there were intimations as long ago as 1967 that "debt-service payments have risen to the point at which a number of countries face critical situations", the current wave of debt relief for poor countries really got underway in 1979.[8] The 1979 World Debt Tables of the World Bank noted "lagging debt payment" on official loans to poor countries, although "debt or debt service forgiveness has eased the problems for some." The 1977-79 UNCTAD meetings led to official creditors writing off $6 billion in debt to 45 poor countries. The measures by official creditors included "the elimination of interest payments, the rescheduling of debt service, local cost assistance, untied compensatory aid, and new grants to reimburse old debts." [9]

The 1981 Africa report by the World Bank (usually known as the Berg Report) noted that Liberia, Sierra Leone, Sudan, Zaire, and Zambia (all of which would become HIPCs) had already experienced "severe debt-servicing difficulties" in the 1970s and "are likely to continue to do so

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[6] *International Herald Tribune*, p. 1, June 14, 1999; *Financial Times* June 21, 1999 p. 3; see also the World Bank web site on the HIPC Initiative www.worldbank.org/hipc.

[7] *International Herald Tribune*, p. 6, June 12, 1999. See also Center for International Development 1999.

[8] The quote is from UNCTAD 1967 p. 3

[9] World Bank, 1979, pp. 7-8, UNCTAD 1983 p. 3

in the 1980s." The Berg Report hinted of debt relief, namely "longer-term solutions for debt

crises should be sought" and "the present practice of {donors} separating aid and debt decisions

may be counterproductive." [10]

The 1984 World Bank Africa report was more forthright: "where monitorable programs

exist, multiyear debt relief and longer grace periods should be part of the package of financial

support to the program."[11] The wording got even stronger in the World Bank's 1986 Africa

report: low income Africa's financing needs will "have to be filled by additional bilateral aid and

debt relief."[12] The Bank's 1991 Africa report continued escalating the rhetoric: "Africa cannot

escape its present economic crisis without reducing its debt burden sizably."[13]

Meanwhile, the June 1987 G-7 summit in Venice called for interest rate relief on debt of

low-income countries. The World Bank noted "the past year has brought increasing recognition

of the urgency of the debt problems of the low-income countries of Sub-Saharan Africa.."[14] One

year later, the June 1988 G-7 summit in Toronto agreed on a menu of options, including partial

forgiveness, longer maturities, and lower interest rates (these became known as the "Toronto

terms".)[15] Meanwhile, in order to help African countries service their official debt, the World

Bank in December 1987 initiated a Special Program of Assistance (SPA) to low-income Africa.

The IMF complemented the SPA with the Enhanced Structural Adjustment Facility (ESAF). Both

programs sought to provide "substantially increased, quick-disbursing, highly concessional

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[10] World Bank, 1981, p. 129

[11] World Bank, 1984, p. 46

[12] World Bank 1986, p. 41

[13] World Bank 1991a, p. 176

[14] World Bank, 1988a, p. xix. *The general literature started noticing low-income African debt at about the same time. See Lancaster and Williamson 1986, Mistry 1988, Greene 1989, Parfitt and Riley 1989, Humphreys and Underwood 1989, Husain and Underwood 1991, and Nafziger 1993. For more recent compilations of analysis, see Iqbal and Kanbur 1997 and Brooks et al. 1998.*

[15] World Bank, 1988b, p. xxxviii.

assistance to adjusting countries."[16] The 1990 Houston G-7 summit considered "more concessional reschedulings for the poorest debtor countries." The UK and the Netherlands proposed "Trinidad terms" that would increase the grant element of debt reduction to 67 percent, from 20 percent under the "Toronto terms."[17] The 1991 London G-7 summit agreed "on the need for additional debt relief measures…going well beyond the relief already granted under Toronto terms."[18] Through November 1993, the Paris Club (the club of official lenders) applied Enhanced Toronto Terms that were even more concessional.[19] In December 1994, the Paris Club announced "Naples Terms" under which eligible countries would receive yet additional debt relief.[20]

Then, in September 1996, the IMF and World Bank announced the HIPC (Highly Indebted Poor Countries) Debt Initiative, which was to allow the poor countries to "exit, once and for all, from the rescheduling process" and to resume "normal relations with the international financial community, characterized by spontaneous financial flows and the full honoring of commitments." The multilateral lenders for the first time would "take action to reduce the burden of their claims on a given country," albeit conditional on good policies in the recipient countries. The Paris Club at the same time agreed to go beyond Naples Terms and provide an 80 percent debt reduction in net present value terms.[21] By September 1999, debt relief packages had been agreed for 7 poor countries, totaling more than $3.4 billion in debt relief in net present value terms.[22] Then, as we saw above, there were renewed calls in 1999 for expansion of this program.

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[16] World Bank, 1989, p. 31.

[17] World Bank, 1990, p. 29.

[18] World Bank, 1991b, p. 31.

[19] World Bank, 1993, p. 6.

[20] World Bank, 1994, p. 42.

[21] P. 126, 129 Boote et al. 1997.

[22] P. 76 World Bank, 1999 and the web site www.worldbank.org/hipc. The seven countries are Bolivia, Burkina Faso, Cote d'Ivoire, Guyana, Mali, Mozambique, and Uganda. According to the Bank's web site, in addition "Ethiopia, Guinea-Bissau, Nicaragua, Mauritania and Tanzania have completed a preliminary review and could qualify for billions more in debt relief."

Besides explicit debt relief, there also has been an implicit form of debt relief going on throughout the period, which is the substitution of concessional debt for non-concessional debt. It's remarkable that the net present value of future debt service for HIPCs rose throughout the period despite the large net transfers of resources from concessional lenders like the International Development Association of the World Bank and the concessional arms of bilateral and other multilateral agencies.

The necessity to provide continuing waves of debt relief one after another, from UNCTAD to Venice to Toronto to Houston to Trinidad to London to Naples to HIPC to expanded HIPC, all the while substituting concessional for non-concessional debt, may suggest something is wrong with the implementation of debt relief. There is the paradox that a large group of countries came to be defined as highly indebted at the *end* of two decades of debt relief and increased concessional financing.

This paper reviews possible explanations. The revealed preference of debtors for high debt may simply lead to new borrowing to replace old cancelled debts. Even if borrowing is constrained, poor countries that have a high discount rate against the future may run down country assets. This is the external adjustment equivalent to the fiscal adjustment "illusion" discussed by Easterly (1999).

The granting of progressively more favorable terms for debt relief may also have perverse incentive effects, as countries borrow in anticipation of debt forgiveness and delay policy reforms waiting for the best deal. Burnside and Dollar 1997 and World Bank 1998 suggest that aid does not raise growth in countries with poor economic policies. The World Bank's latest Africa report (World Bank 1994b) suggested that many African countries failed to depart from poor economic policies during the process of receiving adjustment loans from the World Bank and International Monetary Fund.

Since private lending withdraws because of the poor creditworthiness of HIPCs, the process of debt relief has also led to a substitution of official lending for private lending and foreign direct investment, which raises the concern that official lending may have not followed the same standards of creditworthiness as private lending., There has been a redistribution of roles even among official lenders, with some agencies making net transfers (debt flows net of interest) to HIPCs and others receiving net transfers from HIPCs.

In this paper, I first present a very simple intertemporal model of national wealth and the current account to evaluate debt relief. The intertemporal approach to the current account is standard in modern macroeconomics (e.g. Obstfeld and Rogoff 1996). I then examine the empirical experience with debt relief.

II. A theoretical model of debt relief

I hypothesize that a country that has gotten an "excessive" external debt is one with a high discount rate against the future (perhaps because of a profligate government and/or because of political instability or interest group polarization) and/or a low intertemporal elasticity of substitution (ITES).[23] After receiving debt relief, the high-discount-rate, low ITES country would like to accumulate the same amount of external debt again. There will be an amount of new borrowing corresponding to the amount of debt relief, until the old ratio of net worth to GDP is restored. Alternatively, debt relief conditionality could try to control new borrowing by constraining a country's non-interest current account deficit. Even this constraint could be ineffective, however, because a country can reduce its assets to restore its desired low level of net worth in the long run. Finally, a government can impose its own high discount rate on the rest of the economy through policies that tax private sector capital accumulation. If the government's discount rate is unchanged before and after debt relief, then these bad policies will persist with debt relief.

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[23] See Easterly and Levine 1997 on ethnic polarization.

A. The Model

I assume producer-consumers accumulate total assets A with rate of return r. Total assets include physical capital, human capital, infrastructure, technological knowledge and so on. The country accumulates foreign liabilities L, which also carry an interest rate equal to r. Concessionary debt financing is divided into a grant element and into a loan element; the grant element is accounted as a lump sum transfer, while the loan element is defined as the present value of debt service payments and carries a market interest rate.

The country's Gross Domestic Product will be simply GDP=rA. The country's Gross National Product subtracts out factor payments:

(1) GNP = rA − rL

The country's net worth W is simply equal to A-L, so we could also say GNP=rW. In terms of the usual macro identities, the change in W is equal to saving, the change in A to investment (although in a much broader sense than the usual national accounts definition), and the change in L to the current account deficit. So the identity that the current account deficit is equal to investment minus saving is simply a rearrangement of the definition of net worth W=A-L in flow terms:

(2) $\dot{L} = \dot{A} - \dot{W}$

I make the usual assumptions that all individuals are identical and maximizing over an infinite horizon the present discounted value of utility from consumption:

(3) Max $\int\limits_{0}^{\infty} \dfrac{e^{-\rho t} C^{1-\sigma}}{1-\sigma} dt$

subject to

(4) $C = rW - \dot{W}$

We get the usual solution for the optimal growth of consumption:

$$(5) \quad \frac{\dot{C}}{C} = \frac{r - \rho}{\sigma}$$

Growth is lower the higher is the discount rate ρ and the lower is the intertemporal elasticity of substitution (1/σ). The ratio of consumption to wealth in the steady state is where W and C grow at the same rate, which from (4) and (5) implies:

$$(6) \quad \frac{C}{W} = r\left[1 - \frac{1}{\sigma}\right] + \frac{\rho}{\sigma}$$

Note that the higher the discount rate, and the lower is the intertemporal elasticity of substitution (if r>ρ), the higher is the propensity to consume out of wealth. The inverse of this is the ratio of wealth to consumption, or assets − liabilities to consumption:

$$(7) \quad \frac{A - L}{C} = \frac{1}{r\left[1 - \frac{1}{\sigma}\right] + \frac{\rho}{\sigma}}$$

A high discount rate is associated with a low ratio of A-L to C, or in other words a low asset ratio (A/C) and a high external debt ratio (L/C).

If r>p, the optimal net worth ratio depends positively on the intertemporal elasticity of substitution (1/σ). It has been argued in the literature that poor countries have a low intertemporal elasticity of substitution.[24] Thus, we would expect poor countries like the highly indebted poor countries (HIPCs) to have a lower net worth to consumption ratio than richer countries. Again, lower net worth implies some combination of higher debt and lower assets.

Equation (7) gives some insight into debt relief. It defines an optimal level of net worth (assets net of debt). If debt relief is granted, it will be a one-time lump sum transfer that reduces L but does not affect the long-run desired level of net worth to consumption. Therefore, *if the behavioral parameters are unchanged* before and after debt relief, the country will respond to debt relief by new borrowing until the old ratio of net worth to consumption is restored. In the

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[24] See Ogaki, Ostry, and Reinhart 1995 and Easterly 1994.

same vein, if the terms of lending are made more favorable by substituting concessional for non-concessional debt then countries will reborrow to maintain the net present value of debt service. Alternatively, the country could run down assets to restore the old ratio of net worth to consumption.[25]

On the other hand, what would happen if the parameters change? If the behavioral parameters *are* changed, perhaps because a reformist government succeeds a spendthrift one, then debt relief would successfully provide a painless transition to a higher ratio of net worth to consumption (higher assets and lower debt to consumption ratios).

In flow terms, we can solve for the ratio of saving to consumption as follows:

$$(8) \quad \frac{\dot{A}-\dot{L}}{C} = \frac{r-\rho}{r(\sigma-1)+\rho}$$

Saving is positive as long as r-ρ>0 and σ >1. Saving could conceivably be negative if the discount rate was so high as to exceed the interest rate. In general, a higher discount rate means lower net saving. Note also that countries with a high σ (low intertemporal elasticity of substitution) will have lower saving. Lower saving will involve some combination of a higher current account deficit $\dot{L}/_C$ and lower domestic investment $\dot{A}/_C$. If debt relief is granted, this will be a one-time lump sum transfer that will not affect (8); the empirical prediction is that saving, investment, and current account deficits will be unchanged before and after debt relief if behavioral parameters are unchanged.

Note that if saving is negative (r-ρ<0), there will be negative growth in GNP (rA-rL). There is no reason in practice to rule out negative growth, as consumption could go asymptotically towards zero. Given the possible combination of asset decumulation and liability accumulation with negative saving, the commonly used debt to GDP ratio (L/rA) could trend

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[25] The consumption path will also shift up by the annuity value of the lump-sum transfer implied by debt relief. In a real life example of part of this consumption effect, the President of Nicaragua gave workers a half day off to celebrate being part of the HIPC program.

upward in the long run. However, the ratio of net worth to consumption will be stable at the ratio given in (7).

Another insight from (8) is that any constraint on $\overset{\cdot}{L}/C$ will not necessarily be binding. The country can adjust $\overset{\cdot}{A}/C$ one for one to leave the path of net worth (8) and consumption (5) unchanged. For example, the country that is forced to reduce its current account deficit could reduce the amount of productive new investments it is making in physical and human capital. We will see this in more detail now.

B. Conditionality on debt ratios

The extent to which saving is decomposed into asset accumulation minus external borrowing is indeterminate in this formulation. Above, I described one possible reaction to debt relief is for the country to re-borrow enough to restore the old ratio of net worth to GDP. However, the external creditors (many of them official lenders) may impose a limit on borrowing. A common formulation is to provide enough loans as to maintain a certain target debt ratio (usually a ratio to GDP or to exports). I will suppose here that a country's external creditors supply an amount of credit such that its debt to consumption ratio (L/C) is equal to Λ.[26] In this case, we can solve for the ratio of assets to consumption from (7) as:

$$(9) \quad \frac{A}{C} = \frac{1}{r\left[1 - \dfrac{1}{\sigma}\right] + \dfrac{\rho}{\sigma}} + \Lambda$$

Note again that a high discount rate and a low intertemporal elasticity of substitution is associated with a low level of assets relative to consumption. Note also that the assets to consumption ratio rises with the permitted debt ratio, which is because consumers optimize with respect to net worth alone and not with respect to its components.

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[26] The idea of maintaining a stable external debt to GDP ratio as one criterion for current account sustainability is common in official agencies and in the academic literature. See for example, Van

Equation (9) gives some insight into debt relief accompanied by conditionality. Suppose that a country has unchanged rate of return and preferences, as captured by r, ρ, and σ. Suppose that debt relief lowers Λ and imposes the lower level of borrowing associated with maintaining the new Λ. This kind of debt relief would simply cause a one-for-one reduction in national assets with the amount of debt reduction as percent of GDP. In the long run the national net worth as a ratio to consumption is unchanged before and after debt relief at the value given by (7). Since liabilities have been reduced, assets will in the long run decrease as well. Being prevented from running up as much debt as previously to finance consumption, the country will compensate by running down assets instead. If the current debt level was "unsustainable" in that it represented too heavy a burden relative to assets, then the new debt level will be equally "unsustainable" because society's assets will decrease with the debt.[27] If the intertemporal parameters are changed to put more weight on the future, however, then debt relief will not result in asset decumulation.

C. Breaking out government and the private sector

So far I have not distinguished between public and private agents, leaving it unclear whether a high discount rate and low intertemporal elasticity of substitution characterizes the government or the private sector. The key difference that we might expect is that the government will be more impatient, because of uncertainty of tenure and lower concern for future generations

Wijnbergen et al. 1992, Dadush et al. 1994, Milesi-Ferretti and Razin 1996, Cohen 1996, World Bank 1998, and Roubini and Wachtel 1998.

[27] I have treated all assets as domestic capital stock, and have not introduced the possibility of foreign assets. It is straightforward to extend the definition of A to include foreign assets (capital flight). Therefore, the country could reduce its accumulation of flight capital abroad in response to a reduction in available new borrowing. There is ample scope for flight capital to adjust at the margin. Collier et al 1999 find 39% of African private wealth is held abroad. Similarly, Ajayi 1997 finds that the stock of accumulated capital flight over 1980-91 was on average 40 percent of the external debt outstanding in the HIPCs, with such extremes as Rwanda (94.3 percent), and Kenya (74.4 percent). Of course, the flight capital is in private hands while the debt is public, so there is the "transfer problem" of taxing the private sector to pay the public debt.

of government. I will thus assume that the government has a higher discount rate than the private sector.

The first, most obvious, model of the government would simply recast the above as the government's maximization problem with respect to government consumption over an infinite horizon. All the above results would go through, simply adding a "g" subscript to all the parameters. In particular, high discount rate governments will have lower net worth to consumption ratio, part of which is a higher government debt to consumption ratio.

The second model I will do of the government focuses on the tradeoff between taxing the private sector to finance government consumption today versus government consumption tomorrow financed by the future tax base (which is decreasing in the tax rate today). To focus on this tradeoff, I assume the government follows an externally imposed balanced budget rule. To focus attention on the discount rate, I assume that the intertemporal elasticity of subsitution is equal to unity for both parties. The private sector accumulates net worth with the same model as above, except that the government imposes a tax rate τ on income. The rate of growth of private consumption C_x and private wealth W_x in the optimal steady state is as follows:

$$(10) \quad \frac{\dot{W}_x}{W_x} = \frac{\dot{C}_x}{C_x} = (1 - \tau)r - \rho_x$$

The government finances its own consumption C_g with its income tax revenues:

$$(11) \quad C_g = \tau r W_x$$

The government maximizes the present discounted value of government consumption over time, taking into account the effect of the tax rate on private accumulation. Hence it maximizes with respect to the tax rate τ:

$$(12) \quad \int_0^\infty e^{-\rho_g t} \ln C_g \, dt$$

The control variable is the tax rate τ and the state variable is private wealth W_x. Consumption is given as a function of the tax rate by (11) and accumulation of private wealth is given by (10). The optimal tax rate for the government yields the following growth rate of government consumption:

$$(13) \quad \frac{\dot{C}_g}{C_g} = r - \rho_x - \rho_g$$

We can see from (11) that government consumption will grow at the same rate as private wealth. Equating (10) and (13) gives us the solution for the optimal tax rate:

$$(14) \quad \tau = \frac{\rho_g}{r}$$

The optimal tax rate is increasing in the government's discount rate. Intuitively, the government is trading off consumption today (increasing in τ) versus consumption tomorrow (increasing in private wealth tomorrow and thus decreasing in τ). A high discount rate government will choose to tax the private sector heavily. The government will succeed on imposing its intertemporal preferences on the whole economy through its policies. The policies may include predatory behavior that implicitly rather than explicitly taxes capital accumulation, such as high corruption, real overvaluation, a high black market premium, high inflation, or financial repression.

The empirical prediction is that a high discount rate government will have bad policies that explicitly or implicitly tax the private sector. If the government's high discount rate is unchanged over time, then we would expect these bad policies to remain unchanged before and after debt relief.

D. Other theoretical predictions

I have not covered all the ways in which debt relief can lead to bad incentives. The way that debt relief has been granted, offering progressively more favorable terms over time for two decades, also has perverse incentive effects. Most obviously, it creates moral hazard incentives to borrow in the expectation that part of this debt will be forgiven.

More subtly, incremental debt relief creates incentives to delay policy reforms, waiting for a progressively higher "price" at which to "sell" policy reforms. If the rate at which the amount of relief is increasing exceeds the international market interest rate, then policy-makers will wait to "sell" policy reforms.

Going further, we can think of a Hotelling-type model for the depletion of the "stock" of needed policy reforms. If there is a supply of needed reforms in HIPCs and a demand for reform by donors, then the equilibrium "price" of a marginal reform will rise at the rate of interest. If HIPCs reform "too fast", this would drive down the price below the interest rate trajectory -- which means that HIPCs prefer to wait in such a case, driving the price back up to the equilibrium interest rate trajectory. This suggests policy-makers will adopt a gradualist rather than big-bang strategy of economic reform in response to gradual debt relief, only gradually depleting their stock of "necessary reforms." This result is undesirable because it means that countries will be stuck longer with poor policies.

There is also a perverse incentive created by the response of debt relief to *changes* rather than the *level* of policies. Obviously, countries with worse initial policies have more scope for improvement. If debt relief responds exclusively to *changes*, it may result in aid resources going to countries with a worse *level* of policies on average. Countries could even engage in zig-zag behavior, getting debt relief as they improve policies and then backsliding to the old level of policies. This is the kind of result that Burnside and Dollar 1997 depicted as unproductive aid.

Finally, I have been dealing with the *demand* for external loans, but not with their *supply*. Countries that have negative growth, falling assets, and increasing debt are poor credit risks. The prospect of debt forgiveness also would tend to chill private lending. We could expect that private creditors will stop lending at some point. If multilateral and other official lenders perceive their role as "filling the financing gap", then their role will increase over time in countries with falling assets and increasing debt.

These other theoretical stories do not follow from the models above, although they are not inconsistent with them. I will not try to distinguish these stories from the "high discount rate behavior" implied by the model. One alternate hypothesis to mine would be that highly indebted poor countries became highly indebted through bad shocks like adverse terms of trade growth and war. This I will test in the results below. The other testable predictions from my model are that high debt countries will show other signs of heavily discounting the future (such as asset decumulation), that new borrowing will be associated with debt relief, and that policies will be worse in high debt countries. These are sharp predictions contrasting with conventional wisdom that debt relief finances or encourages asset accumulation and that actual debt falls over time with improved terms on the debt.

III. The Empirical Experience with Debt Relief

We can examine successively the response of new debt and assets to debt relief. I examine the 41 highly indebted poor countries (HIPCs) as so classified by the IMF and World Bank.[28] The countries are Angola, Benin, Bolivia, Burkina Faso, Burundi, Cameroon, Central African Republic, Chad, Congo (Dem. Rep.), Congo (Rep.), Cote d'Ivoire, Equatorial Guinea, Ethiopia, Ghana, Guinea, Guinea-Bissau, Guyana, Honduras, Kenya, Lao PDR, Liberia, Madagascar, Malawi, Mali, Mauritania, Mozambique, Myanmar, Nicaragua, Niger, Rwanda, Sao Tome and Principe, Senegal, Sierra Leone, Somalia, Sudan, Tanzania, Togo, Uganda, Vietnam, Yemen, and Zambia.

The reader may worry that we have a sample selection bias, because these countries were classified as HIPCs at the *end* of the period. Hence, it would not be so surprising if we find that things did not go well for these countries in the period prior to their classification. However, this sample selection is justified because it is this group that the debt relief efforts targeted. We can think of the following results as documenting the extent of adverse selection in debt relief efforts.

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[28] See the World Bank web site www.worldbank.org\hipc. See also IMF (1997).

We will retrace the path of this group to see if the prediction of unchanged behavior before and after debt relief hold relative to other developing countries.

A. Debt accumulation and asset decumulation

The theoretical model predicted that a high discount rate country would be characterized not only by high debt accumulation but also by low asset accumulation, or even asset decumulation. This contrasts with the traditional view that debt accumulation finances asset *accumulation*. The natural place to look for evidence on asset accumulation is investment. This is a poor indicator, however, as Devarajan, Easterly, and Pack 1999 have found that traditionally measured investment is not productive in Africa where most of the HIPCs are concentrated.

A better albeit indirect way of getting at productive asset accumulation is to look at the behavior of per capita output. If we take per capita output as proportional to a broad concept of productive capital per capita, including physical and human capital, technological capital, knowledge, etc., then the evolution of per capita output would tell us something about the tangible and intangible forms of asset accumulation.

The natural measure of HIPCs' external liabilities is their debt to GDP ratio. However, since much of the HIPCs' debt is concessional, the face value of the debt is a poor measure of the debt burden. I use the present value of debt service as a ratio to GDP as the debt indicator. Surprisingly, despite the attention given to the poor countries' debt problem, I was unable to find time series of the present value of debt service for HIPCs. (The World Bank's *Global Development Finance* reports an estimate of the present value of debt service for the latest year, while earlier reports reported three year moving averages going back to 1991. These moving averages do not give internally consistent numbers for individual years, so I do not use them.) Using data on scheduled debt service from the Debt Reporting System of the World Bank, a time

series 1979-97 for each of the HIPCs' present value of debt obligations was calculated for this paper.[29]

Figure 1 shows the evolution of the HIPCs' per capita output in 1997 prices and their median debt to GDP ratio in present value terms.[30] If we take the trend fall in output over 1979-97 as representing a fall in potential output, and potential output as proportional to a broad notion of productive assets, then there was asset decumulation at the same time as there was high debt accumulation. The HIPCs' debt problem arose not just because of new borrowing, but because of disinvestment in productive potential. This is consistent with a story in which the HIPCs can be characterized as persistently high discount rate countries.

There is some possibility of a break point towards the end of the period in which the debt ratio went down and output went up. This corresponds to the period after the new HIPC debt relief initiative was launched, which could indicate more success for this latest debt relief attempt. However, the period after the break is too short to evaluate whether it's a permanent change.

I next turn to data on oil production, for which we have data 1987-96. There are 10 HIPCs that are oil producers. Oil production is a form of asset decumulation, since it takes an asset in the form of oil in the ground and turns it into cash that can be an alternative form of financing consumption if conventional debt is constrained. Did HIPCs have higher oil production growth over this period of debt relief than did the non-HIPC oil producers? The answer is yes. The average log growth in oil production is 6.6 percentage points higher in the HIPCs than in the non-HIPCs, which is a statistically significant difference. The average log growth in oil production in HIPCs was 5.3 percent; in non-HIPCs, it was −1.3 percent.

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[29] The discount rate used is the average LIBOR over 1979-1997.

[30] Since debt is not in PPP prices, I also use a non-PPP measure of output – the World Bank's World Development Indicators Atlas method per capita income in 1997, and then apply median real per capita growth in HIPCs to get the series. The HIPCs' median debt to GDP ratio is somewhat lower than that in the World Bank's Global Development Finance (50% here compared to 70% in GDF), because the discount rate I used is higher. Nevertheless, the correlation of debt to GDP ratios between GDF and mine across the HIPCs is .90.

Another form of asset decumulation taking place at this time was sales of state enterprises to foreign purchasers. We have data on privatization foreign exchange revenues for 1988-1997. Over this period, total sales of state enterprises in the HIPCs amounted to $US4 billion. This is an underestimate, because not all privatization revenues are recorded in the official statistics. Even using this flawed data, there is a positive and significant correlation of .35 across the 41 HIPCs between the amount of debt forgiveness and the amount of privatization foreign exchange revenues. Privatization may have been done for efficiency reasons or even as a condition for debt relief, but it also may suggest a high discount rate economy running down its assets.

B. Debt relief and new borrowing

The data on debt relief from the World Bank's World Debt Tables only go back to 1989. The relationship between debt relief and new borrowing over this period is interesting: total debt forgiveness for 41 highly indebted poor countries over 1989-97 totaled US$33 billion, while their new borrowing was US$41 billion. This seems to point in the direction of the prediction above that debt relief will be met with an equivalent amount of new borrowing.[31]

Was new borrowing the highest in the countries that got the most debt relief? Running a regression for the 40 HIPCs that have complete data, there is a statistically significant association between average debt relief as a percent of GDP and new net borrowing as percent of GDP. The offset in this case is less than one for one: 1 percentage point of GDP higher debt forgiveness translated into .34 percent of GDP new net borrowing.

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[31] Unfortunately, these figures are in nominal rather than NPV terms. However, since NPV of debt to exports is fairly stable over this period, this supports the idea that new borrowing replaced forgiven debt. Also, the relationship between debt relief and new borrowing year by year is not contemporaneous. New borrowing is concentrated toward the beginning of the period, while debt relief is concentrated toward the end of the period. One possibility is that the high level of new borrowing caused a threshold to be passed that resulted in debt relief; this possibility suggests a potentially serious problem with moral hazard. Another related possibility is that borrowing nations expected progressively more favorable terms of debt relief and engaged in pre-emptive new borrowing to keep their long-run ratio of net worth to GDP unchanged. In this case, debt relief was an illusion. Finally, it is possible that the debt relief efforts of 1996-97 were more successful than earlier efforts.

Another bit of evidence that debt relief did not lower debt significantly is to look at external debt to export ratios over the period 1979-1997. I again use the present value of debt service as a measure of external debt, but now as a ratio to exports. I again use 1979 as a base year because it was the year the UNCTAD summit inaugurated the current wave of debt relief. I have data for 28-37 highly indebted poor countries over the period 1979-97. Despite the ongoing debt relief, the median present value debt to export ratio rose strongly from 1979 to 1997 (Figure 2). We can see three distinct periods: (1) 1979-87 when debt ratios rose strongly; (2) 1988- 1994 when debt ratios remained constant; and (3) 1995-97 in which debt ratios fell. The behavior in periods (1) and (2) is consistent with failed debt relief, while the fall in the last period may indicate that the 1996 HIPC debt relief program has been more successful than earlier efforts.

Despite the fall in the last period, however, the median debt to export ratio is statistically significantly higher in 1997 than it was in 1979. Again this result is not surprising given that we have selected the sample based on their debt at the end of the period. Still, it suggests that for a large group of 41 countries, new borrowing (more than) kept pace with the amount of debt relief, as would have been predicted by the model for countries with unchanged discount rates.[32]

C. Regression analysis of HIPCs' macroeconomic imbalances and country policies

In this section, I develop summary statistics of HIPCs' policy stance. I regress an average over the debt relief period 1980-97 of each policy indicator or macroeconomic imbalance on the log of initial income, and a dummy for HIPCs for the whole sample of LDCs.

Table 1 shows the results. We see that the average levels over 1980-97 of current account deficits, budget deficits (with or without grants), M2/GDP, and real overvaluation, were worse for HIPCs. The differences in HIPCs' real interest rate, black market premium, and

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[32] The calculation for this paper that the median debt to export ratio in 1997 is 221% is lower than the World Bank's Global Development Finance (GDF) estimate of 278%. Obviously, the present discounted value is sensitive to the assumption on the discount rate. Still, the correlation across HIPCs between the debt to export ratios from GDF and those from this paper in 1997 is .78.

Table 1: Regression results for policies in LDCs 1980-97, controlling for income

(Sample of all LDCs)

Dependent variable, average 1980-97	Current account balance/ GDP		Budget deficit excl grants/GDP	
	coefficient	t-statistic	coefficient	t-statistic
Log income, 1979	0.08	0.11	1.47	2.08
Dummy for HIPCs	-5.58	-4.36	-4.26	-3.67
R2	0.25		0.32	
#observations	77		81	

Dependent variable, average 1980-97	Budget deficit incl grants/GDP		M2/GDP	
	coefficient	t-statistic	coefficient	t-statistic
Log income, 1979	-0.34	-0.46	1.50	0.48
Dummy for HIPCs	-4.97	-3.94	-15.65	-2.96
R2	0.19		0.15	
#observations	84		83	

Dependent variable, average 1980-97	Log (1+inflation rate)		Index of overvaluation (based on Dollar 1992)	
	coefficient	t-statistic	coefficient	t-statistic
Log income, 1979	0.13	2.60	9.07	1.13
Dummy for HIPCs	0.15	1.79	64.19	4.92
R2	0.08		0.30	
#observations	82		68	

Dependent variable, average 1980-97	Real interest rate		Log (1+black market premium)	
	coefficient	t-statistic	coefficient	t-statistic
Log income, 1979	-0.01	-0.47	0.04	0.60
Dummy for HIPCs	-0.05	-1.79	0.09	0.78
R2	0.05		0.01	
#observations	74		77	

Dependent variable, average 1980-97	Country Policy and Institutional Assessment (1-5 scale)			
	coefficient	t-statistic		
Log income, 1979	0.07	0.72		
Dummy for HIPCs	-0.33	-2.15		
R2	0.11			
#observations	77			

inflation rates from the rest of the LDC sample are not statistically significant (although inflation

and real interest rates are marginally significant at the 10% level).

The HIPCs also were worse on the broad measure of policy given by the World Bank's Country Policy and Institutional Assessment (CPIA). This measure of policies not only includes a rating of policy stance, but also of institutional quality – like the prevalence of corruption. The HIPCs' average CPIA 1980-97 was worse than the CPIA for other LDCs.

The result on the current account deficit is not surprising: obviously HIPCs got to be HIPCs by borrowing a lot! The results on policies are not as obvious, as the debt accumulation could have come from bad external shocks (on which more in a moment) rather than bad policies like real overvaluation, low financial depth, and poor Country Policy and Institutional Assessments.

Even more interesting is to examine the composition of financing the current account deficit. Table 2 shows some intriguing patterns. First, HIPCs received less foreign direct investment (FDI) than other LDCs, controlling for income. This may be an indirect indicator of the bad policies found on the other indicators: investors don't want to invest in an economy with high budget deficits, high overvaluation, and high corruption. Investors may also have worried what debt relief may have meant for other external liabilities like the stock of direct foreign investment. It also is a confirmation of the prediction that private capital flows will dry up in high discount rate economies with falling assets and increasing debt.

Second, despite their poor policies, HIPCs received more in World Bank and IMF financing than other LDCs. The result on World Bank financing is controlling for initial income (negatively related to World Bank financing). The effect (0.96 percent of GDP) is small relative to the size of the current account deficit, but large relative to the mean amount of World Bank financing (1.1 percent of GDP). The share of World Bank financing in gross disbursements also was significantly higher (by 7.2 percentage points) in HIPC than in non-HIPCs. This confirms the prediction that multilateral lenders "filling the financing gap" will have a significant role in financing high discount rate economies.

Table 2: Financing composition of debt accumulation, 1979-97				
Dependent variable, average 1980-97	Foreign Direct Investment/ GDP			
	coefficient	t-statistic		
Log income, 1979	0.11	0.66		
Dummy for HIPCs	-0.84	-2.92		
R2	0.17			
#observations	77			
Dependent variable, average 1980-97	World Bank Financing/ GDP		IMF Financing/ GDP	
	coefficient	t-statistic	coefficient	t-statistic
Log income, 1979	-0.40	-3.76	0.05	0.41
Dummy for HIPCs	0.96	5.35	0.73	3.40
R2	0.53		0.15	
#observations	83		83	
Dependent variable, average 1980-97	World Bank share of disbursements/ GDP		IMF Share of Disbursements/ GDP	
	coefficient	t-statistic	coefficient	t-statistic
Log income, 1979	-8.10	-5.72	0.69	0.79
Dummy for HIPCs	7.17	3.14	4.37	3.12
R2	0.54		0.13	
#observations	76		76	

The results are similar for the IMF. I regressed IMF financing on a constant, initial per capita income and the HIPCs dummy. The HIPC dummy is indeed significant. Like the World Bank HIPC dummy, the effect is small relative to current account deficits (0.73 percent of GDP), but large relative to the non-HIPCs average IMF financing (0.5 percent of GDP). The HIPC effect for the IMF's share of disbursements is of the same sign and significant – the IMF had 4.4 percentage points more of gross disbursements to HIPCs than to non-HIPCs, controlling for income. The HIPCs got to be HIPCs in part by borrowing from the World Bank and IMF. I will go into more detail on who gave loans to the HIPCs (and when) in a later section.

One explanation of the HIPCs' becoming highly indebted is that they suffered adverse terms of trade shocks. However, Table 3 shows that the least-squares log growth in terms of trade over 1979-97 was not significantly worse for HIPCs. The LDC sample as a whole shows

significantly worsening terms of trade over 1979-97, but the HIPCs do not stand out as any

different than their less highly indebted neighbors.

Another possible shock that might have caused HIPCs to have high debt ratios is war,

since it both destroys productive assets and causes additional government spending that has to be

financed. However, as shown in Table 3, HIPCs were not more likely to be at war than the rest of

the LDC sample.[33]

Table 3: Terms of trade shocks and war, 1979-97				
Dependent variable, average 1979-97	Least-squares log growth in terms of trade		Percent of period at war	
	coefficient	t-statistic	coefficient	t-statistic
Log income, 1979	0.00	-0.97	-0.04	-0.75
Dummy for HIPCs	0.00	-0.05	-0.09	-1.10
R2	0.02		0.02	
#observations	77		76	

In sum, we have a pattern of poor policy indicators that most needed to be improved to

avoid a debt crisis. Not surprisingly, HIPCs' policies were worse precisely in those areas – high

current account deficits and budget deficits -- that led to high debt accumulation. Less obvious

were bad policies on financial repression and exchange rate overvaluation. This is consistent with

these countries having a high discount rate that was unchanged before and after debt relief. This

is also consistent with policy-makers waiting for the best deal during the incremental process of

debt relief. It is also consistent with the moral hazard problem that after the initial debt relief in

1979, HIPCs may have rationally anticipated that much of their new borrowing would be later

forgiven.

D. Current account deficits and budget deficits over time

In addition to averages over the period 1980-97, it is important also to look for trends.

Did HIPCs' policies get better over the two decades of debt relief? On the current account deficit,

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[33] The war variable was the percent of time at war on national terrritory from 1979 to 1994.

perhaps the most important measure of policy stance for highly indebted countries, the news is not good. (This measure of the current account deficit treats grants as revenue rather than financing.) The median current account deficit has stayed high and constant at around 7.5 percent of GDP over the period of incremental debt relief 1979-97.

The budget deficit to GDP ratio also fails to improve over the debt relief period 1979-97 (figure 3), for a sample of 23-35 countries, if anything deteriorating to the very high level of around 10 percent of GDP. These figures treat grants as a source of financing. This would be justified if we think of grants as temporary, with the donors planning that the country exit from needing foreign aid after a certain interval. However, grants in practice may be permanent and they do not imply future debt servicing requirements, so it's of interest to see the budget deficit including grants. The grant-inclusive budget deficit still fails to improve for HIPCs (figure 3).

The results on the current account deficit and budget deficit do not show a clear improvement in behavior during the process of incremental debt relief. This is consistent with the HIPCs being persistently high discount rate economies.

E. Debt relief and other country policies over time

How have other HIPC policies behaved during the period of incremental debt relief 1979-97? As noted in the theoretical section, poor policies is one mechanism by which the government imposes its own high discount rate on the rest of the economy. There is also the worry that countries would respond to incremental debt relief by postponing policy reforms, waiting for a higher "price" at which to "sell" policy reforms. Alternatively, countries could slowly reform, selling off pieces of reform as the price rises. The intent of the debt relief efforts, in contrast, was that policies would improve immediately as a condition for getting new debt relief. Which happened?

The evidence is very mixed, as shown in figure 4. The real interest rate for HIPCs is an indicator of either the private return to capital if interest rates are uncontrolled or financial repression if there is a nominal interest rate ceiling. HIPCs had flat real interest rates over time.

Contrary to the stereotype of HIPCs as financially repressed, the median real interest rate was positive for most of the period (although not significantly different than zero).

However, a different variable related to financial repression, the ratio of M2 to GDP (financial depth) in HIPCs, shows a different picture. We have already seen that HIPCs had worse financial depth than other LDCs. Financial depth, which King and Levine (1993a,b) identified as a critical determinant of growth, does not improve in the HIPCs over time.

The inflation rate oscillated in the HIPCs without any clear trend over 1979-97. The inflation rate was not in the range that Bruno and Easterly 1998 identified as associated with negative growth performance (40 percent and above), although it spent a few years in the 20-40 danger zone where there is a high risk of slipping into the above 40 percent zone (Bruno 1995).

HIPCs spent a good part of the debt relief period with the black market premium above the 20 percent threshold defined by Sachs and Warner 1995 as one of the criteria for being a "closed" economy. After a wild period in the mid-1980s, however, there is a tendency for both the median and variance of the black market premium to fall over time in the HIPCs.[34]

There is good news and bad news on another exchange rate measure, the measure of deviation of local prices from purchasing power parity at the official exchange rate. I construct an purchasing power parity index of Dollar 1992 to benchmark the real exchange rate as an average of 1976-85 for each country, then convert it to a time series using the usual definition of the real exchange rate ($P_{Domestic}/(E*P_{US})$). The good news is that the real exchange rate depreciates over 1979-1997 in the HIPCs. This is one of the major achievements of this 20-year process of adjustment and debt relief.

The bad news is that the initial position was extreme overvaluation and the improvement was only gradual, so that the average exchange rate in the HIPCs for the period is severely

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[34] Drazen and Easterly 1999 find that inflation and the black market premium display a "crisis provokes reform" property, whereas the growth rate, the budget deficit, and the current account deficit do not. They also find that aid is reduced at high levels of inflation and the black market premium, while it increases with current account deficits and budget deficits.

overvalued (as we saw in the regression analysis). Another piece of bad news is that other LDCs also had a tendency toward real depreciation, so that at the end of the period the HIPCs were still 24 percent overvalued relative to other LDCs.

The HIPCs fared worse on our broadest measure of policy, the World Bank's subjective rating called the Country Policy and Institutional Assessment (CPIA).[35] The HIPCs display no clear trend over time. This is consistent with the story that intertemporal preferences were unchanged before and after debt relief, and the government used poor policies to impose its high discount rate on the whole economy.

F. Composition of financing

Figure 5 shows the composition of gross disbursements to HIPCs over 1979-97. The prediction that private credit would disappear and multilateral financing assume an increased share are more than confirmed. World Bank International Development Association (IDA) financing alone more than tripled its share in disbursements. The share of private credit began the period 3.6 times higher than the IDA share; by the end of the period, the share of IDA was 8.6 times higher than that of private financing. The share of IMF financing, which began at the same level as IDA financing, remained roughly unchanged. The other important change is away from bilateral financing in favor of IDA and other multilateral concessional finance.

Another important thing to examine is net transfers (net flows minus interest payments). On debt that carries a market interest rate, positive net transfers imply that the debt is growing faster than the interest rate. This implies the debt is unsustainable (if the recipient continued to borrow to pay the interest and then some, this would imply the present value of debt is unbounded). Net transfers from concessional sources, on the other hand, carry a large grant

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[35] The CPIA has four components, which are Macroeconomic Management and Sustainability of Reforms, Policies for Sustainable and Equitable Growth, Policies for Reducing Inequalities, and Public Sector Management. It is available for 1977 to 1998. These results should be taken with a grain of salt, not only because of the subjective element but also because the methodology for the rating has changed over time.

element and so don't have the same implications for debt sustainability; if anything higher concessional net transfers should increase the likelihood of sustainability.

Figure 6a shows that all the non-concessional net transfers were positive, and so contributed to the rapid growth of debt during 1979-87 (recall figure 2). However, there were also large net transfers from concessional sources (IDA, other multilaterals, and the bilaterals) – total net transfers to the HIPCs of US$33 billion -- which makes it all the more striking that these countries became increasingly highly indebted in net present value terms over this period.

Figure 6b shows that there was a huge shift in net transfers from 1979-87 to 1988-97, a period in which debt ratios stabilized. Large positive net transfers from IDA and bilateral concessional sources offset negative net transfers for IBRD, IMF, bilateral non-concessional, and private sources.[36] This was another form of "debt relief", since it exchanged concessional debt with a large grant element for non-concessional debt. However, the net present value of debt remained roughly unchanged over this period, at least until the last few years, suggesting that these economies persisted in "high discount rate behavior."

A cynical interpretation would be that as countries could not or would not pay their non-concessional debt, official lenders replaced their non-concessional debt with concessional debt that had a large grant element. This should have significantly eased the debt servicing burden of the HIPCs. Even so, the HIPCs still had enough of a debt problem at the end of the period that lenders initiated more debt relief.

> *Concessionary finance used unproductively leads to indebtedness which is then used as an argument for further concessionary finance.*
> *--Bauer (1972, p. 127)*

III. Conclusions

The theoretical models in this paper predict that countries with unchanged preferences in the long run will respond to debt relief by running up new debts or by running down assets. There

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[36] IDA is the concessional lending arm of the World Bank, while IBRD is the non-concessional lending part of the World Bank.

are some signs that the incremental process of debt relief over the past two decades fulfilled these predictions. New borrowing was correlated with debt relief so that debt ratios actually got worse. Per capita output had a trend decline, suggesting decumulation of productive assets, broadly defined. Oil reserves were depleted more rapidly and sales of state enterprises to foreign owners were higher in countries that got debt relief.

Policies by which government implicitly or explicitly taxes asset accumulation displayed a mixed pattern of some gradual policy improvements and some failures to improve. The most important policy indicators for highly indebted countries--the current account deficit and the budget deficit – failed to improve, and they remained above other LDCs' levels controlling for their initial values in 1979.

There is also some good news. HIPCs' exchange rate overvaluation and black market premium improved over time. Debt ratios fell in the past 3 years, and per capita income rose. This could indicate that the most recent HIPC debt relief initiative has been more successful than earlier debt relief efforts, although we have only a few years of data on which to draw conclusions.

Still, the problem of the adverse selection of HIPCs remains a serious one. By 1997, with the coming of the new multilateral debt relief initiative, HIPCs received 63% of the flow of resources devoted to poor countries despite only accounting for 32% of the population of those countries.[37] Including debt reduction as aid, Cote d'Ivoire received 1276 times more per capita aid net flow than India in 1997.[38]

The results on composition of financing are also rather alarming. The HIPCs' debt crisis developed because of the expansion of official lending. The official lenders did not seem to

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[37] This calculation sums net flows of long-term debt and debt stock reductions going to HIPCs and to other low income economies, where low income is defined as in the World Bank's World Development Indicators.

[38] India's low per capita aid receipts represent not only its suffering from the adverse selection of aid donors, but also from the tendency of large countries to receive small amounts of aid per capita.

follow the same prudential rules as private capital, which pulled out of the HIPCs. The IMF and World Bank provided more financing to HIPCs over 1979-97 than other countries of their income level, despite their worse policies. In the second half of the period, positive net transfers from IDA and bilateral concessional sources offset negative net transfers from IBRD, IMF, bilateral non-concessional and private sources.

What are the policy implications? Debt relief is futile for countries with unchanged long-run preferences. At best, only countries that display a fundamental shift in their intertemporal preferences should be eligible for debt relief. To assess whether countries have made such a fundamental shift in preferences, some track record of low discount rate behavior should be required prior to granting debt relief. There were important steps in this direction in the 1996 HIPC initiative, which unfortunately may be weakened by the 1999 Cologne G-7 proposal that suggests speeding up the process of debt relief. Official lenders should not keep "filling the financing gap" in violation of prudential standards of creditworthiness.

Perhaps what has been most damaging to incentives for new borrowing and delayed reforms is the creeping process of debt relief over the past 20 years. Although debt relief is done in the name of the poor, the poor are worse off if debt relief creates incentives to delay reforms necessary for growth.

A once for all program is greatly superior to a gradual program of increasing relief. The once for all program has to attempt to establish a credible policy that debt relief will never again be offered in the future, and that it is only giving debt relief to countries with a shift in intertemporal preferences. If this is problematic, then the whole idea of debt relief is problematic. It results in more resources going to countries with bad policies than poor countries with good policies. Why should the HIPCs receive four times the aid per capita of less indebted poor countries, as happened in 1997? If there is any expectation that donors will continue to favor the highly indebted in the future, then debt relief will not be successful.

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Figure 1: External Debt/GDP (present value terms) and per capita income in Highly Indebted Poor Countries
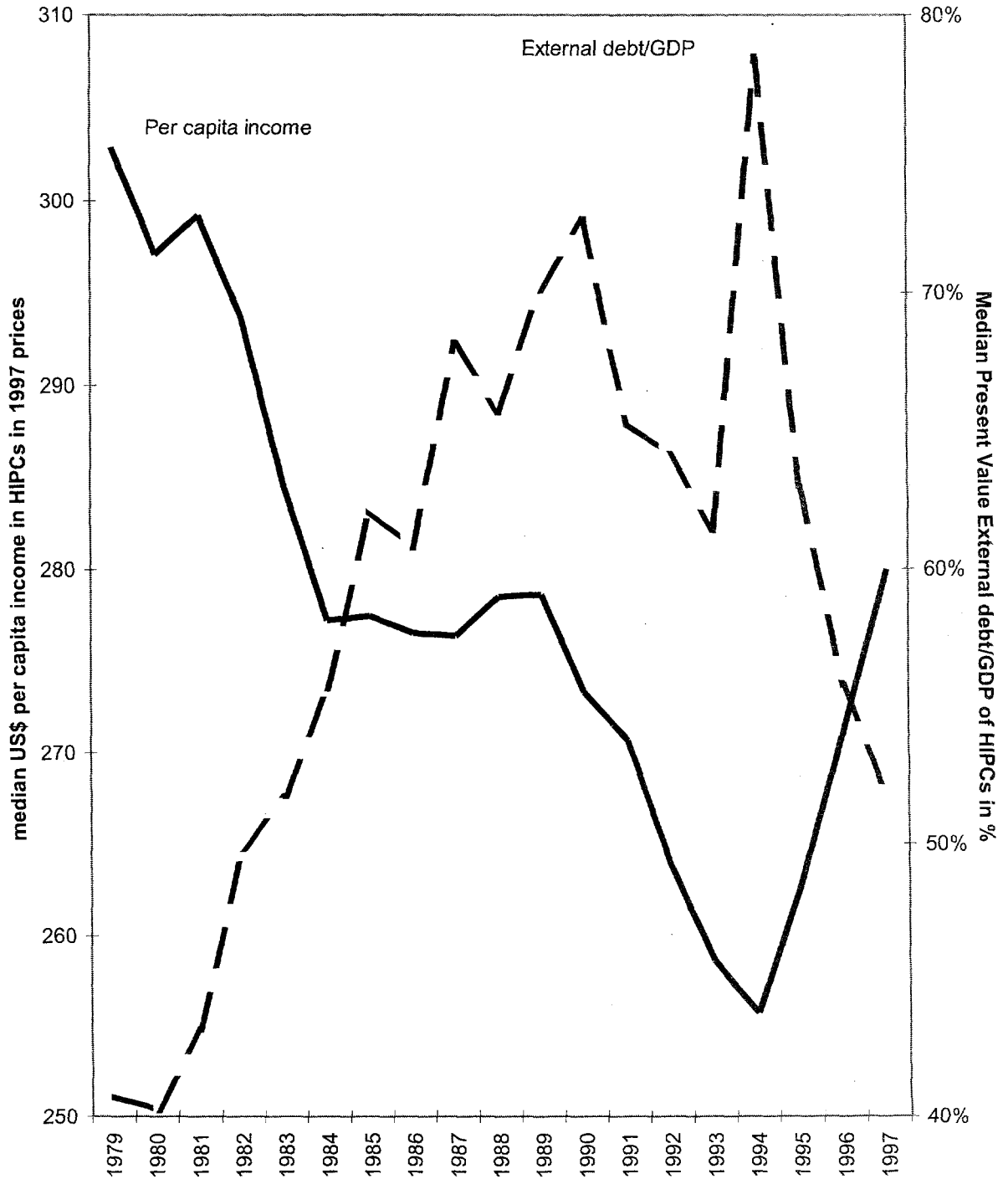
Figure 2: 95% confidence interval for median present value of debt of highly indebted poor countries as a ratio to exports
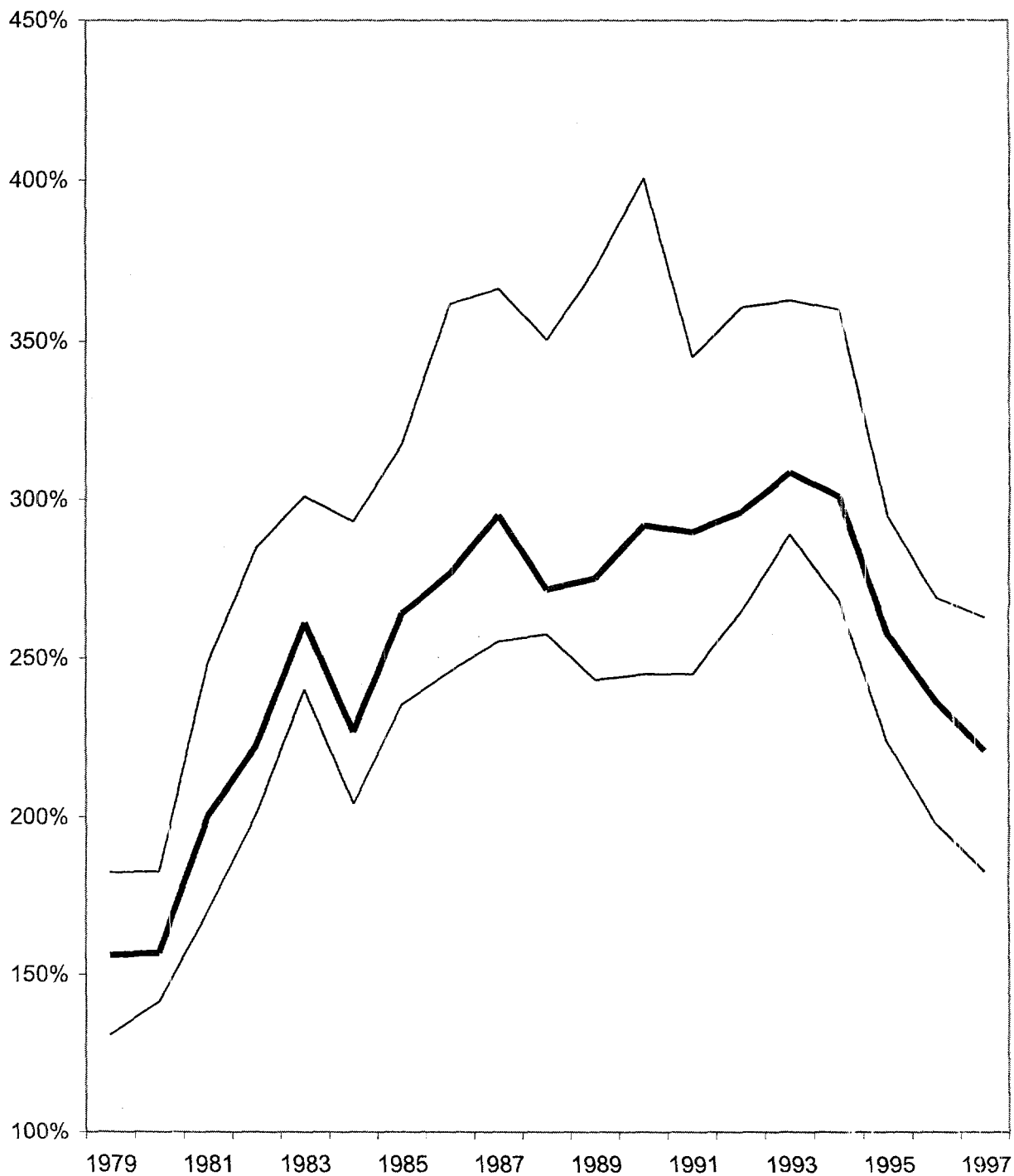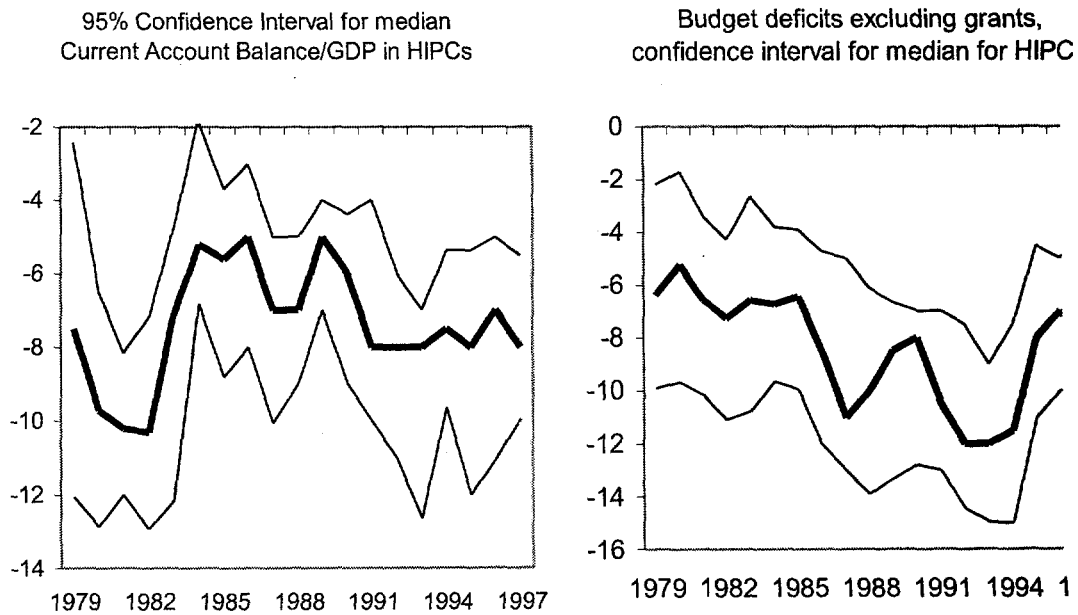
Figure 3: Current Account and Fiscal Balances Over Time in HIPCs

95% Confidence Interval for median
Current Account Balance/GDP in HIPCs

Budget deficits excluding grants,
confidence interval for median for HIPC

Budget deficits including grants, confidence
interval for median for HIPCs
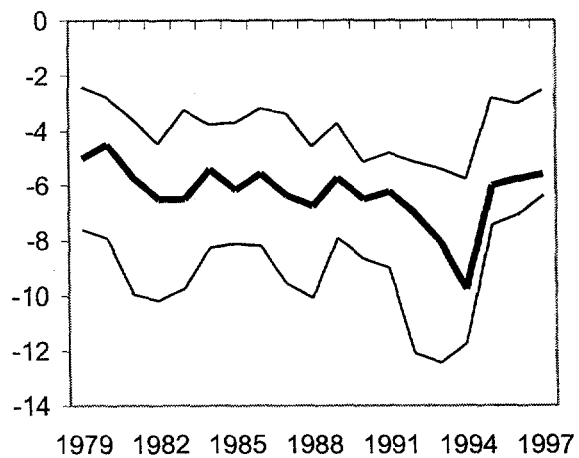
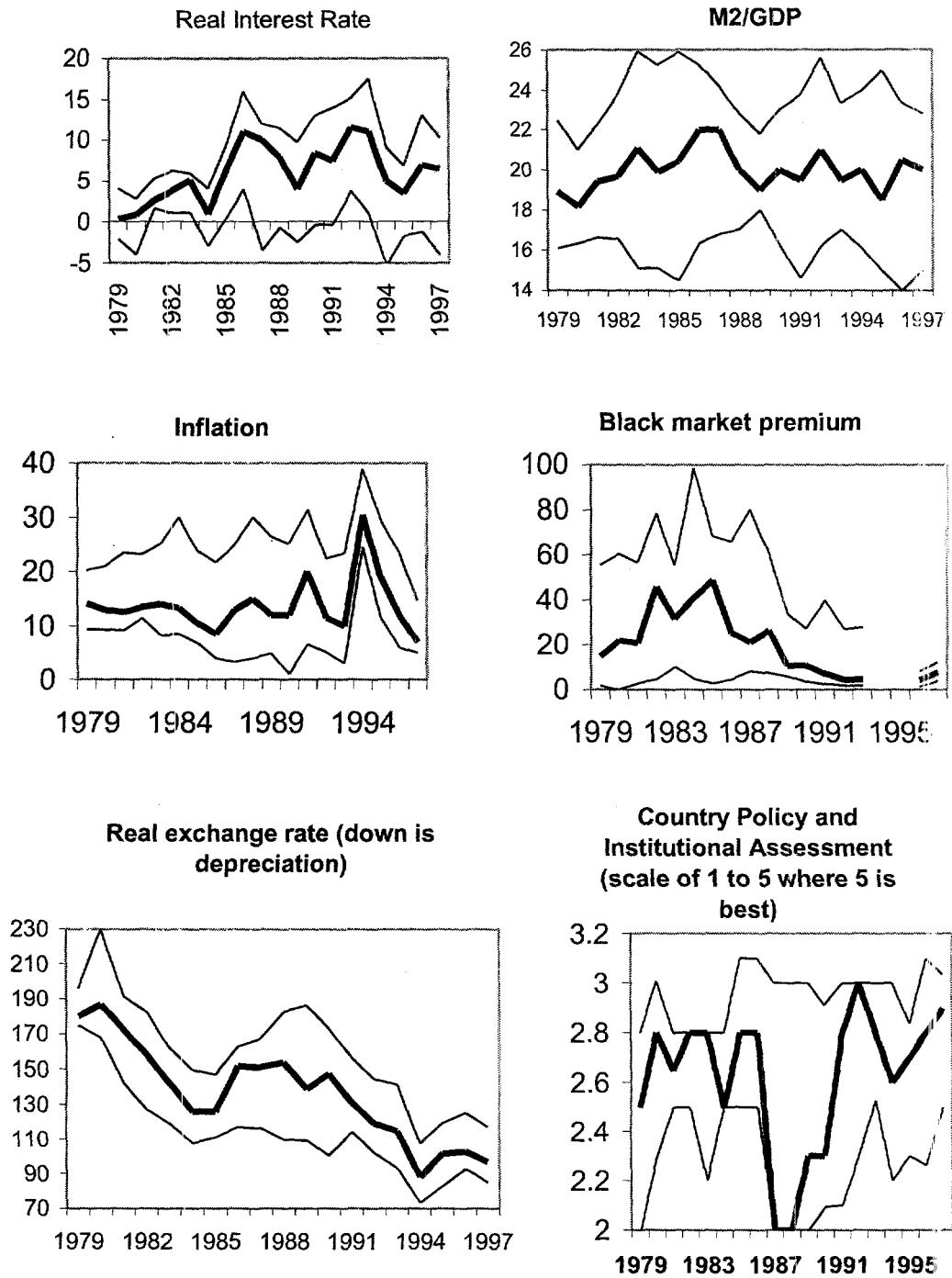**Figure 4: HIPC Country Policy Indicators Over Time, 95% confidence interval for medians**

Real Interest Rate

M2/GDP

Inflation

Black market premium

Real exchange rate (down is depreciation)

Country Policy and Institutional Assessment (scale of 1 to 5 where 5 is best)

Figure 5: Composition of gross disbursements to HIPCs

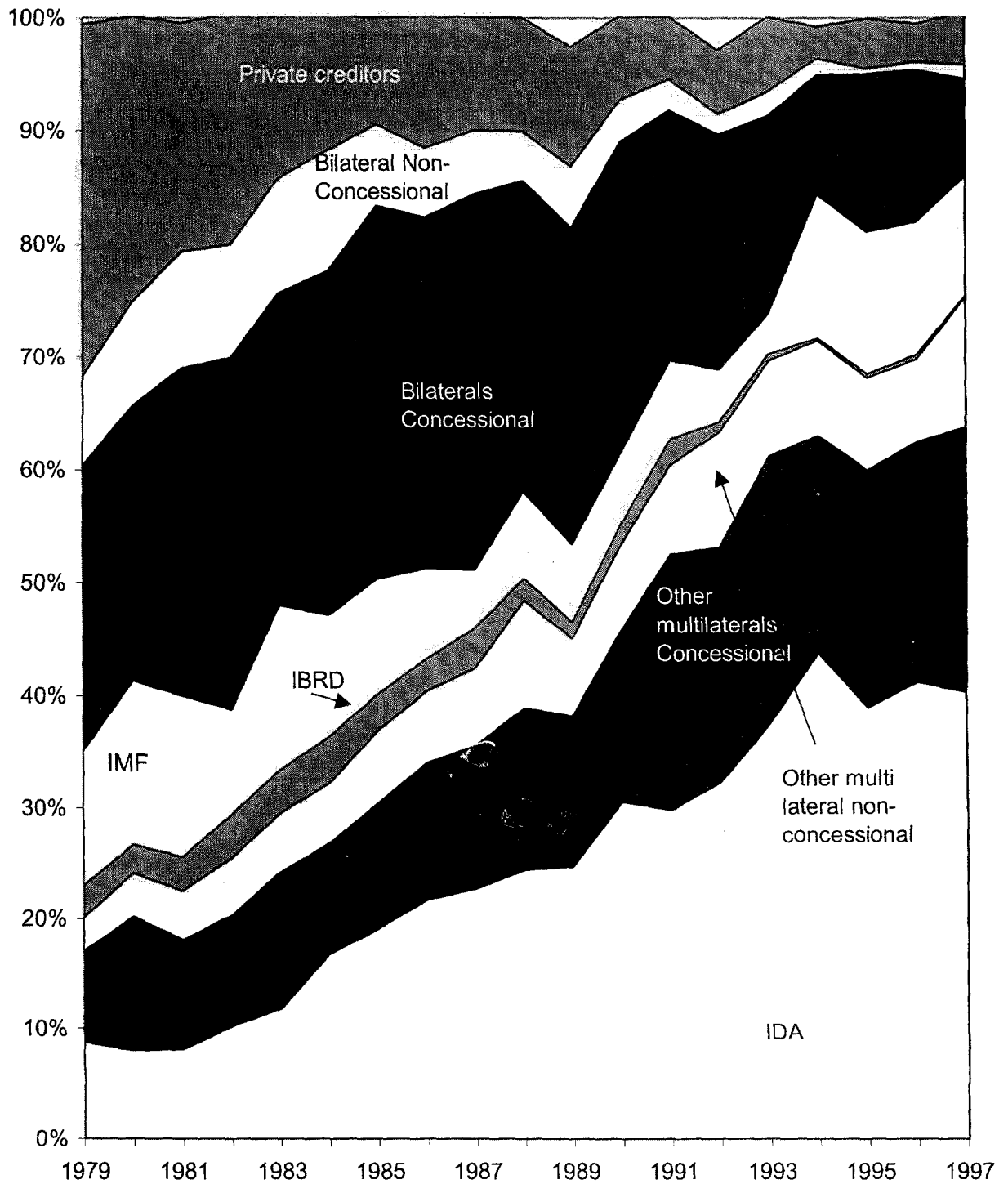**Figure 6a: Net transfers to HIPCs by creditor, 1979-87 (Billion US$)**

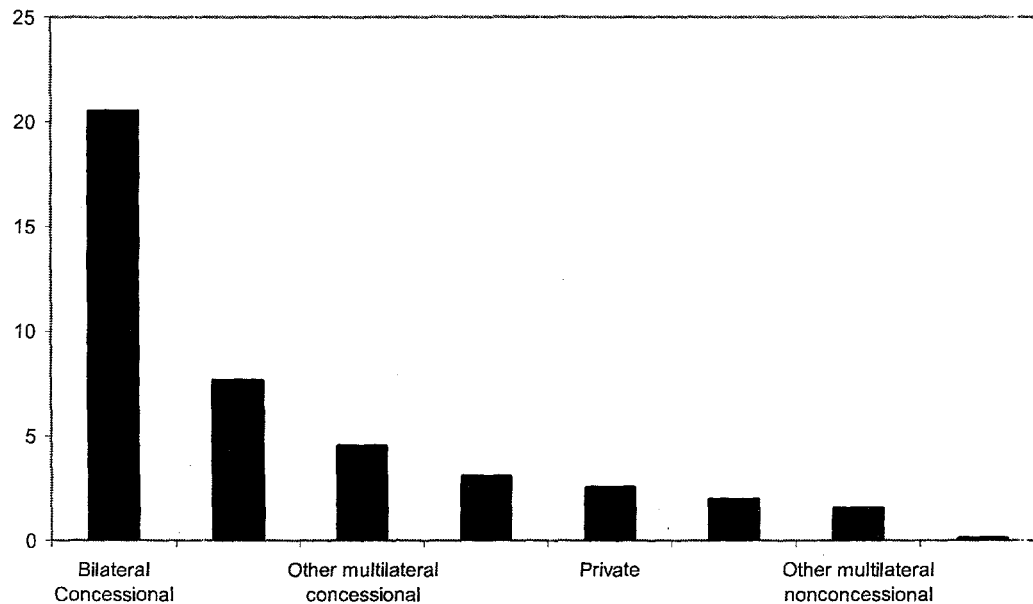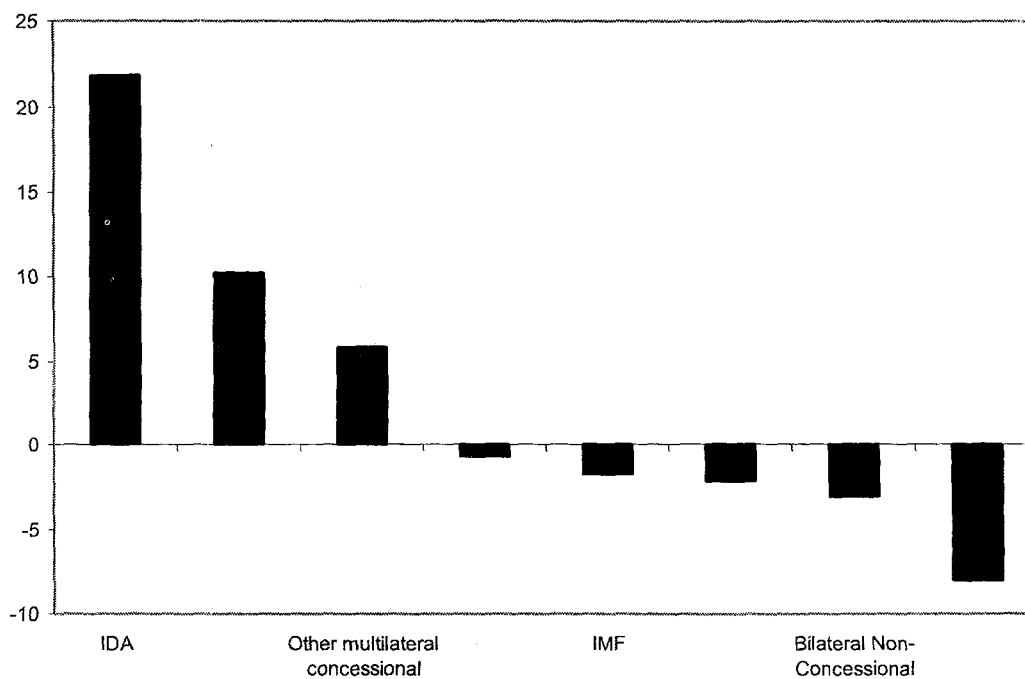**Figure 6b: Net transfers to HIPCs by creditor, 1988-97 (Billion US$)**

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