Consequences of Debt Relief Initiatives in the 1990s

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Abstract

In this paper I investigate the effects of recent debt relief initiatives such as the Heavily Indebted Poor Countries (HIPC) Debt Initiative of 1996 on resource flows to developing countries. Focusing on a sample of low-income countries, I concentrate on the following questions. First, is the HIPC initiative selective in the sense of "rewarding" improved policies in HIPC countries with higher transfers? Measuring improvement directly with dummy variables representing progress in the initiative, I find that good macroeconomic management does not seem to matter in terms of the level of resource transfers and foreign aid received by a HIPC country. Second, have HIPCs and non-HIPCs experienced reductions in aid inflows (other than debt relief) in the 1990s and early 2000s? My estimates suggest that countries classified as HIPCs received higher (official and aggregate) net transfers than non-HIPC countries in the first half of the 1990s. These differences persist after 1996, however, at a lower level. Looking at net official development assistance, differences between HIPC countries and non-HIPC countries persist throughout the 1990s and early 2000s, with higher levels of aid going to HIPC countries. Third, have the debt relief initiatives in the 1990s provided additional resources to low-income countries? Confirming findings in earlier literature, my results suggest that aid flows have not changed significantly in response to debt relief.

Keywords: HIPC debt initiative, foreign aid, selectivity, additionality

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1 Introduction

"This initiative [HIPC] is a breakthrough ... It deals with debt in a comprehensive way to give countries the possibility of exiting from unsustainable debt. It is very good news for the poor of the world."

James D. Wolfensohn, President, World Bank[1]

In the second half of the last decade, the call for debt relief or cancellation as well as poverty reduction in developing countries grew very loud. Apart from NGOs like Oxfam and Jubilee2000, prominent figures like the Pope, the Dalai Lama, and the Irish pop singer Bono were demanding a solution to the debt problems of poor countries. The Paris Club of Creditors and the international financial institutions – the IMF and the World Bank – responded to the public pressure by establishing the Heavily Indebted Poor Countries (HIPC) Debt Initiative in 1996, and the Enhanced HIPC Debt Initiative in 1999. Also, the United Nations General Assembly adopted the Millennium Development Goals in September 2000, calling for, among other things, a worldwide eradication of extreme poverty and hunger.

The focus of my paper is on the effects of recent debt relief initiatives, such as the Heavily Indebted Poor Countries (HIPC) Debt Initiative of 1996, on resource flows to developing countries. My sample covers 66 low-income countries (most of them located in Sub-Saharan Africa) over the period 1989 to 2002[2]. Forty of these low-income countries are classified by the World Bank as Heavily Indebted Poor Countries.

First, I investigate whether the HIPC initiative is selective in the sense of "rewarding" improved policies in HIPC countries with higher transfers. Instead of using a policy index, I use a novel approach to measure good policy. The HIPC initiative is explicitly designed to

[1] Quote taken from http://www.worldbank.org/hipc/about/hipcbr/hipcbr.htm

[2] For a list of the countries, see table 1 in the appendix.

reward good macroeconomic performance by conditioning debt relief on the implementation of key reforms. I use this characteristic of the initiative, and classify country observations by the progress made in the initiative, i.e., whether and when they qualify for debt relief. Earlier literature suggests that foreign aid is more effective in promoting growth when allocated to countries with good policies, rather than according to strategic and political interests.

Second, I ask whether HIPC and Non-HIPC countries are treated differently in terms of aid allocation in an environment of declining aid flows. In this context, I also compare the differences before and after 1996 – the year of the announcement of the HIPC initiative. This is an important policy question, because redistribution of resource flows towards HIPC countries can potentially distort incentives for ineligible countries. If the economic situation of the eligible countries improves dramatically without a significant effort in implementing key reforms, ineligible countries have an incentive to achieve HIPC status.

Third, in following earlier literature, I investigate whether debt relief provides additional resources to low-income countries between 1989 and 2002. It has been argued that in the past, bilateral donors have often given aid in order to keep their debtors out of arrears, i.e., some of the aid money was used to pay back debt owed to multilateral and bilateral donors[3]. One of the goals of the HIPC debt initiative is to break this "aid recycling", and to provide additional resources to the eligible countries[4]. If debt relief is additional, ineligible countries are again in a moral hazard situation.

Addressing these three issues in an empirical analysis, I find that, first, good macroeconomic management does not seem to matter in the HIPC initiative in terms of the level of resource transfers and foreign aid received by a country. Second, my estimates suggest that countries classified as HIPCs received higher (official and aggregate) net transfers than non-HIPC countries in the early 1990s. These differences persist after 1996, however at a lower level.

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[3] See, for example, Birdsall (2002) about the politics of foreign aid in Sub-Saharan Africa.

[4] "A key concept underlying the HIPC Initiative - that of ***additionality*** - is that debt relief should supplement, not replace, the flow of assistance in the form of grants and concessional loans to the poorest countries.", quote from: *HIPC initiative: Status of Implementation*, page 9, IMF, April 2002.

Looking at net official development assistance, differences between HIPC countries and non-HIPC countries persist throughout the 1990s and early 2000s with higher levels of aid going to HIPC countries. In this sense, resources have been allocated towards non-HIPC countries. Third, confirming earlier literature on additionality, debt relief initiatives in the 1990s did not affect aid inflows significantly for low-income countries, neither positively nor negatively. Hence, debt relief did not crowd out aid.

In section 2, I briefly review literature on the historical background of the debt crisis in low-income countries and the HIPC Debt Initiative. The third section describes the main issues, the methodology, and the data used in the paper. In the fourth section, I describe my regression results. Section 5 concludes. Section 6 and 7 in the appendix include tables and figures, respectively.

2 Background

2.1 Brief history of the low-income country debt crisis

The situation of low income countries in the last 35 years and until the mid 1990s can broadly be characterized as one with an increasing debt stock, increasing debt service, positive and increasing aggregate and official transfers, and increasing foreign aid (all in per capita terms).[5] External borrowing increased significantly in the 1970s and 1980s, when creditor governments provided export credits to developing countries in order to increase their own exports. Low income countries – unlike the middle-income Latin American countries – had to rely on official loans, since their access to private capital markets was very limited[6].

During this period, export credit guarantees were considered part of the overall development strategy pursued by developed nations. The debt burden of low income countries steadily

[5] See figures 1 to 4, and 7 in section 7.

[6] For a brief historical overview of the low income countries' debt crisis, see Daseking and Powell (1999).

increased, and their overall financial situation deteriorated because of adverse terms of trade shocks, weaknesses in the management of debt, lack of adjustment to an evolving economic environment, as well as political factors such as wars and social unrest.

The international financial community's reaction to the unfolding debt crisis in the 1980s differed for middle-income and low-income countries. The Baker Plan[7] of the mid-1980s was mainly directed at middle-income Latin American countries and some African countries[8]. The prevalent paradigm at the time was that the debt crisis was a problem of (temporary) illiquidity, and that countries could "grow out of debt", given temporary debt servicing relief. Under the Baker Plan, it was assumed that a rescheduling of debt[9] without any adjustment in its net present value would bring about a solution. New lending would lead to increased investment, which would eventually lead to greater economic growth. Hence, the proposed solution was a flow rescheduling of debt, and provision of "new money" by commercial banks and creditor governments, conditional on the implementation of an IMF-approved structural adjustment program. The lack of IMF-approved adjustment programs and the Brazilian debt moratorium in 1987 made clear that the Baker Plan was not adequate. In the meantime, commercial banks started setting aside loan-loss reserves, while the share of the debt owed to official creditors increased. With regard to low income countries, the reaction of the international community to the debt crisis was to provide comprehensive non-concessional flow reschedulings through the Paris Club creditors and several multilateral agencies. Commercial banks played only a minor role.

In the late 1980s – in an environment where the secondary market value of sovereign debt of many low and middle income countries was significantly below its face value – the paradigm shifted from one of a liquidity problem to a "debt overhang" problem. The concept of debt overhang is defined as the "presence of an existing 'inherited' debt

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[7] The plan was named after the then U.S. Secretary of the Treasury, James Baker.

[8] See Cline (1995).

[9] A (flow) rescheduling of debt means that interest and principal payments are postponed for some period in the hope that economic growth in the meantime will make it easier for the debtor to repay the debt.

sufficiently large that creditors do not expect with confidence to be fully repaid"[10] The idea is that there is a "debt Laffer curve", in the sense that the net present value of repayments is increased when debt relief is provided. Krugman (1988) and Sachs (1986) argued that highly indebted poor countries were on the "wrong side" of this curve. They suggest that in this situation, countries' incentives to invest domestically (and therefore to increase the available surplus used for debt repayment) are distorted, since the high stock of debt acts like a high marginal tax on that investment.

This shift in paradigm led to the Brady Plan[11] in 1989, which used market-oriented debt reduction schemes, such as debt buybacks and equity swaps, to solve the debt crisis. Again, mainly Latin American countries were involved. Commercial banks used this opportunity to leave the market by making use of their previously accumulated loan-loss reserves. Around the same time, the notion of debt overhang gained prominence among policy makers in dealing with debt of low income countries. An initiative by the Paris Club, that later becomes known as "Toronto Terms", included an option that allowed debt rescheduling on a concessional basis, meaning that "below market" interest rates were charged on rescheduled debt. In the following years, the concessionality of debt reschedulings by the Paris Club of Creditors deepened. For example, the "Naples terms" agreed upon by the Paris Club in 1994 provided debt relief of up to 67% on bilateral debt.

2.2 HIPC Debt Initiative and related literature

There are several factors that distinguish the HIPC debt initiative from previous initiatives by the Paris Club[12]. One distinguishing factor is that for the first time multilateral debt owed to the IMF and the World Bank is eligible for debt relief. Second, the implementation of the initiative involves all actors – creditors, donors, and debtors, as well as NGOs and churches. Especially in the Enhanced HIPC Initiative in 1999, involvement and active participation of

[10] See Krugman (1988).

[11] The plan was named after then US treasury secretary Nicolas Brady.

[12] The Paris Club initatives are also called "traditional debt relief mechanisms".

civic society plays an important role in the design of the required Poverty-Reduction Strategy Paper (PRSP).

The goal of the HIPC debt initiative is twofold. First, its purpose is to provide a permanent exit from debt renegotiations and rescheduling, and to lower the eligible country's debt stock to a sustainable level. This is to be achieved by removing the debt overhang through debt relief in order to promote economic growth. Second, a combination of debt relief and foreign aid should provide additional resources for increased social spending in infrastructure, primary education, health, and to reduce poverty in general. In this paper, I describe debt relief as *additional* if it leads to additional resources made available to the *individual* debtor receiving debt relief. The goal of additionality is explicitly incorporated in the Enhanced HIPC Debt Initiative in 1999.[13,14]

Under the original 1996 HIPC initiative, debt sustainability is the key goal. Countries that are considered as potentially eligible generally have no access to private capital markets, and are only able to borrow from the International Development Association (IDA), the concessional lending arm of the World Bank. Once a country is classified as eligible for HIPC debt relief, it enters a two-stage process: First, an agreement is made with the World Bank and the IMF about key structural reforms. After a 3-year track record of good performance, the country reaches the "decision point", where the Paris Club and other bilateral creditors provide debt relief of up to 80% on eligible debt, and the multilateral creditors provide funds through the structural adjustment program. Second, after another 3-year track record of good performance, the "completion point" is reached Deeper stock-of-debt relief is then provided. Since this process is described as "too little, too late" by the official review[15] of the HIPC initiative in October 1998, the Enhanced HIPC Debt Initiative

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[13] "… the debt-servicing capacity of HIPCs depends not only on their ability to generate foreign exchange through exports, but also on how much foreign assistance is expected to be forthcoming in the future…", quote from Claessens et al. (1997).

[14] "…the enhanced HIPC initiative will boost social spending…", quote from http://www.worldbank.org/hipc/progress-to-date/May99v3/may99v3.htm

[15] see International Monetary Fund and World Bank (1998).

was created in 1999. The thresholds for eligibility[16] are lower and the process simplified and accelerated. Debt relief is provided once *some* of the key reforms are implemented. A 3-year track record of good performance is no longer required. Also, poverty reduction is now explicitly included as a goal[17].

Some argue that highly indebted countries engage in "aid recycling" – with the full awareness and support of their donor countries – meaning that a share of official aid flows is used to repay old debt. The underlying reason for this behavior is to keep the debtor countries out of arrears on multilateral debt, since that could potentially lead to a withdrawal of funds by the donor community as a whole. Under these circumstances, debt relief can provide a way out of this vicious circle, and eliminate aid recycling altogether. And if the aid budget is not adjusted for the foregone debt repayments, debt relief is additional. Hence, debt relief also provides an opportunity to correct distorted incentive structures by freeing up part of the aid budget of the donor country, which then can distribute those "extra funds" to countries with good institutional structures and sound policies.

Since I am interested in the link between debt relief and foreign aid, I turn first to the aid allocation literature, which investigates the motivation and determinants of aid allocation. Schraeder et al. (1998) find that different determinants of aid allocation are important for different donors. The authors suggest that U.S. foreign aid policy in the 1980s is mostly driven by strategic (Cold War) interests, mainly in the Middle East. However, they also find a positive relationship between aid to some African countries and US trade with these countries. For France, colonial ties play an important role. Sweden's foreign aid allocation in the 1980s seems to be driven by ideological affinity of recipient countries as well as economic interests (again, there is a positive link between aid and trade). Alesina and Dollar (2000) investigates the same question with data from 1970 to 1994. The authors find that political and strategic considerations play at least as big a role in allocating foreign aid as economic need and "good policies" in recipient countries. In the Scandinavian countries, the

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[16] A country becomes classified as a HIPC once the net present value of the debt-to-export ratio exceeds 150% (previously 200-250% on a case-by-case basis) and the debt-to-revenue ratio exceeds 250% (previously 280%).

[17] For a more detailed overview on the design of the HIPC initiative, see Boote and Thugge (1997).

humanitarian aspect of aid dominates. Again, France puts more weight on colonial ties, while foreign aid policy in the US is dominated by strategic interests in the Middle East, with Egypt and Israel being the main aid recipients. This kind of behavior by some of the major donor countries clearly distorts the incentives of developing countries, since the rewards for "good policies" are small or non-existent. Furthermore, democratization increases aid flows, while foreign direct investment (FDI) responds more to economic factors like trade liberalization and improved property rights. McGillivray (2003) questions the methodology of earlier literature on aid allocation and suggests that the importance of strategic considerations for aid allocation during the cold war period is overstated. He argues that aid allocation might have been driven by developmental criteria all along despite contrary results in earlier literature.[18]

Aid allocation and its effectiveness are interrelated. Recent literature emphasizes "good policy" as the most important factor for aid to be effective in the sense of being growth-enhancing. Burnside and Dollar (2000) is a widely cited and influential paper in this literature. Its authors find aid to be effective in promoting growth if a country's fiscal, monetary and trade policies are sound. Svensson (1999) finds that a higher degree of political freedom and civil liberties makes aid more effective in promoting growth. Collier and Dollar (1998) suggest that 10 million people annually could be lifted out of poverty if aid would be allocated to poor, "good policy" countries, rather than to satisfy strategic, political and commercial interests. In a critique on the recent aid effectiveness literature, Easterly (2003) points out that the significant positive link between aid (conditional on good policies) and growth disappears when the original data set of the Burnside and Dollar (2000) paper is extended. Furthermore, Easterly (2001) questions the strong link between good policies and higher growth rates. Controlling for other factors, he finds that growth rates in developing countries have stagnated in the 80s and 90s, even though a number of typical policy measures have improved. He speculates that the increased level of indebtedness in developing countries may have been a reason for such stagnation.

[18] See, for example, Maizels and Nissanke (1984), McKinlay (1978), McKinlay and Little (1979).

If high indebtedness alone is really an impediment to growth, as argued in the debt overhang literature, debt relief might then be a possible solution. As previously described, proponents of the debt overhang theory argue that the removal of the debt overhang corrects distorted incentives for domestic investment.[19] Bird and Milne (2003) caution, however, that providing debt relief to highly indebted countries might simply redistribute resources to countries with a history of unsound macroeconomic policies. Hence, "bad policies" in the past would be rewarded ex-post by providing debt relief. The authors also question whether there is a debt overhang problem in low-income countries. They find that more highly indebted countries receive more official net transfers, not less. Hence, incentives might not be distorted for domestic investment. Easterly (2002) argues that debt relief initiatives in the past two decades have not helped the situation of HIPC countries. In some instances, these initiatives might even have promoted behavior worsening the debt situation of these countries.

Apart from the effects of debt relief on incentives, another concern is that debt relief might crowd out foreign aid receipts. For example, Cohen (2000) is concerned that aid flows will be cut as a result of the HIPC initiative. He argues that the nominal figures of debt relief overstate the true amount of additional resources available to poor countries. A "splitting up" of the accounting of debt relief is suggested: One part is the cleaning of the books of donor countries, i.e., a write-down of the debt that could not have been expected to be paid back. A second part will be accounting for the actual additional resources that become available through debt relief. Based on the Brady deals in the 1980s, Cohen attempts to estimate the market values of the debt of HIPC countries in order to answer the question how much debt was expected to be repaid. Hence, only debt relief that goes beyond the market value will provide additional resources to the HIPC countries. He finds that the market value of HIPC debt is far below its face value or net present value. Since HIPC debt relief is based on net present values, he warns against decreasing aid flows after the provision of debt relief. Furthermore, Sachs et al. (1999) lament the volatility of grants and new loans making planning for the developing countries harder.

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[19] See Krugman (1988) and Sachs (1986).

3 Empirical Model and Data Sources

There has been little empirical research on the *direct* implications of the HIPC initiative on resource flows to the eligible countries. Powell (2003) investigates whether debt relief activities lead to a decrease in aid flows received by low-income countries. He states that debt relief and aid allocation decisions were kept largely separate in the past, and are usually dealt with by different ministries in the donor countries (this has changed in recent years, however). Where this is the case, we should expect that in donor countries debt relief will not have much influence on aid budgets (at least in the short-run). Looking at data for 60 "IDA-only" countries[20] from 1996 to 2000, Powell finds that neither the level of official development assistance (ODA) nor official net transfers received is affected by debt relief provided by official and multilateral creditors. Hence, there seems to be additionality (in the sense the term is used in this paper). In his empirical analysis, the factors that do play a role in determining aid flows to a country are population size, and whether an IMF program is in place.

Birdsall et al. (2003) are mainly concerned about "selectivity", meaning whether donors will be selective and provide more aid to countries with good macroeconomic management. The authors use a sample of 37 Sub-Saharan African countries over the period 1977 to 1998. The countries are categorized into three groups: low debt countries, high debt countries with low multilateral debt, and high debt countries with high multilateral debt. As a variable for policy performance, they use the World Bank's Country Policy and Institutional Assessment (CPIA) data,[21] and alternatively, the policy index created by Burnside and Dollar (2000), which is based on publicly available data. They find that policy seems to matter little in determining net transfers. Only if interacted with the country category, policy matters. High multilateral debt countries receive higher net transfers when their policies are bad.

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[20] As previously mentioned these countries only receive loans from the International Development Association (the concessional lending arm of the World Bank) and usually have no access to private capital markets.

[21] The CPIA data set is not publicly available. It contains 20 components that can be grouped into 4 subgroups: Macroeconomic policies, structural policies, public sector management, and social inclusion.

3.1 Main Issues, Data and Methodology

In this paper, I assess the resource impact of debt relief on HIPC and non-HIPC countries before and after the implementation of the HIPC debt initiative in 1996. As mentioned previously, one of the goals of the HIPC debt initiative is to provide additional resources for social spending to the eligible countries. Again, the definition of additionality used in this paper is the following: There is full additionality if the net aid flow increases by the amount of debt relief granted. Whether there is additionality is an important policy question because poverty can only be reduced successfully if there are funds available. Since debt relief and foreign aid are imperfect substitutes, debt relief by itself, however, will not necessarily provide these additional resources. For example, suppose that – before debt relief is provided – part of the available aid budget is used to sustain the flow of debt service payments (i.e., "aid recycling" is present); in that situation, only a combination of debt relief and an aid budget that is not fully adjusted by the amount of debt relief leads to additional resources for the recipient countries. Another important and related issue is that of selectivity: Are HIPC countries with good macroeconomic policies "rewarded" by receiving more transfers than countries that qualify for the HIPC program, but are unsuccessful (or unwilling) in implementing reforms? I.e., will aid donors be more selective in the sense of giving aid *conditional on good policy* rather than according to their strategic or political interests as they have done in the past?

In order to address these issues, I investigate donor behavior using data on aggregate net transfers, official net transfers, and net official development assistance (net ODA) for 66 low-income countries – of which 40 countries are HIPC countries – over the time period 1989 to 2002. All debt-related and GDP data come from the World Bank's *Global Development Finance 2004* data set. Population data are taken from the World Bank's *World Development Indicators 2004*. Data on net official development assistance (ODA) are taken from the OECD's International Development Statistics 2004. I also use data from *Annual Freedom in the World Country Ratings 1972 through 2003* by Freedom House.

My sample consists of 66 "IDA-only" countries[22]. As previously mentioned, "IDA-only" generally means that a country has no access to private capital markets. I chose this restriction for two main reasons. First, the classification by the World Bank as "IDA-only" is a prerequisite for eligibility for the HIPC Debt Initiative. Second, since the HIPC initiative only deals with *official* bilateral and multilateral debt, choosing a set of countries with little if any private debt appears to be consistent with this criterion.

3.1.1 Descriptive Statistics

Table 2a compares the average values of the variables used in the regressions for HIPC and non-HIPC countries. The time period is split in 1996 when the original HIPC initiative is announced. The table provides a good comparison of the main characteristics of these two sets of countries Per capita GDPs were similar for the first period, but increased much faster in non-HIPC countries in the late 1990s and early 2000s. We see that debt stock and debt service have decreased significantly for the HIPCs, while both measures increased for non-HIPC countries. Furthermore, official development assistance for non-HIPCs dropped much more substantially (from about 4.5% of GDP to 2.3 % vs. 9.7% to 7.9% for HIPC countries), suggesting that in relative terms foreign aid might have been shifted away from non-HIPCs. As we would expect, relief and reductions in debt are much higher for HIPC countries after 1996, but they are also much higher before the implementation of the HIPC initiative. [23]

In table 2b, we have the same measures for two HIPC countries, Uganda and Ghana. Uganda received all treatments and successfully completed both the original and enhanced HIPC debt initiative. Ghana on the other hand reached the decision point of the enhanced HIPC initiative only in February 2002, and received debt relief after that. Hence, those two countries are a good example for a comparison of a country with a very good record in implementing key structural reforms (Uganda) and a country with a mediocre record

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[22] The International Development Association (IDA) provides interest-free loans and some grants to the world's poorest countries. IDA-only"

[23] All countries in the sample received some debt relief in the 1990s through the Paris Club.

(Ghana). Whether the HIPC debt initiative framework is responsible for all (or at least most) of the differences between those two countries is an open question, and beyond the scope of this paper. Nonetheless, the emerging pattern is suggestive. While Ghana's per capita GDP dropped by about 6 %, Uganda experienced an increase of about 21 %. The significant drop in debt service for Uganda is reflected by the massive increase in debt service relief. We also see the debt stock increasing rapidly in Ghana, from 77 % of GDP to almost 107%, while Uganda's situation improves significantly. The comparison of these two countries suggests that policy performance is rewarded under the HIPC initiative. I will test this more rigorously in section 4.

The dependent variables used in the following analysis are aggregate net transfers, official net transfers, and official development assistance, respectively. Net official development assistance (net ODA) is the first dependent variable considered. Funds being classified as ODA have to satisfy three criteria: First, they are provided by an official agency; second, the purpose of the assistance is economic development; and third, the assistance contains a grant element of at least 25 percent.[24] Debt relief, which – under OECD guidelines – is recorded as ODA is netted out for the purpose of my regressions. The second dependent variable used is official net transfers. These transfers consist of the sum of official net flows on long-term debt to official creditors, plus official grants minus official interest payments on long-term loans. Highly indebted poor countries have received positive official net transfers in the past; therefore it is interesting to see whether and how debt relief influenced these transfers. Finally, I use aggregate net transfers as a dependent variable. These transfers consist of net foreign direct investment, net portfolio equity flows, and official grants minus interest payments on long-term debt and FDI profits. All dependent variables, as well as debt stock, debt service, debt service and debt stock reduction, and OECD debt relief are measured as ratios of GDP.

[24] Using ODA as a direct measure for "foreign aid" has been criticized by several authors, mainly because of the arbitrary calculation of the grant element of concessional loans. See, for example, Chang et al. (1998), and Renard and Cassimon (2003).

3.1.2 Benchmark Regression

First, I investigate whether HIPC countries are treated differently compared to non-HIPC countries before and after 1996. As a benchmark, I start with a regression that includes only dummy variables:

$$(1) \qquad Y_{i,t} = \alpha + \delta_1 \times hipc_i + \delta_2 \times hipc96_{i,t} + \delta_3 \times post96_t + \eta \times time\_dummies + \varepsilon_{i,t}$$

As described above, $Y_{i,t}$ stands for official net transfers, aggregate net transfers and official development assistance, respectively. The coefficient on *hipc* tells us what the difference in transfers per GDP between HIPC and non-HIPC countries is on average before 1996. The coefficient on *hipc96* is the change in transfers per GDP for HIPCs since the start of the HIPC initiative in 1996 relative to before 1996. Hence, the sum of *hipc* and *hipc96* represents the difference between HIPC and non-HIPC countries in 1996 to 2002. Lastly, the dummy variable *post96* helps distinguish the transfer levels between 1989 to 1995 and 1996 to 2002.

3.1.3 Regression including Main Determinants of Transfers/Foreign Aid

In a second approach, I first estimate the following equation, including the determinants used in the earlier literature:

$$(2) \quad Y_{i,t} = \alpha + \beta \times X_{i,t} + \delta_1 \times hipc_i + \delta_2 \times hipc96_i + \delta_3 \times post96_t + \eta \times time\_dummies + \varepsilon_{i,t}$$

Again, the same dependent variables are used. X is a vector of the following variables: debt stock, debt service, logarithm of GDP, a country's share of the total population of the sample countries, debt stock and debt service reduction, an OECD debt relief variable, and a variable called "freedom", which is an index composed of the average of a political rights and a civic liberties indicator value.[25]

When running the regression with ODA as the left-hand side variable, I use the variable "OECD debt relief" as an alternative measure of debt relief[26]. As noted in previous

[25] Both are on a scale from 1 to 7, where a higher number means less "free".

[26] It is also taken from the OECD's International Development Statistics 2004 data set.

literature, using this OECD measure for debt relief is not ideal[27]. It will only provide a *lower bound for debt relief* because of the different reporting approaches among creditors. Some countries report the amount of debt relief only when a payment should have fallen due (i.e., over the lifetime of the loan that was forgiven), others report the total amount of debt relief in the year when it was granted.

Following Powell (2003), I control for the political environment in a country with the variable "freedom". This variable captures some institutional and political aspects in those countries.[28] The logarithm of GDP is included as a measure of poverty, since headcount data on poverty are not reliable in early years.[29] Previous studies have found that there is a small country bias, meaning that smaller countries tend to receive an over-proportional share of transfers. To control for this, I use the share of the total population of the sample.

3.1.4 Regressions distinguishing HIPC by Policy Performance

In my last set of regressions, I replace the dummy variable *hipc96* with a set of dummy variables that are proxies for a HIPC's progress within the debt initiative. As previously described, the two HIPC initiatives are multi-stage processes, where each of them has a decision and a completion point. The dummy variables each signify a particular level of progress, describing which points have been reached. These variables can be seen as a measure of good policy, because progress in the HIPC initiative is equivalent with implementing key structural reforms under IMF and World Bank guidance. The use of these dummy variables therefore tells us whether "good policy" is rewarded with higher transfers within the HIPC initiative.

The following model is being estimated:

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[27] For a discussion, see Powell (2003).

[28] Using the World Bank's Country Policy and Institutional Assessment data would be preferable, but – as previously mentioned – this data set is not publicly available.

[29] See Birdsall (2002).

$$(3)\quad Y_{i,t} = \alpha + \beta \times X_{i,t} + \delta_1 \times hipc_i + \delta_2 \times hipc96_{i,t} + \delta_3 \times post96_t + \sum_{n=1}^{6} \gamma_n \times hipc\_stage\_n_{i,t} + \eta \times time\_dummies + \varepsilon_{i,t}$$

The dummies for *hipc_stage_n* will tell us exactly how far a country has advanced at any point in time. The coefficient here is interpreted as the difference in transfers received by a country reaching a certain stage in this process and those of a HIPC country that has not advanced in the process.

4 Empirical Evidence

As mentioned earlier, my analysis focuses on these questions: First, is there any differential treatment for HIPC countries in comparison to the other low-income countries in the sample before and after the announcement and implementation of the HIPC debt initiative in 1996? Second, is aid allocation more selective within the HIPC countries, i.e., does relatively more aid go to "good policy" countries? Third, is debt relief additional? In terms of coefficients, I focus on the coefficients of *hipc*, *hipc96* and the policy performance dummies *hipc_stage_n*.[30]

4.1 Official Development Assistance (ODA)

Official development assistance comes closest to what is generally understood as foreign aid. In Figure 3, we see that – in per capita terms – more and more ODA is flowing to HIPC countries, while in non-HIPC countries, the per capita amounts increase slowly. When measured as a share of GDP (see Figure 4), ODA falls significantly faster between 1995 and 1997 for HIPC than for non-HIPC countries, temporarily narrowing the gap between the two groups of countries. However, the gap is increasing again from 1998 onwards. This is at least suggestive evidence that the HIPC debt relief initiative might be working in terms of providing additional (concessional) resources to the eligible countries.

[30] The variation of the variables is weighted by population size in order to minimize the influence of small island nations on the regression results.

The regression results for net ODA as the dependent variable are reported in Table 3. When using ordinary least squares and random effects, I find that HIPC countries receive more assistance than non-HIPC countries (by approximately 5% and 9% of GDP, respectively) before 1996. When going beyond the benchmark regression, there is only a significant change in 1996 to 2002 when using OLS, suggesting that this difference drops by around 3% to a 2% difference between HIPCs and non-HIPCs. In the fixed effects approach, *hipc96* is not significant. Looking at the coefficients of the policy performance variables *hipc_state_n*, no clear picture emerges. If foreign aid is allocated selectively, we would expect positive coefficients for all these policy dummies. Only the coefficients associated with the enhanced HIPC initiative are (mostly) positive, but almost none significantly so. This suggests that policy performance has at best no effect and at worst a negative impact on foreign aid flows to a HIPC country.

The coefficient of debt *service* per GDP is positive and highly significant for all three estimation techniques, suggesting that countries with a higher debt service burden receive more foreign aid. Only in the fixed effects approach, does a high debt *stock* lead to significantly lower foreign aid. A higher GDP is consistently linked with lower foreign aid. Since log(GDP) is our proxy for poverty, we would expect that a poorer country receives more foreign aid. The coefficient of OECD debt relief is positive, but not robust. Hence, debt relief does not crowd out aid flows. The population share variable is highly significant in all three specifications, but – unlike the other two approaches – the fixed effect model results in a negative coefficient. Hence, it is not clear whether there is a "small country bias".

4.2 Official Net Transfers

After increasing for about two decades, per capita official net transfers to HIPC countries started declining throughout the 1990s (see Figure 5). In the mid-90s, these transfers dropped to the level of non-HIPC countries. Figure 6, which is in absolute dollar terms, shows a similar picture – falling transfers to HIPCs until the mid-90s, stabilizing and then increasing. Transfers to non-HIPC countries are relatively stable throughout. Figure 7 suggests that after 1994 official net transfers per GDP dropped significantly for both HIPC and non-HIPC countries. The drop seems to have been more pronounced in HIPC

countries, though. More recently, official net transfers as a share of GDP have increased significantly more for HIPC countries.

Table 4 reports the results for official net transfers. As was the case for ODA, official net transfers before 1996 are significantly higher for HIPC countries than for non-HIPCs, regardless of estimation technique. The fixed effects approach suggests that HIPC still received higher transfers than non-HIPC countries (about 2% of GDP). The coefficient of *post96* confirms what we see in figure 7, namely that the overall level of official net transfers dropped after 1994. The policy dummies are mostly positive, but none are robustly significant in the expected direction. This suggests again, that policy performance – even if evaluated directly and within the HIPC initiative – seems to matter little!

Official net transfers respond positively and significantly to a higher debt stock per GDP. For each one percent (per GDP) increase in debt stock, a country receives between 1.5% and 3% more official net transfers. Neither debt service nor debt stock reduction has any robustly significant effect. This means that aid budgets did not respond to debt relief, hence there is additionality. The freedom variable is significant and negative for all three techniques. A more democratic country receives between 0.5 % (random effects and fixed effects) and 1.5 % (OLS) more transfers per GDP. The share of population shows the same behavior as before: significant and positive for OLS and random effects, but significant and negative for fixed effects. Finally, relatively wealthier countries (higher GDP) receive fewer transfers, again consistent with our expectations.

4.3 Aggregate Net Transfers

As suggested by figure 9, aggregate net transfers per GDP are higher in HIPC countries for the time period considered, but there is a significant drop for the period 1996-2002 especially for HIPC countries. Comparing Figures 7 and 9 suggests that the drop in aggregate net transfers is driven by the drop in official net transfers[31].

[31] When running a regression (not reported) with the difference between aggregate net transfers and official net transfers (i.e., non-official transfers) as the dependent variable, the coefficients on *hipc*, *hipc96* and *post96* are not significant.

In 1989-1995, aggregate net transfers are between 3.8% and 5.6% of GDP higher for HIPC countries than for non-HIPCs. This difference decreases for the 1996-2002 period by between 2.3% and 3% of GDP under OLS. sing random effects, there is no significant change. Even though the policy performance coefficients are mostly positive, only a few are significant for some specifications. Hence, overall, policy mattered little. Higher indebtedness leads again to bigger transfers. The coefficient on log(GDP) is consistently negative and relatively robust, meaning that poorer countries receive more transfers . As with official net transfers, more democratic countries receive higher aggregate transfers.

5 Conclusion

The empirical analysis yields several important results. First, good policy performance in the HIPC initiative has little or no effect on either official and aggregate net transfers or official development assistance. This result is consistent with earlier literature showing that aid allocation is driven by strategic and political, rather than developmental interests. Second, the HIPC initiative has not brought about a dramatic change in transfer flows to HIPC and non-HIPC countries. In general, HIPC countries still receive higher aid flows than non-HIPCs, even though the gap has narrowed in some instances. Third, debt relief did not impact aid inflows to low-income countries. Hence, debt relief provides additional resources since donors did not cut aid flows by the amount of debt relief provided. Also, debt relief has not significantly decreased ODA nor official and aggregate net transfers.

Taken together, these results have important policy implications. While aid flows declined significantly throughout the 1990s, my results indicate that donors' selectivity did not increase. That is, there is little evidence that aid allocation is driven by developmental rather than strategic and political interests. Furthermore, aid effectiveness can be increased by more selective behavior on the donors' side. Since debt relief in our sample did not lead to a crowding out of aid flows, deeper debt relief might not necessarily have detrimental effects on the aid level either. Additionally, removing the debt overhang completely corrects distorted incentives. Aid effectiveness can be increased significantly by providing more debt relief overall, and thereby "freeing up" foreign aid flows that were previously used for aid

recycling. These aid flows can then be allocated to countries with better macroeconomic policies.

The remaining results are largely consistent with earlier literature. Official development assistance is higher for countries that have a higher debt service burden, lower GDP, and are classified as Heavily Indebted Poor Countries. And countries with more political freedom and lower GDP receive higher aggregate net transfers. However, in contrast to earlier research, I find no small country bias in terms of aid and transfer inflows.

It is too early to judge the success of the HIPC debt initiative. The five countries that have emerged successfully from the initiative have done so only recently. It remains to be seen whether the current debt levels of these countries are sustainable.

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6 Tables

Table 1. List of Sample Countries

HIPC	Non-HIPC
Angola	Afghanistan
Benin	Albania
Burkina Faso	Armenia
Burundi	Bangladesh
Cameroon	Bhutan
Central African Republic	Cambodia
Chad	Cape Verde
Congo	Comoros
Congo, Dem Rep.	Djibouti
Côte d'Ivoire	Eritrea
Ethiopia	Georgia
The Gambia	Haiti
Ghana	Kiribati
Guinea	Kyrgyz Republic
Guinea-Bissau	Lesotho
Guyana	Maldives
Honduras	Moldova
Kenya	Mongolia
Lao PDR	Nepal
Liberia	Samoa
Madagascar	Solomon Islands
Malawi	Sri Lanka
Mali	Tajikistan
Mauritania	Timor-Leste
Mozambique	Tonga
Myanmar	Vanuatu
Nicaragua	
Niger	
Rwanda	
São Tomé Principe	
Senegal	
Sierra Leone	
Somalia	
Sudan	
Tanzania	
Togo	
Uganda	
Vietnam	
Yemen, Rep. of	
Zambia	

Table 2a. Descriptive Statistics

	HIPC countries			non-HIPC countries		
	1989-1995	1996-2002	% change	1989-1995	1996-2002	% change
Population (in Millions)	516.0	608.0	17.8	223.0	255.0	14.3
GDP (in Mio. USD)	139000	175000	25.9	66200	91800	38.7
GDP per capita (USD)	269	288	6.8	297	360	21.3
GDP growth*	2.6	4.3		4.0	3.0	
Debt Stock*	139.0	107.0	-23.0	40.3	41.0	1.7
Debt Stock Reduction*	0.4	1.4	262.8	0.0	0.0	-46.6
Debt Service*	3.8	3.5	-9.6	1.7	2.0	19.7
Debt Service Reduction*	1.3	2.9	127.7	0.1	0.0	-62.2
OECD Debt Relief*	0.8	0.8	0.1	0.2	0.2	7.2
Aggregate Net Transfers*	9.5	7.3	-23.7	4.8	4.0	-16.6
Official Net Transfers*	8.9	6.1	-31.4	4.6	3.2	-32.0
Official Development Assistance*	9.7	7.9	-18.4	4.5	2.3	-48.7

* in percent of GDP (and weighted by population)

Table 2b. Descriptive Statistics for HIPCs Uganda and Ghana

	Uganda			Ghana		
	1989-1995	**1996-2002**	**% change**	**1989-1995**	**1996-2002**	**% change**
Population (in Millions)	18.6	22.6	21.5	16.1	18.6	15.5
GDP (in Mio. USD)	4100	6020	46.8	6000	6490	8.2
GDP per capita (USD)	220	266	20.8	373	349	-6.4
GDP growth*	4.3	0.2		4.1	0.8	
Debt Stock*	75.4	62.5	-17.1	76.6	106.6	39.2
Debt Stock Reduction*	0.7	0.8	12.7	N/A	N/A	
Debt Service*	3.7	1.9	-50.1	6.0	6.9	13.8
Debt Service Reduction*	0.4	1.4	216.8	0.7	0.4	-36.7
OECD Debt Relief*	0.4	0.7	65.7	0.6	0.2	-59.8
Aggregate Net Transfers*	12.8	11.4	-11.0	10.3	8.9	-13.2
Official Net Transfers*	12.5	9.1	-27.3	9.0	7.0	-22.7
Official Development Assistance*	17.0	11.1	-34.4	11.1	9.6	-13.3

* in percent of GDP

Table 3. Official Development Assistance

	Ordinary Least Squares			Random Effects		Fixed Effects	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
hipc	0.069***	0.054***	0.055***	0.088***	0.090***		
	(0.011)	(0.009)	(0.009)	(0.025)	(0.026)		
hipc96	-0.007	-0.032***	-0.030***	-0.025	-0.027	0.004	-0.001
	(0.015)	(0.009)	(0.009)	(0.019)	(0.018)	(0.010)	(0.010)
post96	-0.031	-0.011	-0.013			-0.016	-0.013
	(0.022)	(0.014)	(0.013)			(0.013)	(0.013)
oDecPt		-0.012		-0.022		-0.036***	
		(0.015)		(0.021)		(0.012)	
oCmplPt		-0.005		-0.016		-0.043*	
		(0.015)		(0.023)		(0.022)	
oCmplPt & enhDecPt		-0.015		-0.015		-0.054***	
		(0.017)		(0.024)		(0.020)	
oCmplPt & enhCmplPt		0.036**		0.004		-0.019	
		(0.017)		(0.026)		(0.021)	
enhDecPt		0.02		0.004		0.016	
		(0.016)		(0.014)		(0.012)	
enhCmplPt		0.017		0.043		-0.009	
		(0.018)		(0.041)		(0.016)	
Debt Service		0.442***	0.425***	0.458***	0.461***	0.638***	0.634***
		(0.074)	(0.077)	(0.064)	(0.063)	(0.058)	(0.060)
Debt Stock		-0.012	-0.012*	0.003	0.003	-0.027**	-0.029**
		(0.008)	(0.007)	(0.006)	(0.006)	(0.013)	(0.013)
OECD Debt Relief		0.694***	0.720***	0.044	0.036	0.047	0.016
		(0.212)	(0.209)	(0.056)	(0.055)	(0.154)	(0.165)
log(GDP)		-0.068***	-0.069***	-0.070***	-0.071***	-0.082***	-0.089***
		(0.005)	(0.006)	(0.009)	(0.009)	(0.025)	(0.025)
Share(population)		0.007***	0.007***	0.011***	0.011***	-0.059**	-0.062**
		(0.001)	(0.001)	(0.004)	(0.004)	(0.025)	(0.025)
freedom		-0.010***	-0.010***	-0.005	-0.005	-0.002	-0.003
		(0.003)	(0.003)	(0.004)	(0.004)	(0.003)	(0.003)
Constant	0.077***	1.636***	1.652***	1.592***	1.601***	2.349***	2.530***
	(0.016)	(0.117)	(0.121)	(0.178)	(0.181)	(0.661)	(0.639)
Observations	828	828	828	828	828	828	828
R-squared	0.18	0.57	0.56			0.83	0.82

Heteroskedasticity-robust standard errors in parentheses.Time dummies are included, but are not reported.
* significant at 10%; ** significant at 5%; *** significant at 1%

Definitions for "hipc_status"
oDecPt = reached decision point in original HIPC initiative
oCmplPt = reached completion point in original HIPC initiative
oCmplPt+enhDecPt = reached completion point in original and decision point in enhanced HIPC initiative
oCmplPt+enhCmpPt = reached completion point in original and enhanced HIPC initiative
enhDecPt = reached decision point only in enhanced HIPC initiative
enhCmplPt = reached completion point only in enhanced HIPC initiative

Table 4. Official Net Transfers

	Ordinary Least Squares			Random Effects		Fixed Effects	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
hipc	0.043***	0.037**	0.039***	0.040**	0.041**		
	(0.008)	(0.008)	(0.008)	(0.016)	(0.017)		
hipc96	-0.011	-0.026**	-0.022***	-0.007	-0.008	0.022**	0.021**
	(0.011)	(0.008)	(0.008)	(0.011)	(0.010)	(0.010)	(0.010)
post96	-0.024	-0.006	-0.009	-0.055***	-0.046***	-0.049***	-0.052***
	(0.016)	(0.016)	(0.016)	(0.015)	(0.015)	(0.014)	(0.014)
oDecPt		0.007		0.026		-0.01	
		(0.014)		(0.022)		(0.012)	
oCmplPt		0.001		0.002		-0.021	
		(0.014)		(0.024)		(0.019)	
oCmplPt & enhDecPt		-0.003		-0.001		-0.021	
		(0.026)		(0.024)		(0.015)	
oCmplPt & enhCmplPt		0.066		0.044		0.029	
		(0.048)		(0.027)		(0.036)	
enhDecPt		0.013		-0.028**		0.009	
		(0.013)		(0.014)		(0.013)	
enhCmplPt		0.040**		0.067		0.009	
		(0.012)		(0.043)		(0.014)	
Debt Service		-0.066	-0.089	-0.089	-0.079	0.08	0.072
		(0.051)	(0.056)	(0.060)	(0.060)	(0.062)	(0.060)
Debt Stock		0.016*	0.015**	0.029***	0.029***	0.022*	0.021*
		(0.007)	(0.006)	(0.003)	(0.003)	(0.012)	(0.012)
Debt Service Reduction		0.037	0.031	0.022	0.004	0.04	0.038
		(0.021)	(0.021)	(0.043)	(0.042)	(0.030)	(0.030)
Debt Stock Reduction		0.149**	0.169***	0.018	0.032	-0.003	0.005
		(0.050)	(0.042)	(0.039)	(0.039)	(0.058)	(0.050)
log(GDP)		-0.045**	-0.045***	-0.047***	-0.047***	-0.007	-0.008
		(0.004)	(0.004)	(0.006)	(0.007)	(0.022)	(0.022)
Share(population)		0.004**	0.004***	0.006*	0.006*	-0.086***	-0.082***
		(0.001)	(0.001)	(0.003)	(0.004)	(0.022)	(0.022)
freedom		-0.014**	-0.015***	-0.005*	-0.005*	-0.005**	-0.006**
		(0.002)	(0.002)	(0.003)	(0.003)	(0.003)	(0.003)
Constant	0.061***	1.104**	1.111***	1.111***	1.111***	0.725	0.737
	(0.012)	(0.085)	(0.087)	(0.130)	(0.137)	(0.545)	(0.532)
Observations	828	828	828	828	828	828	828
R-squared	0.09	0.47	0.46			0.73	0.73

Heteroskedasticity-robust standard errors in parentheses.Time dummies are included, but are not reported.
* significant at 10%; ** significant at 5%; *** significant at 1%

Definitions for "hipc_status"
oDecPt = reached decision point in original HIPC initiative
oCmplPt = reached completion point in original HIPC initiative
oCmplPt+enhDecPt = reached completion point in original and decision point in enhanced HIPC initiative
oCmplPt+enhCmpPt = reached completion point in original and enhanced HIPC initiative
enhDecPt = reached decision point only in enhanced HIPC initiative
enhCmplPt = reached completion point only in enhanced HIPC initiative

Table 5. Aggregate Net Transfers

	Ordinary Least Squares			Random Effects		Fixed Effects	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
hipc	0.049***	0.038**	0.044***	0.054***	0.056***		
	(0.010)	(0.009)	(0.010)	(0.019)	(0.020)		
hipc96	-0.013	-0.030**	-0.023**	-0.024	-0.019	-0.005	-0.005
	(0.013)	(0.011)	(0.010)	(0.015)	(0.014)	(0.014)	(0.013)
post96	-0.015	0.005	0	-0.026	-0.009	-0.008	-0.008
	(0.019)	(0.019)	(0.019)	(0.020)	(0.020)	(0.018)	(0.018)
oDecPt		-0.007		0		-0.02	
		(0.021)		(0.029)		(0.012)	
oCmplPt		0.018		-0.011		-0.006	
		(0.019)		(0.032)		(0.015)	
oCmplPt & enhDecPt		0.029		0.016		-0.008	
		(0.027)		(0.032)		(0.018)	
oCmplPt & enhCmplPt		0.101		0.074**		0.054	
		(0.057)		(0.037)		(0.041)	
enhDecPt		0.030*		0.014		0.019	
		(0.015)		(0.019)		(0.014)	
enhCmplPt		0.071**		0.09		0.012	
		(0.016)		(0.058)		(0.018)	
Debt Service		-0.078	-0.126	-0.129	-0.137*	0.024	0.008
		(0.081)	(0.087)	(0.080)	(0.079)	(0.082)	(0.079)
Debt Stock		0.016*	0.015*	0.024***	0.024***	0.01	0.009
		(0.008)	(0.008)	(0.004)	(0.004)	(0.018)	(0.018)
Debt Service Reduction		0.007	-0.002	-0.031	-0.033	0.015	0.011
		(0.025)	(0.025)	(0.057)	(0.057)	(0.036)	(0.035)
Debt Stock Reduction		0.166**	0.195***	0.054	0.062	-0.037	-0.021
		(0.050)	(0.046)	(0.053)	(0.052)	(0.060)	(0.046)
log(GDP)		-0.049**	-0.050***	-0.049***	-0.049***	-0.014	-0.016
		(0.005)	(0.005)	(0.008)	(0.008)	(0.030)	(0.029)
Share(population)		0.005**	0.005***	0.007*	0.007*	-0.023	-0.014
		(0.001)	(0.001)	(0.004)	(0.004)	(0.025)	(0.025)
freedom		-0.010**	-0.012***	-0.011***	-0.012***	-0.007*	-0.007**
		(0.003)	(0.003)	(0.004)	(0.004)	(0.003)	(0.003)
Constant	0.055***	1.165**	1.196***	1.159***	1.153***	0.565	0.55
	(0.014)	(0.102)	(0.103)	(0.153)	(0.158)	(0.702)	(0.683)
Observations	828	828	828	828	828	828	828
R-squared	0.07	0.37	0.35			0.63	0.63

Heteroskedasticity-robust standard errors in parentheses.Time dummies are included, but are not reported.
* significant at 10%; ** significant at 5%; *** significant at 1%

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enhCmplPt = reached completion point only in enhanced HIPC initiative

7 Figures

Figure 1:

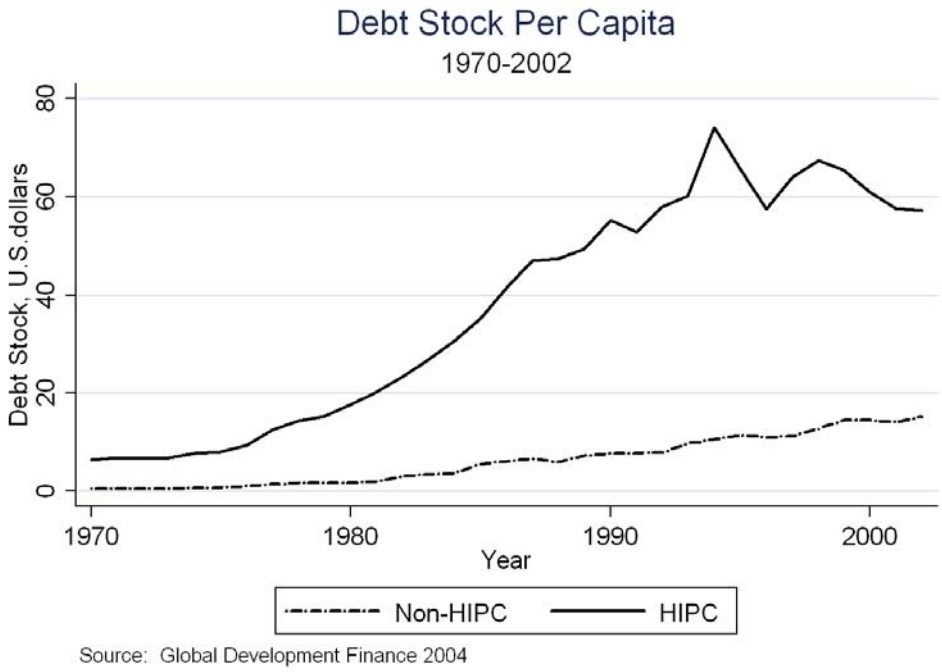


Figure 2:

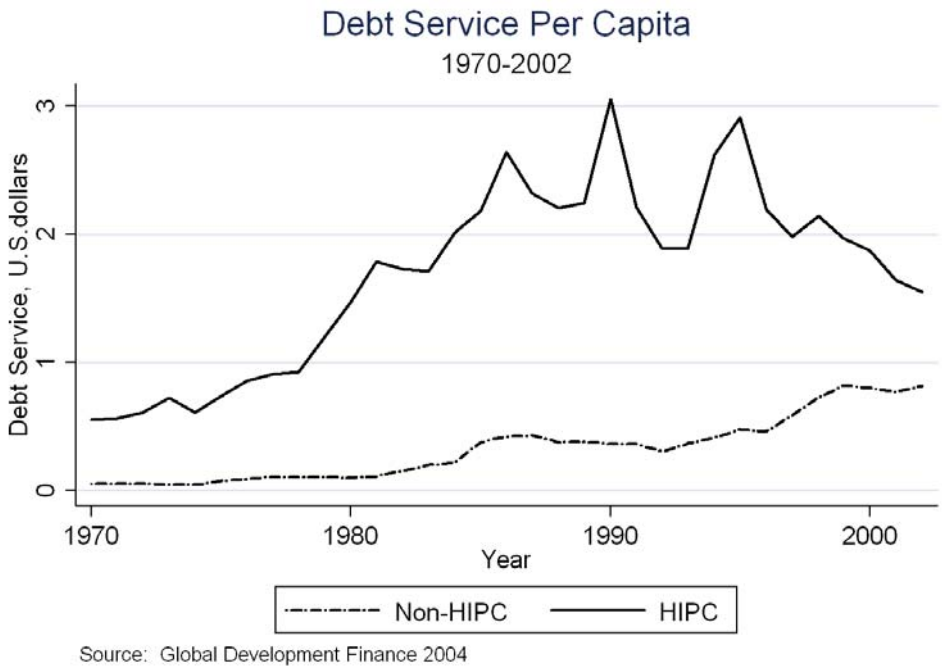
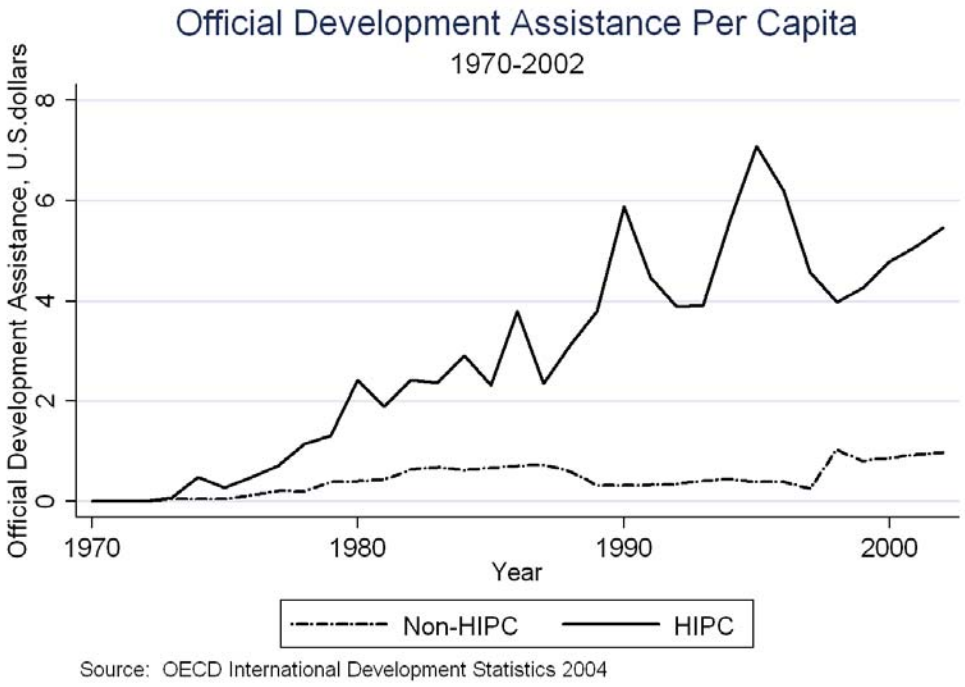
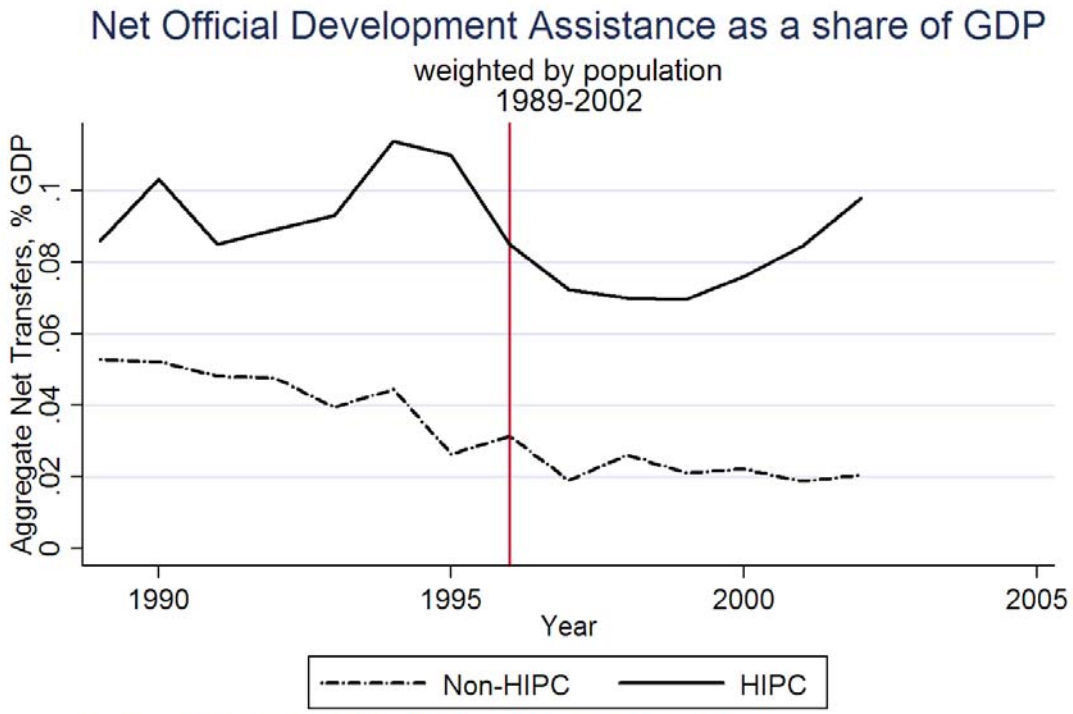


Figure 3:



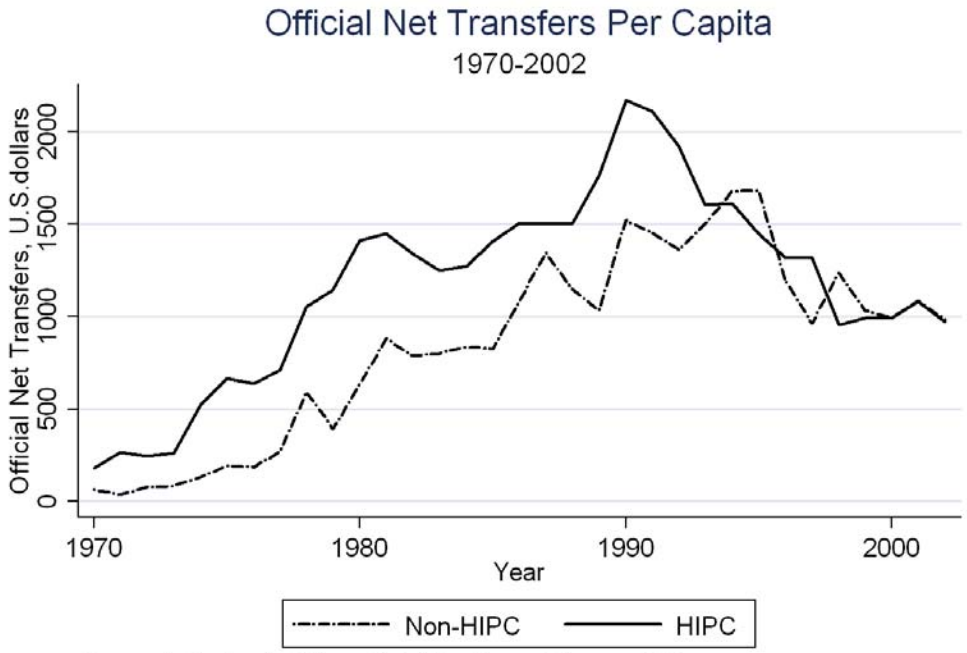
Source: OECD International Development Statistics 2004

Figure 4:



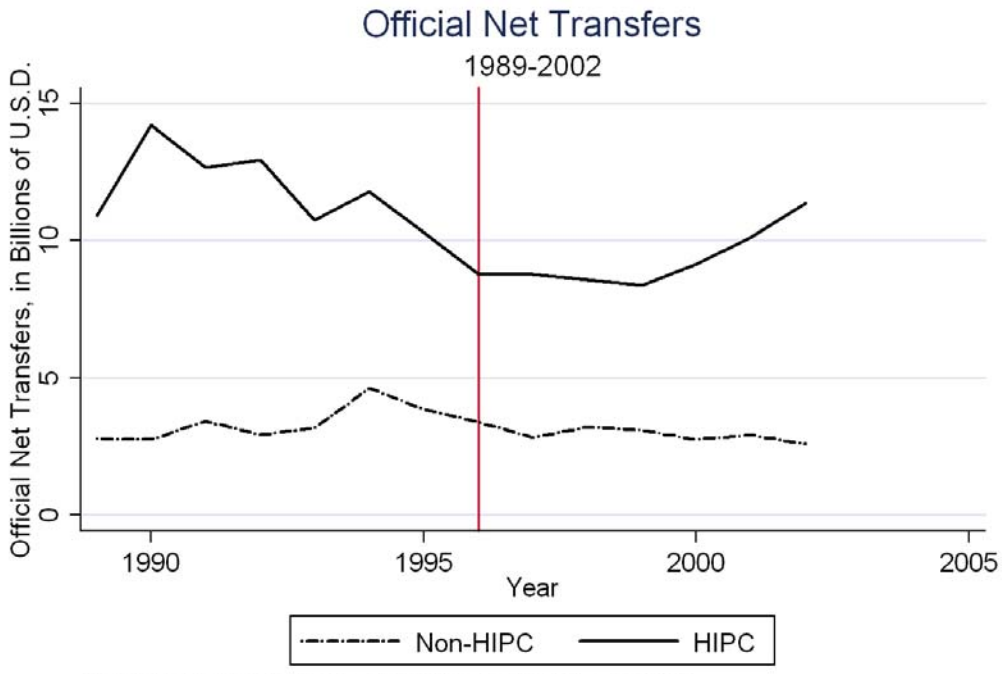
Source: Author's calculations, Global Development Finance 2004

Figure 5:



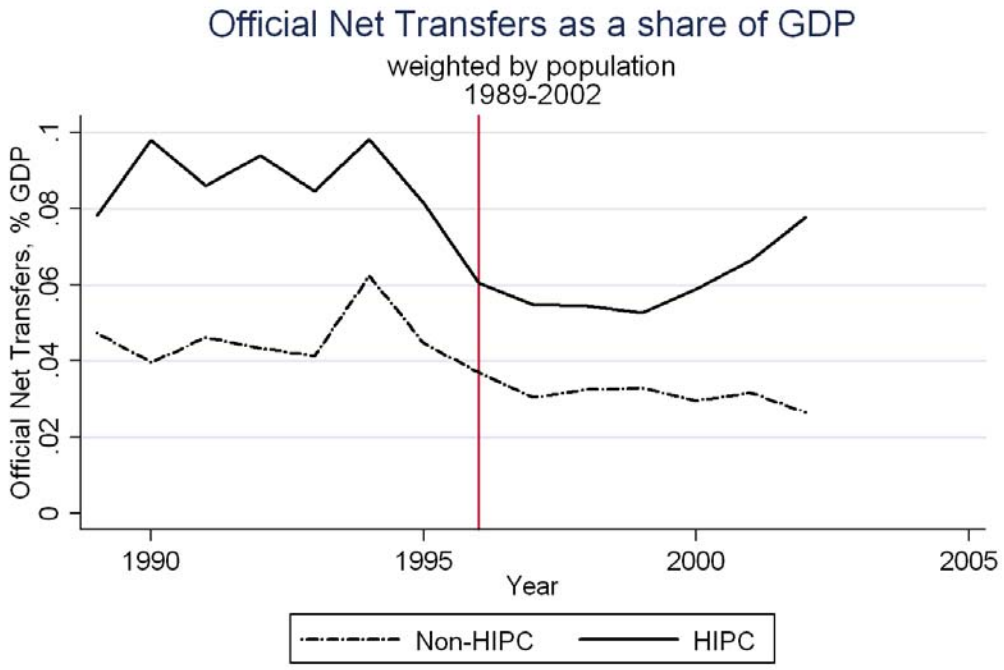
Source: Author's calculations, Global Development Finance 2004

Figure 6:



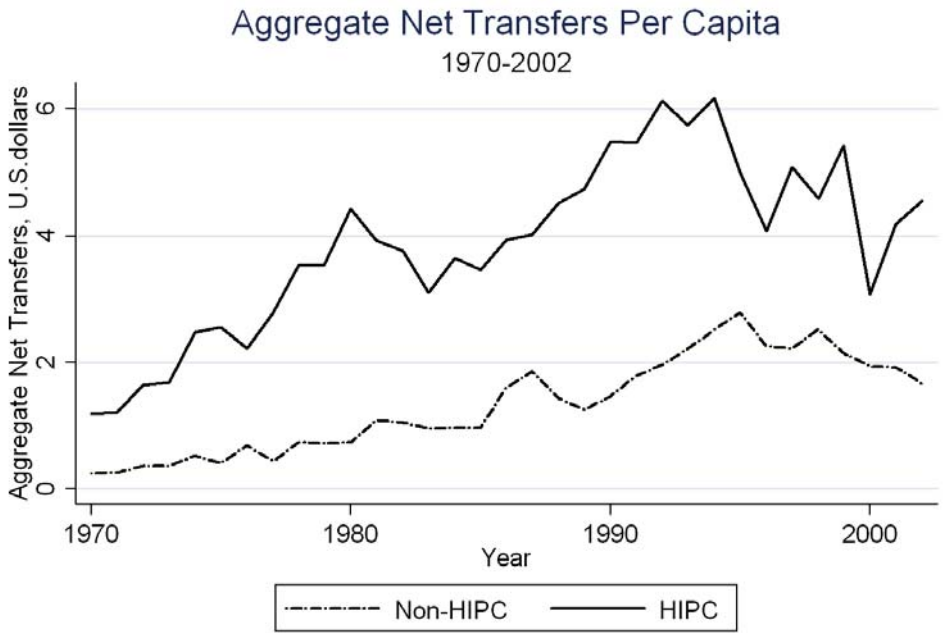
Source: Author's calculations, Global Development Finance 2004

Figure 7:



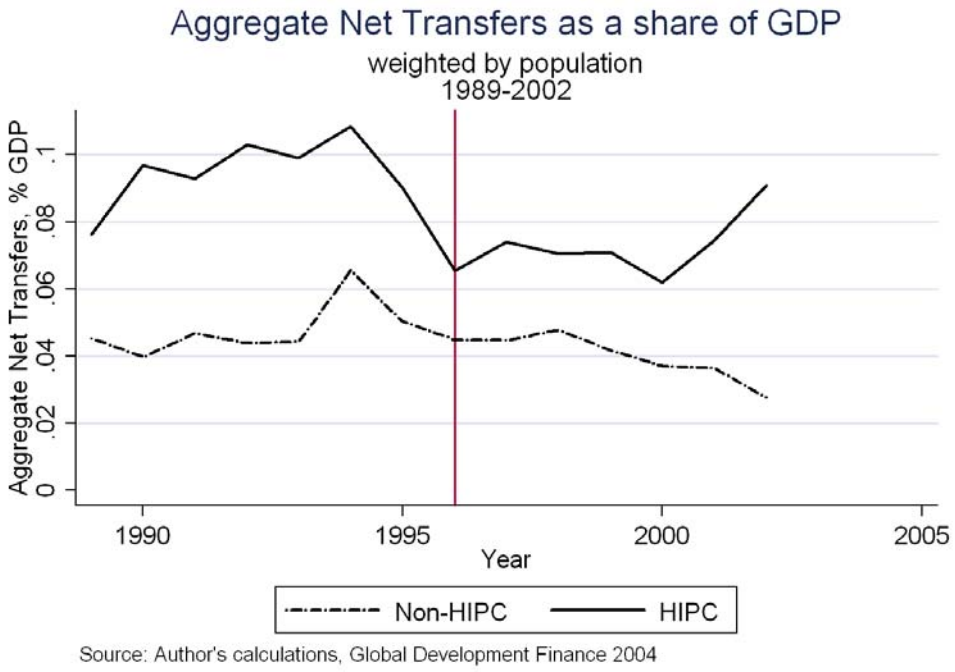
Source: Author's calculations, Global Development Finance 2004

Figure 8:



Source: Global Development Finance 2004

Figure 9:



Source: Author's calculations, Global Development Finance 2004