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Abstract

We investigate whether defensive lending and defensive granting motivated the transfer of resources by official donors to low income countries. We estimate a dynamic panel of 75 low-income IDA and IDA-Blend countries for the period 1982 to 2008, where the sample includes 41 HIPC and a control group of other 34 low-income countries. Our results point to no evidence of defensive lending as opposed to strong evidence of defensive granting. Both bilateral and multilateral donors reduce their loans as the debt they hold increases (where such "correction" is actually weaker in the case of multilateral loans to HIPC). Official donors provide more grants as multilateral debt increases where this effect is significant only for debt-ridden HIPC countries. This result is consistent with a substitution of grants for loans and the new approach to debt sustainability, but questions the efficiency and selectivity of the aid policy.

Keywords: debt relief, foreign aid, highly indebted poor countries.

JEL Classification: C23, F34, F35, O19.

1 Introduction

The aid architecture for low-income countries has been substantially redesigned over the last decade. Debt relief initiatives, such as the HIPC and MDRI initiatives, have become a cornerstone of the new strategy. Indeed, the consensus view has emerged within the donor community that poor countries' debt write-offs are a precondition for a more effective aid policy, while the debate has moved to the loans versus grants controversy (e.g., Bulow and Rogoff, 2005; Radelet, 2005; Cohen et al. 2007; Johansson, 2010). The assessment of debt relief, however, is much more controversial among economists as witnessed by the large theoretical and empirical literature that discusses arguments in favor and against debt relief. A strong argument in favor of debt relief is that it removes the creditors' incentives to engage in defensive lending, that is to provide new loans (and aid) to allow debt-ridden countries to refinance their debt service obligations and avoid default.

Indeed, one of the explanations for the (overall) disappointing results on the effectiveness of the HIPC Initiative lies with the providers of concessional loans and grants who did not do enough to ensure that such transfers were efficiently allocated across countries and efficiently invested by recipient countries.[1] Therefore, defensive lending may explain why debt relief have been preferred to other forms of aid (it has little or no cost - Michaelowa (2003)) and, more importantly, why the effects of debt relief, both in terms of growth and long-term fiscal sustainability, have been limited so far. To the extent that loans and grants are motivated by defensive lending, a main advantage of debt relief is that of increasing the transparency of aid policy possibly inducing a greater future selectivity by donors and lenders.

Although this theoretical argument is now fairly well established, the extent to which defensive lending had, in fact, distorted the allocation of aid ultimately remains an empirical issue. The aim of this paper is to examine whether bilateral and multilateral donors

engaged in defensive lending (and defensive granting) by looking at aid flows, i.e., concessional loans and grants, to low-income IDA and IDA-Blend countries over the period 1982-2008. In particular, we examine whether defensive lending (and granting) distorted financial assistance in favor of HIPC countries.

Despite its popularity, the defensive lending hypothesis has received scant attention in the empirical literature on the determinants of aid flows. Bird and Milne (2003) find evidence of a positive correlation between external debt and aid (loans plus grants). Most contributions, however, focus on the relationship between the disbursements of new loans (gross of repayments) and total debt service, i.e., the sum of interest and principal repayments. Lerrick (2005) and Ratha (2005) find a positive correlation between new loans and total debt service. Cohen and Reisen (2007) show that this correlation is stronger in the case of multilateral loans than for bilateral and private loans. Geginat and Kraay (2007) also find a strong correlation between IDA loans and service payments on outstanding IDA debt, but provide several arguments why this correlation should not be interpreted as evidence of defensive lending.

Using a different approach, Birdsall et al. (2003) investigate whether high debt levels were a main determinant of net resource flows to Sub-Saharan African countries over the period 1978-98. Unlike in other studies, Birdsall at al. consider loans net of interest and principal repayments and, realizing that grants can be used to free resources in the recipients' budget to service the debt, they focus on net transfers, i.e., on the sum of grants and net loans. They find that net transfers were higher in poorer and smaller countries, but the quality of their economic policy mattered little in explaining net transfers, as donors, especially bilaterals, made greater transfers to countries with high multilateral debt, despite their bad policies. Finally, Devarajan et al. (1999) provide evidence that 30% of aid in the period 1975-99 has been used to service the external debt. This evidence suggests that a "defensive granting" hypothesis should be investigated as well.

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In this paper, we further investigate whether defensive lending and defensive granting motivated the transfer of resources by official donors to low income countries by estimating the effect of debt and its composition by type of creditors on net loans and grants, while controlling for economic performance and institutions and for country characteristics. More specifically, we estimate a dynamic panel of 75 low-income IDA and IDA-Blend countries for the period 1982 to 2008, where the sample includes 41 HIPC countries and a control group of other 34 low-income countries. This allows us to examine whether the allocation of net loans and grants to HIPC has been different compared to other low-income countries. Our contribution to the related literature is threefold.

First of all we provide a more rigorous test of defensive lending. A main problem in investigating whether defensive lending has motivated aid flows to highly indebted countries is the lack of a theoretical definition that can be tested empirically. In Section 3 we motivate our choice of considering loans net of interest and principal repayments and we show that the reaction of net loans to debt provides a simple test of defensive lending.

Then, although we focus- as Birdsall et al. (2003)- on net resource flows and distinguish between multilateral and bilateral donors, we examine net loans and grants separately. Indeed, despite official loans to low income countries are, in most cases, concessional and, as such, a part of aid, they are inherently different from grants, if anything because loans must be repaid.

Finally, the use of a dynamic panel is new in this kind of analysis and allows us to reach more accurate and robust conclusions regarding the behavior of bilateral and multilateral institutions. Indeed, a strong dependence of net loans and grants from the level of debt, in the static specification, might simply reflect the autocorrelation of loans and grants that are typically disbursed in a number of installments over time.

Our results point to no evidence of defensive lending as opposed to strong evidence of

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defensive granting. Both bilateral and multilateral donors reduce their *loans* as the debt they hold increases (where such "correction" is actually weaker in the case of multilateral loans to HIPC). Official donors provide more *grants* as multilateral debt increases where this effect is significant only for debt-ridden HIPC countries. This result is consistent with a substitution of grants for loans and the new approach to debt sustainability, but questions the efficiency and selectivity of the aid policy (i.e., debt is an important driver of aid).

Estimating the same model over a *reduced sample,* which includes the years before the start of the Enhanced HIPC Initiative (1982-1999), which marks the beginning of a greater effort in debt reduction, we find some (albeit weak) evidence of defensive lending (and confirm the evidence on defensive granting). As in Birdsall et al. (2003) we find that higher multilateral debt increases bilateral net loans to HIPC, despite their bad policy, while multilateral net loans decrease as multilateral debt share increase but such "correction" is smaller for HIPC (as in the full sample).[2] Furthermore, comparing the results of the two samples, we do not find substantial differences concerning the changes in the sensitivity of the aid allocation policy with respect to poverty, the debt burden or the quality of policies and institutions (as measured by the CPIA index).

This paper is organized as follows. Section 2 contains some descriptive evidence on net loans and grants while in Section 3 we present a more rigorous definition of defensive lending. Section 4 develops the empirical framework and the results are discussed in Section 5. Finally, Section 6 concludes.

2 Loans and grants: descriptive evidence

To estimate the net transfers that debtor countries received over the years we must examine the evolution of net loans, that is, the difference between new loans and total debt

service (i.e., the sum of interests and principal repayments). We call this difference net loans instead of net transfers (which is the definition provided by the Global Development Finance, GDF) to make clear that net loans do not include grants, which are the other important source of funds to low-income countries. To provide further insight, net loans can be distinguished by type of creditors.[3] To this end, we focus on the distribution of long-term net loans, since the GDF statistics of the World Bank provides disaggregated data only for this type of loans.

Long-term net loans to HIPC, disaggregated by type of creditors, are displayed in *Figure 1*.[4] Both bilateral and private net loans started decreasing since the beginning of the eighties. While private net loans were negative almost throughout the whole period (they became positive in second half of the new millennium), bilateral net loans became negative in the mid nineties (and positive again only in the last year of the sample). Positive long-term net loans to HIPC were then ensured by multilateral organizations. International financial institutions played a crucial role in maintaining a positive flow of funds to HIPC. In turn, multilateral net loans decreased dramatically after the second half of the 2000s (corresponding with their greater involvement in debt relief initiatives after the Enhanced HIPC Initiative, in 1999).[5]

Figure 1: HIPC: Net Loans (percent of GDP) - Country Average

A full picture of net resource flows from the international community to HIPC requires examining grants, which represent the most important component of foreign aid and a clear alternative to net loans as a source of funding for HIPC.[6] *Figure 2* presents the evolution of grants (net of debt forgiveness and technical cooperation) disaggregated by type of donors, which are provided by the Development Assistance Committee of the OECD, as the GDF statistics of the World Bank does not contain such a distinction.[7]

Over the last two decades, grants have clearly been the most important transfers

to HIPC. As grants kept rising until the mid nineties, they compensated the fall in net loans over the period between 1984 and 1997, making stable the "total resources inflow". Bilateral and multilateral grants show a similar pattern: both had been rising since the eighties, then they fell substantially in the second half of the nineties to start increasing again since the early 2000s.[8] Evidence on net loans and grants clearly shows that bilateral creditors, unlike private creditors who pulled out from HIPC, agreed to switch from loans to grants. *Figure 2* confirms that bilateral grants continued to flow into these countries, thereby compensating for the fall of net loans.

Figure 2: HIPC: Grants (percent of GDP) - Country Average

Figure 3 shows the evolution of debt ratios of HIPC disaggregated by type of creditors. While private debt was quite stable (and low throughout the whole period), *Figure 3* documents a rise in official debt ratios between 1988 and 1994. After 1994, bilateral debt started to steadily decrease while multilateral debt began to fall only ten years later. The rising debt held by multilateral organizations replaced the amount of debt held by other creditors.

Figure 3: HIPC: Debt (percent of GDP) - Country Average

This debt increase is surprising, as it occurred at a time when bilateral official creditors pledged to reduce the burden of poor debtor countries under the "Toronto terms" (1988), "London terms" (1991) and "Naples terms" (1994). In fact, traditional debt rescheduling did reduce the net present value of debtors obligations (e.g., see Daseking and Powell, 1999) but the effective "relief" was modest and certainly below expectations. More importantly, in the same years, debt relief was offset by a greater amount of new (multilateral) borrowing and grants. This raises the issue of whether resources have been moved away from the indebted countries to their international creditors (negative transfers) or resources have continued to flow into and benefit these countries (positive

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transfers).[9]

This evidence certainly raises the issue of what motivated the increasing involvement of multilateral organizations in the HIPC debt problem. Humanitarian reasons certainly provide a possible explanation. A second explanation is that a substitution of multilateral for bilateral debt may increase the leverage of the international community on the HIPC. Indeed, multilateral loans are conditional on the adoption of reforms and adjustment programmes and multilateral organizations are senior creditors because default on their debt may lead to the exclusion from future lending and from other forms of aid. Finally, the behavior of multilateral creditors can be explained by "defensive lending". Multilateral organizations may have intervened with the main goal of avoiding default and thus the "embarrassment" of losses in their budgets and failure of aid policy.

3   How to Measure Defensive Lending

A main problem in investigating whether defensive lending has motivated aid flows to highly indebted countries is the lack of a theoretical definition that can be tested empirically. Defensive lending is usually defined as the practice of providing new loans (and grants) to allow the borrower to refinance existing debt-service obligations with the aim of avoiding default. According to this definition, Geginat and Kraay (2007) claim that defensive lending implies that new loan disbursements should be equal to the total debt service, and thus argue in favor of estimating gross loan disbursements as a function of total debt service, as done in Ratha (2005) and Cohen and Reisen (2007).

This approach is, however, unsatisfactory for a number of reasons. First of all, detecting a positive correlation between new loans and total debt service does not provide a direct test of defensive lending and may not be very informative. For instance, some positive correlation may naturally arises as new debt is issued to finance maturing liabilities

without necessarily implying Ponzi scheme financing. Morever, this correlation would be sensitive, for any given debt level, to its maturity distribution and its cost. This raises the issue of how strong should be the correlation of new loans to the debt service for lending to be deemed defensive Although Geginat and Kraay (2007) argue that new loans should move one to one with the total debt service, it is easy to see that this may not be the case. By definition, new loan disbursements, LD_t, are equal to the current debt stock, inclusive of new loans, B_t, and the stock of unmatured debt carried over from the previous period, B_{t-1}^U, that is

$$LD_t \equiv B_t - B_{t-1}^U, \tag{1}$$

while debt evolves according to the following equation:

$$B_t = i_{t-1}B_{t-1} + B_{t-1}^M + B_{t-1}^U + X_t - G_t - FDI_t \tag{2}$$

where, $i_{t-1}B_{t-1}$ are the interest payments, B_{t-1}^M is the debt maturing in the current period, X_t is the primary (trade) deficit, G_t are grants and FDI_t is foreign direct investment.

Then, combining equations (1) and (2) shows that new loan disbursements are equal to:

$$LD_t = i_{t-1}B_{t-1} + B_{t-1}^M + X_t - G_t - FDI_t \tag{3}$$

Equation (3) suggests that if FDI and/or grants, G_t, are sufficiently high to cover the primary (trade) deficit, X_t, and finance part of the total debt service, $i_{t-1}B_{t-1} + B_{t-1}^M$, then a defensive strategy can be implemented by providing an amount of new loans lower than the debt service. By contrast, supposing that new loans are equal to the total debt service, the nominal debt stock will grow at a rate equal to the nominal interest rate i and the debt-to-GDP ratio will grow at the rate $r_{t-1} = i_{t-1} - \gamma_t$, where γ_t is the rate of growth of nominal GDP (in dollars). Then, if nominal growth were higher than the (concessional) cost of debt service, a roll over policy would set the debt-to-GDP ratio on a sustainable decreasing path and should not be stigmatized as defensive lending.

To overcome this problem we focus on net loans, $L_t = LD_t - i_{t-1}B_{t-1} - B^M_{t-1}$ (i.e., new loans net of interests and principal repayments) and rely on the approach to debt sustainability proposed by Bohn (1998, 2005). Substituting the definition of net loans in equation (1), and measuring all variables relative to GDP, we have that the debt-to-GDP ratio is equal to

$$B_t = (1 + r_{t-1})B_{t-1} + L_t \tag{4}$$

As shown by Bohn, a sufficient condition for debt sustainability is that net loans L_t (the primary deficit) react negatively to the stock of debt B_{t-1}. This suggests to estimate the following simple reaction of net loans (relative to GDP) to the debt ratio:

$$L_t = -\rho B_{t-1} \tag{5}$$

A negative reaction, $\rho > 0$, of net loans to the stock of debt is is a sufficient condition for debt sustainability in that it makes the debt grow at a slower rate than r_t, i.e. $B_t = (1 + r_{t-1} - \rho)B_{t-1}$, and thus ensures that the transversality, No-Ponzi game, condition holds.

As no reaction of net loans to debt, should be expected under defensive lending, the null hypothesis that the debt coefficient is $\rho = 0$ provides a simple test of the defensive lending hypothesis. Moreover, the point estimate of the debt coefficient, ρ, in equation (5), offers a simple measure of the extent of the correction that can be easily compared to the real (net of growth) interest rate r_t to assess the extent of debt stabilization efforts.

4 A Model of Net Loans and Grants Determination

In this section we examine the determinants of net loans and grants provided by multilateral and bilateral donors to IDA and IDA-blend countries focusing, in particular, on the role of debt and its composition by type of creditors. Unlike in Birdsall et al. (2003) who

focus on aggregate net transfers, we consider loans and grants separately, explicitly recognizing that loans are inherently different from grants in that loans must be repaid. Data on loans are from the GDF statistics of the World Bank; data on grants come from the Development Assistance Committee (DAC) of the OECD. Further details on our variable definitions and sources and some descriptive statistics are reported in the Appendix.

We consider new loans net of interest and principal repayments that are referred to as "net transfers on external debt" in the GDF statistics. Net loans give the amount of disbursements that are left to the borrowers once they have paid for the service of their debts. Hence, we take into account the fact that most of the new credit flows back to the creditors in the form of interests and principal repayments. As we abstract from any gross lending made with the purpose of allowing the borrowers to fulfil their debt payment obligations, we take for granted the positive correlation between gross loans and total debt service found in previous studies and investigate whether net loans decrease with the level of debt. As shown in Section 3, the absence of a negative reaction of net loans to debt (or a positive one) can be taken as evidence of defensive lending.

We restrict our attention to long-term loans (and debt) because data on the distribution by type of creditors are not available for short-term debt, which is, however, a minor component of total debt.[10] We take grants, disaggregated by type of donors, net of both technical cooperation and total debt forgiven. We exclude technical cooperation from total grants because it is the least fungible form of aid and thus unlikely to free budget resources for debt service. We also exclude debt forgiven because its motivation is clearly opposite to defensive lending.[11] Moreover, debt forgiveness, though classified as grant in the DAC-OECD statistics, does not free up a corresponding amount of resources to be used in the immediate future, but only the debt service.(i.e., the interests and the amount of debt to be redeemed in that period).

We estimate a dynamic panel of 75 IDA and IDA-Blend countries for the period 1982

to 2008 with both country-specific effects and time effects. The sample includes 41 HIPC countries and a control group of other 34 low-income countries (listed in the Appendix).[12] This allows us to test for possible differences in the behavior of official donors regarding their allocation of aid to HIPC as compared to other low-income countries. The reason we start our analysis in 1982 is that the debt crisis of the early 1980s arguably marked a shift in regime. We also estimate our model over a reduced sample, that is over the period 1982-1999. The HIPC Initiative was strengthened in 1999, the year 1999 then marks a change in the debt strategy towards a greater effort in debt reduction.

We choose a dynamic specification –i.e., we include a lag of the dependent variable among the regressors– to account for the short run dynamics of net loans and grants that are typically disbursed in a number of installments over time. The dynamic specification allows for a correct estimation of the effect of high debt levels by controlling for the autocorrelation of net loans and grants.[13]

The estimated equations for net loans and grants are equal to:

$$L_{i,t}^j = b_1 L_{i,t-1}^j + b_2 B_{i,t-1} + b_3 Z_{i,t-1} + b_4 C_i + b_5 T_t \tag{6}$$

$$G_{i,t}^j = c_1 G_{i,t-1}^j + c_2 B_{i,t-1} + c_3 Z_{i,t-1} + c_4 C_i + c_5 T_t \tag{7}$$

where $L_{i,t}^j$ denotes net long-term loans (relative to GDP) to country i from creditor j (i.e., bilateral or multilateral creditors) and the variable $G_{i,t}^j$ denotes grants (relative to GDP) to country i from donor j (i.e., bilateral or multilateral donors) and $G_{i,t}$ the grants from the other donor.

To examine the relation between aid policy and indebtedness, we consider the stock of long-term debt (relative to GDP) owed to bilateral, multilateral and private creditors and enter the three debt-to-GDP ratios separately ($B_{i,t-1}$ is the vector of the stocks of long-term debt held by multilateral, bilateral and private creditors). We thus estimate the reaction of net loans (and grants) by a given official creditor to the debt share held

by this creditor and to the debt shares held by others. While a sustainable debt strategy envisages a reduction of net loans as the debt ratio increases, no reaction (or a positive one) should instead be expected in the case of defensive lending.

In order to distinguish the "defensive lending" hypothesis from other motivations for providing aid, such as. poverty reduction and aid effectiveness, we consider a set of variables $Z_{i,t-1}$ that are standard in the empirical literature. To account for poverty reduction and humanitarian reasons we include real per-capita GDP (measured according to PPP), real GDP growth and population.[14] Note that GDP growth should actually matter both in the case loans and grants were motivated by humanitarian reasons and in the case they were given to enhance the effectiveness of aid in stimulating development. In the latter case grants and loans are expected to positively depend on past economic performance (e.g., due to good policies and institutions). But low growth could also lead to higher loans and grants if aid was motivated by humanitarian reasons. As aid effectiveness has long been shown to depend on the quality of policy and institutions of recipient countries, we also include the CPIA index of the World Bank, which reflects the Bank's internal evaluation of country performance and institutions.

Since the CPIA index does not exhaust the list of variables that possibly capture the quality of policies and institutions, we tried to include some other variables in the regression. More specifically, we included the rate of inflation and openness (i.e., the sum of imports and exports relative to GDP), as other possible determinants of policy performance, and the index of "Political Rights and Civil Liberties as another control for the quality of the institutions. While these additional variables were not significant at conventional levels, our main results are not affected by their inclusion (either including or excluding the CPIA index). Finally, we also controlled for whether a country votes (more or less) in line with the United States (or with key G7 countries) in the United Nations General Assembly (UNGA) and we included a dummy for temporary UNSC membership

as other (political) determinants of aid and official loans.[15] While both voting in line with the U.S. (and key G7 countries) and the UNSC dummy are not significant at conventional levels, the results for the remaining variables are unchanged.[16]

Finally, the countries dummies, C_i, control for country-specific fixed characteristics. We also expect them to capture motivations related to donors' political and strategic interests, which are traditional in the aid literature, such as colonial past, religion, ethnic and geographic variables (e.g., Easterly and Levine, 2003). The time dummies, T_t, control for common macroeconomic factors, such as the time variation in the amount of available resources for development assistance.

In studying whether the allocation of aid was distorted by defensive lending and/or defensive granting, we distinguish between HIPC and non-HIPC countries. Since an unsustainable debt is a main condition to qualify for the HIPC Initiative, incentives for defensive lending should be greatest in the case of these countries. On the other hand, if creditors aimed at reducing their exposure to default risk, then their reaction should be greater at high levels of debt, as relevant non-linearities could characterize their reaction functions. In this case, the negative reaction of net loans to debt should be stronger for highly indebted HIPC countries. Hence, the HIPC condition is a natural treatment in testing the defensive lending hypothesis.

To investigate whether the allocation of net loans and grants changes when the level of debt is high and unsustainable (as in the case of HIPC), we allow the effect of debt on donors' decisions to be different in the case of HIPC and non-HIPC countries. We do so by interacting the debt (relative to GDP) owed to multilateral, bilateral and private creditors with two dummies; a dummy H_i, taking the value of one in the case of a HIPC country and a dummy NH_i taking the value of one in the case of a non-HIPC country. The coefficients on the interacted debt ratios allow to examine whether the reaction of net loans and grants has been different for the two country groups. It also allows to test

for a differential treatment of HIPC relative to non-HIPC by creditors and donors.

Therefore, we estimate the following equations:

$$L_{i,t}^j = b_1 L_{i,t-1}^j + b_2 H_i B_{i,t-1} + b_3 N H_i B_{i,t-1} + b_4 Z_{i,t-1} + b_5 C_i + b_6 T_t \tag{8}$$

$$G_{i,t}^j = c_1 G_{i,t-1}^j + c_2 H_i B_{i,t-1} + c_3 N H_i B_{i,t-1} + c_4 Z_{i,t-1} + c_5 C_i + c_6 T_t \tag{9}$$

4.1   The estimation method

We use a GLS fixed-effect estimator in order to correct for heteroskedasticity across countries and control for both countries unobservables and common macroeconomic factors. We choose a dynamic specification, including one lag of the dependent variable among the regressors, to account for the short run dynamics of net loans and grants that are typically disbursed in a number of installments over time. In the case of loans, controlling for their lagged value also removes the correlation between current loans and previous period debt that may possibly arise because previous period loans are accumulated in the stock of debt.

In a dynamic panel with country fixed-effects the lagged dependent variable is correlated with the country-specific component of the error term and, as result, the GLS fixed-effect estimator produces biased estimates. Nickell (1981) has however shown that in the AR(1) case the bias in estimating a dynamic fixed-effects model becomes less important as T increases. Judson and Owen (1999) test the performance of the fixed effects estimator by means of Monte Carlo simulations, concentrating on panels with typical macroeconomic dimensions, i.e., small N and T. Their analysis suggest that the fixed-effects estimator performs well when T=30, that is with a time dimension close to ours (T=27).

The fixed effects assumes homoskedasticity and if the assumption is not met then the estimates will be inefficient. A groupwise likelihood ratio heteroskedasticity test was

performed on the residuals of the baseline model estimated by OLS. The test is chi-squared distributed with N-1 degrees of freedom, where N is the number of groups in the sample, 75 countries in our case. The result of the test led to a rejection of the null hypothesis of homoskedasticity across groups for both net loans and grants regressions.

Baltagi and Li (1995) suggest an LM test for serial correlation in fixed effects models where the asymptotic distributions of the test statistics is calculated for large T. Under two alternative assumptions for the error autocorrelation structure (i.e. an AR(1) and a MA(1)) the null hypothesis of no serial correlation in the disturbance is rejected in one equations out of four. In any case, the size of the autocorrelation coefficient is negligible for all equations. Hence, we decided not to correct for the autocorrorrelation in the residuals and to adopt a feasible fixed effect GLS estimator, incorporating only heteroskedasticity across countries.

5   Estimation results

5.1   Baseline specification

The results of the estimation of equation (6) for both bilateral and multilateral net loans (relative to GDP) are presented in the first two columns of *Table 1*.

INSERT TABLE 1 HERE

We start by considering the whole sample of IDA and Blend countries without distinguishing them into HIPC and non HIPC (as in Table 2 and 3). As expected, net loans are rather persistent, while the variables related to recipients' needs (per capita GDP) and economic performance (GDP growth) are not significant. The effect of the CPIA index varies depending on the type of creditors considered. Consistently with other results in the literature, a good policy performance (in terms of the CPIA score) favors multilateral lending: column 2 of Table 1 shows that the CPIA index has a positive effect on multilat-

eral loans and this effect is significant at the 1% level.[17] By contrast, column 1 of Table 1 shows that a higher CPIA score significantly lowers net loans from bilateral creditors, where this coefficient is significant at the 5% level. Furthermore, bigger countries do receive larger multilateral loans as opposed to bilateral loans which are unaffected by a country' population.[18]

The important evidence, however, concerns the effect of the debt (relative to GDP), that we divide into bilateral, multilateral and private debt depending on the holder's type. Column 1 shows that both bilateral and multilateral creditors have been reducing loans exposure with the corresponding increase in official debt, while official net loans have positively reacted to private debt shares. An increase in private debt (as documented in the descriptive statistics) may represent an increase in the credibility and attractiveness of low income countries to private creditors.

Estimates of the grant equation (7) for both bilateral and multilateral grants (relative to GDP) are presented in column 3 and 4 of Table 1. The high and significant coefficients of the lagged dependent variables show that both bilateral and multilateral grants are highly persistent. Both bilateral and multilateral grants are significantly affected by the variables related to recipients' needs: as columns 3 and 4 show, lower GDP growth and lower per capita GDP significantly affect grants. The strong intervention of official donors in low growth environments is evidence of the importance of recipients' need motivations in their aid policy. Interestingly, and contrary to other results in the empirical literature (e.g. Burnside and Dollar, 2000, Collier and Dollar, 2002), policy performance and institutions, as measured by the CPIA index, does not seem to be a relevant factor of either bilateral or multilateral aid.

As debt variables are concerned, we can observe that debt is a significant driver of aid. Specifically, we can detect a similar pattern in both bilateral and multilateral donors who have both allocated more grants to countries with a higher multilateral debt

independently of their economic performance and institutions quality. Finally, multilateral grants also rise with a higher private debt, confirming what found before in the case of loans.[19] This sensitivity of both multilateral and bilateral aid with respect to multilateral debt, together with the total irrelevance of the CPIA indicator in the regression, casts some serious doubts on the selectivity of donors' aid policy, as confirmed in the results discussed in the section below.

We finally checked the robustness of our results by employing alternative specifications and concluded that our findings are robust to different estimation methods (see *Table A4* in the Appendix).[20]

5.2   HIPC versus non-HIPC

The results of the estimation of equation (8) for both bilateral and multilateral net loans (relative to GDP) are presented in *Table 2*.

INSERT TABLE 2 HERE

As the coefficients of the control variables have the same sign and significance level than those presented in Table 1 above, we focus here on the important evidence concerning the effects of the debt shares distinguishing between HIPC and non-HIPC countries.

In both column 1 and 2 of Table 2, debt ownership appears to be an important determinant of the lending decisions of official creditors. While bilateral lenders did reduce their loans as their debt share increases, without distinguishing between HIPC and non-HIPC, multilateral lenders' "correction," with respect to their own share, is much lower in the case of HIPC as compared to countries which are not HIPC (for which debt sustainability should not be a problem). Moreover, in their lending decision, bilateral lenders are not affected by the multilateral debt share, while multilateral loans decrease with the quota of bilateral debt stock held by the HIPC (without being affected by the

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debt stock held by non-HIPC). Furthermore, bilateral loans increase with the stock of debt held by private creditors (as in Table 1 above), while multilateral lenders now positively react only to the amount of private debt held by non-HIPC.

Overall, this evidence provides no support to the hypothesis of defensive lending by bilateral lenders and very little support to the hypothesis of defensive lending as the main motivation for the behavior of multilateral organizations.

The picture is totally different when we turn to the analysis of the determinants of bilateral and multilateral grants. Estimates of the grant equation (9) are presented in column 3 and 4 of Table 2 for both bilateral and multilateral grants. Again, as the coefficients of the control variables have the same sign and significance level than those of Table 1 above, we focus only on the effects of debt, distinguishing between HIPC and non-HIPC countries.[21] Column 3 shows that bilateral donors do behave differently in the case of HIPC as compared to non-HIPC. Specifically, bilateral grants increase (at the 1% level of significance) with the amount of multilateral debt held by HIPC, while, the amount of bilateral grants is unaffected by the multilateral debt share held by non-HIPC. Moreover, bilateral donors positively react to their own debt share only when it is held by HIPC as compared to non-HIPC.[22]

Evidence of a preferential treatment for HIPC is also discovered when we look at the estimated equation for multilateral grants in column 3. The amount of grants given by multilateral donors increase (at the 1% level of significance) with the amount of multilateral debt held by HIPC, while the amount of multilateral grants is unaffected by the multilateral debt share in the case of non-HIPC. Moreover, multilateral grants positively respond to the amount of private debt held by non-HIPC.[23]

Therefore, the aid policy of both donor groups towards HIPC is significantly different from their aid policy towards non-HIPC. Importantly, debt ownership appears an impor-

tant determinant of the aid policy of both bilateral and multilateral donors. The amount of grants provided by bilateral donors significantly increases only when both bilateral and multilateral debt is held by HIPC, while they do not react to the official debt shares held by non-HIPC nor to the private debt share. The same is true for multilateral donors who increase their grant to HIPC as their debt share increases but do not do the same for non-HIPC.

The results then provides strong support to the hypothesis of defensive granting: since the correlation between grants and debt only emerges in the case of HIPC, the hypothesis of defensive granting appears to offer a more convincing explanation than humanitarian motivations for the positive link between aid and debt. In fact, even if HIPC are in more need than other low-income countries, the presence of control variables and of country-specific effects should control for this motivation of aid. This kind of perverse incentive is even more serious when associated to the multilaterals which, at the same time, should lend and monitor the implementation of the reforms associated with aid flows (e.g., Ramcharan, 2003, Celasun and Ramcharan, 2006, Marchesi and Sabani, 2007).

Table 3 presents estimates of both equation (8) and (9) estimated over a reduced sample of years now ending in 1999. Since the year 1999 marks the beginning of greater effort in debt reduction by both bilateral and multilateral lenders, in order to provide a more robust test of the hypothesis of defensive lending and defensive granting we decided to replicate the analysis excluding the years after 1999. As Table 3 shows, the results do not substantially differ. In column 1 of Table 3, however, we can now detect some (albeit weak) support to the hypothesis of defensive lending by bilateral lenders who now positively react to the amount of multilateral debt held by HIPC (even if only at the 10% level of significance), confirming what already found by Birdsall et al. (2003).

INSERT TABLE 3 HERE

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Finally, comparing the estimates of the two different time periods allows us also to (briefly) comment on the evolution in donors aid-allocation criteria. Comparing Table 2 with Table 3, we do not detect any variation in the size, sign and significance in the coefficient of the variable CPIA for no type of creditors and donors. This result is to some extent at odds with what previously found by Dollar and Levin (2006) and Claessens et al. (2009) who, respectively, report that multilateral and bilateral aid began to respond more to the quality of the policy and the institutional environment in the recipient countries only in the late 1990s/early 2000s.

In column 3 and 4 of Table 2, the coefficient of the per capita GDP becomes significant at the 5% and 1% level of significance, respectively. Then there is some evidence that both bilateral and multilateral donors started to be more reactive with respect to poverty in the last years of the sample. Finally, the sensitivity of aid allocation to the debt burden has (slightly) decreased over the years as the coefficients of both multilateral and bilateral debt are smaller in size in column 3 and 4 of Table 2, with respect to the same columns in Table 3.

6 Conclusions

In this paper we have examined the determinants of net loans and grants to low-income countries, focusing on the heavily indebted and poor ones. We estimate a dynamic panel of 75 low-income countries, for the period 1982 to 2008, by GLS with country-specific effects and time effects. To test the robustness of our results we replicate the analysis over a reduced sample of years now ending in 1999, that is before a greater effort was made to provide debt relief.

In the full sample, we find that both bilateral and multilateral donors reduce net *loans* to HIPC as their debt shares increase (where such "correction" is actually weaker in the

case of multilateral loans to HIPC). Official donors provide more *grants* as multilateral debt increases where this effect is significant only for HIPC. Overall the aid policy of both bilateral and multilateral donors appears more generous with HIPC than with non-HIPC countries.

The estimates of the reduced sample, presents some (weak) evidence of defensive lending and confirms the evidence of defensive granting. As in Birdsall et al. (2003) we find that higher multilateral debt increases bilateral net loans to HIPC (despite their bad policy), while multilateral net loans decrease as multilateral debt share increase but such "correction" is smaller for HIPC (as in the full sample). Furthermore, comparing the results of the two samples, we do not find substantial differences concerning the changes in the sensitivity of aid allocation policy to poverty, the debt burden or to the quality of the policies and the institutions (as it is measured by the CPIA index).

Overall, the results of our analysis clearly show that the amount of aid that HIPC have received, compared to non-HIPC, have been influenced by their debt levels. As the HIPC dummy stands for an indicator of high debt, this evidence suggests that HIPC have received a preferential treatment just because of their high degree of indebtedness, thereby supporting the hypothesis of defensive granting. These results are then consistent with a substitution of grants for loans and the new approach to debt sustainability, but questions the efficiency and selectivity of the aid policy.

Finally, since grants have increased as a share of total aid and they definitely dominate loans, it is crucial that donors learn how to become more selective in the future. Specifically, in the case of HIPC, greater future selectivity implies that donors should not be affected by the debt shares in their grants allocation decisions. Despite the average external debt to GDP ratio is now reduced to about 40% (thanks to the great amount of resources, over 117 billion dollars, allocated under the HIPC and the MDRI Initiative) HIPC countries are still likely to rely on domestic debt and on non-concessional borrowing

due to their limited tax revenues, thus limiting their total debt sustainability (Arnone and Presbitero, 2010). As both bilateral and multilateral grants still account for a significant fraction of resource inflows into HIPC countries (each around 5% of the GDP, in 2008) it is then crucial that accumulating new debt (after debt relief) will not distort again donors' behavior.

NOTES

1. After 15 years from the beginning of the HIPC Initiative (in 1996) the evidence on the effects of debt cancellation is not very encouraging. Debt relief has done little to improve the long-run fiscal sustainability in HIPC countries (Burnside and Fanizza, 2005). Moreover, debt relief seems more likely to be effective in enhancing economic growth and fiscal disciplines only in countries with good institutions (Arnone and Presbitero, 2010).

2. In a preliminary version of this paper (Marchesi and Missale, 2007) we estimated a similar model over the same (reduced) time period. The sample of countries was however slightly different and the results were, to some extent, different too. However, they also pointed to an overall "mixed" evidence, concerning the hypotheses of defensive lending (and defensive granting).

3. Multilateral donors include the IFI (IMF, World Bank and other regional development banks) and other multilateral and intergovernmental agencies while bilateral donors include governments and their agencies and official export credit agencies.

4. As data on IMF net loans were not originally included in the long-term multilateral net loans we had to add them to the series.

5. In 2005, following the G8 meeting at Gleneagles, donors pledged to cancel the whole debt held by the IDA, the IMF and the African Development Fund of the countries that reached completion point under the Enhanced HIPC Initiative.

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6. Foreign aid is usually associated with Official Development Assistance (ODA), which includes both official grants and official concessional loans (that is loans with at least a 25% percent grant component). ODA statistics are produced by the Development Assistance Committee (DAC) of the OECD. In turn, ODA can be divided into a bilateral and a multilateral component, which accounts for about 2/3 and 1/3 of all the resources, respectively (see Renard and Cassimon, 2001).

7. Technical assistance relates to short and long-term experts from the donor countries working in developing countries, scholarship programmes and some other forms of human capital contributions.

8. Bilateral grants have been higher than multilateral grants throughout the whole period, the difference between the two, however, substantially reduced in the second half of the 2000s.

9. As Easterly (2002) puts it, the central paradox of the HIPC is that they became indebted after two decades of partial debt relief and concessional (official) lending. Official lenders did not seem to follow the same prudential rules as private capital, which pulled out of HIPC; they may have given new loans to enable the old loans to be paid back.

10. Short-term loans have been a small share of total loans for the period under investigation.

11. In this paper we do not examine the determinants of debt forgiveness due to the poor quality of the data (on this see Renard and Cassimon, 2001).

12. The group of HIPC has changed several times, since the beginning of the first Initiative in 1996 and the various debt relief programs have evolved over time. In this paper we choose the HIPC classification after the Enhanced HIPC in 1999. Our results, however, will be consistent using different HIPC classification. Different specifications are available upon request.

13. Controlling for the lagged value of loans removes the natural correlation arising between current loans and previous period debt (i.e., previous period loans accumulate to a stock of debt).

14. The use of population is standard in the aid literature, where it is found that countries with a greater population receive less aid, probably because aid is more effective when given to small countries (e.g., see Alesina and Dollar, 2000).

15. Barro and Lee (2005) find that IMF loans tend to be more frequent and larger when a country is more connected politically and economically to the United States and major European countries. Kuziemko and Werker (2006) find that countries serving on the United Nations Security Council (UNSC) receive more United Nations Development Project support and direct foreign aid from the United States; Dreher et al. (2009a and 2009b) report the same for the IMF and for the World Bank.

16. We will not present these results and we will stick with our "base" specification but different specifications are available upon request.

17. For instance, Burnside and Dollar (2000) find that the quality of a country's policy has only a small impact on the allocation of aid, at least for bilateral donors which seem more respondent to donor interests. On the contrary, multilateral aid is allocated to countries with better policies.

18. The importance of population in explaining multilateral loans could be explained by the systemic importance of a single country (the so called "too big to fail" argument).

19. To the contrary, bilateral donors do not respond to the amount of private debt.

20. Specifically, columns 1-4 of Table A4 replicate Table 3 using OLS under a static specification (with a correlation of the first order in the residuals), columns 5-8 show the dynamic specification using OLS, while columns 9-12 show the dynamic specification

using GMM. In the last two columns, while the size is similar, the degree of significance of the coefficient of multilateral debt is lower (about 12%) than in all other specifications.

21. With the only exception of GDP growth which becomes not significant in column 3 of Table 3.

22. Even if the coefficient of the bilateral debt stock which is held by HIPC is significant only at the 10% level of significance.

23. As above, bilateral donors are unaffected by the private debt share.

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HIPCs: NET LOANS (percent of GDP) - Country Average
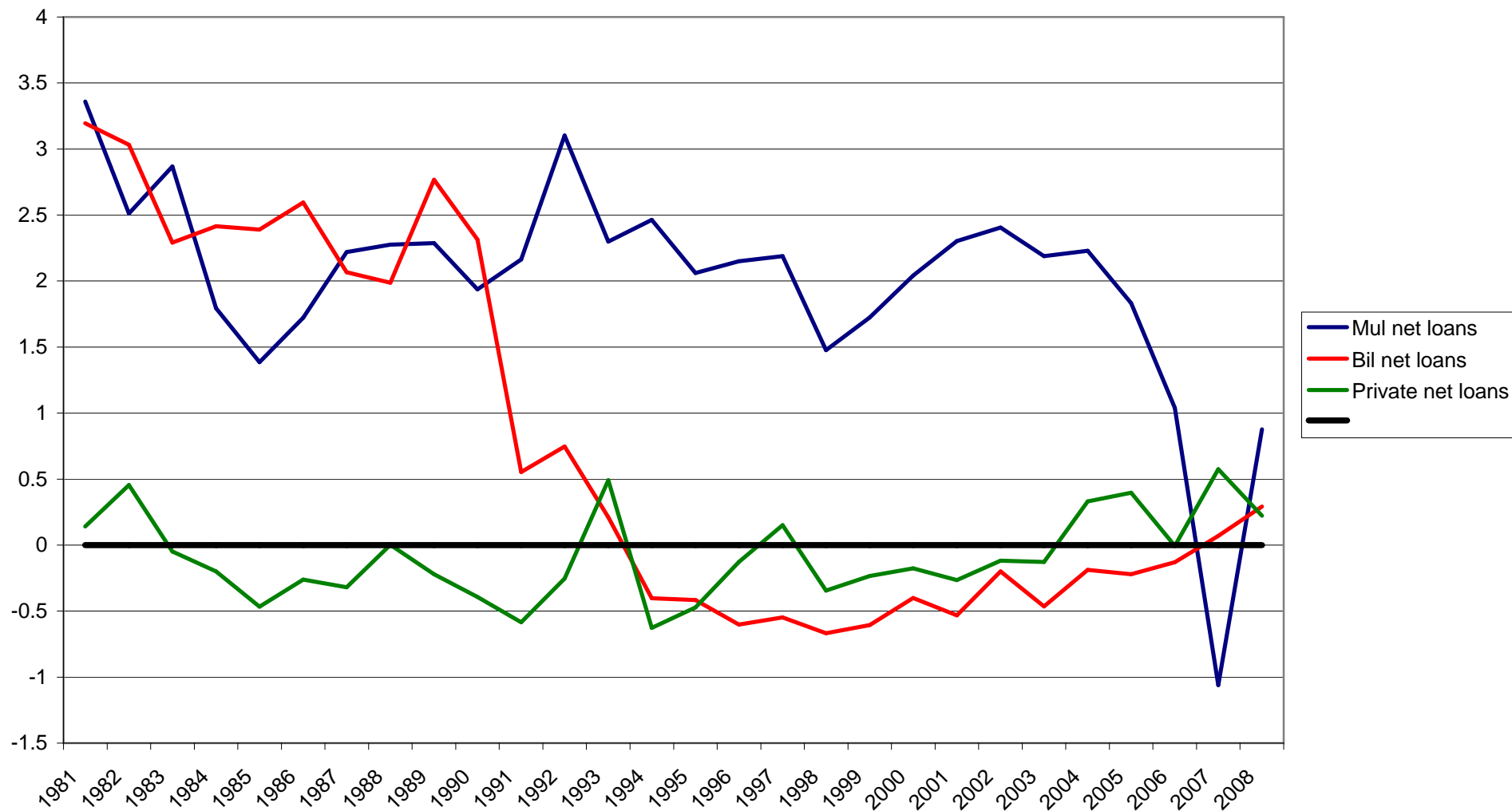
HIPCs: GRANTS (percent of GDP) - Country Average
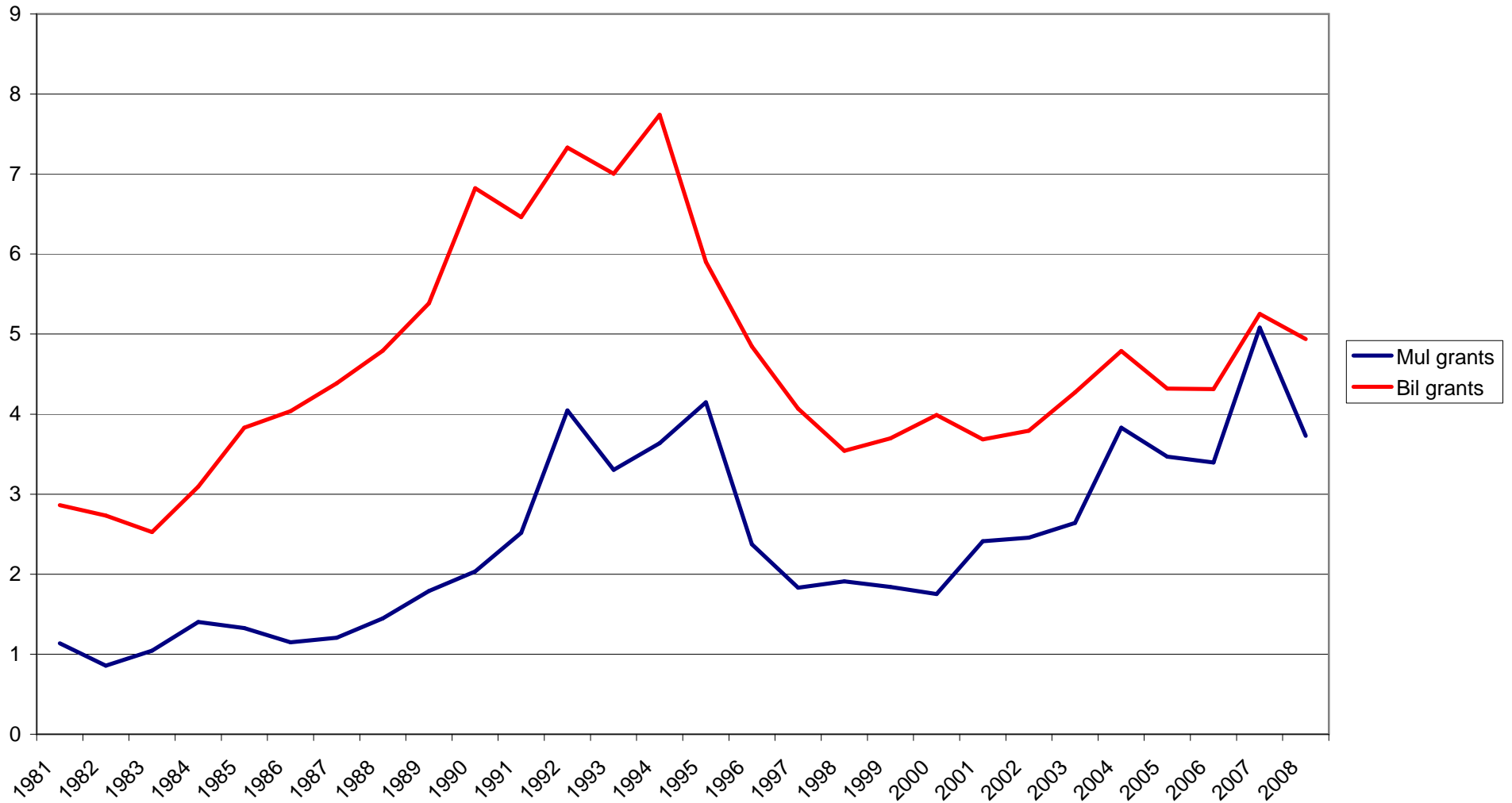
HIPCs: DEBT (percent of GDP) - Country Average
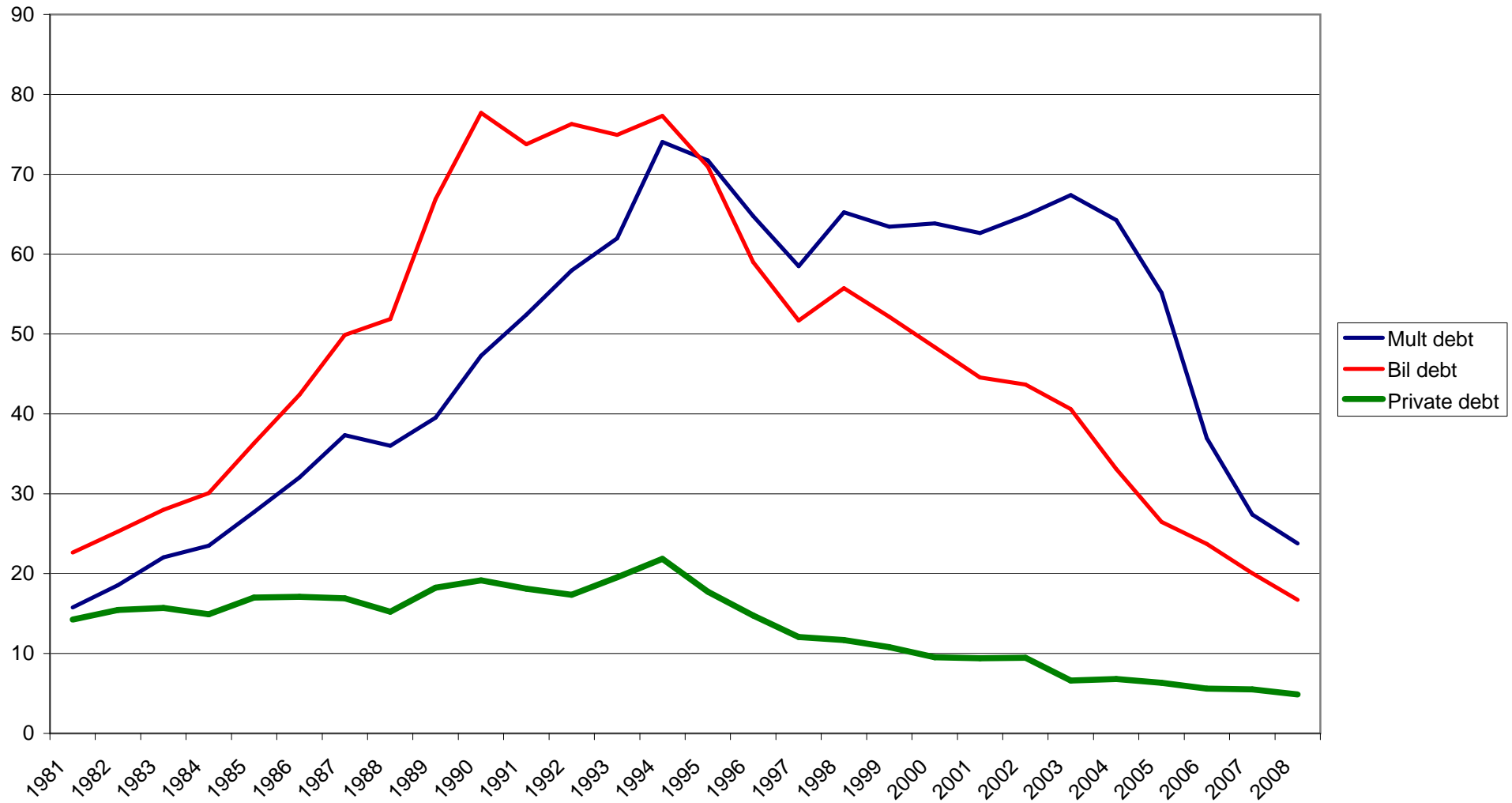
Table(s)

Table 1: Net Loans and Grants, GLS, 1982-2008

	Bilateral Loans	Multilateral Loans	Bilateral Grants	Multilateral Grants
Multilateral Debt (-1)	0.001	-0.009***	0.006**	0.006***
	(0.401)	(-3.931)	(2.221)	(3.350)
Bilateral Debt (-1)	-0.009***	-0.002**	0.002	-0.0003
	(-6.050)	(-1.997)	(1.494)	(-0.400)
Private Debt (-1)	0.006***	0.005***	-0.0004	0.003***
	(4.297)	(2.890)	(-0.159)	(2.629)
GDP Growth (-1)	-0.003	0.006	-0.008*	-0.008**
	(-0.998)	(1.377)	(-1.714)	(-2.571)
Per capita GDP (-1)	-0.0003	-0.0003	-0.001*	-0.001***
	(-0.804)	(-0.766)	(-1.715)	(-3.731)
CPIA (-1)	-0.001**	0.003***	0.00009	-0.0004
	(-2.005)	(4.693)	(0.142)	(-1.055)
Population	0.018	0.035**	0.038	-0.009
	(1.570)	(2.458)	(1.470)	(-0.541)
Bilateral Net Loans (-1)	0.479***			
	(22.62)			
Multilateral Net Loans (-1)		0.438***		
		(20.67)		
Bilateral Grants (-1)			0.646***	
			(33.13)	
Multilateral Grants (-1)				0.501***
				(19.37)
Number of countries	75	75	75	75
Number of years	28	28	28	28
R-squared	0.750	0.600	0.570	0.590
Observations	1747	1747	1748	1746

z statistics are in parentheses: * significant at 10%, ** significant at 5%, *** significant at 1%. Generalised least squares allowing for heteroskedastic errors. Each equation contains country dummies and time dummies.

Table 2: Net Loans and Grants: HIPC vs Non HIPC, GLS, 1982-2008

	Bilateral Loans	Multilateral Loans	Bilateral Grants	Multilateral Grants
HIPC x Multilater. Debt (-1)	0.001	-0.007***	0.008***	0.008***
	(0.344)	(-2.792)	(2.806)	(4.042)
HIPC x Bilateral Debt (-1)	-0.009***	-0.002**	0.003*	-0.0004
	(-5.311)	(-2.199)	(1.914)	(-0.497)
HIPC x Private Debt (-1)	0.006**	0.0004	-0.004	0.003
	(1.992)	(0.184)	(-1.233)	(1.369)
Non HIPC x Multilateral Debt (-1)	0.001	-0.049***	-0.004	-0.001
	(0.188)	(-7.882)	(-0.771)	(-0.338)
Non HIPC x Bilateral Debt (-1)	-0.009***	-0.002	-0.004	-0.0002
	(-2.883)	(-0.900)	(-1.323)	(-0.168)
Non HIPC x Private Debt (-1)	0.006***	0.010***	0.006	0.004**
	(3.269)	(4.797)	(1.191)	(2.569)
GDP Growth (-1)	-0.003	0.004	-0.007	-0.008***
	(-1.005)	(0.891)	(-1.484)	(-2.658)
Per capita GDP (-1)	-0.0003	-0.0004	-0.001**	-0.001***
	(-0.816)	(-0.859)	(-2.113)	(-3.824)
CPIA (-1)	-0.001**	0.003***	0.00006	-0.0005
	(-1.971)	(5.154)	(0.0899)	(-1.114)
Population	0.017	0.026*	0.045	-0.009
	(1.514)	(1.690)	(1.618)	(-0.581)
Bilateral Net Loans (-1)	0.479***			
	(22.58)			
Multilateral Net Loans (-1)		0.438***		
		(20.94)		
Bilateral Grants (-1)			0.636***	
			(32.32)	
Multilateral Grants (-1)				0.492***
				(19.01)
Number of countries	75	75	75	75
Number of years	27	27	27	27
R-squared	0.750	0.600	0.570	0.590
Observations	1747	1747	1748	1746

z statistics are in parentheses: * significant at 10%, ** significant at 5%, *** significant at 1%. Generalised least squares allowing for heteroskedastic errors. Each equation contains country dummies and time dummies.

Table 3: Net Loans and Grants: HIPC vs Non HIPC, GLS, 1982-1999

	Bilateral Loans	Multilateral Loans	Bilateral Grants	Multilateral Grants
HIPC x Multilater. Debt (-1)	0.004*	-0.010***	0.016***	0.011***
	(1.717)	(-3.018)	(3.892)	(3.278)
HIPC x Bilateral Debt (-1)	-0.013***	-0.002*	0.007***	-0.001
	(-5.344)	(-1.753)	(3.183)	(-0.551)
HIPC x Private Debt (-1)	0.009*	0.002	-0.013**	0.005
	(1.937)	(0.478)	(-2.160)	(1.451)
Non HIPC x Multilateral Debt (-1)	0.011	-0.054***	0.011	-0.008
	(1.373)	(-6.028)	(1.413)	(-1.341)
Non HIPC x Bilateral Debt (-1)	-0.008**	-0.002	-0.006*	-0.001
	(-1.981)	(-0.761)	(-1.690)	(-0.815)
Non HIPC x Private Debt (-1)	0.002	0.017***	0.009	0.006
	(0.604)	(4.074)	(1.208)	(1.536)
GDP Growth (-1)	-0.004	0.004	-0.016***	-0.015***
	(-1.008)	(0.873)	(-3.439)	(-3.631)
Per capita GDP (-1)	-0.001	-0.001	-0.001	-0.001
	(-0.808)	(-1.482)	(-0.775)	(-0.964)
CPIA (-1)	-0.001*	0.003***	0.0002	-0.0004
	(-1.854)	(4.057)	(0.295)	(-0.850)
Population	0.130**	0.047	0.089	0.017
	(2.555)	(1.335)	(1.375)	(0.417)
Bilateral Net Loans (-1)	0.449***			
	(16.64)			
Multilateral Net Loans (-1)		0.395***		
		(15.01)		
Bilateral Grants (-1)			0.486***	
			(17.29)	
Multilateral Grants (-1)				0.345***
				(9.368)
Number of countries	74	74	74	74
Number of years	18	18	18	18
R-squared	0.999	0.795	0.750	0.788
Observations	1096	1096	1096	1096

z statistics are in parentheses: * significant at 10%, ** significant at 5%, *** significant at 1%.
Generalised least squares allowing for heteroskedastic errors. Each equation contains country dummies and time dummies.

Table A1: List of Countries

HIPC	Non-HIPC
Angola	Armenia
Benin	Azerbaijan
Bolivia	Bangladesh
Burkina Faso	Bhutan
Burundi	Bosnia and Herzegovina
Cameroon	Cambodia
Central African Republic	Cape Verde
Chad	Comoros
Congo, Dem. Rep.	Djibouti
Congo, Rep.	Dominica
Cote d'Ivoire	Eritrea
Ethiopia	Georgia
Gambia, The	Grenada
Ghana	Haiti
Guinea	India
Guinea-Bissau	Kyrgyz Republic
Guyana	Lesotho
Honduras	Maldives
Kenya	Moldova
Lao PDR	Mongolia
Liberia	Nepal
Madagascar	Nigeria
Malawi	Pakistan
Mali	Papua New Guinea
Mauritania	Samoa
Mozambique	Solomon Islands
Myanmar	Sri Lanka
Nicaragua	St. Lucia
Niger	Vincent and the Grenadines
Rwanda	Tajikistan
Sao Tome and Principe	Tonga
Senegal	Uzbekistan
Sierra Leone	Vanuatu
Somalia	Zimbabwe
Sudan	
Tanzania	
Togo	
Uganda	
Vietnam	
Yemen, Rep.	
Zambia	

Table A2: Variables definition

Variable	Definition	Units	Source
Bilateral Net Loans	Bilateral Net Loan	Ratio to GDP	GDF (Word Bank)
Multilateral Net Loans	Mul Net Loan+IMF Net Loans	Ratio to GDP	GDF (Word Bank)
Bilateral Grants	Bilateral Grants	Ratio to GDP	DAC (OECD)
Multilateral Grants	Multilateral Grants	Ratio to GDP	DAC (OECD)
Bilateral Debt	Long term Bilateral Debt	Ratio to GDP	GDF (Word Bank)
Multilateral Debt	Long term Mul Debt+IMF Debt	Ratio to GDP	GDF (Word Bank)
Private Debt	Long term Bilateral Debt	Ratio to GDP	GDF (Word Bank)
Gr-GDP	Real GDP growth	Annual Rate of change	Penn Tables 6.2 database
Pc-GDP	Real GDP in PPP	Ratio to Population (million units)	Penn Tables 6.2 database
CPIA	Country Policy and Institutional Assessment	Index	World Bank
Population	Population	Billion units	Penn Tables 6.2 database

Table A3: Descriptive statistics (Estimation sample of Table 2)

Variable	Mean	SD	Min	Max
Bilateral Net Loans	0.01	0.03	-0.16	0.56
Multilateral Net Loans	0.02	0.03	-0.11	0.25
Bilateral Grants	0.04	0.05	0	0.85
Multilateral Grants	0.02	0.03	-0.01	0.59
Bilateral Debt	0.35	0.48	0	5.78
Multilateral Debt	0.4	0.42	0	5.85
Private Debt	0.12	0.21	0	2.57
Gr-GDP	0.04	0.08	-0.67	1.05
Pc-GDP	2.42	1.97	0.15	14.54
CPIA	2.94	0.72	1	4.7
Population	0.02	0.1	0	1.13

Table A4: Net Loans and Grants, OLS and GMM, 1982-2008

	Bilateral Loans	Multilateral Loans	Bilateral Grants	Multilateral Grants	Bilateral Loans	Multilateral Loans	Bilateral Grants	Multilateral Grants	Bilateral Loans	Multilateral Loans	Bilateral Grants	Multilateral Grants
Multilateral Debt (-1)	-0.009	-0.026***	0.030***	0.028***	-0.001	-0.017***	0.011***	0.019***	-0.001	-0.019***	0.009	0.016
	(-1.562)	(-5.069)	(3.689)	(6.113)	(-0.435)	(-5.538)	(2.787)	(6.849)	(-0.209)	(-4.162)	(1.431)	(1.576)
Bilateral Debt (-1)	-0.013***	-0.005	0.003	0.004	-0.012***	-0.001	0.002	0.001	-0.012***	-0.003	0.002	0.001
	(-3.442)	(-1.369)	(0.606)	(1.204)	(-5.676)	(-0.371)	(0.616)	(0.300)	(-5.356)	(-0.800)	(0.851)	(0.747)
Private Debt (-1)	0.009	0.009*	0.009	0.002	0.005*	0.006	0.002	0.001	0.007	0.007**	0.002	0.000
	(1.636)	(1.775)	(1.052)	(0.419)	(1.683)	(1.621)	(0.453)	(0.293)	(1.637)	(2.178)	(0.501)	(0.168)
GDP Growth (-1)	-0.011***	-0.001	-0.001	-0.006*	-0.004	-0.002	-0.013***	-0.007***	-0.004	-0.003	-0.013**	-0.008
	(-3.288)	(-0.235)	(-0.140)	(-1.756)	(-1.248)	(-0.783)	(-3.219)	(-2.756)	(-1.575)	(-0.832)	(-2.103)	(-1.477)
Per capita GDP (-1)	0.001	-0.001	-0.006***	-0.005***	0.001	-0.002**	-0.003***	-0.002***	0.001	-0.002*	-0.002**	-0.002***
	(0.935)	(-0.840)	(-3.033)	(-4.657)	(1.257)	(-2.173)	(-2.778)	(-3.238)	(0.519)	(-1.908)	(-2.049)	(-3.211)
CPIA (-1)	-0.004***	0.006***	-0.002	-0.002*	-0.003***	0.005***	-0.000	-0.001*	-0.004	0.005***	0.000	-0.001
	(-2.759)	(3.949)	(-1.057)	(-1.907)	(-3.365)	(4.884)	(-0.292)	(-1.686)	(-1.595)	(3.342)	(0.096)	(-1.263)
Population	0.078	0.159	0.220	-0.038	0.031	0.060	0.081	-0.006	0.039	0.057***	0.082	-0.013
	(0.615)	(1.563)	(1.105)	(-0.399)	(0.636)	(1.146)	(1.232)	(-0.145)	(1.139)	(2.651)	(1.303)	(-0.512)
Bilateral Net Loans (-1)					0.573***				0.568***			
					(28.761)				(8.364)			
Multilateral Net Loans (-1)						0.423***				0.392***		
						(19.425)				(8.258)		
Bilateral Grants (-1)							0.628***				0.623***	
							(32.743)				(20.987)	
Multilateral Grants (-1)								0.501***				0.472***
								(22.398)				(6.865)
Method	static	static	static	static	dynamic	dynamic	dynamic	dynamic	dynamic	dynamic	dynamic	dynamic
	OLS	OLS	OLS	OLS	OLS	OLS	OLS	OLS	GMM	GMM	GMM	GMM
Number of countries	75	75	75	75	75	75	75	75	75	75	75	75
Number of years	28	28	28	28	28	28	28	28	28	28	28	28
Observations	1,674	1,674	1,675	1,673	1,749	1,749	1,750	1,748	1,674	1,674	1,675	1,673

t statistics are in parentheses: * significant at 10%, ** significant at 5%, *** significant at 1%.