

Nunnenkamp, Peter; Thiele, Rainer; Wilfer, Tom

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## Grants versus loans: Much ado about (almost) nothing

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## Grants Versus Loans: Much Ado About (Almost) Nothing

Peter Nunnenkamp, Rainer Thiele, and Tom Wilfer

- When President Bush proposed in July 2001 to provide up to half of aid supplied by development banks as grants, this sparked an intense debate. Unrestricted support for his proposal came from prominent American economists, who favor grants because in their view loans only cause debt problems without having any distinctive advantage. The main opponents of the proposal, European donors, rely on two basic arguments: first, they suspect that a diminishing weight of loans could markedly reduce overall aid resources; and second, they stress the ability of loan arrangements to provide incentives for a careful use of aid resources by recipients. Both positions do not hold up to closer scrutiny.
- In contrast to what one might expect, grants already predominate the aid budgets of all major bilateral donors, except Japan, and of multilateral agencies such as the EU and UNDP. Even for the World Bank's International Development Association (IDA), the proposed shift from loans to grants is unlikely to result in a significant change in effective resource flows due to the high grant element of its loans. Hence, the suspicion of European donors that the hidden agenda behind the Bush proposal was to deplete IDA's resources appears to be greatly exaggerated.
- Concerning the incentive effects of grants versus loans, the proponents of a grants-only strategy ignore that grants may discourage domestic resource mobilization and are more likely to be squandered by corrupt elites. In low-income countries with high levels of corruption, an increase in grants tends to be completely offset by a decline in domestic government revenues. By contrast, in richer recipient countries with better policies and institutions the form in which aid is given does not seem to make a major difference.
- Across all aid recipients, the composition of aid does not appear to be of significant relevance for economic growth. However, country characteristics matter for the growth effects of grants and loans. The finding that grants are positively associated with economic growth in poor and badly governed countries with high inherited debt suggests that debt management problems loom large and impair growth prospects when these countries continue to be financed predominantly by foreign loans.
- The country-specific differences in the impact of grants and loans call for a careful fine-tuning of development assistance according to each recipient country's characteristics, rather than a sweeping revision of current aid allocations in favor of grants. The bulk of poor, indebted and badly governed recipients are located in Sub-Saharan Africa, where the grant element of aid is already close to 100 percent. More surprisingly, very high grant elements are not confined to this country group. It thus appears that the move towards grants has already gone too far.
- In the long run, aid recipients could arguably become more homogeneous in terms of governance and debt management capacities if donors made aid performance-based and withdrew aid in case of noncompliance with performance targets. As a consequence, the differences between grants and loans might disappear. In the short run, however, greater selectivity in providing grants seems to be required once it is taken into account that the incentive and growth effects of grants and loans depend on the quality of governance and the sustainability of debt accumulation in particular countries. Hence, the current debate should, rather, be whether donors have become too indiscriminate in providing grants.

**Peter Nunnenkamp**

Kiel Institute for World Economics (IfW)  
24100 Kiel, Germany  
Tel: ++49-431-8814-209; Fax ++49-431-8814-500  
E-mail: Peter.Nunnenkamp@ifw-kiel.de  
Website: [http://www.uni-kiel.de/ifw/staff/nunnenkamp\\_e.htm](http://www.uni-kiel.de/ifw/staff/nunnenkamp_e.htm)

**Rainer Thiele**

Kiel Institute for World Economics (IfW)  
24100 Kiel, Germany  
Tel: ++49-431-8814-215; Fax ++49-431-8814-500  
E-mail: Rainer.Thiele@ifw-kiel.de  
Website: [http://www.uni-kiel.de/ifw/staff/thiele\\_e.htm](http://www.uni-kiel.de/ifw/staff/thiele_e.htm)

**Tom Wilfer**

Kiel Institute for World Economics (IfW)  
24100 Kiel, Germany  
Tel: ++49-431-8814-367

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Kiel Institute for World Economic  
24100 Kiel, Germany  
Tel: ++49-431-8814-1; Website: <http://www.ifw-kiel.de>

Managing editor:

Prof. Dr. Harmen Lehment  
Tel: ++49-431-8814-232; E-mail: [Harmen.Lehment@ifw-kiel.de](mailto:Harmen.Lehment@ifw-kiel.de)

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# 1 Introduction

The array of the battle between the proponents of grants as a superior means of providing foreign financial aid and those opposing this view is somewhat puzzling for the external observer. President Bush took the offensive when he proposed in July 2001 to provide up to half of aid by development banks as grants. This was a surprising move, considering that the United States has often been blamed to be a rather selfish and less generous donor (Dollar and Levin 2004; Berthélemy and Tichit 2004; Canavire et al. 2005). Still more surprisingly, the Bush proposal has caused a stir and met with stiff resistance exactly by those donors that are widely considered to be particularly generous and more altruistic, i.e., the Scandinavian countries, the Netherlands, and the United Kingdom (Sanford 2002).

More riddles emerged from the subsequent debate on whether aid to poor countries should be provided in the form of grants or loans. In contrast to what one might have expected, the proposed shift to grants has been criticized as being part of the right-wing agenda to curtail, or even stop, giving aid, especially aid by multilateral donors such as the World Bank's International Development Association (IDA) (Odedokun 2004). And indeed, isn't it suspicious that neo-liberal economists and politicians, who have traditionally insisted that developing countries embark on economic policy reforms along the lines of the so-called Washington Consensus as a condition for giving aid, suddenly demand donors to forgo even the servicing of concessional loans by the recipients? On the other hand, isn't it inconsistent that donors, notably European donors, who have strongly pushed the debt-relief agenda in the past years are now opposed to preventing another debt overhang in the future by providing grants rather than loans?

This paper will fall short of resolving all these puzzles. We will focus on the economic aspects of the debate on grants versus loans. So far, economic reasoning has taken second place to discussing the political motivations on both sides of

the debate.<sup>1</sup> Some US economists have embraced the Bush initiative without offering a rigorous account of its pros and cons. For instance, Radelet (2005) posits that loans have perverse incentive effects, whereas grants provide appropriate incentives to recipient countries, but he does not present a sound economic justification of this claim. Moreover, the economic implications of loans and grants in the recipient countries have received insufficient attention so far. As a result, the debate on loans versus grants has been somewhat isolated from the still unresolved question whether, and under which conditions, different forms of financial aid may foster economic development in the recipient countries.

In the subsequent evaluation, we attempt to fill some of the remaining gaps. We discuss whether a shift from loans to grants is likely to deplete future aid resources so that donors could not sustain their aid efforts (Section 3). As concerns the recipients, the incentive effects of loans and grants are addressed in Section 4. Finally, we raise the question whether the form in which aid is delivered may matter for economic growth in recipient countries (Section 5). Before, however, we present some—fairly surprising—stylized facts on loans and grants. Some of the findings reported in Section 2 may even suggest a different twist to the current debate, namely that donors should consider a shift from grants to loans, and not vice versa.

## 2 Stylized Facts

The Bush initiative and the subsequent stir in the development community seem to suggest that loans are the predominant form through which donors give aid. The opposite is true. Considering all bilateral donors of the OECD's Development Assistance Committee (DAC), 86 percent of net disbursements of official development as

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<sup>1</sup> For a detailed account of the political debate, see Sanford (2002).

*Table 1:*  
Major Donors: Share of Grants in Total Net ODA Disbursements, 2001–2003<sup>a</sup>

Donors	Recipients					
	All developing countries		Sub-Saharan Africa		South and Central Asia	
All donors	86.4	(72.1)	85.5	(75.3)	69.4	(50.1)
All DAC countries	98.9	(83.4)	>100.0	(94.9)	97.2	(69.6)
EU members	>100.0	(89.3)	>100.0	(93.5)	>100.0	(79.9)
Japan	66.2	(44.7)	>100.0	(92.6)	41.1	(29.2)
United States	>100.0	(98.4)	98.8	(98.0)	>100.0	(96.2)
All multilateral donors	57.0	(46.5)	53.7	(42.8)	28.9	(21.0)
EC	94.1	(89.2)	96.6	(89.9)	99.0	(96.8)
IDA	5.9	(4.6)	11.1	(9.4)	0.0	(0.0)
UNDP	100.0	(100.0)	100.0	(100.0)	100.0	(100.0)

<sup>a</sup>Annual averages; in parentheses shares of grants in gross ODA (sum of grants and loans extended).

Source: OECD (2005).

sistance (ODA) to developing countries consisted of grants in 2001–2003 (Table 1).<sup>2</sup> Political infighting on the Bush initiative notwithstanding, both the EU countries and the United States provided aid almost exclusively through grants in recent years. Only when looking further back to the late 1980s and the first half of the 1990s, the United States reported a considerably higher share of grants than EU countries (Figure 1).<sup>3</sup> Among major bilateral donors, it is only Japan for which loans represented a considerable share of total ODA disbursements over the last 20 years or so. Recently, however, even this donor extended hardly any loans to Sub-Saharan Africa, the region that depends most strongly on aid inflows.

Likewise, some multilateral donors provided aid mainly in the form of grants. Most surprisingly perhaps, loans played a marginal role in aid delivered by the European Commission,

even though various EU members have harshly rejected the Bush initiative. The fact that for all multilateral donors taken together the share of grants in total ODA disbursements was relatively low, though still above 50 percent of net ODA in 2001–2003 (Table 1), is mainly due to IDA providing loans rather than grants. IDA grants were clearly the exception, even in its aid to Sub-Saharan Africa.<sup>4</sup>

This implies that the controversy on grants versus loans has little to do with aid in general, but applies to just one multilateral donor.<sup>5</sup> True, IDA represents an important donor. It contributed 8.5 percent to net ODA disbursements by all (bilateral and multilateral) donors in 2001–2003. Yet the discussion clearly needs to be put into perspective. The predominance of grants in aid disbursements of almost all donors may even provoke the question whether the proposal to shift IDA aid towards grants addresses the most relevant issue. Unless it can reasonably be assumed that all aid should be given as grants, which will be discussed further below, one might suspect that it would be more important for donors to consider the possibility that they have gone too far and, thus, should shift back to loans.

<sup>2</sup> This share declines to 72 percent when considering the sum of grants and extended loans (gross ODA), instead of net ODA, which results when loan repayments by ODA recipients are deducted from loans extended by donors. Recently, loan repayments often exceeded new loans extended. As a consequence, the share of grants in net ODA may rise beyond 100 percent. Nevertheless, we concentrate on the composition of net ODA in the subsequent discussion, as it is net financial transfers that matter most for recipient countries.

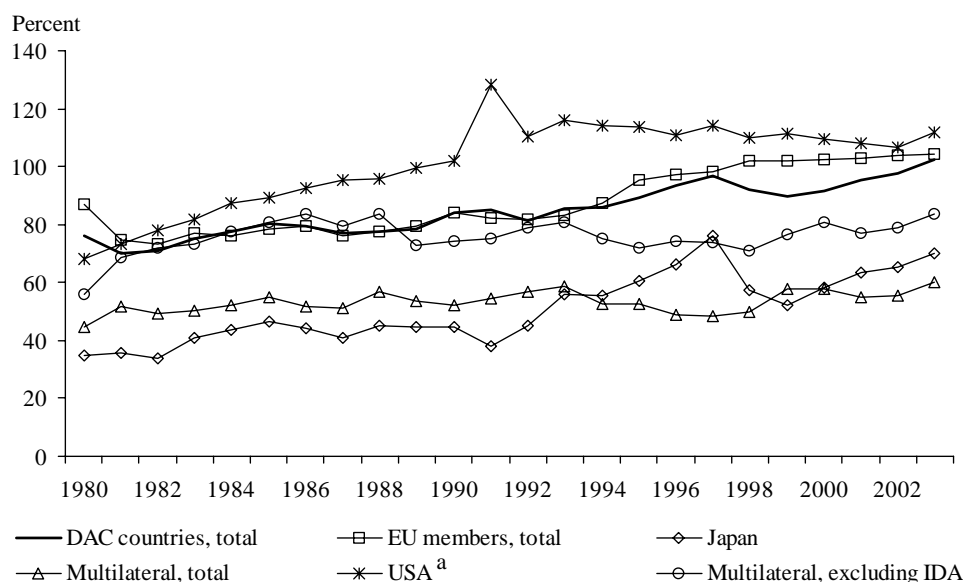
<sup>3</sup> The finding that grants dominated US aid well before the Bush administration took office in 2001 renders it dubious to argue, as Odedokun (2004) does, that the promotion of grants is part of the right-wing political agenda.

<sup>4</sup> It is only since 1998 that IDA grants are reported in the OECD online database (OECD 2005).

<sup>5</sup> This finding is in sharp contrast to Odedokun (2004: 241), who argues that the issue of loans versus grants “transcends the IDA institution” because “bilateral official assistance too often takes the form of soft loans.”

Figure 1:

Major Donors: Share of Grants in Total Net ODA Disbursements to All Developing Countries, 1980–2003



<sup>a</sup>The peak in 1991 for the United States is due to extraordinarily high loan repayments which resulted in net loans in the order of minus \$2.7 billion.

Source: OECD (2005).

Furthermore, the current controversy seems to suggest that ODA loans, in comparison to grants, involve a substantially lower effective transfer of resources to recipient countries by burdening these countries with high debt-service payments in terms of interest and amortization obligations. Again, the statistical facts are in serious conflict with this assumption. The so-called grant element of loans offers a reasonable measure to reveal the extent to which effective financial transfers through loans fall short of the 100 percent benchmark of outright grants. The DAC applies a reference rate of interest (discount rate) of 10 percent for calculating the grant element. The more the interest rates charged by donors remain below this discount rate, and the longer maturities and grace periods extend, the higher the grant element of ODA loans is.

In Table 2, we present the grant element of total ODA commitments, i.e., the sum of loans and grants, of major donors in 2001–2003. It fits into the picture of the predominance of grants in bilateral aid that the grant element of aid by DAC countries, except Japan, exceeds 90 percent. Bilateral aid given to Sub-Saharan Africa,

in particular, is very close to the 100 percent mark. More strikingly, the grant element turns out to be fairly high even for multilateral donors whose aid is mainly in the form of loans. IDA loans typically offer a grace period of 10 years, with maturities of up to 40 years, and the interest rate charged for IDA loans is just 0.75 percent.<sup>6</sup> Consequently, the effective financial transfer to the recipients of IDA loans falls just some 20 percent short of outright grants.<sup>7</sup> In other words, it would be unreasonable to expect that the proposed shift to grants were to result in dramatically higher effective financial transfers. Rather, the impact on effective IDA transfers could remain marginal, especially if the shift to grants implied that IDA could not sustain its nominal amount of aid (see next section on the so-called resource depletion).

<sup>6</sup> More precisely, the borrower is requested to pay a service charge of 0.75 percent to IDA.

<sup>7</sup> Note that Table 2 presents the grant element of IDA's total aid, including grants. According to Sanford (2002) and Odedokun (2004), the grant element of IDA loans is slightly below 70 percent when applying the standard discount rate of 10 percent.

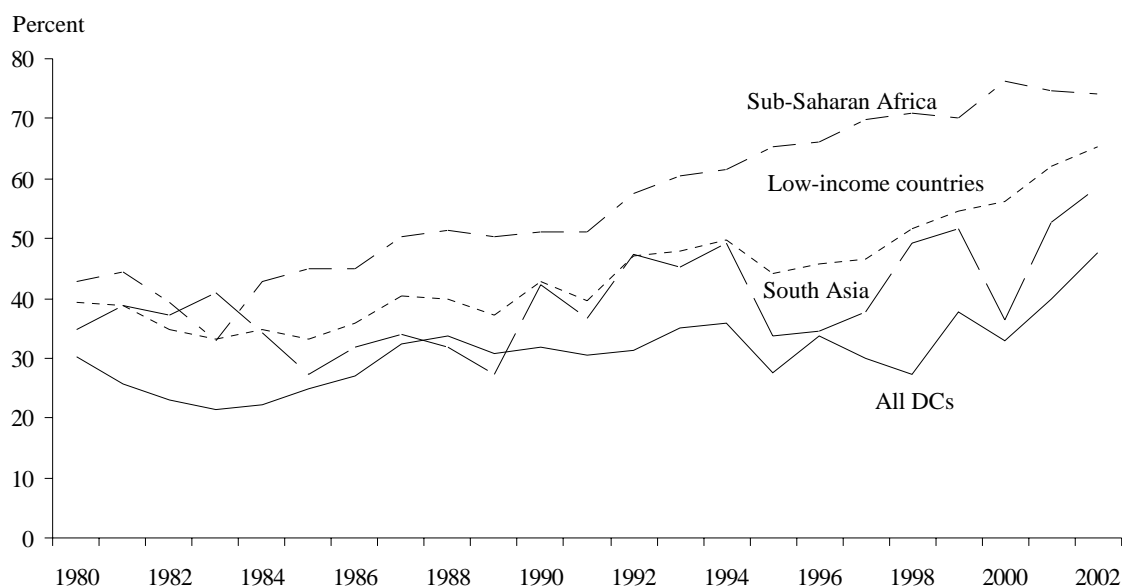
*Table 2:*

Major Donors: Grant Element of ODA Commitments (loans plus grants), 2001–2003 (period averages)

Donors	Recipients		
	All developing countries	Sub-Saharan Africa	South and Central Asia
All donors	88.7	93.3	76.4
All DAC countries	89.9	96.8	74.3
EU members	94.8	96.0	89.0
Japan	61.5	94.8	42.4
United States	99.9	98.2	97.2
All multilateral donors	85.0	87.4	81.1
EC	93.2	93.4	100.0
IDA	82.2	84.0	80.8
Other	81.1	86.7	75.9

*Source:* OECD (2005).*Figure 2:*

Official Creditors: Average Grant Element of New Loans to Selected Country Groups, 1980–2002

*Source:* World Bank (2004).

Finally, the difference in terms of effective financial transfers between grants and new loans extended by official creditors has become less pronounced since the early 1980s. This applies to low-income aid recipients in general, and Sub-Saharan Africa in particular. According to Figure 2, the average grant element of new loans given to low-income countries increased from 36 percent in the first half of the 1980s to 61 percent, on average, in 2000–2002. The grant element of loans to Sub-Saharan Africa reached 75 percent in 2000–2002. Hence, it appears that the region most dependent on foreign aid has little to gain from the shift to outright grants proposed

by President Bush. At the same time, the stylized facts presented in this section render it still more puzzling that the Bush initiative created such a stir among European donors.

### 3 IDA Grants: The Deathblow to Sustained Aid Efforts?

As indicated before, the request to provide poor developing countries with grants, rather than loans, is primarily directed at IDA. Most prominent among the objections raised against this re-



quest is the concern that the shift towards grants would render it increasingly difficult to sustain IDA's aid efforts and, eventually, marginalize this important multilateral donor. Various critics are convinced that exactly this is the hidden agenda of the Bush administration. To take just one example, Claire Short, the former UK minister for international development, called the Bush proposal "crazy" and said it would "wreck" the World Bank's lending programs (Schepp 2002).

Politically, there may be good reasons for being suspicious of the true motives underlying the Bush initiative. The United States, notably the US Congress, is known for its criticism leveled against multilateral organizations such as the World Bank and for its reluctance to ratify IDA replenishment agreements. In 1998, for example, Congress cleared payment arrears incurred to IDA only after other IDA shareholders had threatened to create another international institution of which the United States would not be a member (Sanford 2002). At the same time, Congress established the so-called Meltzer Commission whose report, presented in early 2000, blamed the World Bank for misallocating its resources (IFIAC 2000).<sup>8</sup> The Meltzer Report also pioneered the proposal to provide grants instead of loans and, thus, ignited the controversial debate across the Atlantic about the role of the Bretton Woods institutions in the external financing of developing countries.<sup>9</sup>

At first sight, it may appear obvious that a donor forgoing the repayment of past loans will find it increasingly difficult to sustain previous aid volumes. The pool of aid resources is bound to decline unless the shareholders of the institution compensate extended grants by replenishing the financial resources of the institution. Yet, it is for several reasons that a shift from loans to grants does not necessarily result in lower effective

aid transfers. As concerns IDA, several arguments can be made suggesting that European concerns about resource depletion are exaggerated.

Evidence available for bilateral donors indicates that their longer-term aid efforts are not adversely affected by the increasing prominence of grants in their aid portfolio. Odedokun (2004) performs an empirical test by including the current and lagged values of grants in relation to total aid as regressors in an equation for aid effort, which is defined as the aid-to-GDP ratio. Panel data are derived from pooling annual data for the period 1970–1999 across 22 DAC donors. The share of grants in total aid should have a negative sign *and* the cumulative negative effect on the aid-to-GDP ratio should increase over time if grants dampened the aid effort because of lower debt repayments that could be used for new aid transfers. The coefficient of the contemporaneous share of grants in total aid turns out to be significantly negative. However, the current aid effort is not affected by repayments currently forgone because of past aid transfers in the form of grants. This is concluded from the absence of an increasing trend in the cumulative negative effect of a high share of grants in total aid in earlier years.

Odedokun concedes that the finding that bilateral aid appears to be immune from repayments of past loans does not necessarily apply to multilateral donors. Collective decisions taken by the shareholders of multilateral donors may deviate from the decisions of bilateral donors. Yet, the explanations provided for the case of bilateral aid, notably that past loans might not generate significant repayments, resemble arguments that have been advanced in the context of multilateral donors such as IDA.

For both bilateral and multilateral donors, it has to be taken into account that sustained effective aid efforts do not require the same amount of *nominal* transfers once grants constitute a larger proportion of overall aid. What matters for the recipient countries is the effective financial transfers they receive. Likewise, effective financial transfers, rather than the nominal amount of aid, determine the cost incurred by donors. As noted in Section 2, the grant element of IDA

<sup>8</sup> The Meltzer Commission strongly disputed the World Bank's claim that its lending is focused on countries without access to private capital markets.

<sup>9</sup> It should be noted, however, that the Meltzer Commission does not fit easily into the right-wing niche where many critics would like to have it. For instance, Jeffrey Sachs, possibly the most prominent proponent of giving more aid to poor countries, served as a member on the commission.

loans is about 70 percent. This implies that effective financial transfers would remain the same if IDA extended grants in the order of 70 percent of current loan volumes. Put differently, replacing loans with a grant element of 70 percent by the same amount of grants would result in a 43 percent increase of effective aid. This straightforward arithmetic leads Lerrick and Meltzer (2001) to conclude that many critics of the proposed shift to grants “swap apples for oranges.” As a matter of fact, the point that “it is not appropriate to compare loans and grants of equal size” was already made more than 40 years ago (Schmidt 1964: 389).<sup>10</sup>

Finally, it is debatable whether the shift to grants would have significant effects on IDA resources. In its most extreme form, the argument has been that grants make no difference to IDA resources, as “loans are simply grants in disguise” (Lerrick and Meltzer 2001). This may hold for two reasons: (i) Some debt is ultimately forgiven, for example, in the context of debt relief for highly indebted poor countries (HIPC); (ii) another part of debt is not repaid by IDA clients, but rather recycled through defensive IDA lending (i.e., new loans extended for servicing maturing loans in order to avoid outright default).<sup>11</sup> However, it is difficult, if not impossible, to figure out what exactly the share of defensive lending in IDA loans has been.

In contrast to Lerrick and Meltzer (2001), the Meltzer Commission concedes that multilateral donors such as IDA would have to ask their

shareholders for increased financial contributions if the share of grants were to rise (IFIAC 2000: Chapter 3).<sup>12</sup> Hence, the relevant question is to what extent IDA’s effective aid effort would decline if its shareholders declined higher refinancing. In the first decade, a shift from loans to grants would not have any effect on loan repayments that could be recycled. This is because IDA loans have a grace period of ten years. In the longer run, the proportion to which loans extended by IDA could have been financed through debt-service payments that IDA received from earlier loans may provide some indications. According to Table 3, both repayments of maturing loans (“loans received” in the OECD source) and interest payments have increased faster than loans extended by IDA since the first half of the 1980s. Unless defensive lending has become much more important, this finding is in conflict with the verdict that loans are grants in disguise.

On the other hand, the increase in the ratio of debt service received to loans extended does not necessarily indicate an improved repayment record of IDA borrowers. Rather, the ratio was bound to rise since the 1990s, once it is taken into account that IDA loans gathered momentum in the 1980s only.<sup>13</sup> By contrast, annual IDA loans extended since 1994 have no longer revealed an increasing trend.<sup>14</sup> Consequently, it is open to question whether the extent to which IDA may draw on debt-service payments to finance new loans will continue to rise.

Moreover, in two respects, the evidence in Table 3 supports those who consider European concerns about resource depletion to be exaggerated. First, the ratio of debt service to loans

<sup>10</sup> However, Schmidt’s (1964) analysis qualifies Lerrick and Meltzer (2001, 2002) in one important respect. The donor providing a given net benefit to the recipient may well incur varying costs depending on the choice between grants and loans. For example, it is shown that grants cost the donor less than loans if the return on capital is higher in the donor country than in the recipient country. This is because a loan that offers the same net benefit to the recipient involves a higher (nominal) resource transfer at the very beginning.

<sup>11</sup> It should be noted that this reasoning has important implications concerning the incentive effects of grants and loans as well as their economic growth effects in the recipient countries. If loans were grants in disguise, this should be anticipated by rational economic agents. As a consequence, it appears to be inconsistent to argue that grants are superior to loans, as done, for example, by Radelet (2005) and Lerrick and Meltzer (2002). See Sections 4 and 5 for a discussion of the incentive and growth effects of different forms of aid.

<sup>12</sup> As a matter of fact, the US administration reacted to the critics of the Bush initiative by announcing in late 2001 that the United States was willing to increase its contributions to the 13th replenishment of IDA resources if the other shareholders agreed to the proposed shift to grants (Sanford 2002).

<sup>13</sup> IDA was established in 1960, but its annual loan disbursements remained below US\$2 billion until 1981. The stock of outstanding IDA loans reached just US\$20 billion in 1984, whereas it stood at US\$113 billion in 2003 (World Bank 2004).

<sup>14</sup> Loans extended in 2002 and 2003 (of US\$6.6 billion per annum) exceeded loans extended in 1994 by just 9 percent.

Table 3:

IDA: Extended Loans and Debt Service Received, 1980–2003 (millions of dollars)<sup>a</sup>

	1980–1985	1986–1991	1992–1997	1998–2003
Loans extended	2,282	3,858	5,632	5,877
Loans received	74	204	498	1,079
Interest received	127	281	458	668 <sup>b</sup>
Memorandum:				
Loans received in percent of loans extended	3.2	5.3	8.8	18.4
Total debt service in percent of loans extended	8.8	12.6	17.0	29.7

<sup>a</sup>Annual averages. — <sup>b</sup>1999–2003.

Source: OECD (2005).

drops considerably if interest payments are excluded. As noted before, IDA clients are supposed to pay a service charge, rather than interest rates in the strict sense. Hence, the service charge may also be required for grants if these were to account for a significant share of IDA's business.<sup>15</sup> Alternatively, if administrative costs covered by the service charge were loan-specific, IDA receipts from the service charge would not be available for refinancing and should not be counted as part of the pool of loanable funds.<sup>16</sup> Second, the contribution of debt repayments to new loan financing would decline further if defensive lending were discontinued. Assuming that about half of debt repayments received in 1998–2003 were channeled back to the same IDA clients, in order to avoid outright default, the ratio of 18.4 percent reported in Table 3 would drop to 10.1 percent.<sup>17</sup>

All in all, it appears to be fairly unlikely that IDA could not sustain its aid efforts in the future if the institution extended a larger proportion of its aid in the form of grants. The fear of resource depletion thus fails to be a compelling argument in favor of retaining a major role of loans as a means of development financing.

<sup>15</sup> Of course, this would imply that the grant element falls below 100 percent.

<sup>16</sup> In other words, the service charge would no longer be required if it was loan-specific and IDA replaced loans by grants.

<sup>17</sup> This assumption implies that both "loans received" and "loans extended" decline by the same order of US\$540 million. Lerrick and Meltzer (2002: 4) reckon that "most debts" are recycled to the same IDA borrowers, without substantiating this claim.

## 4 Incentive Effects: How Do Grants Compare to Loans?

European donors (e.g., Jacquet 2004) see a further advantage of loans in their capacity to strengthen responsibility on the part of aid recipients as they have to repay the loans. By contrast, economists such as Lerrick and Meltzer (2002) tend to ignore incentives related to debt-service obligations and make their case for a grants-only strategy by stressing the detrimental effects of a debt overhang (see also Section 5). Lerrick and Meltzer (2002)—as well as Radelet (2005)—regard grants even as *superior* to loans in terms of their incentive effects. These authors argue that grants are likely to be used in a sensible way for development purposes if specific performance targets are attached to them, with future financing conditional on achieving these targets. These positive incentives are contrasted with two allegedly "perverse" incentives of loans: first, much lending is supposed to be defensive and thus merely complicates debt management; and second, the new practice of making debt sustainability the basis for deciding on the mix between IDA grants and loans may imply that "countries that have managed their debt well will be 'rewarded' by receiving more loans, whereas those that have amassed more debt will receive grants" (Radelet 2005: 3). While these two problems are real, they are by no means inherent to loans. If performance-based grants are believed to work, it is equally conceivable to devise a regime of performance-based loans where defensive lending is discontinued and poor debt management punished by a withdrawal of funds.

By comparing performance-based grants with traditional loans, Lerrick and Meltzer (2002) succumb to exactly the swapping of apples for oranges they criticize so harshly in the statements of their opponents.

What, then, would a correct comparison of the incentive effects of grants versus loans reveal? If governments are intent on maximizing the welfare of their citizens, there is no reason to assume that one or the other form of aid is used more efficiently. As Schmidt (1964: 388) puts it, “the best allocation of a five-dollar bill does not depend on whether it was earned or found on the street, but on the benefits derived from alternative uses of funds. A rational government would be equally careful with loans and grants.”

This simple outcome does not apply to a more realistic scenario in which governments in recipient countries at least partly further their own interests at the expense of their citizens’ well being. In this case, the incentive effects emphasized by European donors come into play. Grants are most prone to be squandered, as they carry zero opportunity costs unless donors credibly threaten to withhold funds in case of mismanagement. Loans have to be repaid so that governments should have an incentive to refrain from excess borrowing, and to use the requested loans only for projects that promise a positive net return. This is not to ignore that, in practice, long grace periods and maturities may weaken the disciplinary effect of loans.

The principal superiority of loans in efficiency terms does not hold if a large part of the benefits of financing certain activities accrues to the donor. Under such circumstances, grants are supposed to do better than loans as a means of encouraging recipients to undertake the required activities. Examples include the internalization of external effects, such as the preservation of biodiversity, and transfers reflecting the self-interest of donors, such as military assistance or tied aid (Odedokun 2004). Radelet (2005) additionally pleads for exclusive grant financing of social infrastructure projects where the economic return does accrue to the aid recipient, though only in the very long run. This argument is not convincing, however, as the long time horizon of social projects can also be accommodated by

loan arrangements with sufficient grace periods, a practice that IDA already pursues.

Incentive effects also depend on how fungible resources in recipient countries are. If loans finance projects that would otherwise have been undertaken out of own resources, debt-service obligations do not necessarily induce an economical use of aid inflows because the provision of aid allows the recipient country to divert its own resources to other uses. In the same vein, fungibility can compromise attempts to make the choice between grants and loans dependent on the kind of activity to be financed. However, funds are unlikely to be fully fungible so that incentive effects do not become irrelevant (Feyzioglu et al. 1998). This is particularly true for low-income countries where the generally large share of aid in public budgets limits the ability of governments to shift resources.

Gupta et al. (2003) and Odedokun (2003, 2004) provide some empirical backing for the view that, fungibility problems notwithstanding, loans and grants affect governments’ behavior in different ways. These studies deal with the question of whether a shift to grants could have ramifications for the recipient countries’ fiscal stance. In a panel data regression analysis, Gupta et al. (2003) examine the revenue response to loans and grants for a sample of 107 developing countries over the period 1970–2000. They find that concessional loans are generally associated with higher domestic revenue mobilization, while grants have the opposite effect. On average, the dampening effect of grants on domestic revenue mobilization turns out to be modest. In countries with high levels of corruption, however, an increase in grants is estimated to be completely offset by a decline in revenues, i.e., grants to these countries cannot be expected to raise the aggregate amount of resources available to finance government expenditures.

Odedokun (2003) performs a panel data analysis, where he splits the country sample into 42 lower-income and 30 higher-income countries.<sup>18</sup> His estimates corroborate the revenue-

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<sup>18</sup> The threshold at which a country is classified as higher-income is US\$1,000 per capita (1995 dollar value), averaged over the period 1970–1999.

reducing effect of grants for lower-income countries but not for higher-income countries. This suggests that the composition of aid matters less for domestic revenue mobilization in the latter group where the degree of fungibility tends to be relatively high. Using the same samples, Odedokun (2004) shows that a high degree of concessionality provides an incentive for recipient governments to increase the volume of borrowing. This applies to both lower-income and higher-income countries.

Whether a decline in domestic revenues caused by a higher grant element of aid constitutes an obstacle to development cannot be said *a priori*. It could as well be part of a strategy to return resources to the private sector. As pointed out by Gunning (2000), using aid for tax relief can be very productive because the cost of taxation is likely to be atypically high in developing economies. It is hardly conceivable, however, that aid allocated to corrupt or otherwise misgoverned recipient countries is used to improve the efficiency of the tax system. Furthermore, at least in very poor countries, aid is in all likelihood needed in addition to domestic revenues in order to finance development expenditures, which suggests that declining revenues indicate lower domestic resource mobilization rather than a deliberate tax strategy for private sector development.

Overall, the effects of a shift from loans to grants on the incentives to mobilize domestic resources appear to be negative in poor and badly governed countries, whereas for richer and better governed countries the distinction between grants and loans may no longer be of major importance.

## **5 Growth Effects: Dependent on the Composition of Aid and Country Characteristics?**

Assessing the relative desirability of grants versus loans depends on the ultimate goals that development aid is expected to achieve. If one subscribes to the very modest view that aid should

mainly serve humanitarian purposes (e.g., Easterly 2003, Rogoff 2003), a strong case can be made for giving it in the form of outright grants. If one is a bit more ambitious—as we would argue one should be—and demands at least a small contribution of aid to economic growth, the balance of arguments for and against both forms of aid is much less clear-cut. Some authors (e.g., Rogoff 2003) regard loans as inferior because they might lead to a debt overhang and thereby stifle growth. Others (e.g., Rajan 2005) put a stronger emphasis on the higher net resource flows to developing countries loans might permit. Our own analysis in Sections 3 and 4 suggests a third hypothesis, namely that the composition of aid may have little effect on growth across developing countries. On the one hand, the impact on net resource flows seems to be smaller than Rajan suspects. On the other hand, the debt overhang argument in favor of grants is counteracted by their negative incentive effects on domestic resource mobilization. In any case, it becomes an empirical question to establish the growth effects of grants and loans.

A number of empirical studies on the effectiveness of foreign aid in spurring economic growth have been conducted in the recent past. The literature has been dominated by the analysis of Burnside and Dollar (2000), who made the point that aid has the desired growth effects in recipient countries that pursue sound economic policies and have a favorable institutional environment, whereas it does not work under unfavorable domestic conditions. Several other country characteristics have also been shown to render aid effective. These include the vulnerability to external shocks (Guillaumont and Chauvet 2001), post-conflict situations (Collier and Hoeffler 2004), and deeply rooted factors such as climate-related circumstances (Dalgaard et al. 2004). Hansen and Tarp (2001) even find that the positive impact of aid on growth is not conditional on local factors once it is taken into account that aid is subject to diminishing returns. Ram (2003) estimates a positive growth effect of bilateral aid, whereas the effect of multilateral aid turns out to be negative. He attributes the worse performance of the latter to counterproductive conditionality, but it could also reflect

the relatively small share of grants in overall multilateral aid (Section 2).

The fairly optimistic thrust of all these studies has not remained uncontested. In the most comprehensive sensitivity analysis yet undertaken, Rajan and Subramanian (2005) come to the conclusion that there is no robust evidence of a positive impact of aid inflows on economic growth. This holds for both the unconditional and various conditional aid-growth relationships. Differences in the growth effects of bilateral and multilateral aid are also not corroborated. The loans versus grants controversy is about the only major issue in the aid effectiveness literature that Rajan and Subramanian do not address, but the extreme fragility detected in previous aid regressions may well carry over to regressions involving grants and loans.

Given the problems with aid regressions, we think there is some value in performing a simple correlation analysis to obtain preliminary evidence on whether the growth effects of grants and loans differ. Our analysis covers aid flows for four consecutive five-year periods beginning in 1978. Specifically, we set total net ODA, total net loans, total grants, and the grant element implied in ODA commitments<sup>19</sup>, all defined in per capita terms, in relation to average per capita GNI growth over the subsequent five years. This lag structure is meant to capture that not all aid can be expected to have an immediate impact on economic development. For the data pooled over the four subperiods, we compute both the Pearson and the Spearman rank correlation coefficient as they may lead to different results in case of outliers.<sup>20</sup> By restricting our sample to

the 30 and 60 poorest countries, respectively, we try to mitigate the problem of reverse causality, which occurs because donors tend to give more aid to poorer countries (e.g., Canavire et al. 2005).

The Pearson correlation for the pooled data suggests that aid does not have a significant impact on economic growth, with only one exception: for the sample of the 60 poorest countries, the amount of total net loans is positively associated with subsequent growth (Table 4). By contrast, the nonparametric Spearman correlation displays a negative link between aid flows and growth for the 30 poorest countries, but no significant relationship for the poorest 60 countries. In the former sample, the negative effect is somewhat stronger for grants than for loans, but the coefficient of the grant element of ODA commitments shows no statistical significance. Hence, we tentatively conclude from the correlation exercise that it does not make a big difference for economic growth whether aid comes in the form of grants or loans.

This finding squares quite well with the only existing econometric analysis of the grants versus loans debate by Cordella and Ulku (2004). These authors calculate the degree of concessionality as the ratio of effective development assistance (EDA) to nominal ODA,<sup>21</sup> and plug this variable into a standard aid-growth regression. For a cross-country panel of four five-year averages covering the period 1980–1999, they find that, irrespective of the chosen estimation technique, the degree of concessionality has a very small, and in the majority of specifications statistically insignificant impact on economic growth.

Cordella and Ulku move on to examine whether the degree of concessionality might matter more for growth conditional on country characteristics such as the level of economic development, the quality of policies and institutions, and the level of inherited foreign debt. The underlying hypothesis is that the ability and/or willingness of countries to service large loans is severely compromised if they are poor, badly

<sup>19</sup> More precisely, we use OECD data on the product of the grant element and nominal ODA commitments.

<sup>20</sup> The most striking outlier in the dataset is Equatorial Guinea. Being among the 30 poorest countries in the late eighties, it experienced dramatic economic growth rates due to exploitation of large oil reserves, which by far exceeded the rates suggested by the linear aid-growth relationship. Further outliers are Guinea Bissau and the Solomon Islands, which suffered strongly negative growth at the end of last century and at the beginning of this decade, despite having received considerable aid inflows. China, with high growth rates but minimal per capita aid flows, as well as Jordan, with extraordinarily high aid—mainly from Arab countries—in the late seventies and early eighties, also distort the estimations.

<sup>21</sup> While ODA is defined as the sum of grants and loans, EDA only counts the grant equivalent of loans.

Table 4:

Correlation of Grants and Loans with Growth Per Capita, 1978–2002 (period averages)<sup>a</sup>

		Total net ODA	Total net loans	Total grants	Grant element <sup>b</sup>
Pooled data set for 30 poorest countries					
Growth of GNI per capita, PPP, 5-year periods, 1982–2002	Pearson correlation	.045	.029	.062	–.035
	Spearman correlation	–.258**	–.183*	–.259**	–.167
	Number of observations	119	118	119	118
Pooled data set for 60 poorest countries					
Growth of GNI per capita, PPP, 5-year periods, 1982–2002	Pearson correlation	.102	.131*	.084	.097
	Spearman correlation	.001	.020	–.031	.022
	Number of observations	235	234	234	232

\* estimates are significant at the 5 percent level; \*\* estimates are significant at the 1 percent level.

<sup>a</sup>All aid variables are in per capita terms. — <sup>b</sup>Product of grant element and nominal ODA commitments.

Source: Own calculations based on OECD (2005) and World Bank (2005).

Table 5:

Grant Element by Country Characteristics, 1996–2000 (period average)<sup>a</sup>

Income/indebtedness	CPIA <sup>b</sup>		
	Poor or very poor	Moderate	Good or very good
HIPC <sup>c</sup>	94.16 (12)	92.67 (11)	89.07 (7)
Non-HIPC	92.69 (24)	88.21 (8)	85.67 (24)
Low income	92.90 (21)	90.33 (14)	88.62 (10)
Lower-middle income	93.57 (15)	92.08 (5)	85.40 (21)

<sup>a</sup>Number of observations in parentheses. — <sup>b</sup>World Bank Country Policy and Institutional Assessment 1998. — <sup>c</sup>Highly Indebted Poor Countries.

Source: Collier and Dollar (2001); OECD (2005).

governed, and suffering from a debt overhang, which in turn lowers their growth prospects. Based on a regression framework that incorporates this hypothesis by interacting the concessionality variable with proxies for the three country characteristics, the degree of concessionality is indeed found to be positively associated with economic growth for poor, badly governed and highly indebted countries. This result appears to suggest that the disincentive effects of grants with regard to domestic resource mobilization are dominated by debt management problems when poor and badly governed countries are predominantly financed by foreign loans.

Yet, Cordella and Ulku do not prove those right who demand a sweeping revision of current aid allocations in favor of grants. Rather, the results call for a careful fine-tuning of development assistance according to each recipient country's characteristics. The bulk of poor, in-

debted, and badly governed recipients are located in Sub-Saharan Africa, where the grant element of aid is already close to 100 percent. However, Table 5 reveals that very high grant elements are not confined to indebted and poor countries with poor or very poor governance according to the World Bank's Country Policy and Institutional Assessment (CPIA). Even in lower-middle income countries whose policies and institutions are rated as good or very good, the grant element still exceeds 85 percent on average. If this suggests any shift in the composition of aid, it is one towards loans not grants.

## 6 Concluding Remarks

This paper has shown that it is virtually impossible to detect a convincing economic rationale behind the current debate on whether aid to poor

countries should be delivered in the form of grants rather than loans. In contrast to what one might expect, grants already predominate the aid budgets of all major bilateral donors, except Japan, and of multilateral agencies such as the EU and UNDP. Even for IDA, the proposed shift from loans to grants would probably result in a fairly small change in effective resource flows due to the high grant element of its loans.

Concerning the incentive and growth effects of grants and loans, the one-sided positions taken by almost all participants in the debate appear to be untenable. The proponents of a grants-only strategy tend to ignore that under specific conditions such as high corruption grants weaken the incentives for domestic resource mobilization and are most likely to be squandered. Those who want to retain a significant role for loans tend to downplay the risk of a debt overhang in badly governed and highly indebted poor countries. A more careful weighing of the arguments would probably come out in favor of a mix of grants and loans that is highly country-

specific. To achieve this, the debate might better be relegated from the high-level political arena to the daily work of country specialists.

In the longer run, recipients could arguably become more homogeneous in terms of governance and debt management capacities if donors pressed harder than they currently do to make aid performance-based and withdrew aid in case of non-compliance with performance targets. As a consequence, the differences between grants and loans might disappear, confirming Schmidt's (1964) verdict that rational governments would use both forms of aid equally carefully. In the short run, however, greater selectivity in the provision of grants seems to be required once it is taken into account that the incentive and growth effects of grants and loans depend on the quality of governance and the sustainability of debt accumulation in particular countries. Hence, the current debate should, rather, be whether donors have become too indiscriminate in providing grants.

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