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ABSTRACT

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We argue in this paper that cancelling the debt of the poorest countries was a good thing, but that it should not imply that the debt instrument should be foregone. We claim that debt and debt cancellations are indeed two complementary instruments which, if properly managed, perform better than either loans or grants taken in isolation. The core of the intuition, which we develop in a simple two-period model, relates to the fact that the poorest countries are also the most volatile, so that contingent facilities, explicitly incorporating debt cancellation mechanisms, are a valuable instrument. Based on this idea, we present one of the lending scheme that could be applied to the poorest countries and calibrate the cost that would have to be borne by the creditors, were they to incorporate contingencies clause in their lending strategy.

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1. Introduction

Suppose a DAC donor earmarks $1 billion of taxpayers' money for official development assistance (ODA). The donor may use two instruments as an outright grant or in combination with a market loan to produce a concessional loan of $2 billion with a percentage grant element of 50 per cent. Many nowadays think the choice should be clear: provide grants only, leave loans to the market. Since its inception in the 1980s, the developing country debt crisis has marked a dramatic watershed in official development assistance (ODA), as it brought home the fact that ODA loans had accumulated into unsustainable debt and thus called into question the use of loans to finance development.

After 2000, the *grants-versus-loans* controversy developed when an influential US Congress Report of the International Financial Institution Advisory Commission (better known as *Meltzer Commission; see IFIAC, 2000*) concluded that total cancellation of poor-country debt was essential. One of the conclusions of the Meltzer Commission on reforming the World Bank and the International Monetary Fund was that development assistance should be administered through performance-based *grants* rather than (concessionary, or soft) *loans*. Under this system, grants would be disbursed not directly to the government, but to a non-governmental organisation (NGO), charity, or private-sector business that would offer the cheapest bid for a project. These recommendations were echoed in US President Bush's proposal in 2001 during the negotiations for the 13th IDA replenishment that 50 per cent of IDA financing to poor countries should take the form of direct grants.

The heavily indebted poor country (HIPC) debt reduction initiative has been seen as proof of failure of the soft loan strategy. The international agreement on debt relief (Multilateral Debt Relief Initiative, or MDRI) reached by the G-8 Finance Ministers in mid-2005 followed suit, cancelling $56.5 billion in loans owed to the World Bank, African Development Bank and International Monetary Fund. At Gleneagles the Heads of State formally endorsed the agreement made by their Finance Ministers. Fourteen countries in Africa and four in Latin America became eligible for immediate

debt forgiveness under the plan, and a further nine should benefit over the next few years.

One thing however is to agree on cancelling the debt, and another one is to consider that the instrument should be foregone. Although paradoxical at first glance, we shall argue in this paper that debt and debt cancellations are two complementary instruments which, if properly managed, perform better than either loans or grants taken in isolation. The core of our intuition relates to the fact that the poorest countries are also the most volatile, so that contingent facilities, explicitly incorporating debt cancellation mechanisms, are a valuable instrument.

The sequel of the paper comes as follows. We first review critically a few of the arguments weighting grants against lending to the poorest countries, notably the incentive effects of each instrument. We then address what we regard as the most serious criticism against loans, namely the issue of "defensive lending". If lenders had to refinance by themselves their loans to the poorest countries, then it is clear that the instrument is equivalent to a grant. We show econometrically that this has not been the case in general. Defensive lending is an occasional, not a systematic feature, of loans to the poorest countries.

We then offer a simple theoretical model to show that the equivalence between loans and grants that is assumed or demonstrated in a number of papers (Lerrick and Meltzer, 2002, in particular) only holds if the country has access to fully fledged financial markets. When this is not the case, we show that soft loans incorporating debt cancellations mechanisms perform better than grants only or loans only. We finally present one of the lending scheme that could be applied to the poorest countries and calibrate the cost that would have to be borne by the creditors, were they to incorporate contingencies clause in their lending strategy.

2. Overview of arguments

1. Efficiency

Are grants more efficient than loans in fighting poverty? A number of papers have addressed this question, with no obvious answers so far. Nunnenkamp, Thiele and Wilfer (2005) conduct a simple correlation analysis to explore whether loans and grants have different impacts on economic growth. They look at the relation between, on the one hand, total net ODA, total net loans, total grants and the grant element in ODA commitments (computed as the product of the grant element as defined in DAC statistics and ODA commitments), and, on the other, average per capita growth in gross national income over the subsequent five years. Their analysis finds no substantial difference in the impact on economic growth between ODA distributed through grants and ODA distributed through loans.

Second, it is interesting to ask how ODA relates to local fiscal discipline. Since grants need not be repaid, they entail a potential disincentive on the mobilisation of public revenues and on the quality of public spending. Increased dependency on external aid may result. In principle, loan repayments should help build financial discipline and promote the efficient use of funds. Before moving to empirical results, however, the whole theoretical argument needs to be qualified. In a dynamic framework in which beneficiary countries rely on the continuation of grants and in which development institutions are keen on producing a given level of ODA, the incentive structure is more complex. For example, if the renewal of a grant can be credibly tied to a given level of financial discipline in the recipient country, then the aforementioned disincentive is offset by the positive incentive of having the flow of grants renewed. However, “grant pushing” behaviour by development institutions might again weaken that incentive. More than a grants-versus-loans issue, this is another version of Buchanan’s (1975) Samaritan’s dilemma.

Odedokun (2003), using yearly panel data from 1970 to 1999 for 72 ODA beneficiaries, finds that concessional loans are typically associated with higher fiscal revenues, lower public consumption, higher investment rates and lower dependency of the public deficit on external financing. In poor countries, a higher level of grants in total ODA is associated with a lower tax effort. Gupta *et al.* (2004) look at a set of 107 countries that benefited from ODA between 1970 and 2000, assessing the impact of grants and loans on the domestic fiscal effort. They find that an increase in total ODA (sum of grants and concessional loans) leads to a decline in fiscal receipts in the

beneficiary country. McGillivray and Ahmed (1999) and Sugema and Chowdhury (2005) reach similar conclusions using data from the Philippines and Indonesia respectively. However, Gupta *et al.* (2004) also look at the differential impact of grants and loans, finding that an increase in grants translates into lower receipts: 28 cents of each additional $1 grant are offset by a reduction in the fiscal effort. Conversely, loans tend to be associated with increased government revenue. In countries with weak institutions, additional grants are completely offset by a reduction in domestic revenues (see also Clements *et al*., 2004).

In summary, the argument according to which loans are equivalent to grant is not warranted from these analyses, at least from the point of view of the incentives that each instrument carries.

2. Defensive lending

Another powerful line of reasoning against loans relates to the institutional incapacity of the poorest countries to fulfil their financial commitments. According to Bulow and Rogoff (2005), this institutional weakness is also the simplest way for explaining the lack of access to international financial markets.

Bulow and Rogoff cite a study conducted by the American Congressional Budget Office, according to which the market value of the debt for the multilateral banks is markedly lower than par. In other words, according to this line of argument, the reason why the poor countries haven't got access to the international financial markets is the same one as that explaining why the loans of multilateral banks are non-recoverable.

Lerrick and Meltzer (2002) as well as Radelet (2005) argue similarly that loans carry perverse incentives, in particular linked to the pressures on creditors to make new loans to allow countries to repay old ones, whereas grants can be devised to generate positive incentives. Contrary to loans, grants do not contribute to debt overhang. Bulow and Rogoff sum up this last point in the following way: "multilateral development banks sometimes have their own internal pressures to pump out loans, inducing politically fragile developing countries to take unwanted debt." According to

this argument, thanks to the grants, the multilateral agencies wouldn't be obliged to weaken poor countries, for lack of adequate instruments. Defensive lending, which obliges the lenders to refinance themselves the loans when they come due is, under this analysis, the necessary outcome of lending to the poorest countries. When defensive lending became the norm, debt had to be written down. Which is why, again following the reasoning behind the Meltzer commission, cancelling debt was a good thing, on the condition never to lend again.

It is clear that defensive lending, if a fact, would hamper the relevance of loans to the poorest countries. If debt service had to be constantly refinanced by the creditors themselves, then they would be in reality not different from grants. It is this issue that we now test econometrically.

3. An econometric test

In order to shed light on the relevance and significance of defensive lending, we present an econometric analysis relative to the borrowing policies conducted by the private sector, the bilateral and the multilateral agencies respectively. The matter we want to tackle here is the part of defensive lending granted by each of these groups to their clients. We measure the extent to which new loans (in gross terms) are explained by debt service of the debt. Our analysis follows Marchesi and Missale (2004) (although they reason only in net terms). We also investigate the extent to which grants by bilaterals are a substitute to defensive lending.

The data that we use are the following. Grants and loans are obtained from the OECD *Development Assistance Committee*. Debt service is calculated from the database of the *Global Development Finance* produced by the World Bank. The data "political rights" and "civil liberty" which we also control for, come from the *Global Development Network Growth Database*. We regress gross loans upon debt service and take the value of the coefficient as a measure of defensive lending. We also control for (the lagged value of) the debt-to-GDP ratio (Ldebt), the (lagged value) of grants-to-GDP, population growth (population), lagged GDP growth (LGDP Growth), lagged inflation (Linflation), lagged political rights and civil liberties.

The results are presented in tables 1 and 2 in appendix 2. Table 1 shows the amount of defensive lending that took place for all three private, bilateral and multilateral lenders, over the period 1980-2004. Private lenders are the least concerned, with less than 3% of their loans that can be interpreted as defensive loans. Then come the bilateral lenders with a ratio which is three times higher. Finally the multilateral lenders experience a defensive lending ratio which is again three times the level of the bilaterals, at about 30%.

Table 2 breaks down the ratios over three time horizons: 1980s, 1990s and 2000-2005 which we call, by simplicity, the 2000s. The picture is slightly different. All three lenders eventually experienced some defensive lending, but at different time horizons. Private lenders were concerned in the 1980s, multilateral lenders in the 1980s and 1990s.

These econometric results point to a simple conclusion. Defensive lending has taken place across all classes of creditors. Altogether, however, they do not appear to be an intrinsic and repeated feature of lending to poor countries nor to have exceeded about one third of the debt service involved. There is no intrinsic capture of the creditors by their debtors. On the other hand, creditors do have to refinance loans when under financial stress. This feature points to the need of contingency clauses more than to foregoing the instrument itself.

3. A theoretical framework

Bulow and Rogoff argue that that the poorest countries have no access to the financial markets for lack of proper institutions which, in their view, is the very reason why they should not have access to soft loans either. There is however another explanation as to why poor countries haven't access to the international financial markets: it is the fact that their economies are too volatile. Financial markets do not handle well economic volatility when it comes to sovereign creditors. The lack of efficient procedures for settling debts in case of bad shocks makes it difficult to cancel debt when needed. Financial crises are more frequent than smooth resolution of debt problem. Private loans to developing countries have *de facto* not helped to

smooth per capita consumption but tended to increase the volatility of consumption (Reisen and Maltzan, 1999) in poor countries. Kharroubi (2005) shows how volatility does tend to exclude poor countries from international financial markets.

In the model that we present below, exclusion from the financial markets will be the outcome of two features: poor institutions and high volatility. In this context, we explore the conditions under which grants and loans are or not equivalent and draw policy implications for the design of soft loans.

1. The setting[2]

Consider an open country in a two-period framework. The country considers an investment I_1 in period 1. We suppose that there are two states of nature in period 2. In the favourable state, the return to the investment will be Q_+; in the unfavourable state, Q_- (with $Q_+ > Q_-$). We suppose further that the unfavourable state occurs with probability $p < 1$. The world risk-free interest rate is r.

In such a framework, the investment will be socially profitable if and only if:

$$I_1(1+r) \leq (1-p)Q_+ + pQ_- \qquad (1)$$

In what follows, we assume that this condition is satisfied.

Let us now assume that the country finances I_1 through its own financing capacity Q_1 in period 1 and through a debt D_1 contracted in period 1 from outside investors, such that:

$$Q_1 + D_1 = I_1$$

[2] This section draws on Cohen and Portes (2005).

Let us assume that the country suffers from weak institutions and governance problems and that these translate into an institutional capacity $\lambda \in [0,1]$ to repay the debt. λ can be interpreted as the recoverable part of any investment by the foreign investor.
The debt can then be repaid (on average) if and only if:

$$D_1(1+r) \leq (1-p)\lambda Q_+ + p\lambda Q_-$$

Let us call ρ the risk-adjusted interest rate on debt D_1. Foreign investors will thus require a payment of $R = D_1(1+\rho)$ in period 2.

If $R \leq \lambda Q_-$, the country is solvent and can borrow at the risk-free rate (r = ρ).
If $\lambda Q_- < R \leq \lambda Q_+$, the country will not be able to repay the debt should the unfavourable state of nature occur. We suppose that in such a case the country defaults. Investors will be willing to finance D_1 at a rate such that:

$$D_1(1+r) = (1-p)D_1(1+\rho)$$

This implies that $(1+\rho)(1-p) = (1+r)$, and $\rho \cong r + p$.

Finally, let us suppose that the country has no financing capacity in period 1 ($Q_1 = 0$). The investment will be possible if and only if:

$$I_1(1+r) \leq \lambda Q_+(1-p)$$

Given λ and p, it is thus perfectly possible that a socially profitable investment – i.e. an investment verifying (1) above – will not be financed.

In the following, we assume $I_1(1+r) > \lambda Q_+(1-p)$ so that I_1, which we suppose to be socially profitable, will not be undertaken if it were to be financed by the financial markets alone. We ask how development aid can help solve this inefficiency.

2. The (non-) equivalence between grants and loans

A first option consists in making a grant G_1 to the country. G_1 will finance part of the investment (thus contributing to the country's own financing capacity) and is chosen so as to make I_1-G_1 financeable by the financial markets. The grant G_1 will thus be chosen such that: $(I_1 - G_1)(1+r) \leq \lambda Q_+(1-p)$, hence

$$G_1 = I_1 - \frac{\lambda Q_+(1-p)}{1+r}$$

A second option consists in making a loan I_1, knowing that the country will default in the unfavourable state of nature. Such a loan will thus repay $\lambda Q_+(1-p)$. It will therefore cost an amount exactly equivalent to G_1. In such a setting, the loan and grant equivalence is obtained. This is the core of Lerrick and Meltzer's argument.

Suppose, however, that donors tailor the subsidised loan to the unfavourable state of nature and therefore ask for a repayment $R = \lambda Q_-$. In such a scenario, the country will be able to service its debt in both states of nature. The subsidised loan needed to make the investment happen will then cost G' such that:

$$G' = I_1 - \frac{\lambda Q_-}{1+r}$$

It then follows that if $Q_+(1-p) < Q_-$, *G'*<*G*. A subsidised loan is to be preferred to a grant. In this case the equivalence between loans and grants is broken: soft loans (with susbsidised rates) are superior to grants.

Clearly, the best solution would be to design a loan whose service is contingent on the state of nature, namely:

$R_+ = D_1(1+\rho)$ when Q_+ occurs, and $R_- = \lambda Q_-$ in case of Q_-.

If private creditors are able to design such loans, then the equivalence between loans and grants is restored. If instead developing agencies are in a better position than markets to devise such contingent loans, i.e. if their comparative advantage lies in their ability to write down the debt when needed, then state-contingent loans are

once again superior to grants.

3. Lessons

In the model that we have examined, developing countries' insufficient access to international capital markets relates both to the volatility of their resources and to their lack of institutional commitments. High volatility translates into higher spreads which limit borrowing capacity. Some socially productive investments may then not be spontaneously financed. In such a framework, the equivalence between loans and grants does not hold, when the market is unable to provide adequate state contingent debt. Solving these market failures should be part of the aid donors' mission .

Debt cancellation of poorest countries, such as the one engineered after the HIPC initiative, far from being bad news, may on the contrary reveal the comparative advantage of development agencies. The international financial markets indeed suffer from not having transparency procedures for debt cancellation. Debt and debt cancellation should be thought instead as complementary instruments, rather than substitutes.

4. A new vehicle for lending to the poorest countries

1. How to handle the volatility of poor countries

Let us focus on vulnerability to external shocks as a major factor which should be addressed by lenders to poor countries. Natural resource price volatility has long been recognised as a major source of vulnerability for developing countries. There is ample evidence of the negative impact of export instability and of economic volatility on economic growth (Ramey and Ramey, 1995). While the problem has long been known and understood, and despite several attempts, the international community has so far failed to provide a practical solution. Measures to stabilise natural resource export prices have failed in the face of the high and persistent costs of the distortions thus created given the evolution of markets. Mechanisms such as the Stabex[3] were

[3] The Stabex was set up in 1976 by the European Community under the Lomé convention and was discontinued in 1980. It was a system of compensatory finance to stabilise African, Caribbean and Pacific (ACP) countries' agricultural export earnings. Below a given reference threshold, a developing country would receive from the Stabex mechanism a financial transfer to cover the difference between the threshold and

conceived to provide counter-cyclical relief. In practice, however, they worked rather pro-cyclically and did not achieve their objectives (Collier *et al*., 1999).

The nature of the shocks is one of the critical feature that makes them difficult to manage. Price shocks have tended to be permanent rather than cyclical. This is also one of the reasons why *ad hoc* debt rescheduling has often left debtor countries with an increasing debt burden that eventually became too heavy, as such operations were based on the false hope that higher prices and a more lenient economic environment would eventually bail out overly indebted countries.

Guillaumont *et al.* (2003) usefully discuss several ways to use ODA to dampen the impact of price shocks. A first option consists in explicitly linking yearly repayments to the state of nature by automatic adjustment of the public debt service to the evolution of export prices: reduced debt service during crises, faster repayment during booms. In a similar spirit, Gilbert and Varangis (2005) call for explicit loan indexation on prime material prices[4].

An interesting idea, also explored by Guillaumont *et al*. (2003), consists in using the subsidy element embedded in concessional loans to finance cushioning. The central repayment scheme might be based on constant annuities, but the loan would be associated with contingent grants provided in response to a temporary exogenous negative shock that would partly cover debt service. Such grants would be financed by a reduction in the primary loan concessionality, which means that the implied subsidy on the loan interest rate would be lower or the amortisation period shorter. If no shock occurs during the amortisation period, the associated grant might be used in whole or in part to cover the last payments under strict economic policy conditionality (to provide some incentive for sound management of any price booms).

2. A new lending strategy

Cohen *et al.* (2004) propose a medium-term solution that consists in smoothing out export revenues across a moving average of the previous five years,

actual export receipts.

[4] Donors are currently experimenting with similar ideas. For example, the Agence Française de Développement (AFD) recently made a loan to a cotton company in an African country whose maturity depends on cotton prices.

thus providing a cushion without leaning against the winds of long run trends. Such idea could easily be applied towards adding a price indexation formula to concessional ODA loans. For example, creditors might monitor the difference between previous price averages and current prices. When that difference exceeds a given level, loan repayments could be either accelerated or reduced. Following these ideas, we have calibrated a simple lending strategy. We investigate the cost of canceling (rather than refinancing) the service of the debt in all instances where the value of exports falls below *x%* of their moving averages over the past five years. We show the range of results when the threshold *x* varies from 95% to 75%.

We present in appendix 3 the simulations obtained when taking the set of IDA-only countries where the Agence Française de Développement intervenes. The simulations are based on past performances of these countries, during the period 1975-2005. On average, one obtains that a fraction representing 35% of the loans would have to be foregone, were the debt service of debt to be cancelled whenever the level of exports fall below the 95% threshold. The worst-case scenario is with Burundi, where the occurrence would have reached 62%. Even this worst-case scenario, however, is within the range of grant elements incorporated in loans to the poorest countries (which is on average about two thirds of the face value of loans). There is therefore room for tailoring contingent loans whose grant elements would amount in providing automatic debt relief to the indebted country in time of distress.

3. Implementation

This discussion leads us to advocate a scheme in which the ODA subsidy involved in concessional ODA loan would be used to adapt the service of the debt to the shock pattern that debtor countries face so that debt solvency is maintained. We calibrated a simulation based on exports, but the same idea could be applied to a mechanism which depends upon the price of a basket commodities representative of the country's exports. This would allow for a swifter mechanism. One could go beyond these ideas, and allow for a judgment of the lending agencies themselves, as to when it is appropriate to cancel debt service.

One way of implementing these ideas would be to get multilateral and

bilateral[5] development institutions to build up reserves that would allow them to cancel debt service when the country is in a bad state of nature. Such reserves would be calibrated to cover risks related to shocks in natural resource prices and to natural disasters facing developing countries. They could use part of the grant element to finance the build-up in reserves.

However they may implemented, these ideas face several institutional constraints, both in terms of the the way the DAC is currently accounting for ODA and with regard to accounting standards such as the new International Financial Reporting Standards (IFRS). Reserves, for instance, so long as they are undisbursed, are not counted for as ODA, which usually requires a spending item in the public budget. The same issue arises with guarantees. Time is ripe for debate and possible change of outdated ODA accounting conventions.

Moral hazard stands as another important issue that needs to be addressed. Any debt cancellation scheme introduces a bias in favor of debtor countries. The risk is that of transferring resources from properly managed countries that honor their debt commitments towards those that fail to do so. Indeed, experience with debt reduction under the HIPC initiative illustrates that risk. ODA flows seem to have benefited the most indebted countries rather than the neediest ones, even if there is no evidence that debt relief has had any significant crowding-out effect on other aid flows (Powell, 2003); and there seems to be no correlation between debt reduction and either the level of poverty (Cohen and Vellutini, 2004) or the quality of governance.

The schemes that we propose, however, offers a possibility of significantly reducing the level of moral hazard involved. For one thing, the debt cancellation mechanism, if based on world prices only, cannot, usually, be manipulated by the country.

One can also imagine that countries which have not depleted the reserves committed to them could use them, at the end of the loan, in order to shorten the life of their debt. There would be no cross subsidies across countries, which is a

[5] Development institutions that make bilateral loans (such as AFD) already provision country risk.

problem, but this would have the merit of incentive compatibility.

Third, the amount of “sleeping” reserves committed to each country depends on the threshold that is chosen. This threshold needs not be the same across countries. It could be chosen out of an explicit and transparent assessment of the country risk and thus calls attention to country specifics and policies. To give a practical example, one could conduct a detailed country risk analysis and classify developing countries in four groups, calling respectively for reserves amounting to 25 per cent, 50 per cent, 75 per cent or 100 per cent of debt, each with a corresponding threshold based on past experiences. In the first group, considered as exceptional, a provision of 100 units would allow a loan of 400 units; in the second, the same provision would allow a loan of 200 units; in the third, 133 (=100/75). The fourth and last group would require outright grants. Countries with poor institutions and governance would belong to that group, for which the arguments presented by Bulow and Rogoff (2005) are valid.

Such a scheme also calls for a much tighter coordination between multilateral and bilateral donors. There is a collective action problem in dealing with debt reduction, since it is in no creditor’s interest to move first lest its move facilitate repayment to other creditors. It is interesting to compare our proposal with IDA14 provisions for 2005-08. IDA plans to allocate one-third of its resources to outright grants rather than highly concessional loans. A country might qualify for IDA loans provided that its debt remains within preset debt sustainability criteria established by the World Bank and the IMF. These criteria identify debt thresholds of 100 per cent, 200 per cent or 300 per cent of exports, depending on the institutional risk as measured by the World Bank’s Country Policy and Institutional Assessment (CPIA). When the debt is too high, the country qualifies for grants instead. In order to avoid penalising a solvent country as compared to an insolvent one, IDA14 has decided to cut its grants by a discount factor of 20 per cent (or 9 per cent in a major post-conflict situation). The discount is supposed to limit moral hazard in that it penalises a country that purposely lets its debt grow astray.

Our scheme is based on similar principles, but proceeds in a more systematic fashion. The leverage factor allowed in loans is grounded on constituting provisions

that correspond directly to the grant element of international aid. The more solvent a country (i.e. the more it is able to build its institutions so as to honour its debts), the higher the possible leverage. Instead of a fixed discount, our proposed solution uses a progressive scale depending on the quality of the country's governance.

Conclusion: Beyond grants versus loans, towards modern development finance

The basic message of our paper is that the grants-versus-loans debate as it was cast during the IDA13 replenishment has been misleading and largely irrelevant. It came in a context where most multilateral and, even more, bilateral ODA is already delivered as outright grants. It broadly disregarded financial and economic analysis and reached one-sided conclusions that do not fit well with empirical observations. By putting the focus on ODA instruments, however, it has helped to raise awareness about the link between such instruments and aid effectiveness. Our main conclusion is that there is a rationale for loans as effective ODA delivery mechanisms, that there is also a rationale for development institutions to provide concessional loans, but that a key aspect of any effective ODA loan strategy has to be the issue of debt sustainability.

Modern ODA should build on the capacity of donors to use a wide range of financial instruments, from direct subsidies to market loans, guarantees, and state contingent debt. The key and the originality, therefore, lie in mixing taxpayers' money with a number of financial instruments, in a flexible and innovative manner. This is, of course, a major departure from the conventional conception of ODA instruments as either direct grants or concessional loans.

One obstacle, as mentioned above, lies with the current accounting definition of ODA, which, because of the necessity for public communication concerning the ODA figure, conditions both the nature of the ODA instruments that can be used and their destination. The time has come to open up the statistical definition so as to make full use of the potential of ODA and increase its efficiency. The debate is only getting under way and needs to be pursued within the donor community, notably within the DAC coordination framework.

A number of examples[6] illustrate the potential benefits of such an approach and how it could be expanded at the micro-level. One first example concerns Faulu, a large micro-finance institution in Kenya that plays a prominent role in financing local entrepreneurship. Faulu benefited from a guarantee of 75 per cent of its KS 500 million (€5.5 million) five-year bond issue on the Kenyan Stock Exchange, launched in early 2005. The bond was successfully closed a few weeks later and was oversubscribed by 150 per cent. A development bank is often better placed than other market players to provide such guarantees, as it may have better information than some local actors and the ability to take more risks than the market. In this case, Faulu was able to raise longer-term and cheaper resources than it could have obtained through bank credit. Moreover, this operation helped to establish partnerships with the local institutional investors and thus also to the institutional sustainability and expansion of micro-finance in Kenya.

A second example, in South Africa, shows how it is possible to integrate low-income households in a social housing programme through the local banking system. The programme is based on home ownership loans granted to households with an income between 2,500 and 7,500 rands. A concessional ODA loan with a substantial grant element was made to a local bank. An amount equivalent to the grant element in rands is used by the bank to subsidise the loan instalments for lower-income households that otherwise would not be able to take part in the programme. This is a good example of output-based aid. In this case, the bank also has a further incentive to demonstrate that it is making significant contributions to social objectives, as the government can bar banks from participating in government programmes if certain social targets are not met.

Many other examples could be adduced that show the potentialities and the diversity of this approach, again based on using ODA to offer guarantees and contingencies that allow to go beyond the usual alternative between loans and grants.

[6] Drawn from the 2004-05 operations of the Agence Française de Développement.

A simple analogy suggests how loans may help borrowers to escape poverty: micro-finance allows liquidity-constrained poor households to access (high-interest) loans that allow them to engage in highly productive activities. There is no *a priori* reason why ODA loans to countries could not produce similar results. The objections to the use of loans should rather call attention to the challenge of using ODA loans under a tight debt solvency constraint. While there would be no sense in further increasing the current debt of heavily indebted poor countries (HIPCs) at present, refraining from further lending to them as long as solvency remains an issue is an appropriate but contingent response. Surely, a powerful rationale for restoring solvency is precisely to restore the capacity to borrow. One of the shortcomings of past loans was that risks were insufficiently taken into account and that the typical ODA instrument was too archaic to adapt to the solvency constraint of a poor country that is highly sensitive to external shocks.

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Annex 1: The equivalence between grants and loans

The heart of Lerrick and Meltzer's (2002) argument is that all concessional loans should be thought of as an arithmetic combination between a grant and a market loan (see Annex 1 for further elaboration). ODA should rather consist of outright grants, with loans being provided by markets or financial intermediaries. This would entail no extra cost either for the donor or for the beneficiary.

This is a worthwhile discussion. Its merit notably hinges on the unbundling of a concessional loan into its basic components: not only does unbundling contribute to greater transparency, it also highlights the use of taxpayers' money (less visible in a concessional loan) and invites a stronger focus on the rationale for using subsidies in the first place. One of the crucial questions about ODA is why, when and how to use subsidies. With concessional loans, there is a risk that the subsidy is justified simply by the quest for market share under competition with other donors and with financial institutions. Unbundling thus contributes to greater efficiency.

Lerrick and Meltzer's argument, however, calls for qualification. It is based on the assumption that developing countries have perfect access to international capital markets. Their spending capacity is then determined by their wealth and international interest rates. In that case, grants and concessional loans are fully equivalent. A grants-versus-loans controversy can therefore arise only when developing countries do not have full access to international capital markets.

Let us consider a 30-year highly concessional loan of 1,000 units made by a development agency to a poor country at a 1 per cent interest rate. For simplicity, we consider that there is no grace period and that the loan is repaid in constant annuities, which therefore amount to 38.75.

Suppose now that a private or institutional investor is able, with a AAA credit rating, to borrow on international capital markets at a 4 per cent interest rate, and that the management of the highly concessional loan mentioned above (monitoring, management, disbursement, repayment, etc.) costs the equivalent of a 0.5 per cent

interest surcharge. Experience from past defaults suggests that a substantial risk premium must be added to make the investor willing to invest in poor countries. Taking 15 per cent as a standard risk premium and under international competition, the investor will be willing to lend to the poor country at a yearly rate of 19.5 per cent.

In such a context, the investor will be willing to buy the initial concessional debt title at a price of 198, which corresponds to the amount of a loan made at a 19.5 per cent interest rate and served by annual instalments of 38.5. We therefore conclude that the initial concessional loan involves a subsidy element close to 80 per cent.

DAC statistics, however, use a discount rate of 10 per cent (not 19.5 per cent), which corresponds to a grant element of 63.5 per cent. This example shows how important the discount factor is. It also reflects time preference and might thus be viewed very differently from a poor country's than from a rich country's perspective. The short-term "needs" of poor developing countries imply a high rate of time preference. Suppose, for example, that this rate is 30 per cent, meaning that the country is indifferent between having 100 today and 130 in a year. With such a discount factor, the present value of a stream of 38.75 over 30 years is 129. From the country's perspective, the subsidy element is thus perceived to be more than 85 per cent. Such a preference for the present, in poor developing countries, might lead them to underestimate the debt service burden, to consider that any immediate loan is much like a grant and to indulge in over-indebtedness.

APPENDIX 2
ECONOMETRIC ANALYSIS OF DEFENSIVE LENDING

Table 1: comparative defensive lending, 1980-2004

	PRIVATE LOANS/GDP	MULTILATERAL LOANS/GDP	BILATERAL LOANS/GDP
DEBT SERVICE/GDP	0.03030***	0.30368***	0.09279***
	(2.56)	(14.94)	(6.64)
L.DEBT/GDP	-0.00046	-0.00023	-0.00182*
	(-0.98)	(-0.24)	(-2.04)
L.BILATERAL GRANTS/GDP	0.00084	-0.01013	-0.00590
	(0.40)	(-1.59)	(-1.17)
L.MULTILATERAL GRANTS/GDP	-0.00887	0.00596	0.01175
	(-1.25)	(0.34)	(0.83)
POPULATION	0.00003	-0.00003*	0.00006***
	(1.54)	(-2.30)	(3.32)
L.GDP GROWTH	0.00002	0.00011	-0.00004
	(0.85)	(1.94)	(-0.90)
L.INFLATION	0.00002	0.00001	0.00001
	(0.23)	(0.55)	(0.81)
L.POLITICAL RIGHTS	0.00012	-0.00001	0.00111***
	(0.50)	(-0.04)	(3.48)
L.CIVIL LIBERTIES	0.00090**	-0.00215***	0.00060
	(2.89)	(-4.30)	(1.35)
Time and country dummies	yes	yes	yes
N	1326	1325	1326
Wald	1023	3174	1713

Note : GLS regression with time and country fixed effects, panel-specific heteroscedasticity and AR(1); t statistics in parentheses ; * is 90 % , ** is 95 % , *** is 99 % significance level

Table 2: Evolution of defensive lending and granting

	PRIVATE LOANS/GDP	MULTILATERAL LOANS/GDP	BILATERAL LOANS/GDP	BILATERAL DEBT RELIEF GRANTS/GDP
DEBT SERVICE/GDP 1980S	0.27241***	0.25554***	0.10711***	0.48939
	(10.57)	(9.66)	(4.90)	(0.98)
DEBT SERVICE/GDP 1990S	0.02162	0.35603***	0.10008***	0.30614
	(1.41)	(13.03)	(5.36)	(1.68)
DEBT SERVICE/GDP 2000S	-0.00288	0.12123***	0.02256	0.93890***
	(-0.16)	(3.52)	(0.90)	(2.65)
L.DEBT/GDP	-0.00021	-0.00045	-0.00184*	0.00704
	(-0.42)	(-0.46)	(-2.06)	(0.72)
L.BILATERAL GRANTS/GDP	0.00084	-0.00860	-0.00577	0.01488
	(0.36)	(-1.38)	(-1.15)	(0.37)
L.MULTILATERAL GRANTS/GDP	-0.00630	0.00373	0.01101	-0.10700
	(-0.80)	(0.22)	(0.79)	(-0.88)
POPULATION	0.00002	-0.00003**	0.00006**	0.00001
	(0.92)	(-2.83)	(3.27)	(0.05)
L.GDP GROWTH	0.00002	0.00007	-0.00003	0.00026
	(0.64)	(1.26)	(-0.86)	(0.60)
L.INFLATION	0.00001	0.00001	0.00001	-0.00002
	(0.17)	(0.31)	(0.48)	(-0.32)
L.POLITICAL RIGHTS	-0.00006	-0.00001	0.00109***	0.00200
	(-0.27)	(-0.04)	(3.41)	(0.63)
L.CIVIL LIBERTIES	0.00045	-0.00217***	0.00053	-0.00337
	(1.46)	(-4.35)	(1.20)	(-0.75)
Time and country dummies	yes	yes	yes	yes
N	1326	1325	1326	899
Wald	906	2903	1638	60

Note : GLS regression with time and country fixed effects, panel-specific heteroscedasticity and AR(1);
t statistics in parentheses ; * is 90 % , ** is 95 % , *** is 99 % significance level

Appendix 3
Occurrence of debt cancellation
when exports fall below *x%* of their moving averages of the past five years

Occurrence of shocks 1975-2003					
Threshold *x*	**95%**	**90%**	**85%**	**80%**	**75%**
Bangladesh	14%	14%	7%	3%	3%
Benin	31%	10%	7%	3%	3%
Bolivia	31%	17%	14%	3%	0%
Burkina Faso	34%	24%	21%	10%	7%
Burundi	62%	52%	41%	34%	14%
Cameroon	28%	17%	17%	7%	0%
CAR	48%	41%	28%	21%	7%
Chad	41%	38%	21%	14%	10%
Cote d'Ivoire	41%	28%	14%	10%	7%
Gambia, The	31%	14%	14%	7%	0%
Haiti	24%	21%	10%	10%	10%
India	3%	0%	0%	0%	0%
Kenya	28%	21%	10%	7%	0%
Madagascar	24%	21%	21%	14%	14%
Malawi	41%	24%	17%	7%	0%
Mali	14%	14%	3%	0%	0%
Mauritania	48%	31%	17%	3%	0%
Niger	48%	31%	28%	24%	17%
Nigeria	38%	31%	24%	21%	17%
PNG	31%	28%	21%	10%	3%
Rwanda	45%	41%	38%	31%	17%
Senegal	34%	24%	14%	3%	0%
Sierra Leone	59%	55%	48%	41%	31%
Togo	41%	34%	24%	24%	14%
Average	35%	26%	19%	13%	7%