An Analytical Overview of Aid Absorption: Recognizing and Avoiding Macroeconomic Hazards

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1 Introduction[1]

In recent years, aid flows have tended to become more concentrated on a sub-set of developing countries. In consequence, they have sometimes become large relative to the recipient economy. Present efforts directed at radically increasing the total aid flow, if successful, will tend to reinforce this effect[2]. Current concerns about aid absorption partly reflect the recognition that aid has often been poorly managed and ineffective in the past, but they also reflect the worry that aid may become problematic when it is large relative to the economy it is intended to assist, even if it is well-managed.

This paper is concerned primarily with the second of these issues. This is a very large subject, and it will be helpful to start by categorizing the types of impact that need to be considered. Most importantly, we need to distinguish between a narrow and a broad interpretation of macroeconomic hazard. The narrow interpretation focuses on macroeconomic issues *given* the institutional and political framework in the country. The wider interpretation includes possibly adverse impacts on this framework, which may in turn lead to macroeconomic problems. It is important to acknowledge this wider interpretation here, precisely because many of the most prevalent anxieties about aid impact are of this type.

Section 2 accordingly reviews concerns about the danger of institutional damage, and what may be done to reduce this. The remainder of the paper then considers the narrower set of questions that arise when the institutional framework is taken as independent of the aid flows. Section 3 examines absorptive capacity constraints, and how to reduce the costs of recognizing them and of responding to them. Section 4 then looks at the related concern that high aid inflows may appreciate the real exchange rate and undercut the expansion of exports, putting a brake on growth. Section 5 looks briefly at government operations in the long run, both as regards spending and resources. This section is to prepare the ground for the longer section 6, which discusses the problem of the inconstancy of aid flows in both the long and short run. Section 7 examines debt sustainability and the grant/loan issue, and section 8 concludes.

It may be felt that this paper ranges rather widely given its brief to look at macroeconomic hazards. However, there are few macroeconomic problems which are not, at least partially, rooted in microeconomic frictions or political processes. It may also be felt that the paper devotes far too little attention to each of the many issues considered. In mitigation, its role is largely to provide an introductory overview of issues that will be considered in more depth in later sessions of the seminar.

2 The institutional and political framework

Impacts on the institutional and political framework

There are two related concerns that high aid inflows may damage this framework. One concern is that they will induce aid dependency, weakening a government's capacity to generate domestic resources, and undermining the democratic process. This view is encapsulated in a phrase that inverts the rallying cry of the American War of Independence, to read 'no representation without taxation'. The argument is that it is only when citizens pay substantial taxes that they begin closely to monitor government's actions and to enforce accountability[3]. This creates a pressure for institutional evolution of a kind that appears to be growth enhancing. Conversely, if a government has access to substantial external resources, this reduces the pressure to mobilize domestic taxes, weakening this beneficial institutional evolution.

The other concern is that plentiful aid may induce corruption and other rent-seeking activities in much the same way that resource rents have frequently done[4]. This may have been especially true of aid driven by geo-political concerns; developmental aid has typically been accompanied by devices to increase the probability that it is spent as intended. Even here, however, the fungibility of government resources means that diversion of funds remains possible.

For both these reasons, there is concern that high aid inflows may weaken the political, social and legal institutions that constrain political elites and interest groups, restrain corruption, and permit the effective enforcement of property rights. This impact need not necessarily involve an absolute institutional deterioration; there would also be a problem if it simply involved a reduction in what would otherwise have been the rate of institutional improvement.

Implications if there are such adverse impacts

There is evidence that countries with weak institutions have poorer macroeconomic policies, and experience lower growth and greater instability. Indeed, it has been argued that poor macroeconomic policies are a *symptom* of poor institutions, so that institutional reforms are a prerequisite for improved policies[5]. It has also been argued that sustained growth requires not only sustained investment but also sustained institutional improvement. If it were true that increased aid led to institutional damage, then it might be self-defeating even if efficiently deployed.

The evidence that aid is often correlated with higher growth suggests that there is no inevitability about this perverse link. However, it seems wise to try to associate increased aid inflows with attempts at institutional reforms, and this has indeed become common practice[6]. An example is the initiative to make production of a Poverty Reduction Strategy Paper a pre-requisite for HIPC debt relief. These have typically included a programme of institutional reforms; moreover, the consultative process that is part of their preparation is intended to strengthen civil society and increase the domestic constituency in support of these reforms.

There is a danger in all this. Donors' ostensible intention is to provide support that will pump-prime or accelerate a process of domestic political and institutional evolution, given the view that the existing structure is inadequate. However the distinction between this attempt at support, and an unwarranted intrusion in a country's domestic affairs, is not so much a fine line as a fuzzy one. Even at its most altruistic, it may involve an attempt by donors to substitute outside pressure for inadequate domestic representation.

I do not think there is any easy resolution to this danger. Our current understanding of the factors underpinning sustained growth, let alone sustained pro-poor growth, is very incomplete, but few would now accept that they are narrowly economic in scope. It would be irresponsible to ignore the role of political and institutional factors, and these need to be included in the dialogue between donors and recipient countries. However, this does raise sensitive issues of legitimacy.

3 Absorptive capacity constraints

These are likely to be quite sector-specific. Specific constraints are more likely to be encountered where there is a generalized lack of capacity. However, while the absorptive capacity of a whole economy may be low, it is most unlikely to be uniformly so everywhere. In an economy where capacity is a problem, this has two implications. First, good management of the composition of government spending cannot be based simply on straightforward prioritization. There is little point in routing a large increase in funds into a high priority sector if it is already unable to deploy its existing resources to good effect. Hence the composition of spending may need to be revised from what would otherwise have been chosen. Second, it will be necessary to develop a strategy to relax the existing constraints in priority sectors. This will typically also involve some form of expenditure, and is likely further to alter the chosen composition. For example, suppose the initial prioritization favoured expansion of primary social services, at the expense of provision at higher levels. If there are inadequate human resources for this expansion, priorities will have to be revisited, with expansion of the associated training programmes, and increased spending at the higher levels.

There is a related question. How are capacity constraints to be recognized? In the illustration in the previous paragraph, a simple headcount of nurses or teachers might give sufficient indication of problems in store. More generally, the symptom that a problem has been encountered will be a deterioration in the relation between expenditure and some measure of output or, more difficult, of outcomes. This requires that appropriate measures have been agreed and are monitored. Even so, this procedure is essentially *ex post* and will only identify the severity of a problem some time after it has been encountered. This is inefficient, both because the problem is only identified by the waste of real resources, and because corrective action is delayed.

The alternative is however very demanding, particularly where capacity is generally weak. It requires forward looking diagnostic measures, including for example activity-based budgeting, so that problems can be identified in advance. In all this, the old adage must be kept in mind, that the best may be the enemy of the good. One of the encouraging elements in discussions of public expenditure management in recent years has been the increased recognition that recommendations should respect 'good-enough' rather than 'best' practice[7]. This may mean that capacity constraints cannot always be well identified in advance.

Three other complications are worth noting. First, there is a time dimension. Since attempts will be made to alleviate capacity constraints, the pattern will not be static, and they will shift over time; this needs to be taken into account in planning expenditures. The time required to relax different constraints may also differ significantly. It is also the case that capacity is not static, even in the absence of organized attempts to improve it. Capacity may well evolve in response to increased demands, as a consequence of 'learning by doing'.

The second complication arises from the uncoordinated nature of much activity in aid receiving countries, particularly as regards social service provision. Those involved in service delivery typically include government, and bilateral donors, as well as international and domestic NGOs. If the sector suffers capacity constraints, there is competition for these scarce resources, and no expectation that the rationed allocation resulting from this bidding process will be efficient.

The third complication arises from the manifold market inefficiencies in many developing countries. One consequence of these is that there may be serious bottlenecks in some sectors simultaneously with spare capacity in others. Indeed the bottlenecks may largely explain the inability to utilize the spare capacity. Since one function of aid is to help remove the bottlenecks, it may well act to remove capacity constraints and permit utilization of existing spare capacity. An example would be an aided road programme unlocking increased agricultural supply, which might in turn increase the capacity of the economy to absorb agricultural inputs.

The main conclusion of this discussion is that while absorptive capacity constraints may have important macroeconomic implications, they are largely microeconomic phenomena, and need to be analysed and addressed as such.

4 The potential problem of real exchange rate appreciation

The usual diagnosis

There is a common concern that increased aid will translate into appreciation of the exchange rate and that this will damage the economy. This concern is rooted in three sets of observations. The first concerns the role of growing exports in underpinning growth more generally, the second the mechanics of aid absorption, and the third a possible negative feedback from the second to the first.

A central feature in successful economic development is a process of growth and diversification in exports. The openness of an economy (the relative importance of trade to GDP) tends to rise as per capita income grows, and the causality runs at least in part from exports to growth. This is because the increase in export earnings provides the foreign exchange to pay for the increased imports required to support the growth process. More strongly, however, it is often argued that diversifying into nontraditional exports plays a crucial role in raising domestic productivity; having to meet the exacting standards of export markets forces domestic producers to raise their standards and acquire new skills, possibly in conjunction with international partners. What is more, this process is claimed to exhibit cumulative properties through 'learning by doing'. In consequence, any sustained interruption to export growth may have consequences that cannot be quickly reversed[8].

Unless they are kept offshore and unspent, increased aid flows will tend to put upward pressure on the real exchange rate, and may lead it to appreciate. This will happen irrespective of whether the funds are spent through the government budget, or by NGOs, or by private citizens (if a means of distributing the aid direct to them were installed), provided that they are not spent entirely on imported goods. The reason is that any spending on domestic output requires production to be switched from exports or from import substitutes to nontradables. To induce producers to make this switch, the price of nontradables must rise relative to tradables, and this means an appreciation in the exchange rate. While the presence of unemployed resources may reduce this effect, it will not, in itself, eliminate it.

However, the implication of this is that exporting becomes less profitable and the development of more diversified, nontraditional exports may be inhibited and delayed. If this damage could be factored in to the cost-benefit calculations, the level of aid to GDP which could be successfully absorbed might be substantially reduced. It is often argued that there is some maximum level of aid that can usefully be absorbed before the marginal returns become negative. If there is a negative impact on export performance, and if this has long-term adverse growth consequences, this maximum usable level of aid may be reduced.

Some qualifications to this diagnosis

Despite this rather pessimistic diagnosis, we have the practical observation, noted earlier, that even very high rates of aid absorption do not seem in general to have been growth reducing. So the evidence, over the aid levels so far attained, suggests this anxiety may not be justified. And there are indeed several reasons, derived from economic analysis, which offer some explanation for this practical observation, and suggest the pessimism may be overdone[9].

First, while some aid may be intended to relieve constraints on current consumption, much of it is intended to permit higher investment and higher growth. But this must mean an expansion in the supply side of the economy. The usual diagnosis, summarized above, takes account only of demand side consequences of the aid inflow – the available domestic productive resources are fixed. However, if the aid is successfully designed to increase these resources, the story is more complicated. If aid is particularly successful in raising productivity of nontradables, this may be sufficient fully to offset the appreciation of the exchange rate. The increased supply of nontradables may more than match the increase in demand. In this case, the adverse price effects on exporters do not materialize, or do so only briefly. At the other extreme, if aid is particularly successful in raising productivity of exportables, this may make the real appreciation even larger, but this does not necessarily reduce the incentive to export, since profitability rises sufficiently to match the fall in export prices. The distributional consequences of these different productivity biases may however be very different[10]. In either case, all these relations are likely to evolve in complex ways over time, and may be susceptible to intelligent policy design.

Second, even when aid is not designed to raise the economy's full capacity productive potential, it may still enable it to work closer to its existing potential, by relieving bottlenecks and reducing unutilized capacity, as noted in the previous section. In developed economies, this type of waste is usually cyclical in character; the remedy is to attempt to smooth short-run deviations from full employment. In developing countries, the problem is not so much one of smoothing a fairly regular cycle. It is more that market inefficiencies permit there to be sustained pockets of reduced activity, and also that there are large shocks which induce extended periods of disequilibrium. To the extent that aid can reduce these sources of waste, it is much less likely to set off the perverse chain of events in the usual story.

These arguments share a common feature. They stress that the extent to which real exchange rate appreciation is likely to be a problematic feature of aid absorption depends very largely on the balance between the aid's relative impact on supply and on demand. However, even where the demand effects dominate (as in the usual diagnosis), the extent of the appreciation depends on how difficult it is to shift resources within the economy towards the production of nontradables. If this is very difficult, the appreciation will be correspondingly greater. But shifting resources is likely to be more costly if a large shift is attempted rapidly. This means that we might expect the problem to be worse if a rapid jump increase in aid is attempted, as opposed to a more gradual increase, for an equivalent total transfer over some extended horizon.

Implications

All this has rather complex and difficult implications for aid policy. It suggests that the likelihood of problems arising through real exchange rate appreciation, and of the severity of any such problems, is not a given, but is contingent on policy design. However, it makes the problem of designing policy to use aid productively even more difficult than it used to be. Economic payoffs always involve some mixture of direct effects and the indirect effects discussed above. The latter type, often called 'external effects', are always more difficult to measure and assess than the direct ones. The present case is no different.

This may suggest that the best practical approach would often be to ignore these effects in the design of spending programmes except where there is (unusually) specific information on their magnitudes. This strategy relies on two presumptions. First, that, on average, the supply response is adequate to keep pressures on exporters to manageable levels. Second, that these indirect effects can be presumed to average out reasonably reliably across different expenditure categories.

There are however two general cases where this neutral approach may be harder to justify. The first is the argument that gradualist changes in aid flows may be more easily absorbed than rapid ones, given a similar total increase in transfer over time. The second also reflects the time dimension, though in a rather different way. While the supply pay-off to social sector spending may be very great, it will often be slow in coming. The supply pay-off to physical infrastructure spending and to income-generating projects may be much more rapid. Given the dangers noted earlier of repressing nontraditional export growth for an extended period, this suggests that the massive concentration of increased aid into the social sectors in many countries may need to be reviewed.

5 The long-run spending/revenue mobilization programme

The next section provides a fairly extended discussion of problems arising from the inconstancy of aid flows. However, this inconstancy has a very wide range of time dimensions, running from within-year fluctuations right through to a perspective extending over several decades. To place these matters in context, it is helpful to precede this discussion by considering some long-run issues facing the governments of developing countries, particularly low-income ones. The central issue concerns the scale of government operations, and the way these are intended to evolve over time. It is convenient to think of these in proportion to GDP, though there are some dangers to this. There are four principal components to these operations; domestic revenue mobilization, net aid inflows, net domestic borrowing, and expenditures. The key fact is that the arithmetic of the budget identity requires that the first three (sources of finance) cover the fourth (uses of finance). Hence a change in any one requires accommodation in one or more of the other three.

In principle, all of these could remain constant as shares of GDP, and government operations be maintained in a relative 'steady state'. Amongst others, there are two important reasons why this will not be so.

First, for a highly aided country, it is not conceivable that the net aid inflow should remain a constant share of GDP indefinitely. Eventually, the share will fall, whether the inflow does so absolutely, or simply fails to keep pace with growth in GDP. This relative fall in financing cannot be replaced in the long run (or, typically, even in the short run) by an increase in domestic financing. Hence the budget identity requires that it be accommodated either by an increase in the revenue share or by a reduction in the spending share or some mixture of the two.

Second, as countries achieve higher per capita incomes, the relative size of government has tended to rise. This could reflect greater ease in mobilizing revenue, a greater demand for public services in richer countries, or it could simply be an outcome of changing political processes. Here we suppose that at least in part the first of these explanations applies.

One simple way of putting these two observations together in a forward-looking low-income country would be to suppose that enhanced revenue capability would match the relative erosion of aid, so that expenditure would remain constant as a share of GDP. But there is no inevitability about this balance; it might not be feasible, and it might not be desirable even if feasible.

In particular, there is much evidence that raising the share of domestic revenue in GDP is a difficult and slow business. It appears, for example, very hard to raise this share by as much a one half of one per cent of GDP per annum. Even at this (highly optimistic) rate, a country now receiving aid at the rate of 10% of GDP, which expected this to continue for ten years and then drop to 5% would need to begin maximum attempts to raise domestic revue immediately if it did not wish to be faced with expenditure reductions in ten years' time.

Projecting these matters forward over several decades may seem fantastical; but some sort of long-run forward view needs to be taken, however crudely, for current decisions to be prudent. This has also become necessary, if strategies to achieve the Millennium Development Goals are to be more than mere statements of aspiration. Given reasonable assumptions about the future path of aid and of domestic revenue mobilization, a variety of spending paths is feasible. The link between different feasible paths is their alternative related debt profiles. For example, having an expenditure path which is 'front-loaded' will involve an early build-up of debt which is subsequently wound down (relative to GDP), when compared to a path with a stable share of spending. However, as a cautionary note, front-loaded paths are more vulnerable to adverse changes in projected growth or interest rates, which may render them unsustainable. In essence, the planned relation between government operations and GDP is more likely to be disrupted in these cases.

6 Inconstancy of aid flows

Recipient countries know that aid flows are not to be relied on, and in several different ways. First, they are most unlikely to be constant relative to GDP in the long run. Paradoxically, they may fall relatively faster in more successful economies, even if donors remain keen to support these, since GDP will be growing rapidly in these cases. Second, they may show major fluctuations in the medium run. This will reflect shifts both in donors' priorities and in the extent to which a country continues to be seen as 'on course', given these priorities. A related issue is that donors are usually unable to commit much in advance of the current budget year, so projections based on aid commitments usually show fairly sharp falls in the medium term, even when a reasonable judgement would be to expect medium-term stability in these flows. Third, even within a stable medium-term framework, the aid flows may be very unstable and volatile in the very short run (within the budget year). Closely related to this is the cyclicality of aid, and the consequences of this. Each of these groups of issues is considered in turn, though evidently they overlap to a marked extent. All of them pose problems for the improved allocation of aid, but also for macroeconomic policy management.

6.1 Long-run trends in the aid-GDP ratio

Until fairly recently, discussions of the future path for this ratio centred on the notion that it was likely to fall, this being both the experience and the expectation for the average relation across all developing countries. Experience had been quite different in a select group of low-income countries, some of which had experienced substantial jumps in the ratio; even for these, however, the general expectation was that these enhanced inflows would not be long sustained, let alone further increased.

Recent initiatives have raised the possibility that, even for countries already receiving substantial aid, there may be further sustained increases. If this does indeed transpire, it highlights even more sharply that there must ultimately be a correspondingly large exit from aid.

This would be problematic even if two ideal circumstances held. One would be that the actual future long-run pattern was guaranteed from the outset. The other would be if donors allowed the recipient government complete freedom to separate the timing of the aid flows from the timing of the use of resources in-country. This would mean freedom to invest the aid on international markets and to draw these foreign assets down only when better domestic opportunities became available.

The reason why this type of long-run ‘pulse’ in aid would still be problematic, even in these idealised circumstances, is that it would present government with a severe management problem. There is now much experience of booms in government-owned resources where the transitory nature of the income flow is often well understood, and where there are no constraints on using foreign assets to smooth absorption. This experience is not encouraging as regards government’s usual capacity to handle this type of inter-temporal management challenge.

In respect of aid flows, over the long run, there is no such freedom to separate the timing of receipts from expenditures; if aid takes the form of an extended pulse, it must, at least approximately, be spent simultaneously. This means that these long swings in external resources must either be matched by offsetting swings in domestic mobilization, or require equivalent swings in expenditures. The first may be extremely difficult to achieve, and may possibly be excessively costly even if it can be achieved. The second may also be very costly in terms of wasted resources, both in the expenditure upswing, and in the subsequent downswing.

Ideally, there would be some way of addressing this problem within the context of the current scaling-up discussions. Since this seems unlikely to be achieved in practice, it is probable that – in respect of this long-run timing issue – it will be a matter of taking the pattern that is on offer, or refusing it. It seems probable that even though there may be a substantial waste of resources in the actual pattern on offer, there will still be a real gain, so that accepting it is the better course.

6.2 Medium-term fluctuations and falling commitments

The previous sub-section discussed the problem of handling substantial long-run pulses in aid flows, even if these are reasonably predictable. Another problem in practice is that donors are unable to make long-run commitments, so that recipient countries typically have only reasonably firm expectations in the short or medium term. Since donors differ in the horizons over which they will commit funds, even in the medium term these projected commitments often fall over time. At the same time, pledges do not always lead to commitments, and commitments do not always lead to disbursements.

This poses a continuing problem for governments. For good reason, they are encouraged to adopt a medium-term expenditure framework that permits coherent planning of expenditure programmes over (typically) a three-year horizon. To do this, they need to plan expenditures on the basis of a 'resource envelope' which includes projections of aid inflows over that horizon. However, there will usually be some considerable uncertainty surrounding these projections.

Views differ as to what a prudent course of action would look like in these circumstances. One view, often associated with IMF missions, but also commonly held within budget offices, is based on the notion of 'a bird in the hand'. The argument is that it is very costly to be forced to downsize a programme once it has been undertaken, so that programmes should be designed that rely only on securely committed funds. If, as will often transpire, more resources become available than this projected lower bound, they can either be used to reduce domestic public debt, or to supplement ongoing expenditure programmes.

This view presumes that it is always prudent to be cautious. That will be correct if there is an asymmetry of losses from getting things wrong, specifically if it is very wasteful to cut planned programmes back during implementation in light of shortfalls, but not very wasteful to boost spending above programme in light of additional resources above the anticipated lower bound. That there should be such an asymmetry is not self-evident, particularly when there is a systematic bias to under-predict inflows, so that upward revision is commonplace.

This suggests that there is no robust general conclusion on how these medium-term problems should be handled. The solution is likely to be country specific. A country will have its own past experience, as to the relation between pledges and commitments, that between forward commitments and subsequent budget year commitments, and that between commitments and disbursements. This experience should provide some basis for improving on central projections, though this will be vulnerable to major shifts in the aid environment.

How conservative a view government should take relative to this central estimate also depends partly on past experience. However, this could be supplemented by looking carefully, within sectoral programmes, at what the scope is for reducing or increasing the programme at relatively short notice, and the associated costs of doing so. This would provide some concrete evidence on whether, and where, there is the sort of asymmetry mentioned above.

Matters are still more difficult when there is a substantive change in relations between donors and the recipient government. If, for example, a large increase in the net aid flow materializes, it will be difficult to decide how persistent this change is likely to be. In the language often used to describe macroeconomic shocks, is the change 'permanent' (persistent) or 'temporary' (transient)? It is remarkably difficult to decide between the two. Of course, if a very conservative view is taken, positive shocks will be treated as being temporary, and negative shocks as being permanent. This form of extreme prudence would have the merit of ensuring policies were sustainable, at least in the technical sense. However, in a volatile world, they might be unnecessarily costly (there would be little smoothing of spending in the medium term) and it is hard to believe that they represent the best option. By inflicting high transition costs on the population, they might also prove not to be sustainable in the political sense.

6.3 Short-term volatility and cyclicality

Volatility

Even when medium-term flows are reasonably stable, there may also be a problem of short-run volatility. Aid promised for the first quarter of the fiscal year may, for example, be delayed to the second or third quarter. For the moment it is supposed that this aid volatility is uncorrelated with any volatility in domestic revenues; this assumption is relaxed later. The volatility in receipts would matter little if the economy exhibited financial depth, so that the government could easily finance temporary mismatches between receipts and expenditures. However, this is not the case in many low-income countries. A particularly severe example is that of governments operating a monthly cash budget, where use of accommodating domestic finance within-year is ruled out in an attempt to run a very tight fiscal regime, because a lack of credibility prevents use of a more discretionary policy.

In these circumstances, short-run volatility of aid inflows translates directly into short-run volatility of expenditures. Since some categories of spending (for example, interest payments and wages), are less compressible than others (for example, operations and maintenance), the more discretionary items are likely to suffer exaggerated volatility relative to the volatility of receipts. This results in a very uneven and erratic pattern of spending which is inefficient and inequitable.

The obvious solution to this problem would be for donors (individually) to be more careful to disburse aid according to the previously agreed timetable, and to have (collectively) agreed a disbursement schedule that was relatively smooth and/or well correlated with the likely pattern of spending. Of course disbursement delays are sometimes the fault of recipient governments and of 'acts of God' as well as of donors. Sometimes they reflect coordination failures between the parties. In any case, experience suggests that this problem is difficult to eradicate, though that does not excuse the various actors from increasing their efforts to resolve it.

The increased use of budget support for aid delivery, while in many respects an admirable development, may also make this difficulty harder to fix. Shortfalls in external project finance are to a large extent self-sterilizing; if the finance does not materialize, the project gets delayed in a fairly automatic fashion. Traditionally, this has often occurred 'off budget'. With budget support, this direct link is broken, and explicit decisions must be made over how to accommodate the shortfall; it becomes a problem in budget management. In an ideal world, this would be fine; these problems should be handled in a consistent manner, and the budget is the right mechanism for doing so. However, if there are severe capacity constraints within government, this extra challenge, and the increased volatility within the budget, may be hard to handle.

Given that these short-run timing problems are severe and that they are unlikely to be eradicated at source, there remains the question of how best to handle them. There are only three options. The first is to use domestic financing to smooth spending given the erratic arrival of resources; as already noted, this mechanism may be very destabilizing in financially shallow economies. The second is to force spending to follow this erratic pattern; as also noted, this is very damaging to the delivery of public services. The third is to use foreign financing as a smoothing device. In the discussion of long-run mismatches, it was stated that using foreign assets as a matching device was more or less ruled out in the aid context. However, this is not the case for short-run mismatches. Governments can use their foreign exchange reserves for this purpose.

Holding substantial foreign exchange reserves has always been seen as a device to combat volatility. In the usual story, the government wishes to insulate the country's capacity to maintain an efficient flow of imports from the erratic behaviour of exports. These reserves permit imports to be maintained when there is a temporary shortfall in export receipts, without forcing sharp movements in the exchange rate. However, foreign exchange reserves held by the government can also be used in precisely the same way to permit its spending to be maintained when there is a temporary shortfall in aid receipts, without creating a domestic financing problem. Countries facing more volatile exporting conditions have needed to hold larger foreign exchange reserves. The same is true for countries facing large and volatile aid inflows.

Cyclicality

The discussion so far has concentrated on volatility in the aid inflow. However, one characteristic of developing countries, accentuated in low-income countries, is that domestic revenues are also unstable. This raises the question of whether the two sets of volatility might tend to reinforce each other (are pro-cyclical) or to offset each other (are counter-cyclical). If short-run movements in aid are negatively correlated with those in domestic revenue, might they not reduce overall volatility, so that the aid volatility is a blessing in disguise? There has been some dispute about this, but the best evidence suggests that the relation is weakly pro-cyclical[11]. This means that the costs of aid volatility are not mitigated by offsetting movements in domestic revenue; to the contrary, aid instability makes the originally unstable position even worse.

This is another area which it seems policy improvements might address. However, this may prove difficult. One circumstance in which aid might be pro-cyclical is where it is tied to policy performance, but it would be inappropriate to invert this relation. Also, previous attempts to make aid counter-cyclical, for example through stabilization funds, have usually failed to do so, or even made matters worse because of disbursement delays. In consequence, it may be better to concentrate on reducing volatility, and postpone any attempt at reducing pro-cyclicality.

6.4 Macroeconomic policy in the face of aid inconstancy

There is a huge literature on the difficulties of macroeconomic policy design even in industrialized countries, which are highly stable and diversified, and where instability usually takes the form of a fairly mild cycle. The difficulties for most developing countries are much greater; they inhabit a world of much greater relative shocks, and they are less diversified and hence more vulnerable to these. This is particularly true for small economies[12]. Aid inconstancy is only a part of this picture, but it is an important part.

Apart from the large relative size of the shocks, their other major characteristic, evident from the discussion above, is that it is usually very difficult to distinguish whether they are persistent or transitory. The appropriate policy response to each is quite different – smooth a temporary shock, accommodate to a permanent one. Hence the difficulty of diagnosis presents real problems in the design of fiscal, monetary, and exchange rate policy, though it obviously places a premium on flexibility. This is being increasingly studied, but we cannot yet have much confidence in our ability to design robust policy in these circumstances[13]. Apart from posing problems for macroeconomic policy, macroeconomic shocks may also impact differentially on particular groups, not least the poor, and ways must be found of at least partly offsetting these effects[14].

7 Debt sustainability, and the grant/loan issue

External and domestic government debt have very different properties and consequences. There is insufficient space here to cover both, so attention is limited to external debt, since aid is the present focus[15]. Debt sustainability is a very slippery concept, and may not be the appropriate one, especially for low-income countries.

To place this last proposition in context, consider briefly the idea of optimal debt, in the case where this is nonconcessional, and where neither repudiation nor forgiveness is an issue. Then in principle there will be some path for debt which will be optimal given international interest rates and domestic investment opportunities. It would not be worth incurring more debt than this, because the additional investment that could be financed would not have a sufficiently high return to finance the additional cost. Even so, it *would* be possible to incur more debt and still service it; it would be sustainable even if above the optimal level. If borrowing were raised sufficiently further (assuming willing and presumably short-sighted creditors), it would eventually become unsustainable, in the sense that a default would become inevitable. Between the two will be a range of debt levels which are sustainable though undesirable. A key difference needs to be noted between the concepts of optimality and sustainability, and the level of debt that can be carried under each. Optimality involves the relation between the domestic rate of return and the international interest rate; sustainability that between the growth rate (of GDP, or possibly of exports) and this interest rate.

Now consider the consequences of starting with a given level of debt in these circumstances. A larger debt imposes larger debt service obligations, and reduces the productive expenditure the government can make in future, given its expected future tax revenues. What level of external debt would a government choose to inherit on acceding to power, if it had the choice? The answer, clearly, is none at all, or better still, an indefinitely large volume of foreign assets (negative debt).

How does this relate to the current and prospective circumstances of a low-income country which has been highly indebted, has received debt forgiveness under HIPC, and is eligible for concessional finance? Concessional finance has three characteristics which distinguish it from nonconcessional finance, apart from the obvious one of being cheaper. First, access to it is rationed in the present. Second, access to it will be withdrawn at some point in the future. Hence it will not be possible to roll it over indefinitely. Third, the actual degree of concessionality is unclear, since there could be future debt forgiveness in certain circumstances. Furthermore, these characteristics are not independent. For example, a rapidly growing country would tend to lose access and be unlikely to obtain forgiveness in future compared to a country that remains in a low-income trap. All this makes the concessional case quite different from the conventional one.

There seem to be four propositions for low-income countries arising from this analysis. The first is that there is no clear way of assessing sustainable limits for external debt. What now seems easily sustainable might prove not to be so if *future* access to concessional finance were quickly withdrawn. What now seems unsustainable might prove unproblematic if there were further debt forgiveness in future. Second, there may be a complete divorce between a country's capacity to absorb aid and its capacity to accept more concessional indebtedness according to any arbitrary rule concerning sustainability, such as the HIPC criteria[16].

Third, if the real purpose of aid is to assist development, then the criterion should be to allocate available aid resources between countries according to their need and capacity to use and absorb these resources. It does not seem helpful to interpose an additional constraint reflecting some alleged limit on debt sustainability as a subsidiary rationing mechanism[17]. Of course, it would be possible in principle to continually vary the grant element in loans so that a level of resource transfer determined by donor willingness and the capacity of the recipient country could be kept consistent with an NPV of debt that obeyed some HIPC-type rule. But this would be onerous to compute and virtually impossible to implement, as well as seeming to serve no useful purpose.

Hence and fourth, if this argument is accepted, there is little merit in persevering with concessional loans to low-income countries, as opposed to moving comprehensively to a grant mechanism for delivering aid. There are, of course, counter-arguments.

One of the arguments for retaining concessional loans is that they provide a disciplinary mechanism that would be absent under a pure grant regime. However, this is arguable. With concessional finance of the IDA type, for example, the ‘discipline’ is deferred for so long that a different government is likely to be in power before it (weakly) binds. Indeed it is very likely to be perverse, with governments being called to account for the actions of their predecessors, but not for their own. No serious incentive mechanism design would have these properties. A related argument is that, despite this mismatch in time, at least loans – whoever incurred them – act to discipline current government because of the need to cover the associated debt service. But this is a two-edged sword, since the donor community shrinks from enforcing a default on itself. Hence large gross donor flows may provide an illusory degree of discipline. In many respects it is the net flow which constitutes the real discipline, and that would remain under a straight grant system.

Another argument in favour of persevering with loans is that it would require some re-engineering of the IFIs to permit them to operate on a grant basis instead of a loan basis. However, while this may be an important difficulty as a matter of practical operations, it is hard to accept that it could not be circumvented if the will was there.

8 Conclusions

This paper has reviewed an extensive list of macroeconomic issues that may arise in connection with a substantial increase in aid inflows. By and large, the conclusion is that while there are indeed complications to be handled, there is no general case for believing that enhanced resources cannot be used effectively. More light will be shed by the case studies in this session, by papers in subsequent sessions, and by the general discussion in this seminar. Rather than summarizing what is already a summary, we end with a hypothetical, and perhaps politically incorrect, question. Suppose that a low-income country was annexed by a very rich neighbour, becoming a new region of this richer country. Does it really seem believable that it would be beyond the capacity of this rich country to deploy substantial resources into its new disadvantaged region and succeed in engendering highly accelerated development?

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Endnotes

[1] Given the purpose of the paper and the extent of the ground it covers, it would be neither feasible nor desirable to attempt to include a full set of references. However, some representative examples, which include extensive references of their own, are provided. These endnotes are largely dedicated to signalling these representative references.

[2] Sachs and others, 2004.

[3] For example, Moore, 1998.

[4] Auty, 2001.

[5] For example, Acemoglu and others, 2003.

[6] A major shift in thinking towards acceptance of the need for explicit attention to institutional reform was marked by World Bank, 1997.

[7] World Bank, 1997.

[8] More recently, the primacy of exports as opposed to imports as a channel for technology transfer has been increasingly challenged. For example, Lawrence and Weinstein, 2001.

[9] Adam and Bevan, 2004.

[10] Adam and Bevan, 2004.

[11] Bulir and Hamann, 2001.

[12] Commonwealth Secretariat/World Bank, 2000.

[13] For some implications in respect of monetary and exchange rate policy, see O'Connell and others, 2004; for some implications in respect of fiscal policy, see Basci and others, 2004; chapters 2-4 in Addison and Roe, 2004; and Gupta and others, 2004.

[14] For example, Ferreira and others, 1999.

[15] However, it is worth noting that domestic debt is an important and neglected issue, even in the aid context.

[16] This is not to deny the operational importance of the HIPC criteria in mobilizing necessary debt forgiveness by giving concrete rules on which to act.

[17] This is becoming increasingly recognized, also by the IMF. For example, Fedelino and Kudina, 2003.