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THE FISCAL IMPLICATIONS OF SCALING UP ODA TO DEAL WITH THE HIV/AIDS PANDEMIC

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Prepared for the Global Conference on Macroeconomic
Policies to Reverse the HIV/AIDS Epidemic,
Brasilia, 20-21 November 2006

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CONFERENCE PAPER

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ABSTRACT

The HIV/AIDS pandemic has motivated large increases in aid commitments and disbursements, with promises of further large increases in the near future. This aid is urgently required to address the emerging humanitarian crisis and implies immediate, large-scale increases in public expenditure. The central question that this paper examines is whether such increases can effectively address the epidemic without inducing macroeconomic disturbances, especially for those countries, particularly in sub-Saharan Africa, where there is already high aid dependence and parallel commitments to the other MDGs. For the aid to lead to a real resource transfer, the monetary authorities in the recipient countries must accommodate such inflows. However, the twin dangers of 'Dutch disease' effects and inflation provide motivation for resisting accommodation. This paper argues that although such dangers are real, they are overemphasized: aid directed at HIV/AIDS is likely to have positive short- and long-term effects on production possibilities in the recipient countries and to be complementary to efforts to achieve the other MDGs. Furthermore, the increased fiscal deficit is a necessary condition for the appropriate resource transfer and is not likely, in itself, to have an inflationary impact. The danger of inflation lies in an effort by the monetary authorities to resist absorption. Recipient governments are understandably fearful of fiscal sustainability and debt sustainability because of the historical record of very high aid volatility and low predictability. However, spending that reduces the debilitating effects of HIV/AIDS is most likely to counteract such effects by raising government revenues in both the short and medium term. Nevertheless, donors have a

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responsibility to match disbursements to commitments on a more systematic and long-term basis, and reduce the dangers of volatility and unpredictability by shifting aid towards debt relief and grants. The possibility that aid-induced spending will quickly induce decreasing returns is an overly static and pessimistic view: aid targeted at HIV/AIDS can respond very elastically in the medium term and release the supply constraints that limit its effectiveness. Finally, many of the major impediments to aid effectiveness lie in donors' behaviour, particularly their lack of co-ordination with one another and with the recipient country. In summary, although there are potential dangers in scaling up aid-supported spending to address the HIV/AIDS pandemic, they are manageable and provide no reason for delaying the immediate application of resources on a large scale.

FOREWORD

This Conference Paper on “The Fiscal Implications of Scaling up ODA to Deal with the HIV/AIDS Epidemic” was commissioned for the Global Conference on “Gearing Macroeconomic Policies to Reverse the HIV/AIDS Financing”, which was held in Brasilia, 20-21 November 2006. It is the third in a four-part series that contributes to the ongoing debate on macroeconomic policies in low-income countries that restrict the scaling up of financial resources for an expanded HIV/AIDS response.

The conference was jointly sponsored by the HIV/AIDS Group of the United Nations Development Programme, New York and the International Poverty Centre, Brasilia. It brought together representatives from government and civil society, the IMF, HIV/AIDS specialists and economists in a lively and productive dialogue on the policy and practical governance requirements for macroeconomic stability in HIV-affected countries.

The publication of one additional paper, a country case study of Kenya, will follow suit. We hope that these Conference Papers will make a valuable contribution to the ongoing dialogue and debate on this critical issue, and help motivate further studies at the country level.

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1 INTRODUCTION

The scale of the HIV/AIDS pandemic has led in recent years to significant increases in overseas development assistance (ODA) and has motivated the promise of further, extremely large increases in ODA (UNDP, 2005). There has also been a commitment to increase aid in support of the other Millennium Development Goals (MDGs) (Commission for Africa, 2005). Assuming that the promised aid is forthcoming, the impact on the macroeconomic balances within the recipient countries becomes an immediate object of concern. Since the aid will be predominantly spent via the public sector, the implications for fiscal policy, both in terms of the overall stance relative to monetary and exchange rate conditions and in terms of its composition, become important questions. The objective of this Conference Paper is to consider some of the major implications of the scaling up of aid on the fiscal position of recipient countries.

However, an immediate consideration is the objective of such aid. Gupta et al. (2006, p.24) identify three different objectives of aid:

- Aid provided in the context of disasters, emergencies, and humanitarian relief (for example, food aid).
- Aid that might affect growth but, if so, only indirectly and over a long time.
- Aid that might reasonably be expected to affect growth within a fairly short time.

It is clear that aid for the prevention and relief of HIV/AIDS most clearly fits into the first category. Nevertheless, the success of the programme will have an impact under the second category. There are also persuasive reasons for supposing that there may be an important impact under the third objective, especially in countries with extremely high incidences of infection. However, the first objective provides the central justification for the increase of ODA.

This analysis has a number of important implications for the discussion of fiscal policy. First, the scale and composition of spending should be determined by the extent and depth of the pandemic, not by its impact on economic growth; a corollary is that aid should be demand determined. This implies that the first stage of an analysis of public spending increases is to establish the medical, educational and social policies that will most efficiently contain the pandemic. These need to be translated back into fiscal projections. This exercise maps into the first scenario of scaling up of aid identified in Gupta et al. (2006): Costing Non-Income-Related MDGs.

This approach explicitly translates the cost of achieving a particular target into a fiscal scenario. In the case of HIV/AIDS this would require countries to articulate the level and type of resources required to achieve an agreed target in terms of reductions in AIDS and HIV infections. This would in turn require establishing targets over particular time frames in terms of the present spread and characteristics of the disease, which would be translated into resource requirements in sectoral terms and into budgetary costs. This exercise would also identify possible bottlenecks in terms of, especially, skilled labour and could identify the appropriate balance between imported drugs, tradables and non-tradables.

This approach leads to two important, but subsidiary questions: what is the likely impact of such changes on other variables?; and what is the best way to manage fiscal policy to minimise

the possibly destabilising impacts on growth, inflation and other economic objectives? These are the central questions considered in this Conference Paper.

This paper is structured as follows. Section 2 presents a range of data to illustrate the scale of the pandemic in Sub-Saharan Africa and the size of the spending increases necessary to contain it. This is followed by a discussion in Section 3 of the relationship between aid directed at containing and treating HIV/AIDS and aid directed at the other MDGs. Section 4 considers the interaction between fiscal policy and the monetary and exchange rate stance in terms of aid absorption and aid spending. Section 5 considers the possibility of 'Dutch disease' effects, while Section 6 discusses the related question of whether the fiscal deficits associated with increased aid are likely to lead to increased inflation. Section 7 considers the impact of the increase in aid commitments on fiscal sustainability and debt sustainability. Section 8 discusses other reasons for aid pessimism arising from capacity constraints and the impact of aid on the incentive structures facing governments and other agencies, including donors. Section 9 summarises and concludes.

2 THE SCALE OF THE PANDEMIC

The latest UN update on the pandemic reports that, despite some promising developments, the number of people living with HIV continues to grow, with a central projection of 39.5 million people infected at the end of 2006. Amongst these, new infections are heavily concentrated among young people (15-24 years of age), with this group accounting for 40 per cent of new HIV infections in 2006 (UNAIDS/WHO update, Dec 2006, p.3). Although the pandemic is global, sub-Saharan Africa 'continues to bear the brunt' with 63 per cent of all people infected with HIV living in this region (UNAIDS, 2006, p.3), most of which is also classified as least developed. An estimated 2.8 million adults and children from sub-Saharan Africa became infected in 2006, which UNAIDS (2006, p. 10) notes is more than in all other regions combined.

Table 1 presents the latest figures available from the UNAIDS/WHO 2006 Report on the global AIDS pandemic for those sub-Saharan countries with the highest infection rates. Although the methodology for estimating infections has been improved in the recent past and, in consequence, the UNAIDS/WHO are more cautious in their estimates, the situation for most sub-Saharan African countries depicted by the table for 2005 is largely unchanged from 2003. The table also shows the sub-Saharan African countries with the highest infection rates in their adult (15-49 years old) productive populations. Swaziland, Botswana, Lesotho and Zimbabwe stand out with infection rates of over 20 per cent. Swaziland's infection rate of 33 per cent is the highest in the world.

As the costs of treatment and prevention are likely to be a direct function of the infection rate, this situation suggests that these countries should be priorities. There are also several countries with infection rates in the high teens. Lewis reports (2005, p.6) that 7,000 adults and children are dying every day for lack of treatment. UNAIDS/WHO report that "almost three quarters (72%) of all adult and child deaths [due to HIV/AIDS] since 2006 occurred in sub-Saharan Africa" (UNAIDS/WHO update, Dec 2006, p.3). These figures amply support those who argue that increased aid is justified on the basis of the existing humanitarian crisis (for example, ActionAid, 2004).

TABLE 1

Numbers and infection rates in selected Sub-Saharan African Countries

Country	Adults and children 2005		Adults and children 2003		Adult (15–49) rate (%) 2005		Adult (15-49) rate (%) 2003	
	<i>Estimate</i>	<i>[low estimate – high estimate]</i>	<i>Estimate</i>	<i>[low estimate – high estimate]</i>	<i>Estimate</i>	<i>[low estimate – high estimate]</i>	<i>Estimate</i>	<i>[low estimate – high estimate]</i>
SS.Africa	24 500 000	[21 600 000 - 27 400 000]	23 500 000	[20 800 000 - 26 300 000]	6.1	[5.4 - 6.8]	6.2	[5.5 - 7.0]
Botswana	270 000	[260 000 – 350 000]	260 000	[250 000 – 340 000]	24.1	[23.0 – 32.0]	24.0	[23.0 – 31.6]
CAR	250 000	[110 000 – 390 000]	240 000	[110 000 – 370 000]	10.7	[4.5 – 17.2]	10.8	[4.6 – 17.2]
Côte d'Ivoire	750 000	[470 000 – 1 000 000]	710 000	[440 000 – 950 000]	7.1	[4.3 – 9.7]	7.0	[4.3 – 9.7]
Gabon	60 000	[40 000 – 87 000]	56 000	[36 000 – 79 000]	7.9	[5.1 – 11.5]	7.7	[5.0 – 11.0]
Kenya	1 300 000	[1 100 000 – 1 500 000]	1 300 000	[1 200 000 – 1 500 000]	6.1	[5.2 – 7.0]	6.8	[5.8 – 7.7]
Lesotho	270 000	[250 000 – 290 000]	270 000	[250 000 – 290 000]	23.2	[21.9 – 24.7]	23.7	[22.3 – 25.1]
Malawi	940 000	[480 000 – 1 400 000]	900 000	[460 000 – 1 300 000]	14.1	[6.9 – 21.4]	14.2	[7.0 – 21.5]
Mozambique	1 800 000	[1 400 000 – 2 200 000]	1 700 000	[1 300 000 – 2 000 000]	16.1	[12.5 – 20.0]	16.0	[12.5 – 19.7]
Namibia	230 000	[110 000 – 360 000]	220 000	[100 000 – 330 000]	19.6	[8.6 – 31.7]	19.5	[8.7 – 30.6]
South Africa	5 500 000	[4 900 000 – 6 100 000]	5 300 000	[4 800 000 – 5 800 000]	18.8	[16.8 – 20.7]	18.6	[16.6 – 20.5]
Swaziland	220 000	[150 000 – 290 000]	210 000	[140 000 – 270 000]	33.4	[21.2 – 45.3]	32.4	[20.7 – 44.1]
Uganda	1 000 000	[850 000 – 1 200 000]	960 000	[810 000 – 1 100 000]	6.7	[5.7 – 7.6]	6.8	[5.8 – 7.8]
Tanzania	1 400 000	[1 300 000 – 1 600 000]	1 400 000	[1 200 000 – 1 500 000]	6.5	[5.8 – 7.2]	6.6	[5.9 – 7.3]
Zambia	1 100 000	[1 100 000 – 1 200 000]	1 100 000	[1 000 000 – 1 200 000]	17.0	[15.9 – 18.1]	16.9	[15.9 – 18.0]
Zimbabwe	1 700 000	[1 100 000 – 2 200 000]	1 700 000	[1 200 000 – 2 300 000]	20.1	[13.3 – 27.6]	22.1	[14.6 – 30.4]

Source: 2006 Report on the global AIDS epidemic, UNAIDS/WHO, May 2006.

The estimated worldwide costs of treating and containing this pandemic in low and middle income countries are provided in UNAIDS (2006). These are estimated to be US\$14.9 billion in 2006, US\$18.1 billion in 2007 and US\$22.1 billion in 2008 (UNAIDS, 2006, p.224). The funding requirements under different categories of treatment and prevention are shown in Table 2.

TABLE 2

AIDS Funding Requirements for low- and middle-income countries

US\$ Billions	2006	2007	2008	2006-2008
Prevention	8.4	10.0	11.4	29.8
Care and Treatment	3.0	4.0	5.3	12.3
Support for Orphans & Vulnerable Children	1.6	2.1	2.7	6.4
Programme Costs	1.5	1.4	1.8	4.6
Human Resources	0.4	0.6	0.9	1.9
Total	14.9	18.1	22.1	55.1

Source: Table 10.1 p. 225 UNAIDS (2006).

The proportions of the total (US\$ 55.1 billion) required for Prevention and Care and Treatment for Africa were 22 and 54 per cent, respectively. Of the total for support for orphans and vulnerable children, 95 per cent is needed for sub-Saharan Africa (UNAIDS, 2006, p. 229).

Despite the rapid rise in commitments and disbursements in recent years, these funding requirements are still considerably larger than the present level of commitments, estimated to be US\$8.9 billion in 2006 and US\$ 10 billion in 2007 (UNAIDS, 2006, p. 224). However, Lewis (2005, Figure 2, p.7) provides evidence of recent, sharp increases in commitments and disbursements to sub-Saharan African countries with the highest levels of infection. External funding increased in most of these countries, sometimes by extremely large amounts in proportionate terms; for example, in Zambia between 2002-2004 the increase was nearly 700 per cent. Further large increases in commitments are evident in the latest data from the Development Assistance Committee (DAC) of the OECD, shown in Table 3.

In almost all of the countries with the highest infection rates, commitments rose between 2000 and 2005, in proportionate terms by very large amounts, albeit sometimes from extremely low initial levels. In the case of the worst affected country, Swaziland, commitments rose from a mere US\$40,000 to almost US\$20 million. In the case of Namibia, there was a more than ten-fold increase from US\$4.07 million to US\$46.7 million. However, it is worth observing that although there was a steady increase both for sub-Saharan Africa as a whole and for the sub-sample of most infected countries, there is still considerable year-on-year variability; the total for Kenya, for example, falls from over US\$100 million in 2000 to just US\$24 million in 2001, then rises by 2003 to US\$110 million and falls to US\$87 million, before rising again to US\$119 million in 2005.

TABLE 3

Official Development Assistance (commitments) for HIV/AIDS expenditures

Selected Sub-Saharan African Countries in US\$ millions							
Recipient, total commitments	2000	2001	2002	2003	2004	2005	% Increase 2000-2005
Botswana	3.88	11.6	10.43	30.39	20.76	40.07	933
Central African Rep.	0.44	17.78	0.6	25.79	5.08	0.33	-25
Cote d'Ivoire	5.7	17.54	10.68	26.99	12.33	27.8	388
Gabon	-	0.09	0.52	0.2	3.16	0.37	311*
Kenya	108.47	23.76	51.41	110.88	86.52	118.78	10
Lesotho	2.62	1.43	2.22	11.75	6.19	15.9	507
Malawi	13.08	24.68	20.86	100.53	21.51	40.5	210
Mozambique	14.84	51.35	27.09	85.34	82.3	88.37	495
Namibia	4.07	5.38	10.27	17.8	57.33	46.7	1047
South Africa	23.62	26.15	53.26	147.38	148.28	147.37	524
Swaziland	0.04	3.17	2.71	30.4	1.1	19.83	49475
Tanzania	18.56	33.15	36.51	115.68	93.27	254.48	1271
Uganda	19.92	85.42	53.74	81.58	169.22	64	221
Zambia	20.32	27.59	78.83	163.75	62.42	88	333
Zimbabwe	33.86	18.47	32.7	25.8	55.2	29.28	-14
Grand Total for selected countries	269.42	347.56	391.83	974.26	824.67	981.78	264
Grand Total for Sub-Saharan Africa	596.97	774.28	782.87	1565.1	1506.5	1575.1	164

*: relative to 2001.

Source: OECD DAC database (2007).

3 AID FOR HIV/AIDS AND THE OTHER MDGS

The central objective of this paper is to consider some of the implications for fiscal policy of the impact of a scaling up of aid to tackle the HIV/AIDS crisis. However, this impact will be conditioned by the relationship between changes in aid to tackle HIV/AIDS, the existing overall level of aid and the proposed increases in aid to address the other Millennium Development Goals. This section briefly discusses this issue.

Table 4 indicates the total net aid *disbursements* for the sub-Saharan African countries with the highest infection rates. The pattern is irregular for several countries, particularly those that received very large, short-term increases in aid associated with the end of long-term conflicts. Nevertheless, there is evidence for much of the sample of an increasing trend at least until 2004, although in many cases the level of aid is still lower than in earlier periods. Although the 2005 aggregate figure is barely changed from 2004, the total for the whole of sub-Saharan Africa is noticeably higher. The commitments by DAC members to raise the proportion of their GDP devoted to aid in support of the MDGs suggest that the aid for the sub-sample shown will return to a rising trend in future years; this is implicit in the simulations of future aid given by the OECD (OECD, 2005, p.11).

TABLE 4

**Net Disbursements of ODA to Sub-Saharan Africa by Recipient in US\$ million
at 2004 prices and exchange rates**

	1989-1990	1994-1995	2002	2003	2004	2005
	average	average				
Botswana	208	103	43	30	47	69
Central African Rep.	302	181	76	57	110	93
Côte d'Ivoire	745	1 593	1 403	278	160	116
Gabon	183	189	96	- 13	40	53
Kenya	1 549	768	483	570	664	755
Lesotho	192	135	97	88	106	68
Malawi	644	512	471	570	501	561
Mozambique	1 251	1 333	2 888	1 139	1 246	1 255
Namibia	122	184	175	160	173	121
South Africa	-	409	651	708	628	686
Swaziland	56	65	28	38	22	46
Tanzania	1 423	1 045	1 595	1 884	1 761	1 475
Uganda	769	916	897	1 069	1 198	1 172
Zambia	579	1 520	813	653	1 125	929
Zimbabwe	408	612	246	206	187	359
Sample total	8 432	9 565	9 962	7 435	7 969	7 757
Total for SSA	22817	21197	23695	26477	25867	31422

Source: OECD DAC database (2007).

The overall level of aid is also extremely high for many of these countries; for Mozambique, Tanzania and Uganda, the 2005 disbursements were over a billion US\$, with similar levels in previous years. The figure for Kenya was more than US\$750 million. However, the most important point to note is that aid for HIV/AIDS is, in most cases, a relatively modest part of the total. Table 5 below expresses the aid for HIV/AIDS as a proportion of overall aid for 2004 (the year when the two sets of figures are directly comparable since Table 4 is in 2004 US\$).

Table 5 demonstrates that aid commitments to tackle HIV/AIDS are a relatively small proportion of the overall level of aid disbursed to the most infected countries. As commitments are usually lower than subsequent disbursements, the proportions shown in the table are likely to be upper bounds. Even for those countries that are now in receipt of considerable ODA directed at HIV/AIDS, this is in the context of very large aid inflows for other purposes. In the case of Uganda, for example, although aid commitments for HIV/AIDS were almost US\$170 million, this represented only 14 per cent of aid disbursements in 2004. This is consistent with the earlier observation of Lewis (2005, p.8) that, over the 2002-2004 period, the flows associated with HIV/AIDS relief were, in most cases, a relatively modest proportion of the projected overall increases, representing between 5 and 35 per cent.

TABLE 5

Aid Commitments for HIV/AIDS as a percentage of overall Aid Disbursements (US\$ millions)

Year: 2004	(1) Aid for HIV/AIDS	(2) Overall Aid	(1) as % of (2)
Botswana	20.76	47	44
Central African Rep.	5.08	110	5
Cote d'Ivoire	12.33	160	8
Gabon	3.16	40	8
Kenya	86.52	664	13
Lesotho	6.19	106	6
Malawi	21.51	501	4
Mozambique	82.3	1 246	7
Namibia	57.33	173	33
South Africa	148.28	628	24
Swaziland	1.1	22	5
Tanzania	93.27	1 761	5
Uganda	169.22	1 198	14
Zambia	62.42	1 125	6
Zimbabwe	55.2	187	30

Source: OECD DAC database (2007) and author's calculations.

It is therefore important to recognise that although funding for HIV/AIDS is likely to rise further both absolutely and proportionately, the context is an overall scaling up of aid into countries, which are, for the most part, already in receipt of considerable amounts of aid. This does not mean that extra spending for HIV/AIDS will have no macroeconomic effects. However, for many of the highly infected countries, it does suggest that "HIV/AIDS funding *alone* is unlikely to derail overall macroeconomic policy" (Lewis, 2005, p.8, italics added). It follows that for the most infected countries, the appropriate way to assess the impact of the extra HIV/AIDS spending is in the context of the large increase in aid associated with targeting all of the MDGs.

It is also important to note that the increases in aid, for both HIV/AIDS and the other MDGs, are proposed in the context of already high levels of aid relative to the size of the recipient economies. Table 6 indicates the overall aid 'intensity' (ODA/GNI) for the sample of sub-Saharan African countries with the highest infection rates. There is evidently a large spread, with South Africa receiving the equivalent of only 0.3 per cent of GNI in 2004 while Malawi, Mozambique and Zambia received 25.9, 21.4, and 21.2 per cent respectively. It is clear that several of the countries with the highest infection rates are already aid dependent. By contrast, South Africa and Botswana, with aid commitments for HIV/AIDS totalling 24 per cent and 44 per cent respectively of their overall aid disbursements in 2004, received aid that was equivalent to only 0.3 per cent and 0.5 per cent of their GNI.

Table 6 also indicates the remarkably large variability of aid flows year by year, with changes equivalent to over 10 per cent of GNI in a single year not being uncommon. In Malawi, for example, aid disbursements as a proportion of GNI fell from 21.9 per cent of GNI in 1996 to 13.1 per cent in 1997, followed by a rise to 25.4 per cent in 1998. In Mozambique, the figures range from 25.1 per cent in 2001 to 56.2 per cent in 2002, falling back to 22.6 per cent in 2003. Although the overall degree of aid dependency is lower in other countries, the pattern of very high volatility is still evident.

TABLE 6

ODA as a percentage of Gross National Income (GNI)

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Botswana	2.9	2.1	1.9	1.6	2.4	2.1	1.3	0.6	0.6	0.8	0.4	0.5
Central African Republic	13.5	20.2	15.3	16.2	9.2	11.7	11.4	8.0	6.9	5.8	4.2	7.9
Cote d'Ivoire	7.9	21.1	12.1	8.6	4.1	8.0	3.8	3.6	1.7	9.9	1.9	1.0
Gabon	2.6	4.9	3.4	2.6	0.8	1.1	1.2	0.3	0.2	1.7	-0.2	0.6
Kenya	16.9	10.0	8.4	5.0	3.5	3.0	2.4	4.1	3.6	3.0	3.5	4.0
Lesotho	11.8	9.6	8.6	8.2	6.8	5.4	2.7	3.4	6.0	8.9	5.9	6.3
Malawi	24.5	41.3	32.2	21.9	13.1	25.4	25.8	26.1	24.0	20.0	30.1	25.9
Mozambique	63.4	61.0	51.4	33.2	29.5	28.4	21.3	24.7	27.5	56.2	22.6	21.4
Namibia	5.3	4.2	5.2	5.3	4.5	5.2	5.3	4.4	3.4	4.3	3.1	3.1
South Africa	0.2	0.2	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.5	0.4	0.3
Swaziland	4.9	5.1	4.0	2.3	1.8	2.5	2.0	0.9	2.1	1.9	1.5	4.9
Tanzania	23.2	22.2	17.1	13.8	12.5	12.1	11.6	11.4	13.6	12.7	16.6	16.2
Uganda	19.2	19.1	14.7	11.3	13.0	9.8	9.9	14.2	14.3	12.5	16.0	17.3
Zambia	28.9	23.1	62.9	19.9	16.5	11.5	21.0	25.8	10.1	18.1	13.9	21.2
Zimbabwe	7.9	8.5	7.2	4.5	4.2	4.6	4.3	2.5	1.3	0.7	2.4	4.0

Source: World Development Indicators, 2006.

An alternative index of aid dependency is the proportion of total government expenditures funded through aid. A selection of figures for sub-Saharan Africa during 2003/2004, drawn from Moss and Subramanian (2005), are shown in Table 7.

TABLE 7

Aid (ODA) as a percentage of General Government Expenditure (GXP)

	ODA/GXP	Projection
Central African Republic	34	61
Cote d'Ivoire	9	25
Kenya	14	32
Lesotho	16	26
Malawi	71	80
Mozambique	88	91
Tanzania	77	87
Uganda	64	79
Zambia	48	60
Zimbabwe	3	12

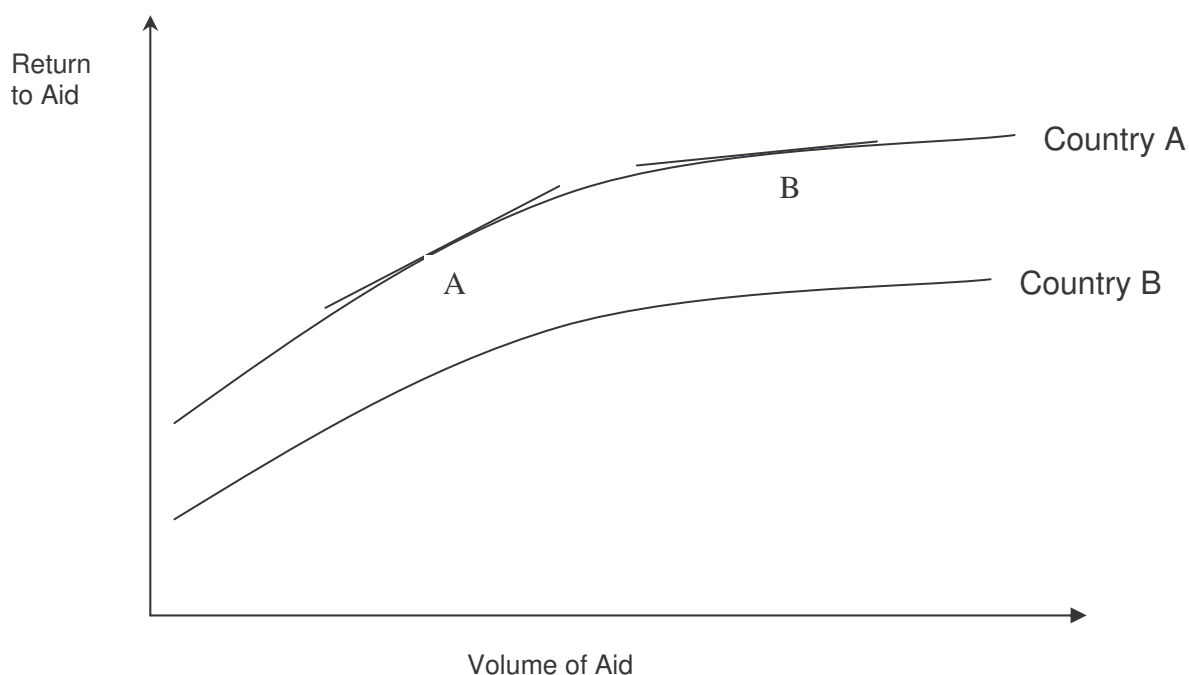
Source: Moss and Subramanian, (2005), Table 2, p.6.

The table also illustrates the projected level of the ODA/GXP ratio if aid levels were to be doubled. Moss and Subramanian (2005, Table 1, p.4) also note that of the 52 countries defined as low-income by the World Bank, fully 22 are already receiving aid that is more than 50 per cent of total government expenditure, with more than one fifth having a level above 75 per cent. Their projections also demonstrate that more than half of these countries (34) would have an aid intensity of more than 50 per cent and one third (18) more than 75 per cent if aid levels were to be doubled.

The countries with the highest infection rates are, except for Botswana and South Africa, lower middle income or low-income countries, according to the 2006 World Bank classification. They are in receipt of large amounts of development assistance both in absolute and relative terms, which are likely to grow in order to address the whole range of MDGs. The context for the increase in funding for HIV/AIDS is therefore of already high and rising aid dependency. This situation raises a number of questions about the impact of the larger fiscal deficits corresponding to the scaling up of such aid.

These issues can be illustrated using a diagram from Bourguignon and Sundberg (2006), shown in Figure 1. The overall return to aid is measured on the vertical axis. The curves slope upwards for both country A and B indicating the hypothesis that the marginal returns to aid are positive but declining. One set of questions asks what determines the height of the curve. In other words, what factors determine how effective aid is in different countries and different circumstances? This outcome will depend on the composition of the spending associated with aid and the degree to which it matches the particular needs of the recipient economies; this will include the degree of complementarities between public and private investment.

FIGURE 1



It is important to note that the notion of a rate of return does not imply that aid should be assessed only in terms of its impact on the rate of economic growth. As Kenny remarks (2006, p.15), “[o]verall economic growth was probably never a good metric for aid effectiveness.” As noted in the introduction, the overall objective of aid is multidimensional; the rate of return must be measured in the appropriate dimension, only one of which is economic growth.

However, a linked but conceptually distinct question is what determines the marginal return to an extra increment of aid in a particular country. In particular, are there grounds for believing that the marginal returns to aid may decline, in whatever dimension, if the aid budget is scaled up significantly in the context of already high aid dependency (as suggested in the diagram by the declining slope in the movement from A to B). This may be of some significance as aid for HIV/AIDS is likely, at least initially, to be overwhelmingly spent in health sectors, which are already under considerable strain (Lewis, 2005).

4 FISCAL POLICY AND THE MONETARY AND EXCHANGE RATE STANCE

The size of the necessary increases in expenditure to address the HIV/AIDS pandemic will depend on the particular characteristics of the disease in different countries relative to their pre-existing capacity in terms of, for example, health provision; a precise country plan will be necessary in all cases. However, the broad pattern is indicated in Table 2 (page 7). For sub-Saharan African countries the balance will be dominated, at least in the short term, by the need to raise the proportion of people with access to anti-retroviral drugs. Although the

provision of anti-retroviral therapy has increased ten-fold since 2003, this increment represents only 23 per cent of those estimated to need the drug therapy (UNAIDS/WHO Update, Dec, 2006, p. 10). A further major expenditure will be to deal with the very large number of orphaned and vulnerable children. Other expenditures will include drugs to treat opportunistic infections, such as tuberculosis, medical infrastructure of various forms, and, crucially, staff. There will also be expenditures on prevention and containment, such as the purchase and distribution of condoms, but also including education and awareness campaigns.

At the same time, as noted above, pursuing the other MDGs will imply a much broader pattern of expenditures, which are likely to interact with those for HIV/AIDS; for example, improved infrastructure will improve the distribution of drugs and other medical technologies, especially in the more remote regions. However, as with every economic change, the way in which agents, both public and private, respond complicates the picture, with the serious possibility of unintended consequences undermining the original purpose. In particular, how the monetary authorities respond to the increased spending is a crucial issue.

The purpose of aid is to achieve a real resource transfer so that the recipient economy has a greater access to resources than it did previously. This can be discussed in terms of the distinction between absorbing aid and spending aid (see IMF, 2005a). Aid spending may be defined as the change in the non-aid fiscal deficit consequent upon the receipt of an aid inflow. This represents the degree to which the aid allows public expenditure to rise without increases in domestic revenues.

Evidently, the aid can be spent by using it to finance tax reductions so that aid can also support private decision makers' expenditures. However, in most circumstances, the overall effect on the recipient economy cannot be directly inferred from the scale of the aid inflow and the size of the increased fiscal deficit. This is because, unless the aid constitutes a direct physical transfer of resources, it consists initially of a financial transfer of foreign currency, usually dollars. How the monetary authorities use this foreign currency determines the degree to which the increased fiscal deficit corresponds to a real resource transfer.

Absorbing aid is "the extent to which the non-aid current account deficit widens in response to an increase in aid inflows" (IMF, 2005a, p.8). This represents the direct and indirect extra (net) imports financed by the aid inflow. Without the extra imports, the increased fiscal deficit will represent simply an increased claim on an unchanged supply of domestic resources; there will be a re-allocation of resources in the economy but no overall increase. The possibility exists that aid will be received but not absorbed, by being used to bolster a country's reserves or to reduce external debt. This may be the policy choice of the monetary authorities and, in fact, seems to be a common response to aid inflows in some sub-Saharan African countries (IMF, 2005a). In this case, there is no real resource transfer in the immediate period, although this may be reversed if the foreign exchange is spent in the future.

If spending is increased without the corresponding release of the foreign currency, then the increased fiscal deficit will not be matched by any corresponding dampening elsewhere and there will be a net injection of demand. The effect of this will depend on the responsiveness of aggregate supply, which may itself be influenced by the spending, if it is directed to releasing capacity constraints, and by the pre-existing degree of excess capacity. The response of the monetary authorities to such upward demand pressure will, in turn, depend on the existing level of inflation relative to any inflation target. An overly tight inflation target will pre-dispose the monetary authorities to raise domestic interest rates. It is important to note that, even if the

foreign exchange is initially sold, the potential increase in net imports and therefore absorption will be reduced through a more restrictive monetary policy.

The aid may also be used by the government to close any fiscal deficit. In this case, it is being used to dampen demand. In this case, the central bank sells the foreign exchange, absorbing domestic money, raising the nominal exchange rate and diverting demand to imports, which, with government spending unchanged, reduces overall aggregate demand.

The distinction between absorbing aid and spending aid allows a simple matrix of possible outcomes, shown in Table 8, each reflecting different policy responses of the monetary authorities to different expenditure decisions (see Gupta *et al.*, 2005, p.11-12). Clearly intermediate combinations are possible.

TABLE 8

Possible Combinations of Absorption and Spending in Response to a Scaling up of Aid

<p>Aid is absorbed and spent The government spends the aid. The central bank sells the foreign exchange. The current account deficit widens.</p>	<p><i>Aid is neither absorbed nor spent</i> Government expenditures are not increased and taxes are not lowered. The central bank does not sell the foreign exchange. International reserves are built up.</p>
<p>Aid is absorbed but not spent Government expenditures are not increased. The central bank sells the foreign exchange. Monetary growth is slowed; the nominal exchange rate appreciates; aggregate demand is lowered.</p>	<p>Aid is spent but not absorbed Government expenditures are increased and taxes are not raised; the fiscal deficit widens. The central bank does not sell foreign exchange. International Reserves are built up. Aggregate demand increases.</p>

Source: Based on Table 2, p.12, Gupta *et al.* (2005).

An unambiguous real resource transfer occurs only if the extra spending allowed by the aid is also absorbed (although spending and absorption may be separated in time if there are fiscal or exchange rate difficulties at a particular point). This means that it is assumed that the government's increased spending, with a corresponding increase in the fiscal deficit, will be financed by the domestic counterpart to the aid inflow. This will be provided through the monetary authorities' sale of foreign currency, which will simultaneously finance an equivalent increase in imports. It is worthwhile noting that this dynamic highlights the importance of co-ordination between the fiscal and monetary authorities--something that, unfortunately, is not always evident. In fact, the currently favoured institutional arrangement of central bank independence from the direct influence of the finance ministry may be an impediment to the effective absorption of aid.

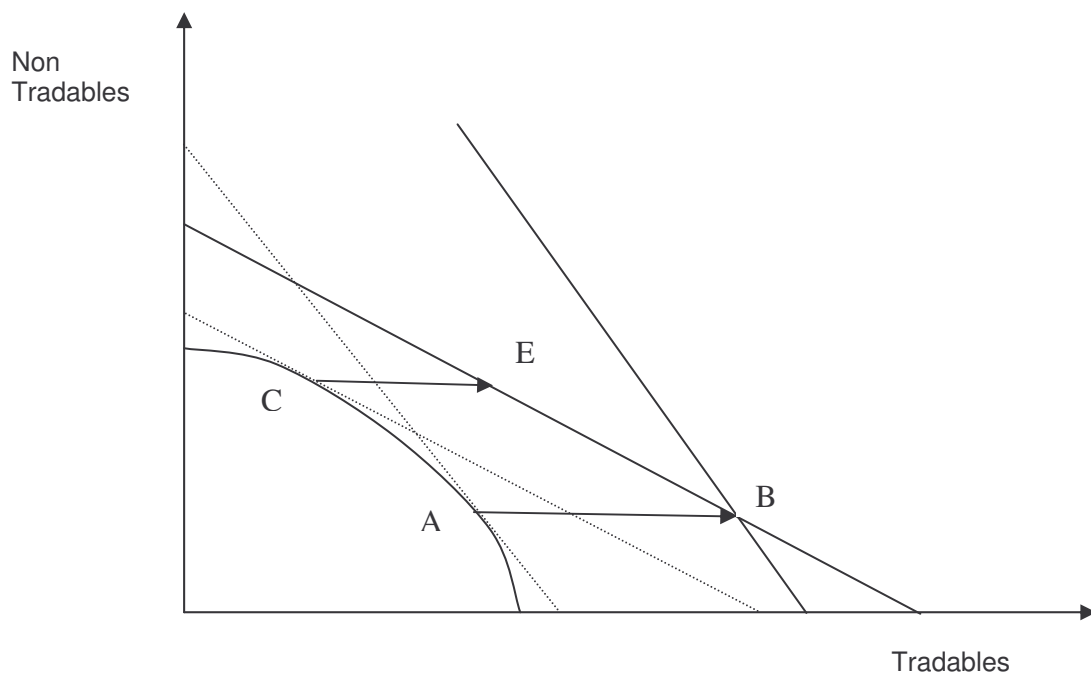
The questions which now arise are: is the increased fiscal deficit likely to generate destabilising macroeconomic consequences?; are there physical and other constraints on the delivery of the increased aid via the public sector?; is the increased aid likely to induce inappropriate and inefficient incentive structures? In addition, and crucially, are there appropriate policy responses that can relax any constraints on the effective use of aid? The first of these questions relates to the impact on the real exchange rate, exports and competitiveness, summarised in the question of whether increased aid spending may lead to 'Dutch disease' effects. This is the subject of the next section.

5 THE IMPACT ON TRADABLES AND NON-TRADABLES AND THE LIKELIHOOD OF 'DUTCH DISEASE'.

The original literature on 'Dutch disease' effects emphasized the appreciation of the real exchange rate as the cause of the weaker growth and balance of payments deterioration. The supposition was that aid-financed public spending on non-tradables raised the relative price of non-tradables *vis-à-vis* tradables, rendering exports less competitive and attracting more imports, with lower growth and recurrent balance of payments crises.

It is instructive to represent the argument in terms of a simple 2-sector general equilibrium model (see for example, Bulir and Lane, 2003; Michaely, 1981).

FIGURE 2



The economy's potential output is given by a convex production possibility frontier between nontradables and tradables (Figure 2). Real relative prices are given by the budget constraint which defines an equilibrium allocation between tradables and non-tradables at point A. Aid is interpreted as a transfer of tradable goods that shifts the budget constraint horizontally outwards, allowing an unambiguously higher level of welfare at point B. The real resource transfer is represented by the horizontal distance between A and B. This would be the situation in which all of the aid was spent on imported goods, none of which were substitutes for domestically produced goods; the absorption and spending of aid would occur at the same time and through the same decision. This is of some consequence in the case of aid to relieve HIV/AIDS because, as noted earlier, a significant proportion will be spent on the acquisition of anti-retroviral and other drugs, which will need to be imported and are not substitutes for domestic production (Gupta *et al.*, 2005, Box 1, p.10).

However, this is not usually regarded as the most likely outcome. There is a general presumption that aid spending will, at least to some degree, require the application of domestic resources, which will need to be diverted from other activities (or from inactivity). In particular, the aid inflow means that the imports can be financed by a lower level of exports so that resources previously devoted to exports are now available for non-tradable purposes. This is effected by changes in the relative price of goods between the two sectors so that the terms of trade between the tradable and non-tradable sectors shifts away from tradables.

The precise mechanism by which this occurs differs but in terms of Figure 2, the excess supply of tradables relative to non-tradables rotates the budget constraint to establish a new equilibrium for domestic production at point C, while the aid finances imports CE. More realistically, the extra demands for non-tradable goods and services reflected in the increased fiscal deficit raises the relative price of non-tradables rotating the budget constraint. Of course, the size of the effect will depend on the elasticity conditions.

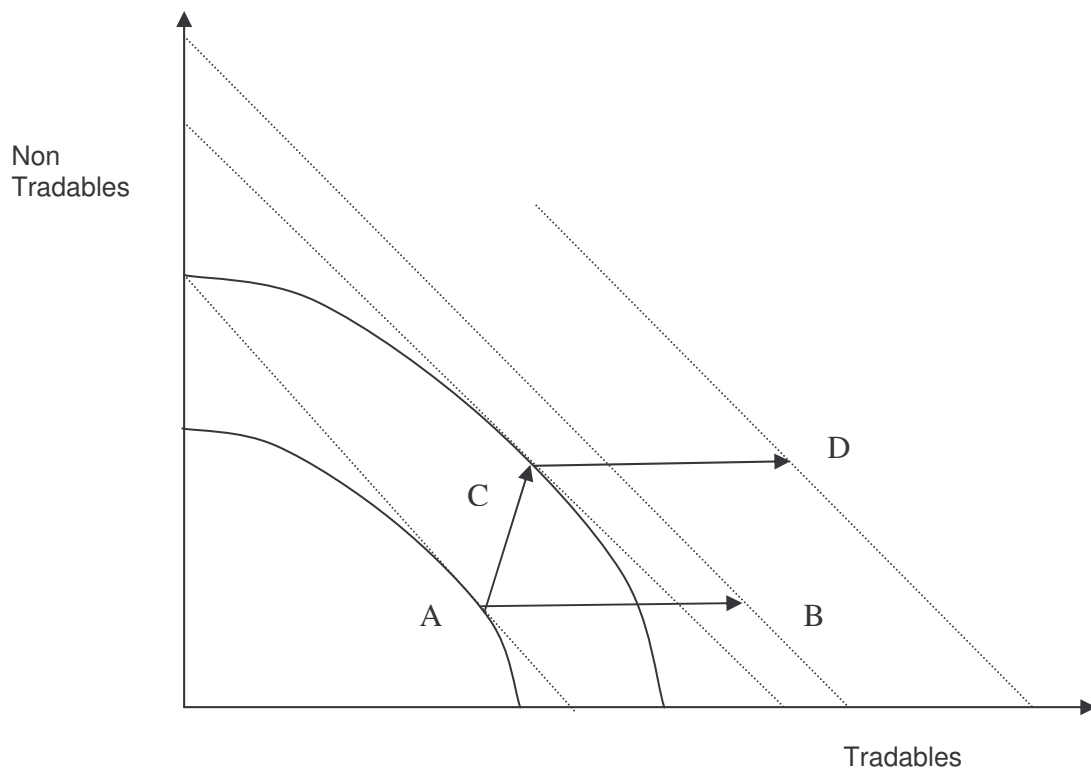
A number of observations are in order. First, this represents an *appropriate* re-alignment of the productive balance between tradables and non-tradables relative to the new price structure. In welfare terms, the only value of exports is to finance imports; the welfare effects in the post-aid equilibrium are positive. In terms of Figure 2, there is an unambiguous increase in both tradables and non-tradables in the new equilibrium. Nevertheless, there has been a tendency to infer, based on such static models, that the dynamic impact of reduced exports will be to reduce overall growth. However, to reach this conclusion based on this class of models requires further assumptions.

The simple model outlined restricts the impact of aid to changes in relative prices only. If it is assumed that the effects of aid are likely to impact on the production possibilities facing an economy as well as on the relative prices between the sectors, the predicted outcomes become ambiguous. In terms of Figure 2, plausible assumptions allow the production possibility frontier to shift in response to the level and composition of the aid expenditures.

One possibility discussed in the literature (see for example, Van Wijnbergen 1984) is a learning-by-doing externality arising in the tradable sector. In this case, the contraction of the tradable sector has the undesirable consequence of reducing productivity. However, as noted by Bulir and Lane (2002, p.), "the distortion should be tackled directly as opposed to discouraging aid inflows". In addition, it is also possible to hypothesize that the increased exposure to international goods and services may generate a positive externality. In this case the increase in imports may also be relevant (Barder, 2006b). It is also perfectly feasible to hypothesize that aid financed public expenditure will have positive external effects on the non-tradable sector; this reverses the presumption that aid will induce a contraction of the tradables sector, albeit at the cost of deteriorating income distribution between the rural and urban sectors (see Adam and Bevan, 2003).

In general, the simple results from the 2-sector model are based on the assumption that the technology implicit in the production possibility frontier is invariant to any of the changes that the inflow of aid might induce. However, *any* mechanism that makes the behaviour of the overall production possibility frontier endogenous to the aid inflow means that these results become ambiguous.

FIGURE 3



For example, Figure 3 illustrates the possibility that aid inflows, shown as a shift from A to B, raise productive potential in *both* the tradable and non-tradable sectors. In this case, both sectors can expand with *unchanged relative prices* so that the economy settles at point C, with the aid-enhanced resource constraint given at point D. Of course, the excess supply of tradables may still be expected to rotate the budget constraint in favour of non-tradables but it is clear that there can be no unambiguous presumption of Dutch disease effects, although the length of the time before the aid induced expansion of supply offsets the demand expansion due to the aid spending then becomes a crucial issue.

However, despite the theoretical ambiguity, it is important to note that the danger of Dutch disease is real so that appropriate policy responses to raise productivity may be a necessary adjunct to increased aid flows. This condition also means that the effect of aid will depend on the composition of the expenditure associated with the aid inflow, as well as the size of the inflow; this is a significant result from the perspective of fiscal policy. Finally, it means that the question of whether Dutch disease is likely becomes an empirical issue about the signs and magnitudes of interacting effects operating over different time scales and contingent on the specific conditions of the recipient countries.

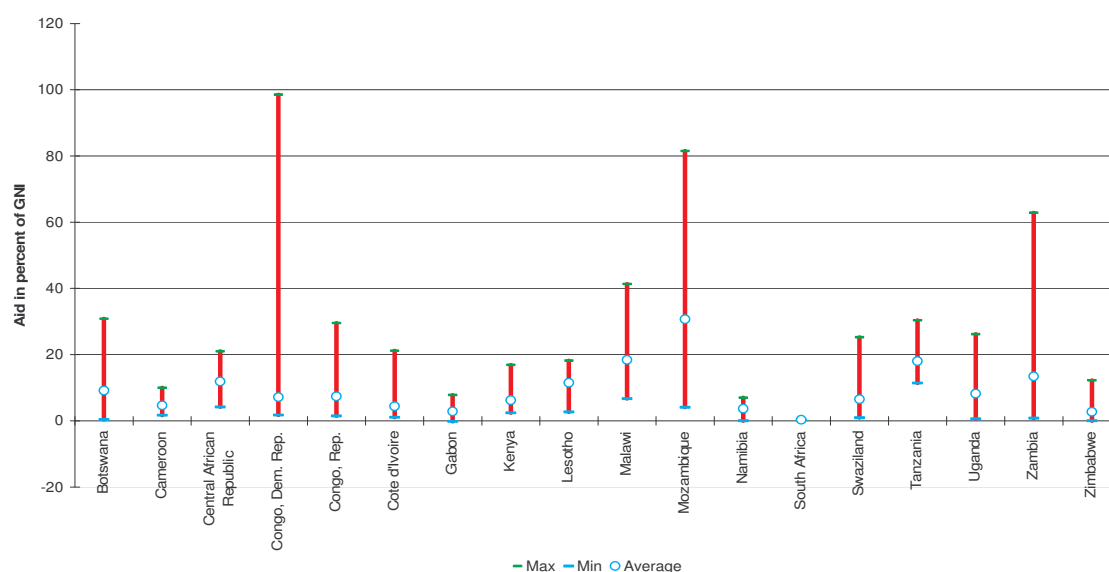
Nevertheless, a further conclusion of considerable importance is available from this simple model: the inferences depend on the real relative prices induced by the aid inflow being the correct long run adjustment. If the aid is only temporary or extremely volatile then the adjustment of the economy to the new set of relative prices will be inappropriate in the long run. The impact of a temporary increase in aid can be destabilising and potentially

negate the short-term increases in welfare provided by the aid transfer (see Foster and Killick, 2006; IMF, 2005a). In particular, the re-allocation of resources from the tradable to the non-tradable sectors is not without transitional costs; firms must contract or become bankrupt so as to allow resources to move to the non-tradable sector. If the change in relative prices is temporary then these transitional costs are multiplied. In these circumstances, aid is equivalent to a temporary shock, which may lead to much larger costs than are likely under a migration to a new longer run equilibrium, especially for countries with undeveloped financial markets that lack the capacity to smooth such shocks (Barder, 2006b).

However, in the case of HIV/AIDS, the volatility of AIDS funding is likely to have even greater effects as effective treatment must be continuous for survival and, as noted in Over *et al.* (2004), interruptions in treatment may lead to the development of more resistant strains of the virus. Given these possibilities interruptions in funding may imply instability in other government programmes if the government prioritises spending on anti-retroviral drugs, especially if this means diverting foreign exchange from other uses.

In fact, there is clear evidence that promises of aid are often not realised and that aid is volatile and often short term, reflecting the political cycle and pressures in donor countries much more than the analysis of problems that aid is designed to address. Table 6 (page 11) illustrates the variability of aid for the countries identified as having the highest infection rates in sub-Saharan Africa. Following Bulíř and Hamann (2006, p.8), Figure 4 indicates the degree of aid instability for the group of sub-Saharan African countries with the highest infection rates. The variability is evidently enormous, with some countries moving between close to zero ODA as a proportion of GNI to very high percentages. The average level of aid for the sample as a whole is 9.3 per cent of GNI, with average upper and lower bounds of 30.1 and 2.2 per cent respectively. The standard deviations range from over 20 per cent of GNI to less than 1 per cent, with a sample average of 6.1 per cent.

FIGURE 4

Aid Instability 1965-2004 (per cent of GNI)

Source: World Development Indicators (2006).

In addition, as noted above and reflected in Table 7 (page 12), the most heavily infected countries are, for the most part, very aid dependent in terms of government spending. Bulíř and Hamann (2002) indicate that aid flows are extremely volatile, with aid for heavily aid dependent countries up to seven times more volatile in terms of its variance than other forms of revenue. In addition, in their recently up-dated study they find that the relative volatility of aid increased during the early 2000s (Bulíř and Hamann, 2006). Based on this evidence, a rational government in receipt of aid would plan to accommodate aid volatility, by, for example, building up reserves as a buffer against further aid instability. This appears to have been the decision, for example, in Ghana in 2003 (IMF, 2005a, p.31).

A further conceptually distinct point is the degree of aid predictability; volatility would be less of a problem if it were predictable. However, the evidence provided by Bulíř and Hamann (2006) is that predictability, in terms of the relationship between commitments and disbursement, has also deteriorated in the recent past. They report that "during 2000-03 average commitments grew by about 4 percent, relative to 1995-98, while average disbursements fell by some 5 percent during the same period" (Bulíř and Hamann, 2006, p.16).

In addition, the predictability of aid appears to be worse for the low-income countries, with countries at the lower end of the income scale having received only about one-half of commitments (Bulíř and Hamann, 2006, p.16). If the donor community wishes aid addressing HIV/AIDS to be rapidly absorbed and spent then it is incumbent on them to reduce aid volatility, increase aid predictability, and build up long term stable donor commitments.

It is worthwhile noting that the composition of aid is of considerable importance to the degree to which recipient governments are able and prepared to both spend and absorb aid. Aid provided as debt relief is a fully predictable form of aid that simultaneously releases present and future budget and foreign exchange constraints. Therefore, it provides a fully predictable, non-volatile component of funding, which can be allocated to recurrent expenditures or capital spending without any danger of a subsequent cutback. Grant aid, although it does not raise debt levels and so avoids one dimension of fiscal uncertainty, is still subject to the problems of volatility and unpredictability.

Finally, concessional lending generates the greatest levels of fiscal uncertainty for the recipient governments. It is unpredictable and volatile; and it raises debt levels, which, given the unpredictable future relationships with donor countries as well as the possibility of exogenous shocks, may become burdensome. The composition of aid is therefore an important influence on the degree to which recipient governments feel confident in translating aid commitments and even disbursements into long-term spending commitments, especially in the recurrent budget.

Although, as indicated above, the diversity of infection rates and patterns of the disease mean that the composition of aid spending across countries will be significantly different, *a priori* the impact of aid packages supporting HIV/AIDS relief seems likely to have both a short and long-term impact on the production possibilities open to recipient economies. The extension of treatment with anti-retroviral drugs to a larger number of people seems likely to have a very rapid effect on both the quantity and quality of labour available to the economy. The evidence of the effect of AIDS on, for example, agricultural output and productivity suggests a major impact (see Slater and Wiggins, 2005). In addition, however, Bell *et al.* (2003) suggest, based on an overlapping generations model of families' investment in education, a number of routes through which HIV/AIDS may impact on a country's production possibilities in the longer run through its impact on the production of human capital.

The premature death of one or both of the parents reduces the expected returns from education while simultaneously reducing lifetime family income. In addition, the death of one or more parents during their offspring's childhood also significantly reduces the direct transfer of knowledge between generations. The numbers involved in sub-Saharan Africa suggest that these effects may be considerable. As of 2003 12 million children in sub-Saharan Africa had lost at least one parent to AIDS (UNAIDS (2003), reported in Bell and Lewis (2005)) while between 12 and 20 per cent of children under the age of 15 in Lesotho and Swaziland are projected to be orphaned by 2010 (Haacker, 2002, reported in Bell and Lewis (2005)). The results from the simulation of the Bell *et al.* (2003) model for South Africa suggest the possibility of a catastrophic collapse of human capital without decisive action to combat the disease; the corollary is that the impact on production possibilities of sustained aid to combat HIV/AIDS may be extremely significant.

The proposal of mechanisms that generate external effects on either or both the tradable sector and non-tradable sector has a strong resonance with the mechanisms proposed within endogenous growth theory. The 2-sector general equilibrium model, although often used to make dynamic predictions, has little purchase over the structural changes and other major changes brought about by economic growth. By contrast, endogenous growth models underpin much of the modern theoretical and empirical work on growth. These turn on some form of externality that de-couples the individual experience of diminishing returns from the aggregate impact of individual decisions, allowing the models to generate increasing returns.

The class of models based on Lucas (1988) identifies education as the driver of human capital accumulation, with externalities from education generating increasing returns. Barro's 1990 model emphasises that infrastructural investment provides the externalities. Romer's 1986 model emphasises the impact of knowledge. These approaches have a particular relevance in terms of the debate on the impact of HIV/AIDS as the disease has had a particularly disabling impact on the education sector, both in terms of the death of teachers and other educational workers and in terms of the impact on children and their capacity and ability to access the educational opportunities still remaining to them and, as noted above, through the intergenerational transfer of knowledge (Bell *et al.*, 2003). However, it is worthwhile remembering that theoretical models suggesting such links have not performed well in empirical tests. Pritchett (2001) finds that the impact of the growth of educational capital on the growth of output per worker is insignificant, with the corollary of a significantly negative impact on the growth of total factor productivity.

The arguments supporting significant external effects of education assume that educational spending translates into appropriate qualitative changes in educational quality and that the existing constellation of incentives guides workers into predominantly socially productive activities and, not least, that the economy generates an appropriate demand for the services of educated workers. All of these assumptions are questionable. It is clear that the potential economic benefits from education, whether responding to HIV/AIDS or otherwise, require not just that spending increase, but also that it is appropriately targeted and appraised.

More generally, the potential benefits of increasing aid spending must be confronted with the much more nuanced empirical evidence. Although there have been no empirical studies that have focused specifically on the impact of aid to address the HIV/AIDS pandemic, some of the recent evaluations of the impact of aid on growth in Africa and elsewhere have some relevance. This is partly because general conclusions may be applicable to the particular

circumstances of countries with high HIV/AIDS infection rates. However, the more important reason for considering this evidence is that, as argued above, HIV/AIDS spending should be seen in the context of the much broader scaling up of aid to achieve the MDGs; the interaction of spending for the other MDGs is one of the most important influences on the success of aid-financed spending to contain HIV/AIDS.

The literature on aid effectiveness is voluminous but inconclusive. As with the impact of education spending, it presents a form of micro-macro paradox, with significant rates of return reported on individual projects but with often contradictory results at the aggregate level in terms of impact upon the rate of growth of output or output per head. Of course, this is partly due to the distinct purposes of aid, with, for example, humanitarian aid likely to be correlated with poor economic performance. However, disaggregating aid in a variety of different ways has often failed to provide definitive answers. In addition, the pervasiveness of reverse causation between aid and its targets introduces econometric difficulties that have no clear-cut solutions. Recent careful evaluations by Rajan and Subramanian (2005), which corrected for endogeneity bias and distinguished between different categories of aid based on assessing impacts over different periods, found no link between aid and growth. These results chime with the recent claims of Easterly, amongst others, that aid is largely wasteful and counterproductive (Easterly, 2006). By contrast, careful re-working of these results by Reddy and Minoiu (2006) reverse these conclusions. They find that a disaggregation into developmental and geo-political aid, allied to a partitioning of donors in terms of the reported quality of aid, provides powerful evidence of developmental aid's effectiveness.

If aid is, on balance, not growth enhancing there are a variety of plausible mechanisms by which it might dampen economic growth (Easterly, 2006). Of particular concern in this context is the work of Rajan and Subramanian (2005b), who find a significant association between aid inflows and the over-valuation of the exchange rate: the classic 'Dutch disease' effect. As noted above, a change in the terms of trade between the tradable and non-tradable sectors is a necessary condition for an effective transfer of resources. The crucial issue is the extent of the appreciation and the time period over which it persists. However, if the externally exposed sector is the major source of productivity enhancing external effects, then the impact may be severe. Of course, as Rajan and Subramanian note "we have not established whether, on balance, these adverse competitiveness effects offset any beneficial effect of aid" (Rajan and Subramanian, 2005b, p.22). In addition, recent empirical studies of exchange rate movements after the receipt of aid have found evidence of *depreciation* (see Prati et al. 2003; IMF, 2005a), as noted above--a result perfectly consistent with theoretical preconceptions.

Other recent evaluations have also found a systematic positive effect of aid on growth under alternative disaggregations (see Clemens, Radelet and Bhavnami, 2004, who disaggregate according to the purpose of the aid). Although the evidence is much more muted, especially for sub-Saharan Africa (see IMF, 2005a for example), a similar positive conclusion is available from surveys (e.g., McGillivray, 2004). However, a number of studies have also suggested that the rate of return on aid declines as it is scaled up (see Clemens and Radelet, 2003). The point at which the marginal return to aid declines to zero, which these authors estimate at between 15 and 45 per cent of recipient GDP, is uncomfortably close to the level of aid seen in some of the heavily aid-dependent economies in sub-Saharan Africa (see Table 6 – page 11). In addition, under several of the scaling up scenarios, aid dependency is likely to cross this threshold for a significant number of other countries.

The empirical evidence is, therefore, ambiguous and disputed. However, as noted by Barder (2006a, p.7), these estimates do not allow for the productivity enhancing impact of aid on growth, on improvements in aid and in its disbursement and use, and on the possible relaxation of constraints. Nor, as noted earlier, is it entirely reasonable to judge aid effectiveness simply in terms of its impact on economic growth; this would seem to be especially true in the case of HIV/AIDS spending.

The conclusions from this brief survey of the theoretical and empirical literature are that there are no compelling reasons to presuppose that aid that is both absorbed and spent via the public sector will necessarily generate Dutch disease effects. Although Dutch disease remains a theoretical possibility, it is not inevitable. Furthermore, aid spent tackling HIV/AIDS seems likely to improve the productive potential of recipient economies in both the short and long-run. A beneficial interaction of aid for HIV/AIDS with aid for the other MDGs also seems possible. The empirical evidence, although contested and not directed specifically at the HIV/AIDS case, provides, nevertheless, some reasons to believe that the danger of aid-induced Dutch disease effects has been overemphasized.

6 AID, DEFICITS AND INFLATION

An alternative claim with respect to the scaling up of aid is that the increase in the relative price of non-tradables is likely to be accompanied via a price rise that is then continuously accommodated, leading to persistent inflation and recurrent balance of payments disequilibria. These are not in themselves predictions that follow from the 2-sector general equilibrium analytical framework; this model assumes full utilisation of resources so as to emphasize the substitution effects that rotate the budget constraint around the production possibility frontier. This approach abstracts from the overall balance between aggregate demand and supply in a particular country. However, it is clear that the change in relative prices necessary to achieve a resource transfer from the tradable to the non-tradable sectors is most easily accomplished via an inflation of prices in the non-tradable sector, as the fiscal deficit is expanded and directed towards spending on HIV/AIDS relief. The question is whether this will trigger a more general inflation.

First, it is important to emphasise that an expansion in the fiscal deficit, reflecting increased spending on the various dimensions of the HIV/AIDS budget, is an essential outcome if the aid is to provide an effective expansion of available resources. The larger fiscal deficit corresponds to the increased imports purchased by the aid; without the extra demand, arising from the larger fiscal deficit, absorption of the aid implicit in rising imports would simply dampen overall demand and thereby reduce the effective release of resources. In addition, as noted above, if the aid is spent predominantly on imports that are not substitutes to local production then there need be little change in the relative price between sectors. This is of some significance since, as noted above, a very large proportion, especially in the early period, is likely to be spent on anti-retroviral drugs.

According to UNAIDS (2006), antiretroviral therapy (including nutritional support) is the single largest category of funding required (UNAIDS, 2006, p.228). In addition, however, many of the other categories are likely to have high import content; for example, the second largest category of funding required is used to treat opportunistic infections, principally tuberculosis, which also implies a high import content. Finally, if the aid induces an increase

in imports that raises domestic supply in other sectors, this effect will ease some of the upward pressure on general prices, allowing the relative price change to occur with a smaller change in the general price level.

However, the more likely scenario would require a considerable degree of complementary medical and other infrastructure ; this requirement means that some re-balancing between the tradable and non-tradable sectors is, in terms of the static model, a desirable outcome. This will reflect a rising demand for skilled labour and for other non-tradable goods to provide the delivery technology to support the anti-retroviral therapies. However, a change in relative prices achieved via an increase in the price level in one sector is not, in itself, inflation. First, in terms of the overall macroeconomic accounting identities it is clear that the increase in government spending, G , exactly corresponds to the increase in imports, M , financed by the aid; there is no change in the overall balance of aggregate demand and supply.

In terms of the national accounting identities:

$$Y = C + I + G + (X - M)$$

For a given level of output (Y), consumption (C), and investment (I), increases in G that are matched by reductions in net exports ($X - M$) have no impact on overall aggregate demand. The issue, in a static framework, is how to move to the appropriate set of relative prices to support the new combination of output required by the increased public spending and imports. However, as noted in the previous section, the more interesting dynamic question is how the aid-induced spending impacts on the evolution of prices and output through its differential effects on aggregate demand and aggregate supply.

In the short run, the presence of excess supply will mean that any increase in aggregate demand will have a muted impact on inflation in the non-tradable sector, and, in consequence, on the real exchange rate. Nkusu (2004) emphasizes the possibility of unemployed resources moderating the impact on the price level in the non-tradable sector. An immediate implication is that the appropriate fiscal deficit to contain inflation is not a constant, nor a constant proportion of GDP. It needs to be adjusted to reflect the specific circumstances of a country, including the level and composition of aid.

In addition, there is little evidence to support an accelerationist view of inflation so long as inflation remains below some (rather moderate) rate (see Yellen and Akerlof, 2006). This suggests that the low inflation targets or limits applied in IMF sponsored programmes may be overly tight to allow the real resource transfers available to be realised. The benchmark inflation target, which influences the overall fiscal and monetary stance, has been below five per cent in the majority of IMF sponsored programmes. For example, in the scaling up scenarios produced by the IMF for Ethiopia an initial target was three per cent, rising to six per cent in the case of a doubling of aid.

The adherence to such tight inflation targets in the face of extremely large inflows of aid is likely to risk misinterpretation of the required changes in relative prices as a more general increase in inflationary pressures, and induce an inappropriately restrictive response from the monetary authorities. This is a conclusion that the IMF is also reaching (Gupta *et al.*, 2005). In fact, for the required change in the nominal prices of non-tradables to feed into sustained inflation requires a series of other connections to hold, which are not inevitable and are themselves subject to policy intervention.

Structural rigidities mean that inflation may be generated by aggregate demand pressures much lower than those necessary to absorb aggregate supply. However, this merely emphasizes the potential for correctly targeted aid to release supply constraints. More generally, there is no necessary reason why aid inflows that are correctly absorbed and spent should generate inflation. The real danger of an inflationary outcome is that inappropriate and poorly designed policies may trigger an inflationary spiral. In particular, if the aid is spent but the monetary authorities fail to absorb the aid then there is clearly an injection of excess demand into the system and, depending on the pre-existing balance of aggregate demand and supply, a danger of inflation. A variation on this occurs when the fiscal deficit rises more than the absorption in terms of the rise in net imports (see IMF, 2005a for examples of this policy combination in sub-Saharan Africa). However, these scenarios reflect an inappropriate policy response rather than something inherent in the scaling up of aid.

Such scenarios may, however, be made more likely by the institutional arrangements for co-ordinating fiscal, monetary and exchange rate policy. It has been noted that an independent central bank with the simple objective of pursuing a (low) inflation target may not be appropriate in the circumstances of a scaling up of aid. At the very least, consistency in the overall balance of these policies is essential if inflation is to be avoided and a real resource transfer achieved. A further problem emerges in the response of governments to volatile aid inflows. If the response of governments is to plan recurrent spending on the basis of aid commitments then the volatility of aid will introduce a ratchet effect on the fiscal deficit; the non-disbursement of committed aid pushing up the fiscal deficit and aggregate demand while extra, unplanned aid receipts are simply reflected in unplanned changes in the financing of the fiscal deficit.

Efforts to reduce the inflationary consequences of any increase in excess demand should be addressed in terms of policies to release supply constraints. These reflect the importance of the appropriate composition of expenditures in response to aid inflows. It is also important to realise the complementarities between different aid budgets. As noted above, the increase in spending for HIV/AIDS should be seen in the context of rising overall aid budgets directed at the MDGs. The effective application of these budgets to relieve supply constraints are an important way of minimising any adverse impact of increasing budget on HIV/AIDS, even if that budget is, in terms of domestic effects, devoted largely to raising demand for skilled workers. For example, the complementarities between increases in spending on infrastructure and delivery of medical services are evident. Further complementarities are likely between educational spending and HIV prevention and treatment.

Bournignon and Lundberg (2006) emphasise the interdependence of the different expenditures to achieve the various MDGs by suggesting that their evaluation be conducted via a general equilibrium model that explicitly takes account of such interdependence. So long as the non-HIV/AIDS spending is directed to enhancing aggregate supply and breaking bottlenecks, there seems no reason to conclude that the increment of aid directed at HIV/AIDS will, in itself, generate anything more than a short run rise in inflation.

In summary, the increase in the fiscal deficit and the switch in relative prices in favour of the non-tradable sector are not in themselves inflationary and are, in fact, necessary elements in the process of real resource transfer that aid is designed to effect. The larger fiscal deficit does not raise aggregate demand so long as the monetary authorities allow the aid to be

absorbed. Although the change in relative prices between the sectors is most easily achieved through a general price rise, this effect need not translate into further inflation.

These conclusions are important given the tendency for advice to maintain tight inflation targets in the face of large aid inflows; such targets should be relaxed sufficiently to allow the process of aid spending and absorption to be achieved. These targets are likely to be considerably above the levels seen currently in many sub-Saharan African countries, which seem to be derived from the experience of western capitalist countries rather than that of countries with large structural barriers to resource re-allocation.

Finally, the potential for a more elastic supply response can be increased through the judicious use of the aid budget to bridge the major supply bottlenecks; the complementarities between aid for HIV/AIDS and aid for other dimensions of the MDG programme may be helpful in this respect.

7 THE IMPACT OF AID FOR HIV/AIDS RELIEF ON FISCAL SUSTAINABILITY

Aid that is both absorbed and spent will increase the fiscal deficit. As noted earlier, this is an intended and desirable outcome that is, in principle, fully funded by the domestic counterpart of the aid when the foreign exchange is sold by the central bank. Nevertheless, a number of concerns have been expressed about the sustainability of such increases in the fiscal deficit and about the level of debt, both domestic and international, which may be generated, especially if the aid comes in the form of concessional loans rather than grants or debt relief.

The concerns about the sustainability of any increase in domestic debt are somewhat different from those relating to international debt. The concern about the prospective increase in domestic debt is, in fact, a concern about the likelihood of future inflation. If the prospect of aid increases leads to sustained increases in expenditures that are not eventually matched from domestic revenue sources then the cessation or diminution of aid in the future will increase the pressure for monetization of domestic debt, with resultant increases in inflationary pressures.

For this reason, the sustainability of an increased fiscal deficit depends in part on the possible impact of aid on a government's ability, or more accurately, preparedness to raise revenue from other sources. The effect of large aid inflows tends to reduce the incentive for governments to raise taxes. In the first place, this effect suggests that domestic funding for HIV/AIDS programmes is likely to decrease, allowing overall expenditure to rise on the back of increased inflows; there is some evidence that such an impact occurs (Lewis, 2005, p.11 asks pointedly how countries can "wisely allocate new resources for HIV/AIDS while their overall health spending declines..."). At the same time, since all aid is effectively fungible, the lower incentive to raise domestic revenue may result in resources being shifted to other lower priority areas.

However, there are a number of reasons for being sceptical of these outcomes. First, the evidence is by no means unanimous that increased inflows of aid lead to stagnation in efforts to raise the revenue base of governments (IMF, 2005a, p.32). In the case of spending on reducing the impact of AIDS, whatever the moral hazard pressure, a successful campaign will maintain productive capacity in the short term, essentially because a person who is

successfully treated with anti-retroviral drugs can continue to work. This outcome means that they can contribute to government revenues through taxation. The effects are likely to be considerable; it is estimated, for example, that 65 days per year for each person with full-blown AIDS are lost through illness in Malawi (Lewis, 2005 quoting Haacker, 2004). If the reduction in the infection rate has a further effect on economic growth, as argued above, then government revenues are likely to expand.

In addition, a successful programme will reduce the future demand for such medical and other related services. A large immediate expenditure may have the effect of reducing future spending. This effect is also likely to be considerable. Masha (2004) estimates in the context of Botswana that these indirect effects will amount to at least 15 percent of the annual cost of the programme. These arguments have a resonance with those advanced in Sachs et al. (2004), in which the aid propels the economy to a new, higher-level equilibrium with greater output and revenue capacity.

Nevertheless, the question of whether aid dependence reduces the incentive to raise domestic resources remains a serious issue. However, this does not in itself constitute an argument against the receipt and disbursement of aid; it merely highlights the need for further reform in terms of accountability and transparency. An alternative perverse incentive should also be noted. It has been persuasively argued (see Killick, 2004, for example) that aid leads to budgets being geared towards the particular priorities of individual donors rather than domestic priorities. The growth of a plethora of conditions for different aid packages seems likely to be a major problem when aid constitutes a substantial part of the overall expenditure within the budget.

A linked but conceptually distinct argument is that aid will raise the resources available for distribution by government and therefore contribute to further growth in rent-seeking, ultimately undermining any beneficial effects from the aid spending. The extremely high scores recorded for corruption in the World Bank indices for the countries with the highest rates of infection underscore this concern. However, the diversion of public funds from whatever source is a function of the degree of transparency and accountability that is applied to the process of distribution. There seems no necessary reason to suppose increased aid flows will reduce this scrutiny and some reason to hope that it will increase it.

A useful distinction in this regard is made by Collier (2006) between sovereign rents and scrutinized revenues. Sovereign rents are "that part of public revenue over which there is no effective scrutiny" while scrutinized revenues "are that part of public revenue over which scrutiny is able to enforce spending on public goods" (Collier, 2006, p. 1484). The higher the ratio of sovereign rents to scrutinized revenues, the greater the space within which patronage, corruption, and rent extraction can take place. The aid pessimists implicitly identify aid as another form of resource rent, which reduces scrutiny of governmental activities. However, aid need not imply such an effect. As noted by Collier (2006), aid comes in many different modalities, which do not, individually or collectively, necessarily imply a reduction in the incentive for scrutiny of governments. In addition, aid itself can be and has been directed at improving governance at all levels. Finally, donors are not passive agents in this process; aid allocations can and should be in the public domain.

A more serious problem for fiscal and debt sustainability is created by the capriciousness of aid flows. UNAIDS (2006) notes that the accurate analysis and management of funds are often not feasible because of the very large gap between commitments and disbursements. In

the case of South Africa, it is estimated that disbursements from bilateral donors may be below 50 per cent of commitments (Ndlovu, 2005, quoted in UNAIDS, 2006). In these circumstances, it is extremely difficult for the Finance Ministry and the Health Ministry to plan scaled up responses to HIV/AIDS.

As noted by Lewis (2005b) scaling up to deal with HIV/AIDS will require large-scale additional hiring, with little ability thereafter to downsize should the resources be curtailed. Given the need, noted above, to maintain treatment in the case of HIV/AIDS, this constitutes a serious problem. Governments are likely to divert resources from other areas of expenditure. This is difficult in the case of other donor-earmarked funding and is likely to lead to competition amongst sectors for resources. There have been several studies confirming the volatility of aid, which is identified in Table 6 (page 11). The inability of governments to be able to predict future aid disbursements to match projected expenditures is a major cause of recipient countries' fiscal and administrative problems (Celasun and Walliser, 2005; Knack and Rahman, 2004).

Long term planning to deal with HIV/AIDS requires long term commitments, not just in terms of the supply of anti-retroviral drugs, but also in terms of the medical infrastructure (hospitals, clinics, orphanages). These commitments have to imply long-term financial commitments by governments. Donor failure to guarantee a long-term flow of income or even the threat of aid interruption can have considerable consequences. In particular, the issue of fiscal sustainability really mirrors the question of aid sustainability. If recipient governments commit to increased recurrent expenditures then it is extremely difficult for them to adjust these to subsequent interruptions in aid flows. The effective treatment to deal with HIV/AIDS requires a long-term commitments by donors.

Debt sustainability is an issue that mirrors fiscal sustainability. Tackling the HIV/AIDS pandemic requires the immediate application of all the resources available. However, if aid is given in the form of concessional lending then spending implies the growth of external government debt. Responsible governments must therefore factor in future debt servicing; this requires assumptions about the predictability and sustainability of the aid and the impact of the aid on future revenues and expenditures—assumptions that in turn must rely on judgements about economic growth and the effectiveness of the aid. Apart from the very great uncertainty of such estimates, scepticism on any of these grounds raises questions about the degree to which aid, especially if in the form of concessional lending, should be factored into government recurrent spending. Concern about debt sustainability, fuelled by the debt overhangs from previous episodes of borrowing, may lead to conservative estimates of the degree to which government spending should be increased after the receipt of aid, especially if it is in the form of loans.

There are a number of issues here. The first question concerns the presumed fiscal space generated by a given increase in the aid inflow. There is a debate to be carried out about whether the advice of international agencies is too restrictive and whether the advice is sufficiently transparent (IMF, 2003; Goldsbrough, 2006). In particular, the restrictive assumptions about the degree of fiscal space are conditioned by the previous experience of countries, many of which were experiencing severe macroeconomic disturbances. Such assumptions are also conditioned by the earlier experience of aid fatigue leading to short term aid surges rather than sustained increases in aid. These assumptions may be inappropriate in the new context of aid scaling up.

Second, however, it is important to re-iterate that this issue is partly endogenous to the behaviour of donors. Aid has a variety of forms with different implications for its predictability and the growth of a debt overhang. As noted earlier, debt relief is fully predictable and generates an immediate improvement in debt sustainability. While still suffering from the problem of predictability and sustainability, grants nevertheless have no impact on the long-term level of external debt, although it has been argued that they may exacerbate the problem of mobilising domestic revenues. Concessional loans are a form of aid that raises the greatest problems in terms of projecting future recurrent expenditures and their subsequent impact on debt. The efficiency of such loans is also reduced if they are tied in some form—a condition on which many of the major donors still insist. Recipient governments are hesitant to factor aid commitments into expenditure plans because of the likelihood that they will not be realised in terms of disbursements or will lead to unsupportable future levels of debt. This stance, which is supported by the IMF, is at least partially justified on the evidence of earlier episodes of aid surges. The donor community should attempt to signal its preparedness to sustain the promised increases in aid rather than wait for recipient countries to learn adverse lessons from their past experience. A number of methods of signalling intent are available. The first would be to re-structure the form that the aid takes, raising the proportion granted as debt relief. Second, formal long term commitments rather than *ad hoc* arrangements which by-pass the government should be the norm. In addition, donors should reduce or eliminate the practice of tying aid.

8 ABSORPTIVE CAPACITY

Although there are grounds to be sceptical of aid pessimism on the basis of the likelihood of either Dutch disease effects or de-stabilizing inflation, there is a large literature that identifies a number of other dangers for fiscal policy posed by large increases in aid. Although these arguments are fundamentally microeconomic in nature, they can have macroeconomic effects. They highlight barriers that restrict the absorptive capacity of countries and, in turn, imply declining marginal returns to aid. In general, it is argued that while these dangers are real, they are not inevitable and can be ameliorated by appropriate policy responses. In other words, absorptive capacity is endogenous to aid-financed investments in capacity.

As noted in UNAIDS (2006, p. 250), sub-Saharan African countries have weak health care systems. At the same time, the increase in external funding is in many cases, such as Lesotho, far larger than the pre-existing health budgets. This situation raises the question of whether the extra resources can be used effectively. Ndlovu (2005) notes that “[A]bsorptive capacity is increasingly becoming the issue for HIV and AIDS spending in South Africa...”. This judgement is likely to apply across the continent.

This is partly due to the lack of trained staff and developed administrative procedures. As noted by Lewis (2005b, p.16), human resources can reach 90 per cent of health spending in less developed countries. This problem is exacerbated by extensive out-migration of health professionals. However, these concerns, although real, can be over emphasized. On the basis of evidence from South Africa, improved absorption can be developed relatively quickly (see Hickey et al., 2003, quoted in UNAIDS, 2006, p. 250).

The response to the increase in spending on HIV/AIDS that has occurred in the last decade is instructive. As noted by Barder (2006a), in 1987 total donor spending on HIV/AIDS was

approximately US\$ 50 million per year; there were few trained professionals able to diagnose and treat the disease nor was there a developed medical infrastructure. By 2006, spending was US\$ 8,9 billion (UNAIDS, 2005, quoted in Barder, 2006a), a 180-fold increase. Barder argues that this demonstrates that the supply of skilled labour is endogenous in the medium term. He suggests that bottlenecks can be overcome with appropriate planning, predictable aid inflows, and political will. He further suggests that this implies changes in donors' behaviour, no less than that of recipient governments. In particular, this analysis suggests that earmarking of resources be restrained; that shortages of skilled labour be made a more explicit target of technical and other assistance; that aid be allowed to be used more flexibly to hire at need; and finally that donors provide predictable aid over the long term.

Further problems are generated as a result of bilateral donor conditionalities, which complicate accounting and administration. These are exacerbated by the large number of agencies involved. Barder (2006a) highlights the finding of Van de Walle (1991) that for a typical African country, aid is provided by "some thirty official donors in addition to several dozen international NGOs...through over a thousand distinct projects and several hundred resident foreign experts" (Van de Walle, 1991, quoted in Barder, 2006a, p.8). These impose substantial costs on the recipient country, diverting skilled administrative resources from other activities and reducing considerably the benefits of aid.

It is likely that these transaction costs will rise with the scaling up of aid (Barder, 2006a). However, the purpose of such arrangements (from the perspective of the donor government) is to increase the effectiveness of aid projects and increase transparency. However, the opportunity exists for such costs to be radically reduced without compromising these objectives. Collier (2006) argues that one way of ensuring that scaled up aid is more effective is through 'donor co-ordination without harmonization' (Collier, 2006, p. 1495). He suggests the device of mutual recognition, following the successful application of this idea in the European Union. A recipient country would be free to adopt whichever donor system was most compatible with its own procedures. All donors would then accept this choice for that country. Of course, this would imply donors working with different procedures in different countries. However, this is 'probably within their competence' (Collier, 2006, p. 1495). It is certainly to be preferred to a system that places the burden on the much weaker administrative structures in the recipient countries. In addition, greater pooling of donor resources would reduce transactions costs.

It is also important to note that many of administrative and other constraints facing recipient governments have been linked to other unfortunate aspects of donor behaviour. More generally, failures to make effective use of aid can, at least to a degree, be identified with the performance of the donors (Birdsall, 2004). The scaling up of aid requires improvements in donor efficiency not just efficiency in the recipient countries (Moss and Subramanian, 2005).

Finally, in the context of the debate about aid effectiveness, it is worth re-stressing the point made earlier about the appropriate metric for measuring the impact of aid. The tendency over the last decade has been to prioritise aid to those countries with good governance indicators. Support for such an approach is based on the work of those aid pessimists who note the correlation between the impact of aid on economic growth and indices reflecting a good policy environment.

Maximising overall aid efficiency measured in terms of a growth dividend requires at the margin that aid be distributed where it will have the greatest impact. This might mean that aid would be diverted from those countries with the highest levels of infection. However, given

that the objective of the programme to control HIV/AIDS is not geared directly to economic growth, it is not at all clear that any lower limit in terms of an economic growth dividend should be set. As noted by Kenny (2006), it is not customary to justify income transfers in rich countries in terms of the expected income growth amongst the poor. In the case of relief of HIV/AIDS, there appears to be very little justification for taking this view. Nevertheless, there is considerable evidence that aid is more effective in the presence of good policies allied to appropriate and supportive institutions. The implication of this is, however, that aid programmes should explicitly target absorptive capacity as part of the overall scaling up of aid.

9 CONCLUSIONS

This paper has considered some of the implications for fiscal policy of projected large increase in aid inflows for the treatment and prevention of the HIV/AIDS pandemic. It was first noted that the level of aid required and its composition should be demand determined on the basis of the extent and characteristics of the disease in different countries. Available evidence shows that the epicentre of the pandemic is in sub-Saharan Africa and that this region is the least able to respond to the crisis in terms of mobilising sufficient domestic resources.

Thus, this region should be the major recipient of the aid inflows. However, even among this group the large differences in infection rates underline the importance of conducting case studies for individual countries. In addition, in almost all cases the countries with the highest infection rates are already in receipt of very considerable aid for other objectives, within which funds directed to HIV/AIDS are a relatively small proportion, even given recent sharp increases. For this reason, the impact of increases in aid to treat HIV/AIDS should be considered in the context of the promised overall increase in aid to achieve the MDGs.

For the increases in public spending on medical and other infrastructure implied by the increases in aid to be effective, monetary and exchange rate policy must be accommodating. In particular, the central bank must sell the foreign exchange constituting the aid inflow; the corresponding domestic currency provides the wherewithal to fund the increased deficit while the foreign exchange purchases increased imports. The evidence from a number of sub-Saharan economies suggests that the new institutional arrangements, which entrench central bank independence, support narrow briefs focusing exclusively on tight inflation and exchange rate targets, may be an impediment to the effective use of aid.

Aid directed at combating the immediate impact of HIV/AIDS is likely to raise productive potential significantly in the short term, through its capacity to restore productive labour, and in the long term, through its impact on health, education and the intergenerational transfer of knowledge. Aid directed at HIV/AIDS is also likely to be complementary with the aid supplied to achieve the broader set of MDG goals, which need to be directed at infrastructural and other supply constraints on the expansion of productive capacity. 'Dutch disease' effects, although possible, are therefore neither inevitable nor likely if aid is used judiciously. However, the high volatility and low predictability of aid are an evident danger. Volatile and unpredictable aid is the equivalent of a de-stabilising shock that produces notable short run costs. In addition, such aid encourages a conservative response of governments in translating aid commitments into increases in expenditure. The behaviour of donors is, in this respect, crucial; it needs to be more predictable and consistent, with a far stronger link between commitments and disbursements.

There is little reason to believe that the enlarged fiscal deficit consequent upon increased aid will inevitably produce sustained inflation; a greater danger is the implementation of conservative assumptions written into restrictive inflation and fiscal targets that undermine any real resource transfer. A change in relative prices is necessary to achieve the intended resource transfer inherent in increased ODA. Even if this is effected through a short-term rise in the general price level, this is not, in itself, a source of sustained inflation; a short term increase in the price level should be accommodated. In addition, the upward pressure on prices is likely to be muted in situations in which aid has a high import content and is directed to expanding aggregate supply; both of these outcomes seem likely in the case of spending for HIV/AIDS.

In fact, the danger of inflation is not attributable to spending the increased aid but to an inappropriate policy response from the monetary authorities. In particular, the expansion of the fiscal deficit without the corresponding absorption of aid is likely to pose inflationary dangers; the monetary authorities and donors need to co-ordinate their response to the expenditure increases if this danger is to be avoided. In addition, the pursuit of an overly tight inflation target is likely to lead to the misinterpretation of the necessary relative price adjustments as incipient inflationary pressures, with the result that monetary and exchange rate policy may be insufficiently accommodating to allow the necessary resource transfer.

Aid for HIV/AIDS is likely to have a positive effect on revenues and fiscal sustainability: by bolstering the working population and, therefore, tax revenues in the short term; by reducing health costs in the medium term; and by raising the long run potential rate of growth. The presumption that aid inevitably corrodes a government's commitment to extending its revenue base is unpersuasive; aid is not a form of 'resource curse'; it can also be directed to improving governance, including extending the scrutiny of expenditure decisions. Finally, donor agencies have a role to play in this respect; at present, many of their actions make accountability to citizens of recipient countries less, not more, likely.

The IMF has provided largely conservative estimates of the fiscal space provided by aid during previous aid surges. These estimates were based on inherited, pessimistic assessments of inflation risks and debt sustainability. Whatever their purchase over previous periods of debt distress, macroeconomic disturbance and large differences between commitments and disbursements, these assumptions should be re-evaluated based on current experience and trends. In addition, they should be made more transparent; they are largely hidden within the technical assumptions of financial programming models. In the current scaling up debate, the probability is that they are overly tight.

In addition, the response of recipient governments is endogenous to the behaviour of donors. By moving to longer term commitments of aid, by changing the combination of forms of aid, with greater priority given to debt relief and grant aid, donors could encourage a speedier domestic increase in expenditure. However, because of the earlier disappointing experience of aid volatility and unpredictability, the donor community needs to provide an early signal of this change in its behaviour.

The scale of the aid inflow for HIV/AIDS relative to the weak health care systems that characterise sub-Saharan Africa raises the question of whether the recipient country will be able to use the increased aid effectively. The evidence in the short term is mixed. However,

available evidence demonstrates that the response in the medium term can be very elastic. In addition, aid can and should be directed at raising productive capacity and improving accountability. The donor community is culpable in this area. Overly tight and inappropriate conditionalities, administrative complexity, and lack of donor co-operation and co-ordination seriously impede the ability of recipient countries to make effective use of aid inflows. In the context of the crisis in sub-Saharan Africa, the donors' responsibility extends far beyond politically attractive, high-profile commitments. The donor community needs to embrace and apply the principles of the Paris declaration on aid effectiveness.

The overall conclusion from this brief examination of the issue is that the expansion of public spending in both the recurrent and capital budgets to address the continuing humanitarian crisis in sub-Saharan Africa does not imply that other objectives such as economic growth, price stability and other economic targets need be compromised. However, the monetary authorities need to act to accommodate the aid inflows, the multinational agencies need to re-examine their policy advice in order to recognise the increased fiscal space provided by the new level of aid commitments and, finally, the donor community must dramatically improve the consistency and predictability of its aid programmes.

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