

Addressing the Macro-Micro Economic Implications of Financing MDG Levels of HIV and AIDS Expenditure



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ADDRESSING THE MACRO-MICRO ECONOMIC IMPLICATIONS OF FINANCING MDG LEVELS OF HIV AND AIDS EXPENDITURE

**Joint UNDP/World Bank/UNAIDS Programme on Strengthening National
Capacity for Integrating AIDS into Poverty Reduction Strategy Processes**

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FOREWORD

This study is commissioned by the Joint UNDP/World Bank/UNAIDS Programme on Strengthening National Capacity for Mainstreaming HIV and AIDS in Poverty Reduction Strategy Processes. The programme was established in 2005 in response to a Global Task Team recommendation for capacity support to countries for ensuring that their macroeconomic and public expenditure frameworks support and appropriately prioritise the implementation of national AIDS action frameworks and annual priorities. The Joint PRSP Programme is currently assisting 25 countries in sub-Saharan Africa, Latin America and the Caribbean, Asia and Eastern Europe to integrate the national AIDS response in development planning through the PRSP formulation and implementation.

The present study takes forward the findings of a conference on ‘Gearing Macroeconomic Policies to Reverse the HIV/AIDS Epidemic’, sponsored by the UNDP Bureau for Development Policy and co-hosted by the HIV Group and the International Poverty Centre. This conference brought together a pool of specialized experts and practitioners drawn from national governments, civil society and the international development organizations, to deliberate on the effects of large-scale inflows of ODA resources on macroeconomic stability. In seeking to address a knowledge gap in the global debate, and help inform national decision-making on HIV resource allocation, the purpose of the present study was to examine the concrete issues of aid absorption at the micro level in Armenia, Malawi and Zambia and to make some recommendations for both policy and future research in PRSP countries.

In putting together the evidence from the field work in the three countries, one major finding is the reluctance of the national implementing authorities (National AIDS Councils, Ministry of Health) to scale up HIV interventions even when additional external resources were available. This finding underscores the very real dilemma that countries face in managing the volatility of aid flows. While the need for efficient management of HIV resources is well recognized at all levels of policy and implementation levels, there is far less consensus on measures that can be applied to a wide range of countries. The case-study countries were considered representative of a range of attributes on aid receipts and macroeconomic management.

The Joint PRSP Programme is pleased to share this draft report to stimulate discussion and encourage feedback from readers on suggestions for improvement.

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ACRONYMS

AIDS	Acquired Immune Deficiency Syndrome
ART	Antiretroviral Therapy
ARV	Anti Retroviral
CBOs	Community Based Organizations.
CHAM	Christian Health Association of Malawi
FBOs	Faith-based Organizations
HAART	Highly Active Antiretroviral Therapy
HADG	HIV and AIDS Development Group
HIV	Human Immunodeficiency Virus
IMF	International Monetary Fund
MBCA	Malawi Business Coalition on HIV and AIDS
MDGs	Millennium Development Goals
MPF	Malawi Partnership Forum for HIV and AIDS
NAC (Malawi)	National AIDS Commission, Malawi
NAC (Zambia)	National AIDS Council, Zambia
NACP	National AIDS Control Programme
NAF	National HIV and AIDS Action Framework
NAPCP	National AIDS Prevention and Control Program
NASC	National AIDS Surveillance Committee
NGOs	Non-government Organizations
ODA	Official Development Assistance
PRSP	Poverty Reduction Strategy Papers
UN	United Nations
UNAIDS	Joint United Programme on HIV/ AIDS
UNDP	United Nations Development Programme
WB	World Bank
WHO	World Health Organization

INTRODUCTION

In 2007, the number of deaths attributable to AIDS was estimated at 2.1 million (UNAIDS, 2007a). Thus, HIV/AIDS continues to account for the largest number of deaths among communicable diseases (ranking ahead of other major killers such as Tuberculosis and Malaria). Most of these deaths occurred in Sub-Saharan Africa, where a majority of the persons living with HIV/AIDS continue to reside. However, though the disease appears to have plateaued in Sub-Saharan Africa (and globally), infection rates are still increasing at worrying rates in regions such as East Asia, Eastern Europe and Central Asia, and Oceania (UNAIDS, 2007a). Clearly, the dimension and potency of the epidemic warrants its status as a global crisis.

Though the world was initially slow to recognize the dimensions and implications of the epidemic, much has been done in recent years. The Millennium Development Goals, established by the UN General Assembly in 2000, included the phrase “halt and begin to reverse the spread of HIV” as part of Goal #6 of the Millennium Development Goals (MDGs). Complementarily, Goal #8 enjoined developed countries to commit additional resources to close the resource gaps faced by developing countries committed to achieving the MDGs. Partly as a consequence, the global resources made available for fighting the disease rose tenfold between 1999 and 2007 (Figure 1). Complementarily, established UN agencies (such as the WHO), new organizations (such as UNAIDS), affiliated institutions (such as the World Bank), newly-created institutions (such as the Global Fund to Fight AIDS, Tuberculosis and Malaria), and bilateral aid agencies have incorporated this goal (of halting and eventually reversing the spread of HIV/AIDS) as a fundamental policy objective and devote substantial resources towards assisting both high and low infection countries (and infected and uninfected individuals) in the fight against HIV/AIDS.

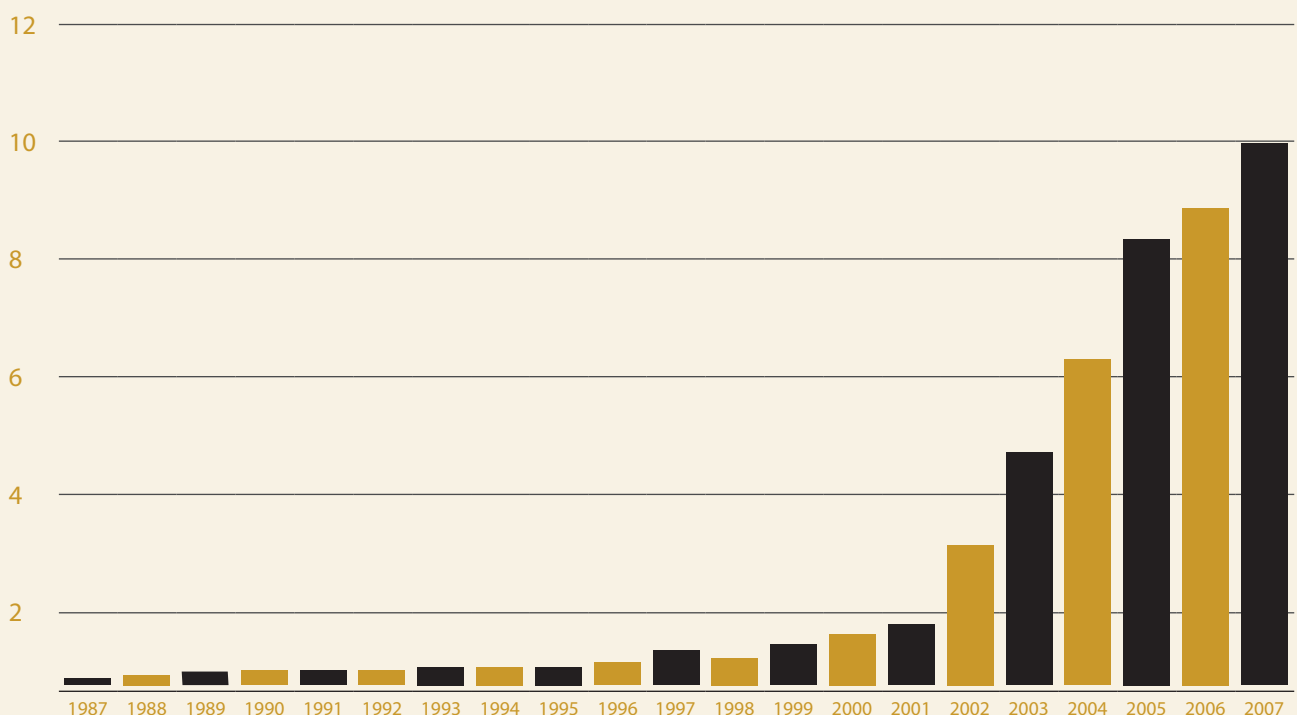
However, while the increase in attention and resources devoted to the HIV/AIDS pandemic (even though belated) has been welcome, this does not imply sufficiency. If MDG #6 is interpreted, reasonably, to imply universal access to antiretroviral (ARV) therapy for all persons living with HIV (among other interventions) by 2015, then, according to UNAIDS (2007b), a persistent gap exists between the resource requirements and past and current levels of available resources (at the global level). In 2005, the gap between the resources necessary to keep the goal of universal access on track and what was available was US \$2.8 billion. By 2007, that gap had expanded to US \$8.1 billion. Clearly, resource commitments continue to fall well short of the resources needed to make HIV/AIDS a chronic disease and a receding health challenge rather than the typically fatal disease and still expanding challenge that it currently is.¹

Yet, despite the resource shortfalls globally, for many countries, external resource commitments and disbursements exceed internal resource utilization despite the fact that treatment, prevention and mitigation measures generally continue to fall well short of desired levels. This second gap – that between resource availability and resource use at the country level – is a consequence of profound fears regarding the possible macroeconomic consequences of a substantial increase in official development assistance (ODA). The fears centre around potential macroeconomic instability (in the form of overvalued exchange rates and high

1. With the correct use of antiretroviral therapies HIV/AIDS shifts from being a fatal disease to a chronic disease (meaning that it is not cured but can be managed over a close to normal lifetime).

inflation levels, leading, ultimately, to Dutch disease) and increased macroeconomic volatility (resulting directly and indirectly from the inherent volatility of large aid inflows). In fact, the IMF (2005) showed that none of five African countries examined reached the ideal of full utilization of available foreign exchange from increased aid flows (full absorption of aid) combined with increased fiscal expenditure in line with the increase in available resources (full spending of aid). In fact, two of these countries came close to full repudiation of aid by neither absorbing nor spending significant amounts of the additional resources.² The conclusion was that, in a majority of countries, macroeconomic policies were being geared specifically towards limiting the utilization of resources made available through development assistance.

FIGURE 1: GLOBAL RESOURCES FOR HIV/AIDS



2. Repudiation may be a strong word here since the use of aid to increase foreign reserves is not exactly equivalent to refusing it. However, where aid is not intended as a means of shoring up reserves, and where ostensibly funded interventions remain in abeyance or are implemented at the cost of other initiatives (non-additionality), it does amount to a refusal to use aid for its intended purpose.

Concerned with this state of affairs, and what it might mean for the present and future of HIV/AIDS mitigation, treatment and prevention, the HIV Group (UNDP) and the International Poverty Centre (UNDP) co-hosted a conference on “Gearing Macroeconomic Policies to Reverse the HIV/AIDS Epidemic” in Brasilia in November of 2007. The conference brought together practitioners and specialized experts to present and discuss findings from analytical studies and country case studies on the effects of large-scale ODA resource inflows on macroeconomic stability. The consensus view, coming out of the studies and the discussion, was that:

- Full absorption and full spending of ODA are necessary if countries are to reap the full benefits of ODA flows for HIV/AIDS and other MDG-related initiatives.
- Macroeconomic volatility and the uncertainty induced by aid volatility are more credible and immediate dangers than the more feared (and touted) Dutch disease that could be induced by a real exchange rate appreciation (as a consequence of the scaling up of ODA).
- Moderate and short-term movements in major economic aggregates (particularly exchange rates and inflation) are part of the normal adjustment of an economy to a scale up of ODA. However, large and persistent movements in those aggregates – and the Dutch disease effect that such movements portend - are indicative of the absence of a supply response (in terms of an increase in capacity utilization, productivity or productive capacity) to ODA-related initiatives. Thus, macroeconomic instability, in this context, is indicative of failures at the microeconomic level (IMF, 2005; Walters, 2007; Serieux 2007).

Beyond issues relating to ODA volatility, the last conclusion clearly places the likely genesis of potential macroeconomic disequilibria (related to scaling up of ODA) at the microeconomic level. In other words, while instability resulting from an ODA scale-up may have macroeconomic manifestations, the failures that produce these outcomes occur at the microeconomic level and, therefore, the solutions lie in ensuring the type of microeconomic responses (to the scale-up) that mitigate against macroeconomic disruption. Such microeconomic responses would imply the use of aid in ways that increase the use of heretofore under utilized resources, expand productivity capacity, increase the productivity of existing factors or, at the very least, avoid the creation of bottlenecks that can generate negative productivity and price effects. In short, there is a need for adequate and timely aid absorption at the microeconomic level.

Identifying the fundamental challenge as one of aid absorption at the microeconomic level shifts the locus of primary concern from the macroeconomic to the microeconomic context of aid distribution and use. The challenges faced by these countries in developing, funding and implementing programmes, and projects relating to HIV/AIDS in particular, and the way these challenges are addressed are now understood to be critical. Moreover, it brings into focus the importance of the PRSP as the major planning and implementation guide for these countries. Integrating HIV/AIDS (and other MDG) projects and programmes into the PRSP process can be part of ensuring that both the direct benefits (welfare and production) and indirect benefits (externalities) from these projects are maximized through appropriate choices, design, coordination and

integration. However, the microeconomics of aid use and management (beyond the project management discourse) is not an area that is either well researched or well understood.

It is the need to better understand the nature of the aid management challenge faced by individual countries, and the nature of their responses to that challenge, which motivated the UNDP HIV Group to commission a multi-country research study to address the macro-micro economic implications of financing MDG-levels of HIV/AIDS expenditures. Appropriately, this research study was also an initiative of the UNDP/WB/UNAIDS Joint Programme on Strengthening National Capacity for Integrating HIV and AIDS in the PRSP. This report presents the main findings of those studies, attempts to identify the main lessons from those studies, and makes some recommendations regarding ways forward for both policy and future research.

In that regard, the following section outlines the methodology used in the study. Section 3 presents profiles of the three countries and their recent economic experiences; Section 4 outlines the macroeconomic and microeconomic responses to ODA and their intersection; Section 5 examines progress in the integration of HIV/AIDS-related programming into PRSPs. Section 6 reviews the evidence and presents some conclusions and recommendations; and Section 6 concludes the report.

The approach taken for this inquiry was to execute a number of targeted country case studies and to attempt to distil both general and specific lessons from these studies. A country-case-study approach was chosen because the desire was to understand the nature of the challenges faced by countries in making appropriate use of increased external development assistance for HIV/AIDS initiatives, and the types of responses to those challenges, rather than to conduct a broad assessment of results. However, this approach also brought with it the challenge of generalizability. If the lessons learnt were to credibly inform policies and approaches in other countries, it would be necessary to ensure that the case-study countries were sufficiently diverse to make commonalities convincingly generalizable, while issues and conditions that might be relevant only to specific country types had a fair chance of receiving adequate recognition. In order to achieve that diversity, the case-study countries were chosen so as to represent a range of conditions across some critically important attributes.

TABLE 1: CRITERIA AND CHOICE OF CASE-STUDY COUNTRIES

CRITERIA	ZAMBIA	MALAWI	HAITI	ARMENIA
HIV/AIDS PREVALENCE LEVEL High (>5%) Moderate (2-5%) Low (<2%)	High	High	Medium	Low
TRAJECTORY OF PREVALENCE LEVELS Change in prevalence rates from 2003 to 2005 (UNAIDS estimates)	Rising	Falling	Stable	Stable
ODA/GDP Levels (2000-2005) High (>5%) Moderate (2-5%) Low (<2%)	High	High	Moderate	Moderate
MACRO-MANAGEMENT SCORES High (>5%) Moderate (2-5%) Low (<2%)	Moderate	Poor	Poor	Good
REGIONAL LOCATION	Sub-Saharan Africa	Sub-Saharan Africa	Americas	Central Asia

The criteria used for ensuring diversity were: level of HIV/AIDS prevalence, the trajectory of prevalence levels, the level of aid inflows relative to output, the country's score on the World Bank's macroeconomic management index and geographic location. Table 1 above presents the countries eventually chosen and the scoring across the chosen criteria. The resulting group of countries consisted of two high HIV/AIDS prevalence level countries in Africa (Zambia and Malawi), one country with a medium prevalence level in the Americas (Haiti), and a low prevalence level country in Central Asia (Armenia). Because of difficulties with executing the Haitian study, that country's case study is yet to be completed. Therefore, in the remainder of this report only the Zambian, Malawian and Armenian studies will be discussed.

The country case studies concerned themselves with an examination of the country's macroeconomic and microeconomic records with respect to the treatment and use of ODA receipts for HIV/AIDS projects and programmes, and the intersection between the two. Besides statistical analysis and close examination of the literature on the country's health and economic challenges (from both domestic and international sources), the studies also drew on material from interviews with important domestic actors in both the public and private sectors, and an informal opinion survey of stakeholders regarding management outcomes with respect to HIV/AIDS initiatives. The specific intent was to:

- Define the country's record and perspective in macroeconomic terms;
- Outline the microeconomic record in terms of the organization, planning and funding of projects and programmes and, related to this, the role of the PRSP in that process;
- Assess the extent to which HIV/AIDS-related projects and programmes approached the criteria that would engender confidence in their ability to generate a supply response, or more generally, avoid disruptive economic effects.

COUNTRY PROFILES: BACKGROUND TO THE ECONOMIES AND THE PANDEMIC

As already noted, the countries were chosen to ensure some diversity in terms of HIV/AIDS infection profiles and macroeconomic performances. However, the recent histories of these countries are also quite different, both in terms of broad economic performance and the evolution of the disease.

3.1 ZAMBIA

After three decades of persistent decline in per capita incomes, Zambia has had consistently positive per capita output growth since 2000. This revival of growth was brought about by a range of factors including a recovery of investment, an increase in non-traditional exports, and growth in the construction, trade and services sectors. This growth has since been strengthened by a recovery of the mining sector in response to a steep rise in the world price of copper. More consistent access to export routes through Mozambique, its previously war-torn neighbour, has also been important in facilitating that economic recovery.

Zambia is one of eight countries with HIV/AIDS incidence levels estimated at over 15% (among those aged 15-49 years). The infection rate was estimated at 17% in 2005, slightly higher than the (population survey-based) estimate of 15.6% from 2001-02 (UNAIDS, 2007a). Thus, the prevalence rate is still increasing, though at a much slower rate than in previous years. However, that prevalence rate varies significantly across different sectors of the population. The HIV/AIDS prevalence rate is 23% in urban areas compared to a rural rate of 11%. Overall, infected persons are 1.4 times more likely to be women than men. This is driven by the disparity in infection rates between men and women in the younger age group (15-24 years). In that age group the infection rate is four times higher for women than men (NAC Zambia, 2006a). The primary mode of HIV/AIDS transmission is thought to be heterosexual contact, but approximately 20% of HIV infections are thought to occur through mother-to-child transmission (prenatal, during birth or during breast feeding) (NAC Zambia, 2006a).

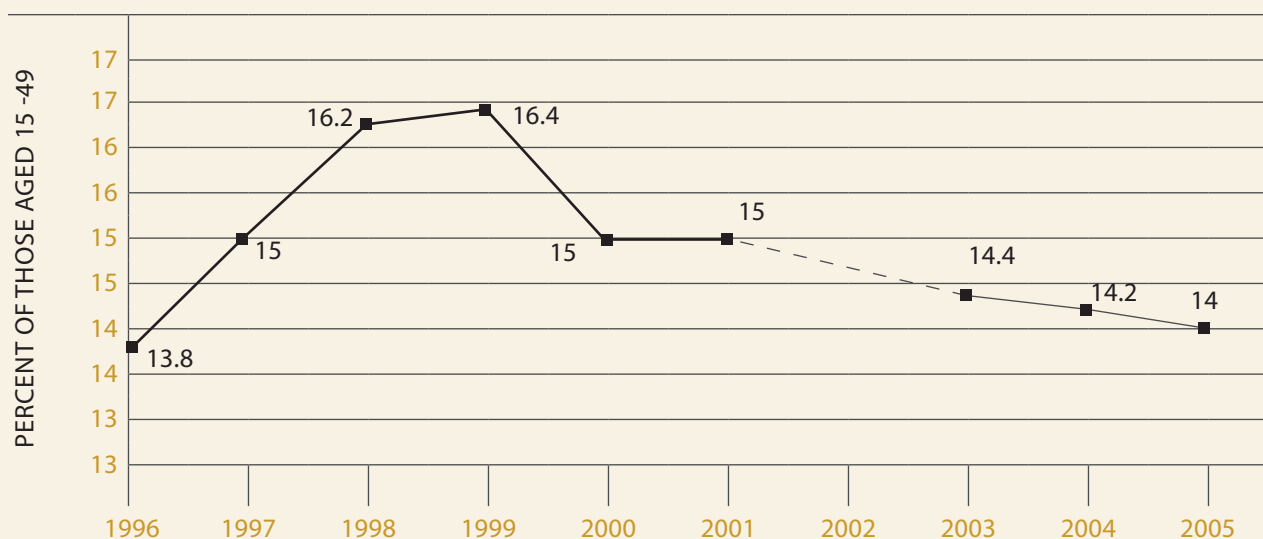
Some of the human development consequences of the epidemic can be discerned from its impact on life expectancy. Despite its poor growth record, Zambia recorded a nine-year rise in average life expectancy at birth (from 42.3 to 51.7 years) between 1960 and 1977. However, in the subsequent years life expectancy began a decline that was slow at first and then accelerated after 1985 to reach a low of 37.4 in 2002. Life expectancy has since begun to recover somewhat and was estimated at 38.4 in 2005. As might be expected from the higher prevalence rate among women, life expectancy for women was much more strongly affected. From a high of 53.4 years in 1982 (more than three and a half years higher than that of men), female life expectancy is now only 37.9 years and one year below that of men. Attempts to reduce the mortality and morbidity effects of the disease through the provision of antiretroviral therapy have only encountered partial success. In 2005, only approximately 25 percent of those eligible to receive antiretroviral therapy were receiving treatment.

3.2 MALAWI

Despite experiencing some years of crisis that saw net output contractions (1992, 1994 and 2001), Malawi's growth record since 1990 has been above the Sub-Saharan African average (3.6% versus 2.6%). This has occurred despite a generally negative trend in the country's net barter terms of trade. Part of the reason for Malawi's moderate (though far from stellar) growth performance, relative to the rest of the region, has been the relatively good performance of agriculture (except for the crisis years), which remains the dominant sector of the economy in terms of employment and exports.

In recent years, the HIV/AIDS prevalence rate in Malawi has been on the decline since peaking at 16.4% in 1999 (Figure 2). In 2005, the prevalence rate was estimated at 13.5 percent and it was expected to dip below 13 percent by 2009 (Carlson et al., 2006). However, because the number of persons in the high-risk age group is still increasing quite rapidly, the actual number of infected persons continues to increase. That number was estimated at 750,108 in 2002 but had risen to 930,000 in 2005 (Kamanga, 2006; UNAIDS 2007c).³ As in Zambia, the disease is predominantly urban (21.6% versus a rural rate of 12.1% in 2005) and heterosexual contact is thought to be the dominant mode of HIV/AIDS transmission. However, mother-to-child transmission is estimated to account for 25% of new infections.

FIGURE 2: HIV/AIDS PREVALENCE RATES IN MALAWI



Note: Estimates for 2002 are not available

Source: White (2007), from various NAC Malawi Documents

3. The increase in the number of infected persons in contrast to the falling rate of infection occurs because of Malawi's rather steep age pyramid. Because, in each year, the number of persons moving beyond 49 (and out of the vulnerable age group) is much smaller than the number of persons reaching 15 (and entering that age group), the denominator for the prevalence rate (those 15 to 49) is increasing rapidly. Thus, even though the numerator (the actual number of persons living with HIV/AIDS) is increasing, the infection rate (for those 15-49) is falling.

The effect of the epidemic on average life expectancy has not been as dramatic in Malawi as it has been in Zambia but it has nevertheless taken its toll. In 1960, the average life expectancy in Malawi was 37.9 years overall and slightly higher for females at 38.5 years. The country experienced continuing improvements in life expectancy until 1987, when the overall average was 46.3 years (47.7 for females). By 2002, much of those gains had been eroded by the epidemic. Average life expectancy was 39.6 years for both sexes. As in Zambia, a modest recovery is underway in Malawi but that recovery is slower for women because of the high proportion of females among those infected (58%). Average life expectancy in 2005 was 40.5 years overall, but only 40.2 years for women (versus 40.8 years for men). The moderate recovery of life expectancy is at least partly the result of increased access to antiretroviral therapy (ART). By March of 2007, 99,535 persons were receiving ART (HERA, 2007). Though this was only a small fraction of the total number of persons who could benefit from ART, and much less than the total number of persons in urgent need of highly active antiretroviral therapy (HAART), it represents a creditable achievement (White, 2007).

3.3 ARMENIA

Like all former soviet republics Armenia experienced a large and sudden contraction of its output in the early 1990s. In the particular case of Armenia, however, the economic crisis was exacerbated by a military conflict with Azerbaijan, its eastern neighbour, resulting in an output contraction of 53% between 1990 and 1993. However, Armenia was the first former soviet republic to recover its pre-transition output. This it did in 2004. The recovery was driven largely by growth in agriculture and the service sector. While some manufacturing capacity has been restored, this sector has yet to recover its previous share of one third of total output. A fourfold increase in workers' remittances in 2003, that has since been sustained, has led to a construction boom, double-digit output growth and increasing inflation in recent years.

As already noted, Armenia's HIV/AIDS prevalence rate is low, at less the one percent of those aged 15 to 49. In fact, in this country, of over three million the total number of registered cases of HIV, in January of 2008, was only 538 (Tumasyan and Papoyan, 2008).⁴ The main modes of transmission are thought to be injecting drug use (47.4%) and heterosexual contact (45.3%). As in the case of Malawi and Zambia, HIV/AIDS infection is a predominantly urban phenomenon in Armenia but, unlike these two countries, HIV/AIDS is mainly a male disease in Armenia. Of the registered HIV/AIDS cases in January of 2008, 74.5% were male (Tumasyan and Papoyan, 2008).

4. Registered HIV/AIDS cases refer only to those that have been diagnosed. There are likely to be many more who have not been diagnosed, and estimates of prevalence rates take that into account.

4.1 RESOURCE GAPS AND RESPONSES

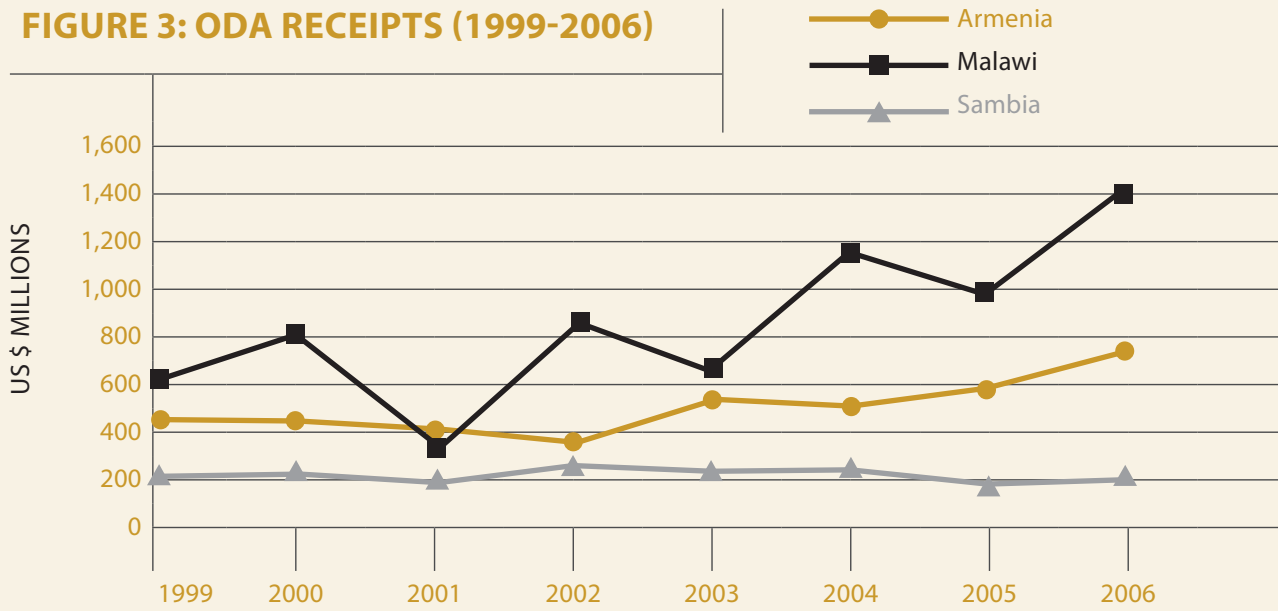
Faced with the challenge of halting and beginning to reverse the spread of HIV/AIDS, high and moderate prevalence countries (and even low prevalence countries that face the threat of a rapid spread of the disease) have had to dramatically increase the number, scale and scope of HIV/AIDS initiatives. For upper-middle income countries (such as Brazil), this has been possible with limited external assistance. However, for most low and lower-middle income countries, that task has been beyond the capacity of local resources. When the other MDGs are added to these countries' commitments, the need for external assistance is magnified. As was pointed out above, though the funding response from the donor community has not necessarily met expectations, there has been a significant expansion of available resource.

As Table 2 indicates, HIV/AIDS intervention plans for all three countries include funds from external sources as a dominant (and, therefore, critical) part of the financing arrangement. In the case of Armenia, just below 90% of the funding for the 2004-06 intervention plan came from external sources. For Malawi and Zambia, the expected contribution of external funding to the financing of ongoing HIV/AIDS intervention plans was well over 90%. Indeed, all three countries received substantially more aid directed at HIV/AIDS initiatives in the three-year period 2003-05 than they did in the previous three-year period (2000-02).

TABLE 2: FUNDING SOURCES AND FLOW OF FUNDS FOR HIV/AIDS-RELATED INITIATIVES

COUNTRY	PERIOD	EXTERNAL SOURCES	
		DOMESTIC SOURCES	EXTERNAL SOURCES
Zambia	2006-2010	7.0	93.0
Malawi	2002-2008	4.1	95.9
Armenia	2004-2006	11.4	88.6
FLOW OF EXTERNAL FUNDS (\$US MILLIONS)			
	2000-02	2003-05	INCREASE (%)
Zambia	7.7	15.2	97.4%
Malawi	58.7	146.1	148.9%
Armenia	126.7	270.2	113.3%

As anticipated by the Millennium Declaration, this pattern of increasing need and use of external financing extends to the other MDGs. Thus, all three countries have experienced discernable increases in overall aid flows in the period since 2000 (Figure 2). For Zambia, the marked increase (above the levels of the recent past) came in 2004 and the upward trajectory continued to 2006. For Malawi, the marked increase came in 2003 and the trajectory since then has also been upward, though less pronounced. Armenia received

FIGURE 3: ODA RECEIPTS (1999-2006)

significantly more aid in 2002-04 than it had in the three previous years but that increase was not sustained. Aid returned to previous levels in 2005-06. What is of immediate interest, beyond this point, is the manner in which macroeconomic authorities (Central Bank and Ministry of Finance) have dealt with the increase in aid flows.

4.2 THE MACROECONOMIC RESPONSE

The increase in foreign assistance for funding HIV/AIDS (as well as other MDG) initiatives comes with its own challenges. Much as these resources are needed to meet the challenge of “halting and reversing the spread of HIV/AIDS,” they also have potential macroeconomic implications that can be quite negative. These include: increased economic volatility and reduced efficiency from the volatility of aid receipts; the short-term economic disruption from price and exchange rate movements; and the potential medium to long run implications of significantly appreciated real exchange rates – Dutch disease. However, even if those negative effects were to occur, without mitigation, there may still be a credible case to be made that, for high prevalence countries, these costs are still fall far below the combined macroeconomic, microeconomic and welfare costs of failure to effectively address the pandemic (UNDP, 2007). Mitigation is, however, possible and has been attempted in almost all countries. The current debate rests on the nature and implications of those mitigation efforts.

Heretofore, most countries have chosen to mitigate the potential effects of large aid inflows on the macroeconomy through a combination of policies that slow down the flow of funds into the domestic economy, into the government budget and, ultimately, into local HIV/AIDS initiatives and sterilize the monetary effect of those flows that are permitted (IMF, 2005). This approach essentially forestalls the prospect of negative effects from aid flows by ensuring that the full amount of these flows do not work their way through the economy. Potential negative effects are, effectively, pre-empted. While this approach can, and usually does, protect macroeconomic stability in the face of an attempted scale-up of development assistance, it has the disadvantage of reducing or negating the potential effectiveness of these flows by restricting the number, size and range of possible initiatives, and compromising the effective implementation of these initiatives because of funding delays and uncertainties.

The argument made at the Brasilia conference, and one which forms a backdrop to this study, is that the perception that an unconstrained increase in external assistance must, inevitably, result in negative macroeconomic effects is erroneous. While macroeconomic disequilibria and Dutch disease effects from aid flow increases are real possibilities, they are not inevitable. These negative effects are likely to be part of the outcome of an increase in aid flows only if there is no supply response to the changes in relative prices that result. In the presence of supply responses, these effects will either fail to occur or will be transitory. A pre-emptive approach severely constrains the possibility of a supply response.⁵ Allowing aid funds to flow, uninhibited, toward their intended use and directing policy toward ensuring the most appropriate and productive use of funds (rather than managing the rate of use) is likely to be a more effective means of maximizing the benefit from aid flows without injury to the economy. Such an approach would require simultaneous accommodation of aid inflows and a proactive approach to ensuring the best environment for a supply response.

5. However, there is no presumption here that a supply response is inevitable. This potential for a supply response will be discussed with respect to the microeconomic response.

TABLE 3: POSTURE OF MONETARY AND FISCAL AUTHORITIES WITH RESPECT TO AID FLOWS

COUNTRY	PERIODS COMPARED (BEFORE VS. AID-SURGE PERIOD)	AMOUNT OF AID ABSORBED	AMOUNT OF AID SPENT
Zambia	2001-03 vs. 2004-06	39%	6%
Malawi	1999-02 vs. 2003-06	100%	59%
Armenia	1999-01 vs. 2002-04	0%	12%

To determine the stance of the macroeconomic authorities for the three countries the IMF's absorption/spending approach was employed (IMF, 2005). A failure to allow full absorption of aid (full use of the foreign exchange resources) and full spending of aid (net expenditure increase to reflect the increase in resources) would amount to absolute pre-emption of aid flows. Full absorption and full spending would amount to full accommodation of aid. Of course, countries are more likely to fall somewhere in between these two extremes.

Table 3 presents a comparative analysis of the stances taken by the macroeconomic authorities in the three countries through a comparison of the aid-surge periods in the three countries and the previous period (of equal length). Full absorption (100%) would mean that the total expansion of the current account deficit (of the balance of payments) was equal to or greater than the increase in the flow of aid. Full spending would mean that the expansion of the budget deficit before grants over the aid surge period was equal to the increase in available aid resources. The results indicate that only Malawi had a profile that suggested at least partial accommodation of aid flows.⁶ Zambia allowed only partial absorption and virtually no spending.⁷ Armenia allowed no absorption and virtually no spending. Malawi allowed full absorption and partial spending of aid resources. Given the markedly different stances of the monetary and fiscal authorities, it is of interest to compare the macroeconomic outcomes faced by these countries before and during the aid-surge periods.

Given the complexity of factors at work in determining macroeconomic outcomes, we need to be careful not to draw sweeping conclusions from this snapshot analysis. However, what is clear from this snapshot is that there is no necessary relationship between the stance of macroeconomic authorities and macroeconomic outcomes. As would be expected, because of its full absorption of aid flows, Malawi had lower average

6. Aid estimates for public sector excludes aid delivered directly to NGOs as well as emergency aid and technical assistance.

7. It is worth noting, as well, that in the case of Armenia, when spending is recalculated using budget projections (rather than previous spending levels) are used as the basis for comparison, spending is zero.

TABLE 4: PERFORMANCE OF IMPORTANT VARIABLES BEFORE AND DURING THE AID SURGE

RELEVANT AGGREGATES	RELEVANT PERIODS	ZAMBIA	MALAWI	ARMENIA
Inflation	Before Aid Surge	21.7	28.0	1.0
	Aid-Surge Period	18.1	12.6	4.2
	Difference	-3.6	-15.4	3.2
Nominal Exchange Rate (Domestic Currency/\$US)	Before Aid Surge	4,247.6	63.1	543.2
	Aid-Surge Period	4,281.8	115.2	561.9
	Difference	34.2	52.1	18.7
Real Effective Exchange Rate ⁸	Before Aid Surge	108.2	103.2	98.9
	Aid-Surge Period	139.6	75.5	87.1
	Difference	31.4	-27.7	-11.8
Average Reserves Level (\$US Millions) ⁹	Before Aid Surge	322.1	213.3	303.3
	Aid-Surge Period	373.3	182.2	344.9
	Difference	51.2	-31.1	41.6

foreign exchange reserve levels during the aid-surge period than in the previous period of equal length. Zambia and Armenia, on the other hand, both increased average reserve holdings. However, despite its higher spending levels, Malawi experienced a large drop in inflation levels. Zambia experienced only a small change in inflation levels and Armenia experienced a large increase in inflation (in relative terms). All countries experienced a nominal depreciation of exchange rates (when annual averages are compared) but, most surprisingly, Malawi, along with Armenia, experienced a real depreciation of the exchange rate, while Zambia experienced a large appreciation despite its failure to absorb or spend aid receipts (Of course, one cannot rule out the fact that Zambia's failure to absorb and spend was partly caused by the real appreciation which was occurring due to other factors, including the increase in the price of copper). What can be said with some certainty, however, is that, except for the failure to increase reserves, Malawi, with the most accommodative stance, had by and large the most positive macroeconomic outcomes, while Zambia, despite its strong pre-emptive stance, had the least attractive outcomes.

8. Because the real effective exchange rate is an index number (rather than a price, like the nominal exchange rate) an increase always means an appreciation and a fall implies depreciation.

9. This is reserves minus gold, as reported in the IMF's International Financial Statistics.

4.3 THE MICROECONOMIC RESPONSE

4.3.1 Zambia

4.3.1.1 *Institutional and Programming Response*

Official awareness of the HIV/AIDS epidemic came late in the progression of the epidemic in Zambia. The first report of the disease was in 1984. However, the fact that 17.5% of hospital patients were found to be HIV positive one year later (1985) indicates that the epidemic was already well advanced by the mid 1980s (Bawlya, 2006). In response to the evidence of increasing HIV/AIDS infection rates, the National AIDS Prevention and Control Programme (NAPCP) and the National AIDS Surveillance Committee (NASC) were established. In the following years a series of formal programmes for addressing various aspects of the epidemic were instituted. These include a Short Term Emergency Plan in 1987 to protect the safety of the blood supply, and the First and Second Medium Term Plan (1988-92 and 1994-98) to coordinate responses to the disease (Bwalya, 2006; WHO, 2005). Yet these institutional and programming responses were all rather modest relative to the magnitude of the problem, as is evidenced by the continued increase in the rate of HIV/AIDS infection rates during the 1980s and 1990s.

The institutional and programming picture changed somewhat with the promulgation of the National Strategic Framework (for 2001-03) in 2000, which simultaneously established the National HIV/AIDS/STD/TB Council (NAC). That Framework sought to outline the principles for a national response to the disease and to identify the priority areas for intervention. It outlined a broader and deeper response to the epidemic and placed the task of directing and coordinating that effort within the hands of one agency. NAC gained statutory recognition and the legal right to seek direct (non-government) funding in 2002. The National Strategic Framework was supplanted by the National Strategic Intervention Plan 2002-05, which has since been followed by the National Strategic Intervention Plan 2006-10. The Fifth National Development Plan also incorporated HIV/AIDS issues in plan development. However, as will be shown later, that inclusion remains rather superficial.

4.3.1.2 *Effectiveness*

We have noted previously that Zambia has experienced a moderate reversal of the decline in life expectancy that began in the 1980s, but the rate of HIV/AIDS infection has not yet shown signs of a decline. This mixed picture, in terms of outcomes, extends to the wider range of indicators related to HIV/AIDS-related interventions. As Table 5 indicates, Zambia has overachieved in terms of meeting the targeted numbers of persons accessing voluntary counselling and testing (VCT) for HIV, and accessing antiretroviral therapy (ART). However, the country is well below targeted levels with respect to the number of HIV+ mothers who were receiving treatment to prevent mother-to-child transmission in 2007, and the proportion of AIDS orphans (and other vulnerable children) receiving support. Noticeably, the areas in which the country performs best are the areas where the work of NGOs and other civil society organizations can make a substantial contribution to the national level of achievement. The country appears to perform less well in the areas where the scale and scope advantages of the public sector are of critical importance in accelerating

TABLE 5: SELECTED ACHIEVEMENTS IN HIV/AIDS-RELATED SERVICE PROVISION IN ZAMBIA

MEASURES OF INTERVENTION OUTCOME	TARGET		MEASURED OUTCOME		PERFORMANCE RELATIVE TO TARGET	
	2005	2007	2005	2007	2005	2007
Proportion HIV+ Mothers Receiving PMTCT Treatment	75%	75%	25%	39%	36%	56%
Proportion of HIV/AIDS Orphans Receiving Support	13%	35%	13%	16%	100%	45%
Proportion of People with advanced HIV on Antiretroviral Therapy (ARV)	25%	40%	20%	50.6%	80%	127%
Number of Voluntary Counselling and Testing (VCT) Centres	400	600	450	1028	113%	171%
Sources: National HIV/AIDS Strategic Framework 2001-2010 (NAC, 2006a); 2005 Zambia Country Report (NAC, 2006b); 2007 Zambia Country Report (NAC, 2008).						

coverage. In the achievement areas previously mentioned, for example, antenatal care, provided largely by the public sector, is the most natural avenue for initial tests (for HIV) and provision of PMTCT therapy, when necessary, and the education institutions and social welfare agencies of the public sector would be of critical importance in identifying and gaining access to vulnerable children.

The imbalance in Zambia's achievements, particularly with respect to the protection of children, also lends support to the observation of frontline observers of NAC that its structure and functioning suggest that it is "more health-orientated, than necessarily multi-sectoral, in nature" (Njelesani, 2007; 32). Thus, while NAC appears to have an excellent working relationship with the Ministry of Health, its relationship with the Ministry of Community Development (which is responsible for orphans and other vulnerable persons) and the Ministry of Local Government (responsible for district level institutional development) are not as well defined or productive. According to that view, a fully multisectoral and multimodal approach to HIV/AIDS is not actualized in NACs current operations.

Another factor which likely played some part in the implied poor performance of the Zambian public sector (with respect to HIV/AIDS mitigation) is the chronic and ongoing staffing shortages. The proportions in Table 6 suggest that the number of skilled health personnel in the public sector is, on average, only a small

fraction of the number thought to be required to meet the immediate needs of that sector. Further, the rate of increase in the number of positions filled (with the obvious exception of pharmacists) does not suggest that this shortage is being adequately addressed. Yet, if this problem remains uncorrected, not only is it likely that the public sector will continue to underachieve, with respect to the prevention, control and mitigation of HIV/AIDS (as well as other health sector objectives), it may eventually become overwhelmed by these responsibilities and become the main constraint on absorptive capacity.

TABLE 6: SKILLED HEALTH PERSONNEL DEFICIENCY IN THE ZAMBIAN PUBLIC SECTOR

STAFF CATEGORY	2006 STAFFING LEVEL	% INCREASE FROM 2004 LEVEL	RECOMMENDED STAFF LEVELS	2006 STAFFING AS % RECOMMENDED
Doctors	718	3.6	2,300	31.2
Clinical Officers	1,254	7.6	4,000	31.4
Nurses	8,650	3.5	22,332	38.7
Lab Technologists	432	-4.8	1,560	27.7
Pharmacists	133	454.2	162	82.1
Paramedics	1,396	66.2	9,006	15.5
Total	12,853	9.1	39,360	32.7

Source: 2006 Economic Report (Min. of Finance and Planning)

It may well be the recognition of this fact that lies behind the continuing shift in the destination of external funding (for HIV/AIDS initiatives) from the public sector (on-budget) to private sector agencies (off-budget), as is suggested by Table 7. This has led to a “mushrooming of NGOs” in recent years (Hailu and Njelesani, 2008: 36). While this may have been part of the reason for Zambia’s relative success in scaling up access to VCT and ART, the plethora of NGOs and other civil society organizations working in this general area presents coordination and efficiency challenges of their own - issues that we shall address shortly. Moreover, the private sector is ultimately just as susceptible to the human resource constraint as is the public sector. Private agencies may be better capable of delaying its effects on absorptive capacity and productivity through innovation and substitution but, in the areas where the greater scope and institutional resources of the public sector is critical, private agencies may simply have no hope of realistically substituting for the public sector.

Effectiveness is also impacted by the allocation of resources. The large and direct involvement of donors in the funding of initiatives through the private sector, and the limited direction provided by NAC with respect to funding choices (to be discussed later with respect to the coordination question), has meant that donor choices play a large part in determining how resources are spent. Those preferences, however, can create

resource imbalances on the ground. Donors are keen to fund the procurement of ARV drugs and other medications but less keen on funding the purchase of medical equipment and the training of personnel (Njelesani, 2007; Birdsall and Kelly, 2007). Yet, without personnel and equipment, medicines cannot be properly delivered. Donors also find it much easier to fund hospitals and other high-end facilities rather than public health programmes and rural facilities (Njelesani, 2007). This tends to exacerbate the geographic concentration of resources and leave rural facilities under-manned and under-equipped (NAC, 2008). It also increases the likelihood of resource bottlenecks that undermine the potential for a supply response.

TABLE 7: DESTINATION OF EXTERNAL FUNDS

NATURE OF FUNDING		2006	2007
ON-BUDGET	\$US Millions	68.7	54.3
	%	29.1	23.6
OFF BUDGET	\$US Millions	167.6	176.3
	%	70.9	76.4
TOTAL	\$US Millions	236.4	230.7

4.3.1.3 Coordination

The mandate of the National HIV/AIDS/STD/TB Council suggests that it has primary responsibility for coordinating HIV/AIDS initiatives in Zambia. However, that institution's role is hampered by: ambiguity in its legal and administrative status; its secondary role in the distribution of funds; the absence of significant enforcement mechanisms; and its limited jurisdiction.

To be sure, NAC has had some successes in its coordinating role. By negotiating a Joint Financing Agreement with donors in 2006, NAC has been able to ensure financing for Provincial AIDS Task Forces (PATFs) and the District AIDS Task Forces (DATFs). NAC has also worked, successfully, to improve coordination between public health officials working on the HIV/AIDS issues by clarifying the functions of PATFs and DATFs vis à vis those of Provincial Health Officers and District Health Management Teams (Hailu and Njelesani, 2008).

The fact that NAC is a legally-constituted entity overseen by a Cabinet Committee gives it some credibility in and outside the public sector. However, the precise division of responsibility between NAC and the line ministries (particular the ministries of health and community development) is not clear in either legal or administrative terms. What NAC's responsibility is with respect to NGOs is also not clear. The government attempted to address part of that problem by proposing a bill that would allow it to regulate NGOs, but this did not go down well and has, in fact, served to poison the atmosphere between the public sector and NGOs (Hailu and Njelesani, 2008). Yet, if NAC is to perform its coordination function adequately, it needs the

good will and cooperation of the NGOs and other civil society organizations but it needs some leveraging ability as well.

Since 2002, NAC has had the legal mandate to secure external funding for itself and for PATFs and DATFs, and also has the responsibility for “identifying institutions through which funding can be directed” (Hailu and Njelesani, 2008). However, NAC is not directly involved in the pooling or distribution of funds to other public and private agencies. This limited role in resource mobilization has at least two negative implications for the coordination of HIV/AIDS-related initiatives. The first negative implication is that, because NAC is not directly involved in the determination and direction of funding or the funding application process, it has limited ability to prevent duplication or to encourage complementarities in the work of various agencies. Secondly, in the absence of a domestic authority to distribute aid locally, donors have more immediate (and direct) control over both the nature and destination of funds. This means that donor priorities play a crucial role in determining which initiatives are funded and therefore actualized. That can lead to both multiple objectives and the supremacy of donor imperatives over domestic imperatives in determining how initiatives are prioritized (Birdsall and Kelly, 2007). Multiple objectives lead to uncoordinated actions and the supremacy of donor priorities has critical implications for the efficiency of resource use – an issue that will be return to shortly.

Despite NAC’s stated mandate “to coordinate, monitor and evaluate inputs, outputs and the impact of HIV/AIDS programmes and interventions” (NAC, 2008), it has few explicit legal or administrative leverages that can be used to accomplish its task. This applies to the activities of donors, other public institutions and private agencies. One example of this relates to the integration of HIV/AIDS-related information into the Health Management Information System (HMIS) in Zambia. An assessment of health systems management in Zambia found that donors had not integrated their information systems into the national Health Management Information System (Ministry of Health et al, 2007). While the Ministry of Health is primarily responsible for coordinating the HMIS, ensuring that information relating to HIV/AIDS is appropriately integrated into the HMIS should properly be within the purview of NAC. However, NAC has no ability to ensure compliance to that requirement and, as a result, the HMIS remains incomplete with a great deal of duplication across different agencies.

The coordination problems are not, however, limited to NAC. At the district level, the DATFs have similar limited control over the activities of private agencies, particularly NGOs. Not only do they have limited ability to control the activities of NGOs, they usually have no idea what NGOs are doing because these agencies “do not completely share plans with or disclose finances to districts” (Cahill, et al, 2006: 96). As with the situation at the national level, lack of coordination at the district level is likely to lead to duplication and the loss of opportunities for complementary action.

4.3.1.4 Efficiency

Efficiency, of course, refers to the degree of parsimony in the use of resources relative to outcomes. Competence in the use of resources is of course a requirement for efficiency but it is not sufficient, particularly in a multi-organizational environment. Volatility and uncertainty in the provision of resources, duplication of efforts and a general lack of coordination can seriously hamper the efficient use of resources and lead to a poor supply response relative to the level of resource use.

In 2006, NAC was able to address one of the outstanding problems with respect to efficient resource in Zambia by signing the Joint Financing Agreement with donors. This agreement has ensured predictable and consistent funding for some time. Previous to this agreement, the erratic and unpredictable disbursement of funds to DACAs and PACAs (from NAC) seriously hampered their ability to provide services on any consistent basis, if at all (Njelesani, 2007). That volatility in funding in turn derived from the unpredictable nature of funding to NAC from external sources.

However, beyond NAC, the increased funding available for NGOs and the ability of CSOs to obtain direct funding from external sources has led to a large increase in the number of CSOs involved in HIV/AIDS-related intervention programmes. While the work of these CSOs is invaluable as a supplement to (resource-constrained) public sector efforts, the presence of so many organizations in the health sector presents serious challenges of their own with respect to: the assurance of competence; avoidance of duplication; and assuring common objectives. There have not yet been any studies to determine to what degree these concerns are valid at the national level but, given NAC's limited ability to ensure that CSOs are properly vetted, that their actions are properly coordinated, and that these organizations work within a common intervention framework, these concerns remain valid. At the district level, there is some documented evidence of duplication of effort and multiplicity of objectives with respect to the work of NGOs and district-level public institutions (High Level Forum, 2006).

The relative importance of donor preferences has been discussed, with respect to effectiveness considerations, but these preferences have some implications for efficiency as well. Donor preferences for funding high-end facilities (such as hospital facilities) versus low-end rural health centres can lead to a high concentration of resources, relative output, in relatively well-resourced urban areas (low marginal product), while rural centres that remain poorly equipped and poorly manned hold the potential for very high returns per unit of additional investment (high marginal product).

4.3.1.5 Innovation

The increased funding and involvement of CSOs in HIV/AIDS-related interventions, while it presents significant coordination and efficiency challenges, can provide a great boost to innovation. These organisations are typically smaller and less institutionally-constrained than the public sector and are, therefore, more able and likely to be innovative in seeking solutions to outstanding problems. Some of these innovations can have

substantial productivity implications. As Table 8 shows, HIV workplace programmes, in particular, can have dramatic productivity effects for large firms. However, attempts to innovate may not always find favour with external funding agencies (Birdsall and Kelly, 2007).

TABLE 8: NET BENEFIT OF HIV WORKPLACE PROGRAMMES IN SEVEN ZAMBIAN FIRMS

	COSTS OF:		SAVINGS FROM:		Subtotals	Benefit to Cost Ratio
	Prevention	Care	ARV Treatment	Less new Infections		
AGGREGATE COSTS (USD)	1,659,627	802,074			2,461,701	3.1
AGGREGATE COSTS (USD)			2,214,300	5,385,073	7,599,373	

Source: Llon et al, 2007 (Table 2).

At the district level the use of a ‘best practice’ approach, while useful in providing operationally useful information for service providers, can be a drag on innovation (Njelesani, 2007). Local providers are often hampered in providing culturally and contextually-appropriate services because of the need to adhere to best practice requirements. Some loosening of these requirements may be necessary to provide room for innovations that can allow for more locally-appropriate approaches to HIV/AIDS interventions – and, thus, better supply responses.

4.3.2 Malawi

4.3.2.1 Institutional and Programming Response

The public sector of Malawi began to develop an institutional framework for addressing what was already, by then, an advanced HIV/AIDS pandemic in 1989 with the establishment of the National AIDS Control Programme (NACP) within the Ministry of Health. In 2001, this organization was replaced by the National AIDS Commission (NAC), housed in the office of the President and Cabinet. That organization and its activities, despite some shortcoming, form the institutional fulcrum of the fight against the disease in Malawi. Its operations are overseen by a Board of Commissioners that has representatives from non-government organizations (NGOs), faith-based organizations (FBOs) and the private sector. The Malawi Partnership Forum for HIV and AIDS, with wider stakeholder representation, provides additional oversight of NACs activities through its advisory role to the Board. There are also a number of coordinating forums at the national level that seek to organize the activity of specific constituencies. These constituencies include: large private sector businesses, faith-based institutions, HIV/AIDS service organizations, people living with AIDS, NGOs, and international NGOs (White, 2007). At the district level, District AIDS Coordinators

and District AIDS Coordinating Committees (comprising representatives from government, CBOs, domestic NGOs, FBOs, the private sector and members of the district assembly) are charged with managing, implementing and coordinating HIV/AIDS responses.

The country's approach to the disease has come a long way since 1989. The first intervention plan for dealing with the disease (The Medium Term Plan I, implemented by the NACP) largely limited its interest to reducing HIV transmission through blood transfusion and education campaigns. By contrast, the latest plan—The National HIV and AIDS Action Framework (NAF) 2005-2009 – identifies eight priority areas for intervention. Central among these are: prevention and behaviour change, treatment care and support, impact mitigation and mainstreaming, and partnership and capacity building.

4.3.2.2 Effectiveness

Despite a still high prevalence rate and the many thousands of people living with HIV/AIDS who are not yet able to access antiretroviral therapy (ART), Malawi can claim some success in its fight against HIV/AIDS. The falling prevalence rate and the rising rate of life expectancy have already been noted. The targets and outcomes presented in Table 9, derived from an independent assessment (HERA, 2007), indicate that Malawi had come close to or surpassed some of the most important benchmarks of its HIV/AIDS control strategy in the recent past. Further, this rate of success cannot be attributed to low expectations since most of these targets were in line with the UNAIDS target of Universal Access by 2010 (White, 2007).

The ostensive successes in Malawi's fight against HIV/AIDS hide an ongoing human resource problem that not only constrains the current response but has the potential to impose a sufficiently hard resource constraint into the future to halt the national response in its tracks. The Malawi public sector is seriously hampered by an ongoing staffing crisis. As Table 10 below suggests, the proportion of posts among medical

TABLE 9: SELECTED ACHIEVEMENTS IN HIV/AIDS-RELATED SERVICE PROVISION IN MALAWI

HIV/AIDS-RELATED SERVICE	2007 NATIONAL TARGETS)	2007 ACHIEVEMENTS	ACHIEVEMENT TO TARGET RATIO
HIV Counselling and Testing (HCT)	300 HCT sites operational	300 HCT sites operational	100%
Prevention of Mother to Child Transmission	150,000 pregnant women counselled, tested and received their serostatus	134,879 tested (10% HIV+)	90%
Condom Distribution	30 million	32.1 million	106%
Antiretroviral Therapy	80,000 patients treated	96,535 patients treated	120%

Source: White (2007), based on data in HERA (2007)

personnel in the Ministry of Health that remain unfilled varies from 33% for clinical personnel to 82% for pharmacists. Given the fact that, even with all posts filled, the ratio of medical personnel to the general population would still be very low, the implications for the delivery of health services is both obvious and ominous. Reasons for these high vacancy rates include deaths due to HIV/AIDS, poor working conditions and better paying opportunities in the private sector and abroad (Hailu and White, 2008).

TABLE 10: MALAWI: EXISTING AND REQUIRED HUMAN RESOURCES (MIN. OF HEALTH, 2005)

	Min of Health Staffing Target	Current Staff	Current Vacancies	Posts Filled (%)	Posts Vacant (%)
PHYSICIANS	433	139	294	32	68
NURSES	8,440	4,717	3,723	56	44
CLINICAL OFFICERS	1405	942	463	67	33
MEDICAL ASSISTANTS	1,500	718	782	48	52
LAB TECHNICIANS	507	251	256	50	50
PHARMACISTS	285	93	192	18	82
Source: MEJN et al. (undated)					

The movement of personnel from the public to the private sector, while it leaves the public sector bereft, is still a long way from meeting private sector needs. White (2007: 23) notes that: “Due to the lack of both human resources and institutional capacity, programmes and projects have been designed in a modest way.” What this means is that, though NGOs, CBOs and FBOs have attempted to respond to the epidemic, their responses have been constrained by human resource availability (in administrative as well as medical fields). In effect, the response has been less than could have been afforded by available financial resources - as is witnessed by the fact that the uptake of funds from NAC and other sources, has consistently been well below what was potentially available (Hailu and White, 2008). Hence the scale-up in resources for addressing the HIV/AIDS epidemic remains ahead of the scale-up of initiatives.

This constraint and its long run implications have been recognized. However, measures to address it remain inadequate. The government of Malawi currently has an Emergency Training Programme that is expected to add an additional 3,950 nurses to the 2004/05 level of 4,717 by 2009/10 (Hailu and White, 2008). However, given the 44% vacancy rate for nurses in the public sector, even this rate of addition to nursing personnel is

inadequate. This training programme does not address the nursing shortage in the private sector; nor does it appear to adequately take into account previous rates of attrition. Further, government's inability to compete with the private sector for staff is additionally constrained by salary restrictions. (As will be discussed later, the perceived need to protect macroeconomic stability appears to take precedence over allowing government the room to increase its ability to compete for critically needed personnel). It is, therefore, not surprising that only 2% of the trainees from the first crop of 309 graduates (of the Emergency Training Programme) joined the government. The rest went to NGOs and FBOs (White, 2007).

4.3.2.3 Coordination

In keeping with its mandate as the lead agency in Malawi's response to the pandemic, NAC is also the principal coordinating agency for HIV/AIDS initiatives in Malawi. Its specifically mandated coordinating roles include:

- Facilitating policy and strategic planning in sectors;
- Guiding the implementation of the National HIV and AIDS Action Framework;
- Building partnerships among all stakeholders in the country with regional and international linkages;
- Facilitation and support of capacity building (Dickenson, et al 2007).

In keeping with that responsibility, NAC coordinates the pooling of donor resources and the distribution of those resources to domestic agencies, both public and private. Pooling is facilitated through the pooled donor group as well as the HIV and AIDS Development Group (HADG) and the Malawi Partnership Forum for HIV and AIDS (MPF). A substantial proportion of these funds are distributed to domestic agencies through

TABLE 11: DISTRIBUTION OF NAC FUNDS BY RECIPIENT GROUP

Organization Type	Share (%) of Disbursements (2004)	Share (%) of Disbursement (2007)
NGOs	31.2	21.9
CBOs	10.1	34.2
FBOs	1.1	7.1
Private Sector	1.0	2.9
Public Sector	56.3	27.7
Training Institutions	0.3	5.8

Source: White (2007) derived from NAC Reports.

a grant disbursement facility. National agencies generally apply directly to NAC for assistance but grant disbursement at the district level occurs through designated umbrella (non-government) organizations that act as sub-granting agencies. Over time, NAC has become more successful at directing resources to community-based organizations (CBOs) and to non-public sector organizations in general (Table 11). This changing distribution of resources means greater geographic dispersion of funds and greater heterogeneity in terms of programming and service delivery.

The increased geographic dispersion of funds is likely to have positive implications both in terms of human development effects and absorptive capacity. Remote (and usually poorer) rural communities are more likely to receive services through community-based organization than through national agencies. There is also less likelihood of an excessive concentration of resources relative to productive capacity, in any one location, that can result in zero or negative marginal gains from resource use.

Increased diversity in the provision HIV/AIDS-related services can be a net advantage from an efficacy perspective, if the wider range of service providers leads to greater innovation, as well as better targeting across vulnerable groups and relevant sectors. However, it can also increase the likelihood of duplication and missed opportunities for complementary action. Whether it is a net advantage or disadvantage will almost certainly depend on NAC's ability to perform other aspects of its coordinating role, by ensuring that there is no excessive overlap of objectives across funded initiatives and encouraging cooperation among agencies and constituencies.

In that respect, there is legitimate need for concern because, despite its acknowledged central role, NAC is still hobbled by the actions of uncooperative donors, the lack of enforcement mechanisms, and an ambiguous mandate.

- The pooling of donor funds, though largely successful, is not complete. There are still some donors who remain outside the donor pool and therefore operate outside the NAC framework (Hailu and White, 2008). Even though these donors may be willing to direct funds to NAC-endorsed priority areas, this still significantly reduces NAC's ability to properly integrate the activities funded by these donors into an overall programme that reflects national priorities.
- NAC lacks the legal enforcement mechanisms that would allow it to compel cooperative behaviour among various agencies. For example, NAC cannot compel institutions to report on HIV/AIDS-related activities (White, 2007). This means that it relies purely on voluntary reporting to track activities and results. It would only need a few uncooperative or delinquent organizations to significantly compromise the NAC's ongoing ability to properly coordinate and manage the national response.
- Though NAC maintains a strong cooperative relationship with the Ministry of Health, the roles and responsibilities of these two organizations in the fight against HIV/AIDS have not been clearly distinguished (Dickinson et al, 2007; Carlson et al, 2006). The confusion that this condition creates can significantly compromise the effectiveness of both organizations.

Coordination at the district level is also challenged by the uneven quality of institutional structures and multiple mandates. Some districts have well-developed institutional structures that allow for an effective execution of their mandate, while others are much less capable of an effective response (Hailu and White, 2008). Moreover, some of the District Coordinating Committees and Officers are much more involved in initiation and implementation of HIV/AIDS-related activities than in coordination.

4.3.2.4 Efficiency

Despite its importance as a coordinating tool, NAC's Grant Facility for the pooling and distribution of HIV/AIDS funding (managed by the Financial Management Agency) cannot be described as efficient. A large part of the problem can be traced to the conditions surrounding the receipt of funds from donors, but NAC's failure to acknowledge some of the limitations faced by its client agencies, as well as the urgency of action, must share some of the blame.

At the receiving end, unpredictability and delays in the distribution of funds from donor agencies are transmitted, through the Grant Facility, into parallel uncertainties in funding at the local level. A good example of this is the delay in disbursements from the Global Fund in 2006. Not only were disbursements late, the amounts delivered varied from the amounts promised and the precise time of arrival of disbursements was never clear (Carlson et al, 2006). These uncertainties led to parallel delays and uncertainties in disbursements from the Grant Facility to local agencies, resulting in serious disruptions in programme implementation. These stop-start-stop effects of aid volatility seriously undermine the efficiency and efficacy of programmes, as well as the morale of committed workers and agencies.

Recent estimates indicated a five-month processing time for funding applications to the Grant Facility and periods of over one year from receipt of application to fund disbursement was not unheard of for some large organizations (Carlson, 2006). This is in stark contrast to NAC's stated target of a three-month processing time. The slow processing time is largely due to complicated guidelines for proposal development and arduous procurement requirements (White, 2007). Some of these procedural requirements can be traced to the conditionalities imposed by donors who wish to retain the ability to trace the movement of funds and reduce inappropriate use of these funds. However, the fact that the procedural requirements do not distinguish small from large organizations, and more from less urgent needs, cannot solely be blamed on donors. NAC, too, must take some responsibility for not advocating for a more nuanced approach that reflects local imperative. The effect is that these requirements strain the already limited capacity of small organizations and contribute to what, despite its successes, continues to look like an incredibly lackadaisical response to an ongoing crisis.

4.3.2.5 Innovation

There is abundant evidence of innovation in Malawi's response to the HIV/AIDS pandemic but there is also evidence of opportunities not taken, examples not emulated. There still remains significant room for innovative approaches to the national and community level responses.

The involvement of faith-based institution in the provision of HIV/AIDS-related services is an encouraging example of innovation on the one hand, while the reticence of private health clinics is a source of concern. For example, Christian Health Association of Malawi (CHAM) was responsible for the operation of 67 (or 19%) of the 351 HIV counselling and testing sites in Malawi as of July, 2007. This was ten more than the number operated by NGOs and more than five times the number (12) operated by private clinics (White, 2007). Clearly, despite the well-known difficulties that religious organisations have had with dealing with the pandemic, the FBOs have ploughed ahead. Private clinics, on the other hand, despite their comparative advantage in terms of human resources, have been reluctant to participate because of concerns about the time demands in the counselling and guidance of clients (Hailu and White, 2008).

Transnational corporations have taken the lead in developing workplace policies and programmes that provide treatment, care and support for workers and their families. As the results from Zambia show, the productive gains from such interventions are both immediate and large. This type of initiative is likely to be beyond the capacity of small and medium-sized local firms, without some sort of external assistance, but can be duplicated in large local firms. Yet, despite the formation of the Malawi Business Coalition on HIV and AIDS (MBCA), large local firms have not made much progress in developing similar workplace policies and programmes (Hailu and White, 2008).

NAC has joined with UNICEF and the government of Malawi in launching a pilot cash-transfer scheme aimed at the most vulnerable households. By providing cash transfers to ultra poor households who have no direct access to labour income (either due to illness, age of members or care-giving responsibility), the programme aims to improve the general wellbeing of the households and increase the rate of school attendance of child members. The potential human development impact of such schemes, if instituted widely, is quite obvious but there are also significant potential productivity impacts. As some of the stories documented by UNICEF (2007) indicate, the cash transfer can have the effect of releasing enterprise, land and labour that have been constrained by the desperate conditions imposed by poverty and HIV/AIDS. Cash-transfer recipients were able to hire labour to work land that had previously been left fallow, begin small enterprises and join the labour force generally. The wider economic impact, when this scheme moves beyond the pilot phase, could be substantial.

4.3.3 Armenia

4.3.3.1 *Institutional and Programming Response*

Armenia initiated its response to an increasing number of registered HIV/AIDS infections nationally, and a rapid rate of increase regionally, by initiating its first National Programme on HIV/AIDS Prevention (2002-2006) in 2002. This programme was to be overseen and coordinated by the Country Coordination Commission on HIV/AIDS, TB and Malaria (also established in 2002). That programme was followed by the National Programme on Response to the HIV Epidemic in the Republic of Armenia for 2007-2011.

Given Armenia's low rate of HIV/AIDS infections (TB is considered the epidemic disease), most of the response to the disease has been focused on prevention (53% of funding). This approach can be considered to have been, at least partially, successful because the frequency of positive test results for persons undergoing tests for HIV has not shown an upward trend.

4.3.3.2 Effectiveness, Coordination, Efficiency and Innovation

HIV/AIDS initiatives are implemented by a wide array of public and private agencies. Non-government Agencies implement the majority of externally-funded projects, while domestically-funded initiatives are generally undertaken by public agencies. The activities of both groups of agencies are coordinated by the Country Coordination Commission on HIV/AIDS, TB and Malaria. However, HIV/AIDS remains a secondary preoccupation in a programme that is largely directed at early detection and treatment of tuberculosis.

To gain some idea of the perceptions of those working in the field regarding the level of effectiveness, efficiency and coordination of HIV/AIDS initiatives, an opinion survey was administered among well-placed observers of the response to the epidemic and persons working in the field. A summary of the responses is presented in Table 12 below. The summary view is that HIV/AIDS initiatives are generally well coordinated among themselves and completed with few hitches (efficient), and generally meet appropriately-chosen objectives (effective). However, these initiatives are generally not very well integrated with other health sector and MDG-related projects. Nor is the PRSP often used as an instrument of coordination. The results of the survey also suggest that projects and programmes have not, thus far, made strong attempts to identify and magnify potential productivity gains. However, given the low rate of infection in Armenia, this would not be a major concern.

4.4 THE MICRO-MACRO NEXUS

In all countries, the concerns about the microeconomic and macroeconomic implementation of HIV/AIDS initiatives overlap and interact at the level of inter-agency relations within the public sector. Coordinating agencies for the HIV/AIDS response and Ministries of Health are typically responsible for coordinating all, and implementing some, of the HIV/AIDS-related initiatives. Ministries of Finance and Central Banks are responsible for managing the macroeconomy through their fiscal and monetary policy instruments. A scaling up of HIV/AIDS initiatives and the concomitant scaling up of external assistance must be compatible with both policy environments or it will flounder. However, as we will show, there is little evidence that there is sufficient dialogue between the various agencies and sufficient buy-in by the macroeconomic managers to suggest a common agenda.

4.4.1 Zambia

Responsibility for determining total spending on HIV/AIDS initiatives in a particular year is divided across various agencies. NAC, through the National HIV and AIDS Strategic Framework, determines the costs of the multi-year intervention plan. This serves as a guide, but not a very strict one, for the precise yearly

TABLE 12: RESULTS OF OPINION SURVEY (ARMENIA)	
QUESTION	AVERAGE SCORE
1. How well integrated are your programmes/projects into the PRSP?	1.5
2. How well integrated are your programmes and projects into the health sector plan?	2.0
3. How well are your programmes/projects coordinated with other MDG-related initiatives?	2.8
4. How well are your programmes/projects coordinated with other HIV/AIDS initiatives?	3.5
5. Which need and potential effectiveness the major determinant of project choice?	4.0
6. Do you have a high success rate in terms of your projects being completed on time?	3.3
7. Do you have a high success rate in terms of your projects actually fulfilling objectives?	3.8
8. Do your programmes/projects obtain enough financial resources to meet their objectives?	2.5
9. Do promised funds arrive on time and on target?	3.3
10. Do your programmes/projects directly and quickly contribute to productivity gains? For instance, employment and income generating initiatives?	1.8
11. Do you interact with macroeconomic institutions (the Central Bank, Ministry of Finance etc.) to discuss issues related to HIV/AIDS funding?	2.0
1=Not at all; 2=in some cases; 3=in most cases; 4=perfectly Source: Tumasyan and Papoyan (2008).	

allocation across various initiatives within ministries and NAC (for disbursement to PATFs and DATFs).¹⁰ However, the sum (but not the distribution) of these allocations for each public agency is strictly constrained by the budgetary allocations assigned by the Ministry of Finance and Planning in the annual budget. That budget is, in turn, informed by (and attempts to work within the parameters set by) the Medium Term Expenditure Framework (MTEF), which is the outcome of consultations between the macroeconomic authorities in Zambia (the Ministry of Finance and Planning and the Central Bank) and the Bretton Woods Institutions (the World Bank and International Monetary Fund). Both of these processes are, in turn, constrained by uncertainties about funding.

The Budget-determining process, by its very nature, gives primacy to macroeconomic concerns in determining funding levels for HIV/AIDS and other MDG initiatives because the overall spending targets are set by macroeconomic authorities. Microeconomic concerns can more immediately inform funding priorities but not levels. It is, of course, possible for macroeconomic authorities to incorporate microeconomic concerns by consulting line ministries and NAC in setting spending targets, and in preparing for negotiations with

10. It is not clear how, and if, yearly disbursements to non-government agencies are determined on an annual basis.

the Bank and Fund on the Medium Term Expenditure Framework. However, there is little evidence that this is occurring. In fact, the policy stance suggested by the MTEF is not designed to accommodate a significant scaling up of development assistance (Table 13). Projected inflation rate of 5% by 2009 (from 2007 levels of 8%) suggests a restrictive monetary policy that would not be compatible with a substantial increase in capital inflows which might be, in all likelihood, inflationary in the short term (even with high absorptive capacity). Indeed, the current account projections suggest no increase in grants, relative to GDP, and a moderate increase in borrowing from abroad, some of which will be used to increase foreign exchange reserves.

TABLE 13: MACROECONOMIC MEDIUM TERM OBJECTIVES

	2008	2009	2010
REAL GDP GROWTH	7	7	7
INFLATION (END PERIOD)	7	5	5
INFLATION (ANNUAL AVERAGE)	7.3	5.9	5
DOMESTIC BORROWING (% GDP)	1.2	1	1
CA BALANCE (EXCL. GRANTS, % GDP)	-7.5	-8.7	-9.8
CA BALANCE (INCL. GRANTS, % GDP)	-2.5	-3.6	-4.8
RESERVES (MONTHS OF IMPORT COVER)	2.4	2.8	3.2

Source: Ministry of Finance and National Planning (2007)

However, the medium term expenditure framework is not the only factor that tends to augur against attempts to encourage the scaling up of HIV/AIDS-related spending. Even before budgetary allocations are determined, NAC's spending projections reflect the dampening effect of aid volatility. NAC's estimates of external resources availability reflect a discounting of actual commitments to reflect past experience with gaps between commitments and disbursements and unpredictability in the timing of disbursements (Njelesani, 2007). Thus, even the initial spending projections are well below what external resources commitments would suggest is possible.

4.4.2 Malawi

Because of NAC's more central role in resource mobilization for HIV/AIDS, the relationship between the main microeconomic authority (NAC) and the macroeconomic authorities (the Ministry of Finance and Central Bank) is a more nuanced one. Though similar dynamics are at play, the restrictions on microeconomic authorities appear to be less absolute. However, this has resulted in only marginal movement from the restrictive policies dictated by the Medium Term Expenditure Framework.

HIV/AIDS-Related programming and costs are guided by the National HIV/AIDS Strategic Framework which is overseen by the National AIDS Commission (NAC). Most of the funding for that programme is provided through agreements between NAC and external funding agencies that are ratified by the National

TABLE 14: MALAWI: BUDGET FRAMEWORK (PER CENT OF GDP)

YEAR	TOTAL REVENUE & GRANTS	TAX REVENUE	GRANTS	TOTAL EXPENDITURE	OVERALL BALANCE
2004/05	38.8	21.8	14	42.9	-4.1
2005/06	43.5	21.5	18.9	44.7	-1.3
2006/07	39.7	21.4	15.3	40.6	-0.9
2007/08	38.5	21.3	14.3	39.2	-0.7
2008/09	37.3	21.2	13.3	38.4	-1.1
2009/10	38.5	21.3	13.5	39.5	-1
2010/11	38.5	21.3	13.5	39.5	-1

Source: Government of Malawi (2007).

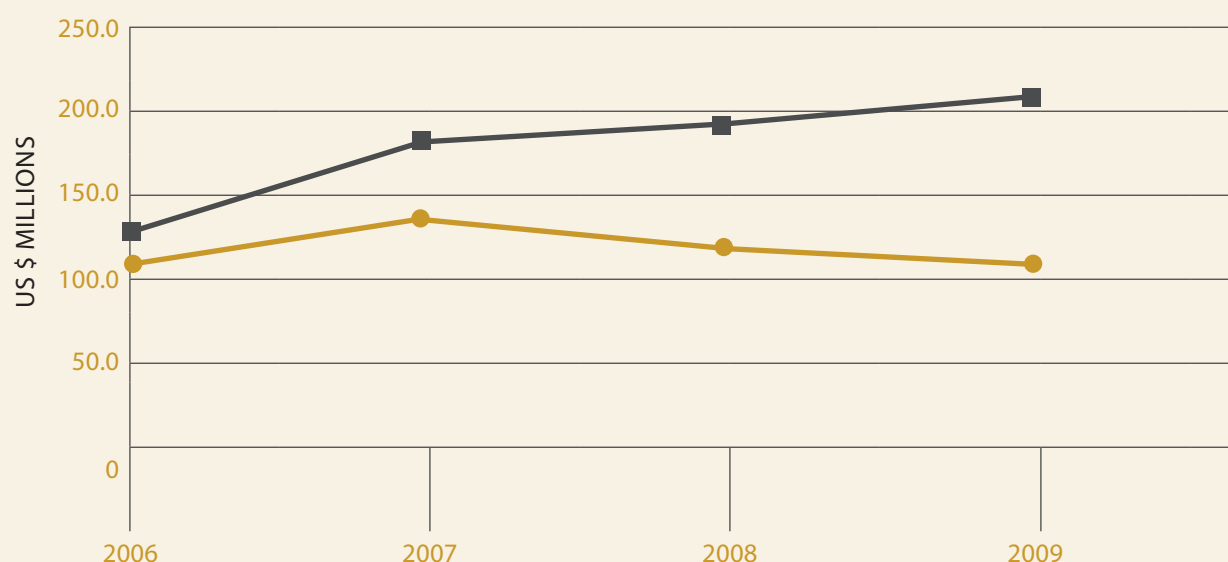
Assembly. Hence, these funding agreements have the status of law nationally (White, 2007). Expected yearly disbursements to NAC (which forms the bulk of funding for that framework) are included in the National Budget.

The Ministry of Finance, in determining budgetary outlays, must incorporate NAC's anticipated revenue flows and spending outlays. However, it must also seek to work within the framework spelled out by the Medium Term Expenditure Framework (MTEF) and other prescriptions of the Poverty Reduction and Growth Facility (PRGF) that are, typically, quite restrictive. In fact, the Medium Term Budget Framework (Table 14), which is informed by the MTEF and PRGF, suggests falling grant and expenditure levels beyond 2005/06 and small budget deficits throughout (all relative to GDP). Moreover, the current PRGF imposes a ceiling (of 7% of the total budget) on wages and salaries. This severely restricts the government's ability to address the human resource challenge that it currently faces and may, indirectly, constrain absorptive capacity.

Nevertheless, it cannot be said that the restrictive expenditure framework (not including the wage restriction) is necessarily incompatible with spending outlays suggested by the NSF. This is because NAC chose a more modest programme than that which would achieve universal access (to ART) by 2010. Thus, what would have been a scale-up of aid to 2009 and beyond becomes a modest increase to 2007 and a decline thereafter (see Figure 4).

Why NAC would choose a less ambitious programme, when its position with respect to resource mobilization is quite strong, is not entirely clear. NAC's strength, relative to the macroeconomic authorities, is illustrated by a conflict which occurred over the location of its Foreign Currency Denominated Account (FCDAs) (into which it deposits receipts from external funding agencies) in 2005. In order to allow the Central Bank to meet foreign exchange reserve targets, the Ministry of Finance ordered NAC to move its FCDA from commercial banks to the Reserve Bank of Malawi (the central bank). NAC complied under duress.

FIGURE 4: COSTS OF ALTERNATIVE HIV AIDS PROGRAMMES IN MALAWI



However, external funding agencies objected (presumably worried about NAC's ability to access those funds) and withheld funds until the order was rescinded (White, 2007). They found some justification in this action from the fact that the 2003 Memorandum of Understanding between those agencies and NAC (which stipulated that NAC's FCDAs would be held in commercial banks) had received parliamentary approval and therefore could not easily be trumped by the Ministry of Finance's concerns about foreign reserves (White, 2007). Thus, while NAC may not necessarily be able to impose its agenda on the macroeconomic authorities as a singular institution, it may well be able to do so with the support of donor agencies and, indirectly, the national parliament. This begs the question as to why NAC chose the more modest programme over that which would accomplish universal access.

The answer to that question has not been explicitly spelled out by NAC but external funding agencies (and mechanisms) are, likely, a big part of that answer. Despite their support of NAC on other issues, external funding agencies have not been able to provide NAC with the assurances that would justify a scale-up of HIV/AIDS programming. There have been very large gaps between commitments and disbursements and significant delays in disbursements even when funding was assured (White, 2007). As in the case for Zambia, in this uncertain funding environment, it is very difficult (and perhaps foolhardy) for national agencies to propose ambitious amplifications in programming.

4.4.3 Armenia

Communication between the macroeconomic and microeconomic authorities, with regard to HIV/AIDS-related initiatives, generally takes place in the context of budgetary allocation. As in the other two countries considered here, spending constraints was the major concern. However, the economic changes of the last few years (rapid growth, currency appreciation from private flows and a fall in ODA) have made this less and less a concern. In fact, currency appreciation (since 2004) and the resulting lower purchasing power of external resources is, arguably, the more immediate concern.

This dialogue, again not unlike the situation in Zambia and Malawi, does not include any discussion of the potential supply side responses of planned spending. What is different about the Armenia situation, however, is the exclusion of externally-funded projects implemented by non-government agencies. Earlier, this may have allowed these initiatives to escape budgetary restrictions but they now have the disadvantage of dealing with the problems posed by exchange rate appreciation without the help of the public sector. A desire to be included in that dialogue (and by these means to obtain some public-sector protection) is one of the current concerns of NGOs.

The three countries are at very different stages in the degree of integration of HIV/AIDS-related concerns and challenges into their PRSPs. However, none has achieved the type of integration that would suggest that all aspects of the pandemic are recognized and addressed in development plans.

5.1.1 ZAMBIA

Zambia's PRSP was transformed into the Fifth National Development Plan 2006-10 (Njelesani, 2007). HIV/AIDS is introduced as a cross-cutting issue and, indeed, it is acknowledged as a challenge within several areas of economic and social activity, including (but not limited to): mining, transportation, the environment and arts and culture. Under all of these various headings the Plan presents some of the challenges presented by the epidemic and indicates (broadly) measures that will be taken to address those challenges. These measures generally fall under one of three headings:

- Mainstreaming – the inclusion of aids concerns (along with other issues such as gender balance etc.) into decision making;
- Information dissemination – ensuring awareness of HIV/AIDS and its effects;
- Workplace programs – initiatives that address the effects of HIV/AIDS on workers and their families.

However, there is very little mention of the damage that the pandemic has wrought on the social and economic infrastructure and the ways in which that damage might be corrected and repaired. There is also little direct mention of the human resource implications of the disease (the rapid and continued loss of skilled labour) or means of adapting to the constraints imposed by the disease in areas such as land tenure, family structure, education provision etc.

5.1.2 MALAWI

Like Zambia Malawi's second generation PRSP has also become the Malawi Growth and Development Strategy, meant to guide the wider economic development program (White, 2007). That plan incorporates the strategies of the National Action Framework (for HIV/AIDS) and thus reflects its main concerns which are:

- Halting and reversing the spread of HIV/AIDS;
- Decreasing the negative impacts on people living with HIV/AIDS;
- Reducing the economic and social consequences (of the disease) on those caring for people living with HIV/AIDS.

As in the case of Zambia, these concerns remain within the confines of prevention and mitigation and do not address the larger institutional issues related to the structural impacts of the disease.

PROGRESS IN INTEGRATING HIV/AIDS CONCERNS INTO THE PRSP

5.1.3 ARMENIA

In terms of the incorporation of HIV/AIDS concerns into the PRSP, Armenia's progress is well behind that of Zambia and Malawi. The first PRSP (of 2003) acknowledged the presence of the disease but did not suggest specific measures to address it (Tumasyan and Papoyan, 2008). The second PRSP, which is still being developed, is not expected to go much beyond that level of involvement. It is not anticipated that specific policies for addressing HIV/AIDS will come until the development of the Action Plan that will follow the second generation PRSP.

6. REVIEW AND RECOMMENDATIONS

The country subjects of the case studies (Armenia, Malawi, and Zambia) all experienced periods of substantially elevated aid flows in the years beyond 2000. The size and duration of these aid surges, however, were quite different. Armenia's aid surge was not very large and persisted for only three years. After 2004, aid returned to pre-surge levels. Malawi experienced a more pronounced increase in aid that persisted to 2006 (the last year of measured aid levels). Zambia experienced the largest increase in aid, of the three countries (in both absolute and proportional terms) and its aid surge persisted to 2006. In none of these countries is the need for additional resources to fight HIV/AIDS contested. Yet, there is substantial evidence that none of these countries have made a concerted attempt to mobilize and utilize all of potentially available external resources. The reason for this appears to be twofold. On the one hand, macroeconomic authorities have attempted to reduce the inflow and use of external assistance because of fears of macroeconomic instability and Dutch disease. On the other hand, microeconomic authorities appear to practise deliberate and considerable restraint in the planning and actual use of external resources (relative to ostensibly available amounts) due to fears about the consequences of aid volatility.

In terms of the posture of macroeconomic authorities, none of the three countries realised full absorption and full spending of the additional aid (over the aid surge period to 2006). Malawi came closest with full absorption and partial spending (59%). Armenia had the poorest record with zero absorption and very little spending (12%). Zambia was not much better with partial absorption (39%) and almost no spending (6%). However, the macroeconomic records of the three countries do not suggest a necessary relationship between the posture of the macroeconomic authorities and the movement of macroeconomic aggregates. Malawi had the best overall outcome. It lost reserves (because of greater than 100% absorption) but saw both real and nominal currency depreciations and a large drop in the inflation rate. Inflation did fall in Zambia as well but by a much smaller amount (both absolutely and proportionally) and, though there was a nominal depreciation, the country experienced a large real appreciation of the currency. Armenia experienced a real currency depreciation for the aid surge period but higher inflation. Clearly, Malawi absorbed and spent more aid but appeared to have done a better job of generating the supply responses at the microeconomic level that allowed it to avoid the anticipated (negative) macroeconomic effects.

Any assessment of the microeconomic responses (and a comparison of the combined microeconomic and macroeconomic responses) can be made using the policy matrix below. The matrix reflects the argument that optimal conditions for a supply response (from the use of external resources) occurs when projects and programs are: effective (in addressing existing problems); coordinated (in order to maximize complementarities and minimize duplication and supply bottlenecks); efficient (get maximal effect per unit of resource used); and innovative (are able to identify and actualize opportunities for larger supply responses). The analysis above suggest that Malawi approaches the most desirable combination of an accommodative macroeconomic policy stance and effective, coordinated, efficient and innovative microeconomic management of aid flows, though it is still a long way from meeting all the requirements of that ideal. Zambia is closer to the least favourable policy combination - a pre-emptive macroeconomic policy stance and ineffective, uncoordinated, inefficient

REVIEW AND RECOMMENDATIONS

and non-innovative microeconomic management quadrant – and, therefore, justifiably little expectation of a supply response (though, evidently, Zambia does not fit that extreme precisely). Armenia falls between the two in exercising a pre-emptive macroeconomic policy stance but some level of effectiveness, coordination, efficiency and (possibly) innovation in its use of aid. The economic outcomes for the three countries during their respective aid surges accords with those respective positions.

MACRO-MANAGERS

MICRO-MANAGERS

	ACCOMMODATIVE	PRE-EMPTIVE
Good conditions for a Supply Response <ul style="list-style-type: none"> • Effective • Coordinated • Efficient • Innovative 	MALAWI Effective: substantively Coordinated: somewhat Efficient: mixed picture Innovative: substantively	ARMENIA Effective: somewhat Coordinated: mixed picture Efficient: moderately Innovative: unclear
Poor conditions for a Supply Response <ul style="list-style-type: none"> • Ineffective • Uncoordinated • Inefficient • Not innovative 		ZAMBIA Effective: mixed picture Coordinated: poorly Efficient: not at all Innovative: somewhat

Even Malawi, with a relatively good micromanagement profile and strong support from the donor community and domestic institutions, has made little attempt to advocate for a rapid scale-up of HIV/AIDS initiatives to correspond to potential external resource availability. This is because, microeconomic authorities significantly discount estimates of available resources and are loath to move to ambitious targets that would be increasingly vulnerable to delays and other uncertainties in the delivery of aid. In effect, for different reasons, microeconomic authorities are also reticent about the potential scale-up of aid flows.

The experience of Malawi suggests that, even with less than perfect microeconomic profiles, countries can experience sufficient supply responses to accommodate an aid surge without untoward macroeconomic effects. However, the Zambian experience suggests that even strong (and largely successful) attempts at stemming the flow of aid into the economy cannot guarantee the integrity of the macroeconomy. Countries need to give themselves every possible chance to benefit from external flows and that means paying attention to the structures in place for using aid effectively and efficiently. A pre-emptive approach, in the best case scenario, may simply detract from the challenge of improving absorptive capacity and, in the worst case scenario may be an unnecessary and artificial impediment to the optimal use of aid flows.

Absorptive capacity (or the potential supply response) itself faces several challenges in these countries and, one suspects, other moderate or high infection countries as well.

- The most pressing challenge is the human resource constraint. The effect of the disease on human capital, as well as emigration and other effects of poor remuneration, have stripped these countries' human resource cupboards bare. If an urgent and concerted effort is not made to increase human capital, regardless of the state of the epidemic, human capital deficiencies may impose a hard constraint on absorptive capacity. In that case, pre-empting aid inflows may be the only option, but this may also mean that further progress against the disease may be compromised.
- Effective coordination of the national HIV/AIDS programme can make a critical difference to absorptive capacity. The contrast between Malawi's flawed (but still effective) coordinating arrangement with a single authority engaged in both the pooling and distribution of aid and that of Zambia and Armenia where donor agencies have, more or less, free rein to pursue their own agendas and the coordinating authority has little ability to track funds and evaluate the nature and progress undertakings, is stark.
- Much of the concern that motivated this research revolved around the need to ensure that countries scaled up HIV/AIDS initiatives to the maximum capacity of available resources. However, even with accommodative macroeconomic stances countries may not respond to promises of more assistance. The attitudes and approaches of local coordinating authorities (that clearly derive from past experiences) suggest that the volatility of aid flows (in the form of: gaps between commitments and disbursements, delays in delivery, and changing conditionalities) make coordinating authorities loath to commit to ambitious programmes that increase the country's vulnerability to these uncertainties.

Given those factors (and other considerations), there is still, very much, a case to be made for the scaling up of aid flows to medium and high prevalence countries and accommodation of these flows at the country level. However, such a call needs to be more specific about what is required for a successful scale up.

- A much larger proportion of the initial scale-up of aid resources must be directed at expanding capacity in those countries – particularly the training of health professionals and administrators. If this is not done, absorptive capacity will quickly be reached and any initial supply response may quickly evaporate.
- There must be more concerted efforts to increase the effectiveness of national coordinating agencies. As the Malawi experience suggests, a role in the pooling and distribution of funding (to both public and private agencies) gives those agencies a much greater ability to bring donors more constructively into the national conversation and to keep track of (and influence) the range and emphasis of HIV/AIDS-related initiatives. Additional means of enforcing policy may also be necessary.
- Effective district-level coordination is also a necessity as increasing amounts of the aid is delivered and spent at the district level.

- There are a host of innovative projects and programmes (such as workplace programmes and cash-transfer schemes) that, in addition to mitigating some of the immediate welfare effects of the epidemic, can potentially engender large productivity increases. These schemes need to be encouraged both because they increase any potential supply response significantly and because they may place less demands on already strained human capital resources.
- The PRSP has the potential to significantly enhance the breadth of coverage of HIV/AIDS concerns but the process of integration appears to be still in its infancy. However, its more critical role may be its ability to take these concerns beyond the immediate issues of prevention and mitigation into structural issues related to the recognition and repair of the damage to institutions and adaptations to the new social realities that diseases impose on high and moderate prevalence countries.
- The volatility of aid flows must be addressed. Promises of more aid do not appear to be sufficient to induce countries to plan for and access more external resources. Greater efforts must be made to increase stability in flows, increase long-term arrangements and bringing disbursements more inline with commitments. In the absence of improvements in these areas pre-emptive macroeconomic policies may be much less discouraging (for donors) than intransigent microeconomic authorities who continue to plan for and expect the worse.

The tenfold increase in resource to fight HIV/AIDS between 1999 and 2007 indicate that there are substantially more resources available for countries in their battle against the pandemic than there were in 2000 when that fight became part of MDG #6. However, multilateral agencies have been concerned, for some time, that countries have not shown great willingness to use those resources fully due to fears of macroeconomic instability and Dutch disease. This research was motivated by the proposition that macroeconomic instability is not a necessary consequence of the scaling-up of aid flows. It is likely to be the consequence only if such aid fails to elicit an adequate supply response. Therefore, attention should be focused on the challenges countries faced in maximizing the supply response and the options for improving the likelihood of an adequate response.

Case study examinations of three countries: Armenia, Malawi and Zambia indicate that, indeed, countries face some significant challenges in assuring conditions for a supply response to aid flows for HIV/AIDS but that those challenges are not insurmountable. Addressing capacity constrains early on; ensuring a strong institutional base for coordinating HIV/AIDS initiatives; encouraging innovative programs that have direct productivity effects; and further integration into larger development planning processes (such as the PRSP) are some of the interventions that can substantially reduce (if not eliminate) the possibility of a negative macroeconomic response to a scale-up of aid flows. The three countries examined have had differing experiences in that regard with some success in some areas and less success in others. Malawi's efforts is furthest along in meeting the criteria for maximizing absorptive capacity but even that country still has much that it can improve and faces, like Zambia, critical human resource constraints.

One factor which was not recognized at the beginning of the study, but which was clearly illuminated by the study, was the reluctance of microeconomic authorities (HIV/AIDS coordinating agencies, Ministries of Health etc.) to scale up HIV/AIDS initiatives even when additional external resources were on offer. This, it turns out, is merely a risk averse reaction to historic experiences of aid volatility. Reducing the volatility of aid flows is therefore an imperative if the appeal for a scale-up of HIV/AIDS initiatives (to match available external resources) is to receive broad compliance in the first place.

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APPENDIX

ABSORPTION						
	Period	Average Level of AID (USD)	Average Non-Aid Current Account Balance (USD)	Change in Average AID Levels (USD)	Change in Non-AID Current Account Balance (USD)	Proportion of Aid Absorbed (%)
Zambia	2001-2003	525,333,333	830,666,667			
	2004-2006	1,161,000,000	584,666,667	635,666,667	-246,000,000	38.7%
Malawi	1999-2002	417,605,000	-273,625,000			
	2003-2006	565,052,500	-434,250,000	147,447,500	-160,625,000	108.9%
Armenia	1999-2001	207,870,000	-351,315,328			
	2002-2004	265,333,333	-225,006,997	57,463,333	126,308,331	-219.8%
SPENDING						
	Period	Average Level of AID to Public Sector (LCU)	Average Budget Balance Before Grants (LCU)	Change in AID to Public Sector (LCU)	Change in Budget Balance Before Grant (LCU)	Proportion of Aid Spent (%)
Zambia	2001-2003	2,998,018,209,029	-2,179,333,333,333			
	2004-2006	7,265,689,913,801	-2,440,000,000,000	4,267,671,704,772	-260,666,666,667	6.1%
Malawi	1999-2002	34,088,163,769	-11,294,605,000			
	2003-2006	91,027,491,725	-45,046,125,000	56,939,327,956	-33,751,520,000	59.3%
Armenia	1999-2001	129,230,467,829	-52,698,623,991			
	2002-2004	192,179,044,126	-60,470,786,698	62,948,576,297	-33,751,520,000	12.3%



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