EXPANDING LONG TERM FINANCING OPTIONS FOR HIV IN VIET NAM

August, 2012

Executive overview

Vietnam has achieved considerable success in scaling up its programmatic response to address the HIV/AIDS pandemic in recent years. However while public agencies and civil society organisations have played a key role in this success, 74% of total resources have come from development partners.

As a result of the global financial crisis and era of fiscal austerity in many developed countries, donor funding is expected to decline in the coming years. This creates significant challenges for policy makers in Vietnam to ensure that the level and quality of services to HIV/AIDS are maintained and expanded.

In response to these challenges, this report explores a number of domestic financing options for the HIV/AIDS response and assesses their potential contribution to the current and future projected HIV/AIDS needs of the country.

The resource needs for the period 2012-2020 are projected to increase from VDN 2.4 trillion in 2012 to VDN 6.4 trillion in 2020. Available baseline resources are estimated at VDN 2.4 trillion in 2012, decreasing to 1.13 trillion in 2020.

Under the baseline scenario figures, there is a financing gap of VDN 0.09 trillion in 2012 and growing to 5.3 trillion in 2020. The financing gap in 2012/13 is equivalent to 0.04% of GDP. By 2020, this will rise to 0.085% of GDP.

In order to fill some of this gap a number of additional domestic sources of financing are explored, these include increases in public sector mainstreaming and private sector contributions, introduction of airline and airtime levies, increases in general taxation and efficiency savings.

Social Health Insurance (SHI) is a potential financing tool for HIV and AIDS by increasing access to outpatient and inpatient care which includes the treatment of opportunistic diseases of HIV positive and AIDS patients. Viet Nam is looking to social health insurance as a potential source of funding to close the gap between need and available funds. The movement towards universal coverage will witness an increase in the numbers of PLHA enrolled within the SHI scheme. In the absence of other funding sources for ART the ability of the VSS should be explored further to establish whether it is in a position to cover ART therapy. We estimate that over the period 2012-2020 the VSS could potentially contribute in the region of VDN 5.84 trillion towards the costs of ART. This will of course depend on competing demands (VSS priorities) and adequate funding over this period.

In terms of next steps, (i) stakeholders must reach a consensus about the principle that VSS will increasingly cover AIDS related health services when donors phase out; (ii) a detailed actuarial analysis must be carried out to obtain more precise estimates of the number of PLWHA who will be covered by VSS over time, and the precise AIDS related benefits they will be entitled to under VSS; (iii) it will be important to understand how the transition from donor funding to VSS coverage takes place. Ideally there is a seamless transition from donor funding to VSS coverage. This will require detailed planning with donors.

International experience highlights the role of **public sector mainstreaming** in contributing resources to HIV/AIDS programmes. Within the Vietnam context whilst a number of ministries undertake HIV/AIDS activities there is little appetite to pursue the option of mainstreaming any further at this point in time. The main reason is that it would necessitate a change of the Budget

Law which specifies which ministries can incur 'Health, population and family planning' related expenses.

Contributions from the private sector play an important role in the fight against the HIV/AIDS pandemic. Private sector contributions can be motivated by a sense of corporate citizenship or by the direct effect that HIV/AIDS has or could have on business. There is scope for increasing private sector contributions in Vietnam. Base on crude cost estimates, we estimate that VDN 0.76 trillion could be collected in 2020 to fund private sector workplace programmes. However, movement towards greater private sector participation will require a number of steps, including (i) increasing advocacy to encourage private companies to play a greater role in funding HIV/AIDS workplace programmes, (ii) validating the costs of these programmes; and (iii) estimating the fiscal and business impact on firms.

Introducing an **airline levy** on international departures, one of the innovative funding mechanisms currently being implemented in a number of countries in Europe and a few in Africa, has the potential to raise revenue. Based on current and predicted air traffic numbers, we estimate that revenues from a US$ 5 airline levy would be in the region of 1.31 trillion in 2020 This is based on conservative estimates of growth in passenger movement in the coming years and could be a useful alternative source due to the relatively small charge on the cost of an airfare and it is not a tax on the poor. A number of steps would be required to implement the levy, including engaging in a consultative process with the airline industry in Vietnam, and relevant tax authorities to the process. The aim of the consultative process is to obtain buy-in from the industry. VAAC and UNAIDS may consider to associate UNITAID representatives to this process, as they will be able to share detailed international experience.

If the other sources of financing are not adequate, additional fiscal space can be created through **additional borrowing**. In Viet Nam's case, the government has increased its borrowing in recent years to counter act the impact of the global financial crisis. Whilst there may be potential in the short term to raise resources for HIV and AIDS from additional borrowing, this report does not consider the option further and the projections exclude any resources from new borrowing.

It is also important to highlight the importance of **efficiency savings** and **prioritisation** where in situations where additional resources are not forthcoming. An obvious solution to underfunding, where available resources do not match identified needs (i.e. the funding gap cannot be decreased completely by alternative sources), is to prioritise funding towards those services that are the highest priority and subsequently, to withdraw funding from those services that are not considered a high priority. These types of difficult decisions are taken by every health care system at some level on a daily basis either explicitly or implicitly.

In conclusion, drawing on the summary of additional sources described above, it is possible to examine the total resources available for HIV. The airline levy is the largest revenue, representing 82% of the total innovative sources over the study period. When all the above additional resources are added to the baseline resources, it is clear that the financing gap is easily covered.

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Abbreviations

ADB	Asian Development Bank
AIDS	Acquired Immune Deficiency Syndrome
ART	Anti Retroviral Therapy
ASC	AIDS spending categories
AusAid	Australian Agency for International Development
DFID	UK Department of International Development
GFATM	Global Fund to Fight AIDS, Tuberculosis and Malaria
HCMC	Ho Chi Minh City
HIV	Human Immunodeficiency Virus
IDU	Injecting drug user
M&E	Monitoring and evaluation
MOH	Ministry of Health
MOLISA	Ministry of Labour, Invalid and Social Affairs
MSM	Man having sex with man
NGO	Non-governmental organization
NHA	National health accounts
ODA	Overseas Development Assistance
OI	Opportunistic infection
PAC	Provincial AIDS Centre
PEPFAR	President's Emergency Plan for AIDS Relief
PLHA	People Living with HIV/AIDS
PS	Provider of Services
STI	Sexually transmitted infections
FSW	Female sex workers
UNAIDS	Joint United Nations Programme on HIV/AIDS
UNDP	United Nations Development Programme

UNGASS	United Nations General Assembly Special Session on HIV/AIDS
UNICEF	United Nations Children's Fund
VAAC	Viet Nam Administration for AIDS Control
VSS	Viet Nam Social Security
WB	World Bank
WHO	World Health Organization

1 Rationale

Up until recently, scarcity of resources was not a priority in the global AIDS policy arena. On the contrary, exceptionally was successfully defended on multiple grounds (Peter Piot 2008). In a breach of conventional thinking about sustainable financing for development, the Global Fund to fight AIDS, Malaria and Tuberculosis call for proposals for example noted: "Applicants are not required to demonstrate financial self-sufficiency for the targeted interventions by the end of the proposal term."[1]

During the late 1990s and early 2000s a global political momentum to 'end poverty' gave rise to two ambitious ventures of international development assistance. The Millennium Development Project devotes one goal specifically to HIV and AIDS, and the Global Fund to fight AIDS, Malaria and Tuberculosis was set up with the single purpose to make progress on three of the most important public health crises worldwide. However, the political commitments have not fully materialised and ODA has increased by less than anticipated since the UN Conference on Financing for Development in Monterrey, in 2002[2]. In the aftermath of the 2008 financial crisis many low and middle income countries wonder if, and how, donor countries will maintain the aid levels they committed to.

Meanwhile, the success of ART programmes has contributed to the understanding that AIDS programmes and particularly ARV treatment create a life-long entitlement of HIV positive citizens on their governments. Governments, especially those in high HIV prevalence countries, therefore bear an important responsibility to meet these needs.

The HIV epidemic in Viet Nam remains concentrated among key populations at higher risk: people who inject drugs (PWID), female sex workers (FSW) and men who have sex with men (MSM). According to 2011 sentinel surveillance, HIV prevalence among PWID and FSW remains high, at 13.4% and 3% respectively; IBBS data indicate that prevalence among men who have sex with men (MSM) also remains high, at 16.7%. The distribution of HIV cases largely follows the distribution of these three populations, which are heavily concentrated in urban centres (though they are not absent in non-urban communities). Overall adult HIV prevalence (ages 15-49) remained at 0.45% in 2011.

The National AIDS Spending Assessment (NASA) 2008–20092010 estimated that Viet Nam spent US$ 96.2 million, US$ 127,8 million and US$ 137.4 million in 2008, 2009 and 2010 respectively on HIV/AIDS, the bulk of which (~74%) was from international sources.

The 2008-2009 UNGASS report and Global AIDS progress report of Vietnam 2012 highlights that the significant scale up of prevention and treatment activities in the last two years is a consequence of extensive donor support. The report also recognises that as Viet Nam approaches middle income country status this external financial support begin reducing their resource in Vietnam The UNGASS report identifies the maintenance and expansion of ART and MMT programmes as a challenge that requires urgent attention and concludes that, *"experiences over the past two years indicate that development partners should: (1) advocate for more domestic resources to be allocated to the HIV response, (2) ensure their programs align with national priorities and other sectors, and (3) support better multisectoral coordination and planning."*

[1] Gorik Ooms, Wim Van Damme, Brook K Baker, Paul Zeitz and Ted Schreker (2008). "The 'diagonal' approach to Global Fund financing: a cure for the broader malaise of health systems?" Globalization and Health **4**(6).

[2] Global development finance (2008). Financial flows to developing countries: recent trends and prospects, The World Bank Group.

The objective of this work is to explore how the Government of Viet Nam can approach long term financing for AIDS. We start from the resource needs to finance the response, which we project up to 2020. We then extrapolate over the same period the available resources in a 'baseline' scenario that does not consider any additional financing sources, nor any major changes in existing sources. This yields a first 'baseline resource gap', the difference between resource need and resource availability. We then consider a number of strategies that can generate additional resources for AIDS. These were identified through discussions with stakeholders in Viet Nam. This allows us to compute a second 'resource gap' which now takes into account the additional resources. We then examine the efficiency of Viet Nam's AIDS response and whether savings can be made in the resource needs. In a before last section we carry out a sensitivity analysis to provider upper and lower boundaries around the estimated extrapolations. We then highlight some priority challenges in service delivery which will need a strategic reply in light of donors retreating. A last section sets out a 'road map' to manage the transition from the current to the future 'financing strategy for HIVAIDS'. The objective of this proactive management strategy is to maintain Viet Nam's response to combating HIV/AIDS in light of major shifts in sources of funding.

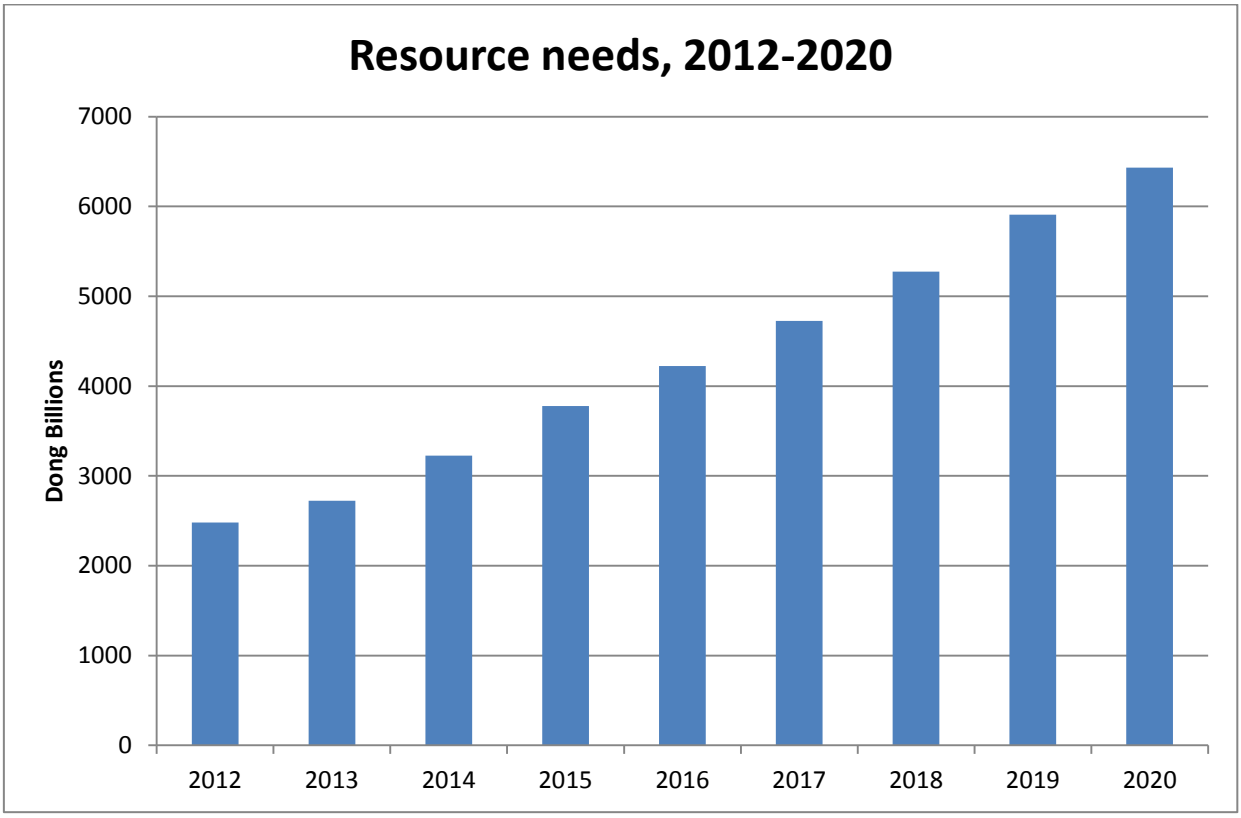
2 Resource Needs, 2012-2020

In this section we estimate the financial resources needed for the AIDS Response in Viet Nam from 2012 until 2020.

The assessment methods used by VAAC focus on the identification of numbers within each target group; current coverage rates; calculation of HIV/AIDS programme costs and changing assumptions relating to scaling up over the period 2012-2020. The estimates provided by VAAC are fixed in real terms (2010 prices).[3] For the purposes of our analysis, it is necessary to convert them into nominal terms. This is done using data from the macroeconomic framework, discussed in Section 3 below.

Figure 2.1 below presents the nominal resource needs for 2012-2020. Table 2.2 provides more detail of the needs, broken down by care and treatment, prevention and harm reduction, monitoring and evaluation, and capacity building.

Figure 2.1 Resource Needs, 2012-2020, VND billions



Source: VAAC estimates, converted to nominal prices.

Figure 2.2 shows that ART programmes (29.8%) and methadone programmes (20.4%) represent the largest needs, followed by public education (13.6%) and PMTCT (12.4%).

[3] See Annex B for VAAC needs assumptions

Resource needs by HIV/AIDS programme in Nominal Prices, VND Billions, 2012-2020

Programme	2012	2013	2014	2015	2016	2017	2018	2019	2020	Total
ART, VL	658	781	920	1079	1237	1417	1618	1841	2087	11637
PMTCT	393	423	451	483	516	551	591	631	676	4715
VCT	116	165	215	275	311	357	400	457	478	2774
Condom	109	114	118	124	134	148	160	177	184	1268
Needle / syringes	184	206	222	247	267	296	320	353	368	2464
Methadone treatment	215	394	583	808	928	1083	1225	1411	1474	8121
Public education	370	413	458	509	564	623	688	759	839	5222
M&E	73	69	88	85	104	101	123	118	162	922
Capacity Building	363	158	171	170	165	147	150	160	164	1647
Total	**2,481**	**2,723**	**3,226**	**3,778**	**4,225**	**4,724**	**5,274**	**5,909**	**6,432**	**38,771**

Source: VAAC estimates, converted to nominal prices

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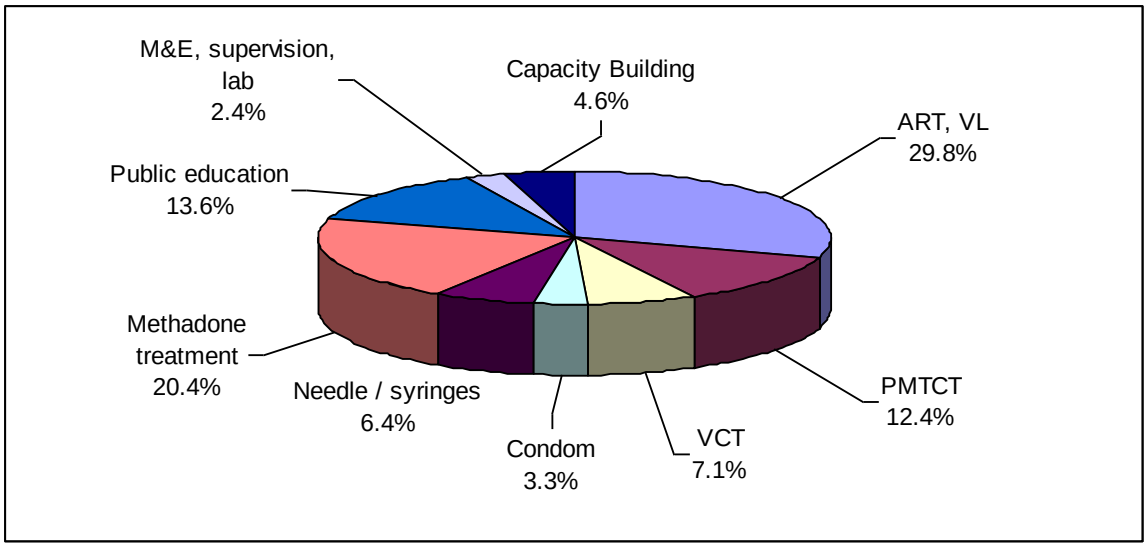
Figure 2.2 Breakdown of resource needs, by programme, 2012-2020



Source: Adapted from VAAC estimates

3 Macroeconomic Context

Underlying any assessment of resource availability is the macroeconomic context within which the HIV/AIDS effort operates. The analysis presented in this work is supported by a macroeconomic framework ensuring consistency in the projections and capturing some of the interactions between HIV and AIDS spending and the economy. Annex C provides the detail of the approach taken to the macroeconomic framework. In this section we describe the application of the framework to Vietnam, and, in doing so, describes the macroeconomic context within which the HIV/AIDS pandemic must be addressed.

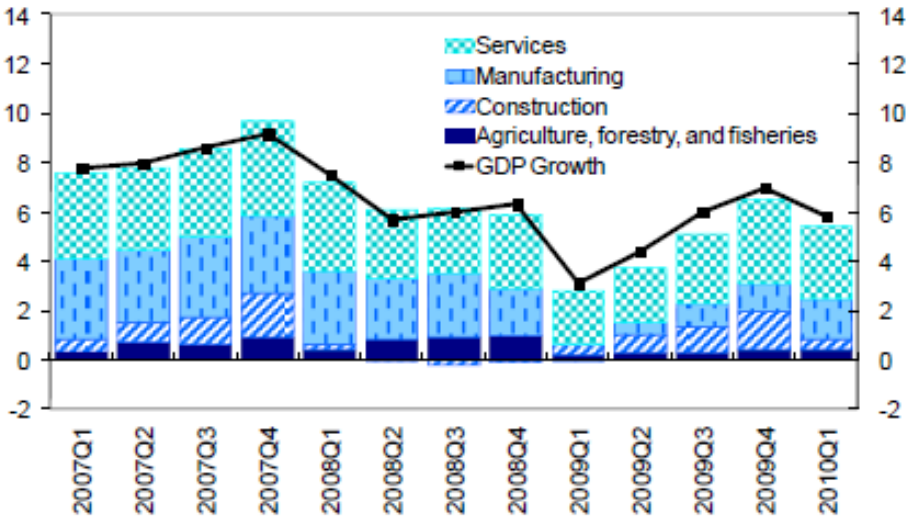
By developing the macroeconomic context in this manner, it is possible to quantify the size of the available resources under both a baseline scenario and one with alternative funding mechanisms (explored later in this paper). The macroeconomic performance of the country also places an inherent cap on any domestically generated resources for HIV and AIDS and therefore is important for determining the plausibility of the total HIV/AIDS funding availability identified in this report.

We describe the composition of the Viet Nam economy and its performance in the short term. It goes on to look at the IMF projections for the medium term and applies the framework described above to paint a scenario for longer term macroeconomic performance.

3.1.1 Short Term

Viet Nam has experienced strong growth in recent years. As demonstrated in Figure 3.1 below, services and, to a lesser extent, manufacturing have been the major sources of growth.

Figure 3.1 Contribution to Growth (Percent of GDP)



Source: Vietnam, General Statistics Office.

Viet Nam experienced a slowing of growth in 2008 and 2009 as a result of the global financial crisis. However, this was successfully offset by an expansionary fiscal policy from the government and a loose monetary policy. As growth has been restored, the government has sought to reduce the deficit and restore stability.

The effects of the global financial crisis has resulted in a significant reduction in reserves, falling to just 2.2 months of import cover in 2009, accompanied by a depreciation in the

exchange rate. As the government reduces its fiscal deficit and the current account deficit improves, it is anticipated that reserves will increase and the depreciation in the exchange rate will slow. Real GDP growth is also expected to increase to 6.8% in 2011.

3.1.2 Medium Term

The medium term projections are draw from the most recent IMF Article IV review, which provides all the necessary information on the different sectors of the economy. The macroeconomic framework therefore envisages that growth will rise from 6.8% in 2011 to 7.5% in 2015. Tax revenues are expected to remain stable at approximately 23.4% of GDP. Non-tax revenues and grants are also expected to be stable at 3.8% and 0.3% of GDP respectively.

Government expenditure is expected to decline slightly as the government continues to seek to reduce the deficit. Total government expenditure will fall from 31.5% of GDP in 2011 to 30.7% in 2015, primarily through declines in current expenditure. Capital expenditure remains constant around 6.6% of GDP.

The fiscal deficit is consequently reduced from 4.3% of GDP in 2011 to 3.3% of GDP in 2015. The deficit is anticipated to be financed primarily from external debt, with no return to the large domestic borrowing that was used to finance the fiscal expansion in 2009 and 2010. As a consequence, public debt remains stable around 50% of GDP, though with an increase in the proportion of external debt, relative to domestic debt.

In the external sector, the current account improves from a deficit of 8.1% of GDP in 2011 to 4.5% of GDP in 2015. This allows for a gradual re-accumulation in reserves, which had fallen to just 2.1 months of imports in 2010, to 3.2 month in 2015. In the monetary sector, inflation is expected to stabilise at 5% from 2013 onwards. The velocity of money is expected to be stable at 0.68.

3.1.3 Long Term

Projecting economic variables over the long term is necessarily a matter of speculation. This is particularly the case with the exercise being undertaken here, where macroeconomic figures are required as far into the future as 2020. The following sections set out the assumptions used in the macroeconomic framework, which in turn is used to produce the scenarios for HIV and AIDS expenditure discussed below.

From 2016, real GDP growth is assumed to be 7.2% per annum, which is the average growth of the previous 5 years and slightly below the outer year projections of the IMF. The GDP deflator is assumed to be 5.7%, which is equal to the IMF estimate for 2015 and reflects the end of a downward trend from 2010 onwards.

Tax revenue (excluding any new measures for HIV/AIDS) is assumed to remain constant at 23.3% of GDP. Again, this is in line with that anticipated by the IMF for 2011-15. Non-tax revenue is assumed to remain as a constant proportion of GDP (3.8%) and grants are expected to remain constant in US$ terms from 2015 onwards.

Government current expenditure, excluding interest costs, is assumed to remain constant at 19.5% of GDP, equal to the average of the previous 5 years. This does not include additional expenditures associated with the HIV and AIDS mechanisms described in this note. Government capital expenditure will also be constant at 6.6% of GDP. The fiscal deficit therefore remains constant at 3.5% of GDP.

The exchange rate is expected to depreciate at 3% per year, equal to the IMF projections for depreciation in 2012-15.[4] The trade deficit is assumed to be constant at 6.4% of GDP and the current account deficit is also constant at 4.5% of GDP, both equal to the IMF projections for 2015. In the monetary sector, the velocity of money is assumed to be constant.

The following sections describe how the various resource mobilisation mechanisms for HIV and expenditures are impacted by the scenario set out above. In Section 8, we carry out a sensitivity analysis and examine the impact of variations in these assumptions on the resources available for HIV.

[4] The IMF does not formally publish exchange rate projections in its Article IV report, but estimates can be derived from figures elsewhere in the report.

4 Baseline Scenario

In this section we estimate the available resources for HIV under the baseline scenario (i.e. without any additional resources). Drawing on the resource needs set out above, we then examine the AIDS financing gap – the difference between the resource needs and the available resources. The baseline scenario applies conservative assumptions for extrapolation of the available resources through to 2020.

4.1 Financial resources available

Table 4.1 presents expenditures for HIV/AIDS in 2008 and 2009, as included in the NASA. This table shows that approximately 13% of resources came from public sources, with the majority of the remainder (74%) coming from international sources.

NASA HIV/AIDS expenditure estimates, 2008-2009, US$ millions

Source	2008	2009	Total 08-09
Public	**13,459,880**	**17,176,061**	**30,635,941**
- Central government budget	6,832,580	6,737,254	13,569,834
- Provincial government budget	6,627,300	10,438,807	17,066,107
Private	**16,014,322**	**16,036,518**	**32,050,840**
- For-profit entities	82,581	144,812	227,393
- Household funds	15,931,741	15,891,706	31,823,446
International	**66,734,575**	**94,161,906**	**160,896,481**
- Direct bilateral contributions	48,552,930	70,785,002	119,337,932
- Multilateral agencies managing external resources	17,849,999	22,975,234	40,825,232
- International not-for-profit organisations and foundations	331,646	401,670	733,317
Total	**96,208,777**	**127,374,483**	**223,583,261**

Source: UNAIDS (June 2011)

4.1.1 Household spending on HIV/AIDS prevention, treatment and care

Recent studies from Viet Nam show that the presence of a PLHA can have multidimensional effects on the total household health expenditure. Inevitably, expenses for health care for the PLHA tend to increase total household expenditure on health-related items. Other household members, especially in households that are poor or otherwise financially limited, may have to sacrifice part of their own health care expenses for the infected person. A study by UNDP / AusAID(2005)[5] reported that total health care expenditure for households with a PLHA was found to be 13 times higher than the average household's health spending in Viet Nam.The same report found that most households with a PLHA, except for the richest 20 percent, will fall below the poverty line. The poorest 40 percent of households with a PLHA will in addition fall below the food poverty line as a result of the expenditure and income effects of HIV/AIDS.

[5] Impact of HIV/AIDS on Household Vulnerability and Poverty in Viet Nam, Report of the UNDP-AusAID supported Project – VIE/ 98/ 006, August 2005

A more recent study initiated by the UNDP in 2009 highlights differences in income by quintile for HIV-affected and non-affected households (Table 4.2).[6][7]

Average annual household income in HIV-affected and non-affected households by quintiles (Unit: million VND)

Income quintile	HIV-affected household	Non-affected household
Poorest	8.42	12.44
Second	25.84	40.24
Third	40.72	53.67
Fourth	61.75	78.17
Richest	178.17	233.74
All groups	66.04	84.29

Source: Strategic Consultancy Company Limited in consortium with Medical Committee Netherlands - Vietnam (2009)

A further study by Hammett, T et al (2010)[8] explored the health seeking behaviours of people living with HIV/AIDS (PLHA) and their OOP health expenditures. It found that rates of health service utilization were much higher for PLHA than among the general population. Furthermore the study found that in the 12 months prior to the survey PLHA spent a mean of VND 1,140,000 (~$US65) on out-patient appointments and VND 1,023,000 (~$US58) on hospitalisation (both items excluding transport costs).[9] The bulk of expenditures (83%) for out patient consultations are spent on "extra drugs", "opportunistic infections" and for hospitalisation; 84% is spent on "direct fees" to the facility. Out of pocket spending on ART was minimal. Of specific interest for the future section of this report on the role of health insurance (HI), Hammett et al's study found that health expenditures by those with HI are only slightly lower than by those without HI; Those with HI spent slightly less on outpatient care but slightly more on inpatient care.

It is important to note that for the purposes of our analysis, private funds do not include out-of-pocket expenditure by households. Though data was included in the NASA, and is shown in the table above, this has been excluded from our analysis elsewhere in this report. Gathering accurate data on out-of-pocket expenditure is notoriously difficult. Furthermore, out-of-pocket expenditure can be seen as a residual, to the extent that if needs are not met by international, public or private sources then out-of-pocket expenditure will – in some cases only – fill the gap. It was therefore decided to exclude it from the analysis. As such, to the extent there is a difference between resource needs and resources available (discussed below), the gap represents a combination of (i) those needs that are met from household out-of-pocket expenditure and (ii) those needs that go unmet for lack of resources.

[6] Socio economic impacts of HIV/AIDS on household vulnerability and poverty in Vietnam Strategic Consultancy Company Limited in consortium with Medical Committee Netherlands - Vietnam (2009)

[7] This association in itself does not prove that households become poor because of health. The information on out-of-pocket expenditure suggests, however, that there is a causal relationship.

[8] Hammett, T et al. Survey of People Living With HIV/AIDS Health Services Utilization and Out-of-Pocket Expenditures, Abt / HPI PowerPoint Presentation Hanoi, January 2010,

[9] A mean exchange rate of VND 17,500 to $US 1 is used to reflect 2009 prices. The authors of the study highlight a wide variation in the expenditures paid at both outpatient and hospital level.

4.1.1 Projecting baseline resources to 2020

In order to derive estimates of resource availability going forward, we make a number of assumptions for the three sources of financing, namely international, public domestic and private resources.

For international resources, VAAC has explored future national and international committed funds for the period 2012 to 2020. The Global Fund provides a significant contribution – US$125m - over the period 2012-2015. Unlike the VAAC estimates, we extrapolate this further to 2020 by assuming continued contributions from the Global Fund (at the same annual amount). This may be an optimistic assumption but provides a figure for discussion.

For PEPFAR, we take the VAAC projection for funds, contributing US$52m over 2012-2020. The World Bank and HARP are also included, though there are no commitments beyond 2014.

Table 4.3 shows the amount of international resources under the baseline scenario – using VAAC estimates and adding additional resources from the Global Fund over the period 2016-2020.

International resources for HIV/AIDS, 2011-2019 (US$m)

Source	2012	2013	2014	2015	2016	2017	2018	2019	2020	Total
Global Fund	24.8	31.9	34.5	24.2	10.0	5.0	2.5	0.0	0.0	132.8
World Bank	2.2	0	0	0	0	0	0	0	0	2.2
PEPFAR	69.8	59.8	49.8	39.8	29.8	19.8	9.8	0	0	278.6
HARP	2.1	2.1	2	0	0	0	0	0	0	6.2
Total	98.9	93.8	86.3	64.0	39.8	24.8	12.3	0.0	0.0	419.8

Source: VAAC estimates / author assumptions regarding Global fund resources

For private sources, it should be noted that the 2008-2009 NASA estimated that over 14% of HIV/AIDS funding was sourced from private households. As discussed above, this is likely to be out-of-pocket expenditure, which we exclude from the analysis. We therefore just take the limited amount from for-profit entities in the NASA and extrapolate it forward by retaining it as the same proportion of GDP.

For domestic public financing we assume the same proportion of government expenditure is allocated to HIV expenditure as that of 2008 and 2009. Taking an average across these years, 0.1% of discretionary current expenditures were budgeted for HIV/AIDS and this assumption is continued through to 2020. In this case, discretionary expenditure is determined by taking total current expenditure and excluding interest costs and externally financed HIV expenditure. Interest costs are a government obligation and clearly cannot be diverted to HIV expenditure. Externally financed HIV expenditure is the same as on-budget expenditure, discussed above, and is therefore removed to avoid double counting.

Clearly, the above assumptions are linked to the macroeconomic framework. External flows must be converted using the exchange rate and domestic flows will be determined by nominal GDP growth and the size of current expenditure as a share of GDP. In this way, the macroeconomic framework ensures a consistent underpinning to these independent assumptions.

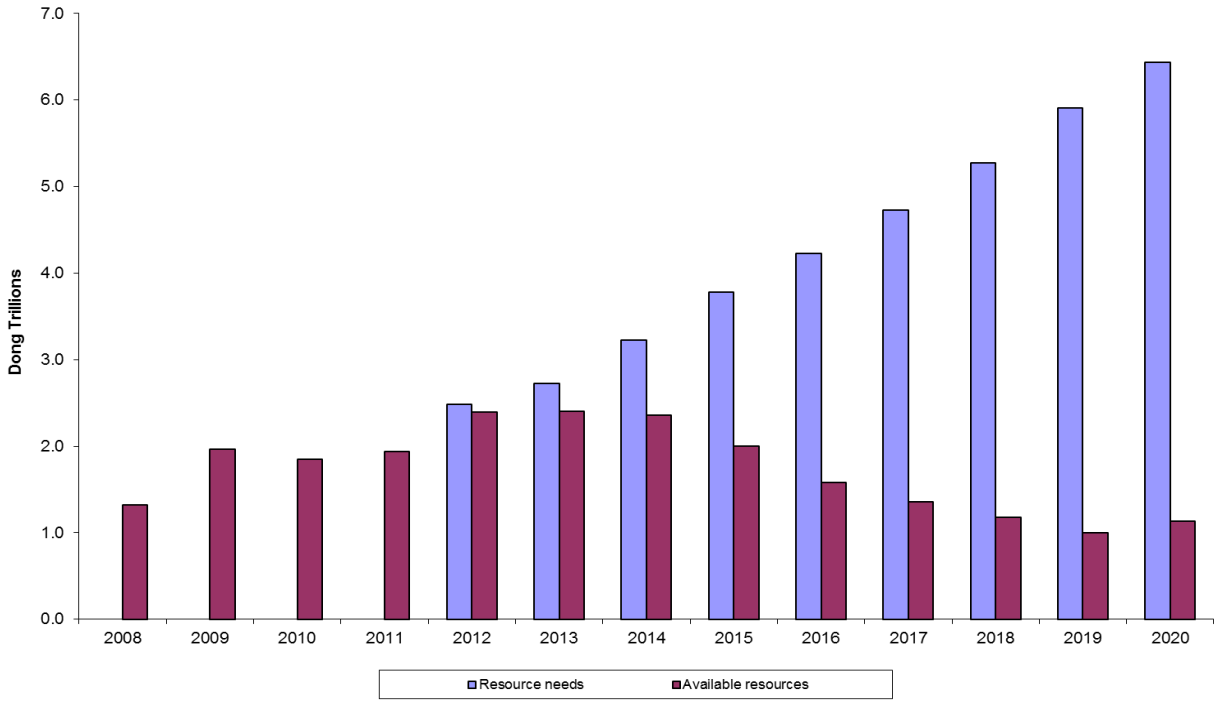
4.2 HIV/AIDS Financing Gap

Using the information above, Table 4.4 extrapolates the resources available from public, private and international sources through to 2020. The resource gap widens over the study period.

Baseline Resources and Financing Gap for HIV/AIDS 2008 – 2020 (Dong Trillions)

	Public sources	Private sources	International sources	Total	Resource needs	Financing Gap
2008	0.22	0	1.1	1.32		
2009	0.27	0	1.69	1.96		
2010	0.33	0	1.52	1.85		
2011	0.37	0	1.57	1.94		
2012	0.41	0	1.98	2.39	2.48	0.09
2013	0.47	0	1.93	2.4	2.72	0.32
2014	0.53	0	1.83	2.36	3.23	0.87
2015	0.6	0	1.4	2	3.78	1.78
2016	0.68	0.01	0.89	1.58	4.23	2.65
2017	0.77	0.01	0.57	1.35	4.72	3.37
2018	0.87	0.01	0.29	1.17	5.27	4.10
2019	0.99	0.01	0	1	5.91	4.91
2020	1.12	0.01	0	1.13	6.43	5.30

Figure 4.1 Resource Needs and Available Resources - Baseline, 2008 - 2020



Comparing the available resources with the resource needs presented earlier, we see that there is a shortfall in funding (known as the “financing gap”). This shortfall increases from VND 0.09 trillion in 2012 to VND 5.3 trillion in 2020.

The remainder of this report examines options to fill this gap by looking at alternative sources of finance.

5 Alternative Sources of Financing

The financing gap under the baseline scenario averages 0.06% of GDP between 2012 and 2020 (see previous section).

In this section we explore a range of alternative financing options that increase the fiscal space for HIV/AIDS expenditures.

The mechanisms explored in the case of Viet Nam include:

1. Social Health Insurance
2. Public Sector Mainstreaming
3. Private sector contributions
4. Airline levy
5. Additional borrowing
6. Prioritisation of HIV/AIDS funding
7. Improving efficiencies in HIV/AIDS programmes

This section focuses on Options 1 to 6. Option 7 is considered in Section 6.

5.1 Social Health Insurance

5.1.1 Rationale

Social Health insurance is a particularly attractive health financing modality. It converts out-of-pocket expenditure for health into pooled funding for health, thus increasing accessibility to health services and equity both in access and financing in the health system. SHI doesn't imply that all health services should always be free to all. User co-payments can be implemented to control usage levels of care. Or higher income groups can be targeted for higher contributions. But an assessment on a case by case must be made whether co-payments don't exclude some population groups from using health care services. Especially in the case of HIV and AIDS it is important that the level of personal care individuals enjoy is high enough to have positive spill over effects in terms of epidemiological control. High co-payment levels could discourage individuals from buying levels personal care which would be desired from an epidemiological point of view.

A country cannot claim to have universal coverage if the population affected by HIV is not covered, or if the services such as voluntary counselling and testing (VCT), prevention of mother-to child transmission (PMTCT) or antiretroviral therapy (ART) are not included in the service coverage, or indeed if the cost coverage of these services is low.

This section considers the future potential role of health insurance in covering a proportion of the HIV/AIDS funding gap in the future. There may be scope to cover ART treatment as this is currently included in the SHI reimbursement list. To date, donor funds have been used to cover the bulk of ART treatment. The SHI is therefore currently playing a small role in funding HIV/AIDS programmes.

5.1.2 International Practice

In high-income countries, most curative HIV/AIDS interventions and treatments are paid by SHI schemes, although it should be pointed out that in such countries SHI schemes tend to collect high revenues and have relatively low HIV prevalence rates. However, even middle-income countries with much higher infection rates – such as Brazil, Mexico and Thailand – have demonstrated that tax-based contributions can – together with SHI – play a major role in financing HIV/AIDS services. Brazil's SHI programme, for example, annually provides over US$300 million in financing to HIV/AIDS programmes (Rompel, M, 2005), and Taiwan has provided all HIV-infected citizens with free access to HAART through the National Health Insurance program since 1997 (Fang et al., 2004). According to estimates by the Taiwan DOH's Bureau of National Health Insurance, the money spent just on medication for HIV-infected people in the year 2000 alone came to 500 million New Taiwan Dollars (NT$) (US$14 million). This constitutes an average expenditure of NT$350,000 (US$10,000) per case, or 100 times the average yearly expense of medical treatment for a citizen in Taiwan.[10] In Thailand, the National Health Insurance Act, promulgated in 2002, endorses the policy of universal healthcare coverage. Equal entitlement to health has been introduced for vulnerable populations which includes people with HIV/AIDS. The National Health Insurance Bureau is required to support medical care for Thailand's people living with HIV/AIDS.

A review of health insurance and HIV/ AIDS in 65 countries by Doetinchem, et al. (UNAIDS, 2010) concluded the following:

1. There is no inherent characteristic that makes explicit health insurance more or less suited for covering HIV-related services.

2. Countries providing HIV services through health insurance are either i) those with a functioning health insurance system in place, like Latin American or Eastern European countries where HIV-related services are simply added to the benefit package; or ii) those that are in the process of bolstering health insurance to become dominant within the landscape of coverage mechanism in the country. Examples are Ghana or Rwanda.

3. Political commitment is essential for the inclusion of HIV services in any coverage mechanism. Yet, financial feasibility also needs to be taken into account and in some countries external funding or revenues from taxation may be needed to subsidise HIV coverage.

4. Explicit insurance systems do not offer a panacea for HIV-service coverage, but that existing ones may be considered as options for extending HIV-coverage - whether in the cost, service or population coverage dimension, or in all three.[11]

Bitran et al. (2010) argue that if insurance already exists and covers a significant share of the population, then HIV and AIDS services should be incorporated. This is provided that enough financial resources are available to make it feasible. In cases of low insurance coverage, expecting providers to cover HIV and AIDS services into the benefit package immediately will be premature.[12]

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[10] "Taiwan," Fighting a Rising Tide: The Response to AIDS in East Asia; (eds. Tadashi Yamamoto and Satoko Itoh). Tokyo: Japan Center for International Exchange, 2006, pp. 226-246.

[11] Ole Doetinchem, Erik Lamontagne and Robert Greener, Health insurance and AIDS: a review of experiences, UNAIDS, 2010

[12] Bitran et al. The role of health insurance in the fiscal and financial sustainability of HIV/AIDS programs in low and middle-income countries, http://www.heard.org.za/downloads/erg-meeting-7-bitran.pdf, 30 September 2010

5.1.3 National Practice

Social Health insurance (SHI) in Viet Nam is entitlement-based. The *Law on Health Insurance No. 25/2008/QH12* and its implementing decrees and circulars removed the diagnosis and treatment of HIV from the list of exceptions for health insurance coverage (UNGASS Report, 2010).

The insured population is covered on a compulsory or voluntary basis. The scheme currently covers approximately 51.7 million people and there are plans to move towards universal coverage by 2015 (OPM, 2011). The SHI scheme defines 5 groups, incorporating 32 sub-groups. Data from the VSS shows that the majority of those who are currency uninsured are defined as working in the informal sector, relatives of employees, the near poor, enterprise workers or pupils and students.

Viet Nam is looking to social health insurance as a potential source of funding to close the gap between need and available funds. Health insurance is free for children under six. This includes children living with HIV. In 2009, VAAC issued 803 health insurance cards to children aged 6-15 who were living with HIV which entitles them to free treatment and care (UNGASS Report, 2010).

Many HIV/AIDS patients are unemployed or working in the informal sector. In one study 68% of HIV/AIDS patients interviewed stated that they were unemployed (Nguyen, 2000). The Ministry of Labour, Invalids and Social Affairs estimated that there were around 48,000 FSW in the whole country in 2004 (Nguyen et al. 2008).

Table 5.1 provides a summary of the number of enrolled population, revenues collected, expenditures and balance for the period 2006-2010. In 2010 58.6% of the population were enrolled in either the compulsory or voluntary scheme. Approximately 36.5 million people are uninsured.

Summary of health insurance coverage and financial position, 2006-2010

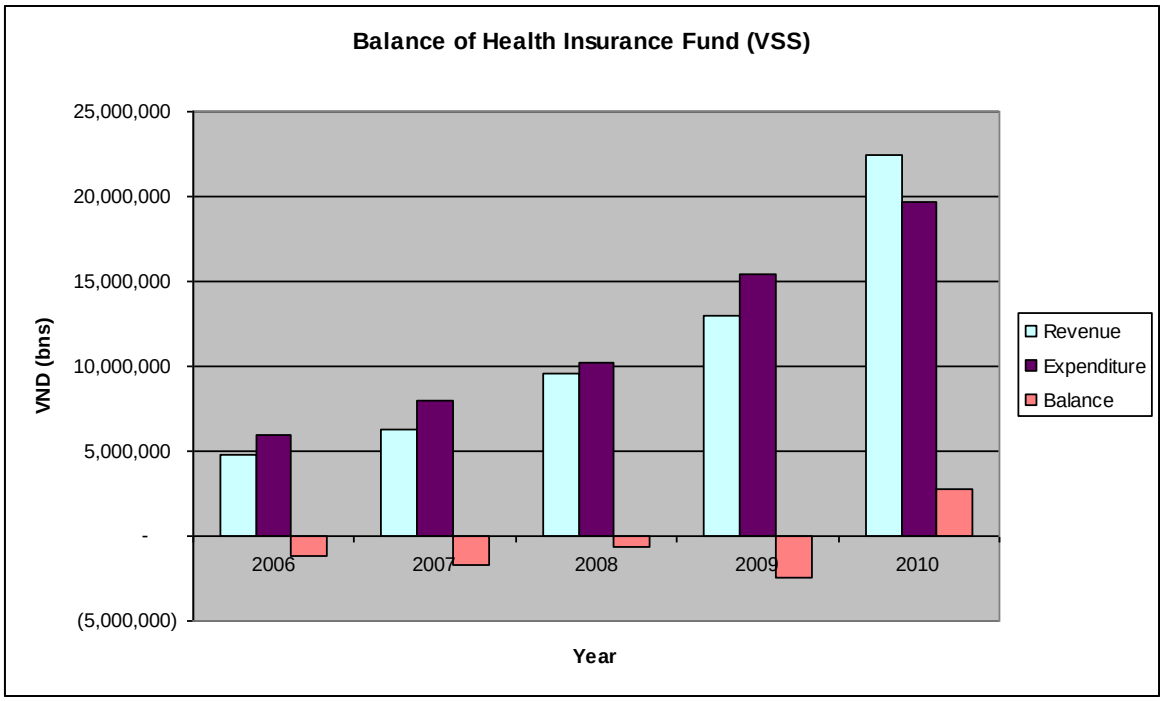
Year	*Population*	*Enrolled*	*% enrolled*	*Revenue*	*Expenditure*	*Balance*
	Mns			VND (bns)		
2006	84.1	36.8	43.8%	4,812	5,940	-1,128
2007	85.1	36.4	42.8%	6,284	8,028	-1,744
2008	86.1	39.7	46.1%	9,608	10,231	-623
2009	87.2	50.0	57.3%	12,981	15,396	-2,415
2010	88.2	51.7	58.6%	22,414	19,656	2,758

Sources: VSS (2011), population figures from http://www.indexmundi.com

A review of the annual VSS SHI balance sheet – the difference between revenues and expenditures – shows that between 2006 and 2009 the insurance fund was operating at a loss (Figure 5.1). This was reversed in 2010 with the fund achieving a surplus – because premium increased from 3% to 4.5% of salaries and coverage of school children was changed from voluntary to compulsory status. The mean per capita revenue collected in 2010 was 344,456 VND (VSS, 2011).[13] This per capita figure is calculated by dividing the total revenue collected in 2010 by the number of insured and will be used in subsequent tables.

[13] The figures provided by VSS exclude their administration fees (10%) for managing the insurance fund.

Figure 5.1 Health Insurance Fund Balance sheet, 2006 - 2010



Source: VSS, 2011

There are plans to move towards universal health insurance coverage for the whole population by 2015. Given the difficulties in enrolling groups such as the informal sector and the near poor, if universal coverage is to be pursued substantial additional funding would be needed to realise this goal.[14]

5.1.4 Estimate of revenues from Social Health Insurance

This section explores the potential for social health insurance to fund some of the funding gap. For illustration, we consider the potential for VSS to cover the costs of ART for PLHA who are enrolled in the health insurance scheme. ART is covered by the VSS; however as donor funding currently pays for these medicines funding it is unlikely that the VSS provides much funding for ART. In future years the decrease in donor funding for ART could require an increased level of VSS commitment to funding this programme activity.

A recent study found that 33% of people living with HIV/AIDS were enrolled in the health insurance scheme (HPI, Jan 2010). It is anticipated that the policy goal of moving towards universal coverage will result in increasing numbers of individuals at risk and PLWA being enrolled and subsequently entitled to insurance benefits.

Table 5.2 presents VAAC estimates of the number of patients who will be eligible for ART treatment between 2012 and 2020. The same table also provides an estimate of the number of these patients who would be covered by VSS. Following recent changes in VCC coverage policy, the assumptions made in this tale are: (i) that at any given time 70% of those eligible for ART receive ART and (ii) 100% of those receiving ART are covered by the VSS.

[14] The costs of subsidising universal coverage via increased government subsidies have been estimated in a recent World Bank study (Liebermann and Wagstaff, 2009). The authors argue that universal coverage could be achieved by increasing the fiscal deficit (3.8% of GDP to 4.4% of GDP (2007)).

Projection of ART patients enrolled in SHI, 2012-2020

Year	Eligible ART patients	Number of eligible ART patients that receive ART	Cost per patient (Dong Mn)	Available Resources (Dong Trillion)
2012	73,000	51,100	8.8	0.45
2013	84,000	58,800	9.3	0.55
2014	95,000	66,500	9.8	0.65
2015	105,000	73,500	10.4	0.76
2016	110,000	77,000	11	0.85
2017	115,000	80,500	11.6	0.93
2018	120,000	84,000	12.2	1.02
2019	125,000	87,500	12.9	1.13
2020	130,000	91,000	13.7	1.25

Source: VSS estimates, author calculations

The mean annual cost of ART, according to VAAC, is approximately US$ 370 in 2010 prices. Converting this cost to Dong and allowing for inflation, the VSS could contribute VND 450bn in 2012. Assuming an increase in the costs of ART over the period 2012-2020 the available resources would be VND 7.59 trillion in total.

The impact on health insurance sustainability is less clear. As can be seen in Table 5.1 above the VSS was in deficit for 4 out of the past five years. However, in 2010 the VSS reported a surplus of VND 2,758bn; therefore assuming this level of surplus is maintained the figure of VND 192bn in 2012 represents only 16% of the surplus.

5.1.5 Recommendations and next steps

The movement towards universal coverage will witness an increase in the numbers of PLHA enrolled within the SHI scheme. In the absence of other funding sources for ART the ability of the VSS should be explored further to establish whether it is in a position to cover ART therapy. This will depend on competing demands (VSS priorities) and available funding.

For VSS to concretely expand the benefit package to AIDS related services, the following steps must be taken, not necessarily in sequential order:

Stakeholders must reach a consensus about the principle that VSS will increasingly cover AIDS related health services when donors phase out. Such an agreement will require a consultative process involving not only technical stakeholders such as VAAC and VSS, but also the Ministry of Finance, the Prime Minister's Office and Parliament. An agreement on the principle should be translated in a change to the legislative and/or regulatory framework regarding VSS benefit package.

A detailed actuarial analysis must be carried out to obtain more precise estimates of the number of PLWHA who will be covered by VSS over time, and the precise AIDS related benefits they will be entitled to under VSS. In the analysis above ARV was taken to illustrate the potential of VSS for AIDS financing. However, a complete list of possible HIV and AIDS services, drugs and commodities must be elaborated and considered for coverage by VSS. Actuarial scenarios including changes in premium should be drawn up.

It will be important to understand how the transition from donor funding to VSS coverage takes place. Ideally there is a seamless transition from donor funding to VSS coverage. This will require detailed planning with donors. It remains to be seen whether donor funding is sufficiently predictable to allow for a smooth transition. This requires a consultative process with donors. A formal Aide Memoire should be drawn up when agreement is reached. If such an agreement is not possible, then an alternative arrangement with the Ministry of Finance should be reached to buffer any financing gap in the transition from donor funding to VSS coverage.

It is expected that some proportion of PLWHA will not be covered by VSS in the next decade. It is important to ensure, and anticipate, that this group will receive access to adequate HIV and AIDS services. The danger is that in the transition from donor funding to VSS coverage, this group sees itself cut off from services.

5.2 Public sector mainstreaming

5.2.1 Rationale

Mainstreaming, as defined by UNAIDS is “a process whereby a sector analyses how HIV and AIDS can impact it now and in the future, and considers how sectoral policies, decisions and actions might influence the longer-term development of the epidemic and the sector”. It is not about imposing HIV activities where they are inappropriate but is instead of ensuring that those who understand the sector take responsibility for contributing to the national AIDS response (UNAIDS, 2005).

The process of mainstreaming HIV/AIDS into a sector involves first analysing how HIV/AIDS impacts on the sector now and in the future, both internally and externally and then determining how the sector should respond based on its comparative advantage. Mainstreaming actions can be in the form of policies or practices that reduce vulnerability of staff or support to those staff living with or impacted by HIV/AIDS – this is known as “internal mainstreaming”. Alternatively, mainstreaming actions could mean that prevention, treatment and support activities are developed to the benefit of the sector’s target group or clients – this is known as “external mainstreaming”. In the education sector for example, internal mainstreaming might mean that support and care is offered to HIV positive teachers whereas external mainstreaming could be in the form of behavioural change and communication (BCC) for pupils.

One tangible means of public sector mainstreaming is to make it compulsory for each ministry to allocate a budget for HIV/AIDS activities both in the workplace and as part of its operations. It is this kind of policy that we explore in this section.

After having taken note of the details of this option the Government of Vietnam has decided not to pursue this option as a priority. Notwithstanding we keep this section in for information, and in case it may become important to review this decision.

5.2.2 International Experience

Most countries with generalised AIDS epidemics have multisectoral AIDS policy in place. Multisectorality, by definition, implies mainstreaming: all agencies covered by the policy, public as well as private, engage in addressing the epidemic. International practice with mainstreaming in this sense is therefore widespread.

The literature relating to mainstreaming within the south East Asia region is limited. In sub-Saharan Africa however the mainstreaming literature reports some interesting initiatives which

should be highlighted. For example Swaziland and Lesotho have established a regulatory framework which seeks to ensure that public agencies effectively contribute a fixed percentage of their 'budget allocation' to HIV and AIDS. In Swaziland the Government has issued a decree which recommends that public bodies devote 2% of their budget to workplace policies for their staff. The Public Sector HIV and AIDS Coordination Committee (PSHACC), which regroups the under-secretaries of the public bodies concerned, oversees the policy. Only recently a Secretariat and a Public Sector HIV and AIDS Workplace Policy have been instated which is expected to give impetus to this initiative. However, at present very few public bodies reportedly devote up to 2% of resources to workplace policy. With total public expenditure standing at US$ 1.3 billion in 2008/09, 2% would amount to US$ 26 million, which is about 30% of the total resources for AIDS in Swaziland in 2008/09.

In Lesotho the Government had a similar policy in place that recommended public bodies to spend up to 2% of their budgets internal mainstreaming i.e. through workplace policies for their staff. However, this policy has in effect been replaced by a yearly allocation from the Prime Minister's Office to the National AIDS Commission. If the recommendation would be followed through this policy initiative would yield significant resources for AIDS: with total recurrent expenditure by Ministries standing at US$ 735 million in 2008/09, 2% would amount to US$ 16 million, which is more than 25% of the total resources for AIDS in Lesotho in 2008/09.

5.2.3 National Experience

The Government of Viet Nam acknowledges HIV as an important development issue which requires the mobilisation of different stakeholders outside the health sector (UNGASS, 2010).

The Ministry of Planning and Investment and Ministry of Financing play a role in managing funding for HIV programmes through the central budget and International Aid for HIV.

The National Strategy assigns duties and responsibilities to ministries and other sectors. These include a number of ministries (see below), several provincial and municipal People's Committees and the state-run media.

At ministerial level, most of the ministries have included HIV in their work plans and include

- Ministry of Health,
- Ministry of Culture and Information,
- Ministry of Education and Training,
- Ministry of Labour, War Invalids and Social Affairs,
- Ministry of Planning and Investment; and
- Ministry of Finance.
- Ministry of Public Security
- Ministry of Defence
- Ministry of Transportation

Mainstreaming is also implicitly referred to in the Law on HIV/AIDS Prevention and Control (No. 64/2006/QH11, articles 7 and 12) which outlines the responsibilities of different ministries. For example the Law states that:

- The Ministry of Culture and Information shall be responsible for directing the mass media to regularly disseminate information and conduct communication on HIV/AIDS prevention and control, and integrate HIV/AIDS prevention and control programs into other information and communication programs.

- The Ministry of Education and Training shall assume the prime responsibility for, and coordinate with the Ministry of Health, the Ministry of Labour, War Invalids and Social Affairs and concerned ministries and branches in, developing curricula and teaching contents on HIV/AIDS prevention and control; to combine HIV/AIDS prevention and control education with sex and reproductive health education; and direct education establishments within the national education system to provide education on HIV/AIDS prevention and control.

- The Ministry of Labour, War Invalids and Social Affairs, the Ministry of Public Security and the Ministry of Defence shall, within the scope of their respective tasks and powers, assume the prime responsibility for, and coordinate with other concerned ministries and branches in, directing information, education and communication on HIV/AIDS prevention and control in medical treatment establishments, educational establishments, reformatories, social relief establishments, prisons and detention houses.

Table 5.3 shows the main sources of public funding for HIV/AIDS. Ninety percent of public AIDS expenditures came from the health sector. The Provincial Department of Labour, Invalid and Social Affairs contributed 10% of public expenditures. The role of other sectors in financing the national HIV response is negligible (NASA Draft Report, October 25th 2011).

Expenditure from Public source by key Public Financing Agent , 2008-09 (US$)

Organisation	2008	%	2009	%	2008-09	%
Health sector:						
Ministry of Health	6,832,580	51%	6,711,254	45%	13,543,834	48%
Provincial Department of Health	5,221,097	39%	6,755,838	45%	11,976,935	42%
Other sectors:						
Women's Union		0%	26,000	0%		0%
Provincial Department of Labour, Invalid and Social Affairs	1,406,203	10%	1,476,466	10%	2,882,668	10%
Total	**13,459,880**		**14,969,558**		**28,429,437**	

Source: NASA Report (Draft, 2011)

The NASA report highlights that budget allocations and implementation of the ministerial action plans are still in need of further improvement. Though HIV related activities are integrated in the work plans, most of the funds for their implementation come solely from the National AIDS Programme. Very few sectors and local Government actually allocate sufficient budget for the planned activities. All other ministries and mass organisations have some HIV-related expenditures; however, these are normally covered by non-HIV budget lines (e.g., multi-tasked personnel or workshops) (NASA Draft Report, October 25th 2011)

The lack of detailed information on mainstreaming across ministries leads to challenges in identification of a baseline figure with which to project up to 2020. In the absence of this data one approach towards estimating potential revenues that could be used to decrease the funding gap is to explore what the impact on revenues would be if a small proportion of the state budget were to be hypothecated for HIV/AIDS activities. Annex D provides a breakdown on the centralised state budget by Ministry. The total planned budget in 2011 was VND 130,380,619 millions (MoF, Annual Report of State Budget, 2011)

Potential revenue from mainstreaming, 2011, VND billions

	% of centralised state budget allocated to mainstreaming									
	0.1%	0.2%	0.3%	0.4%	0.5%	0.6%	0.7%	0.8%	0.9%	1.0%
2011	97	194	291	388	486	583	680	777	874	971

Source: author calculations

Table 5.5 provides an illustration of the potential contribution that could be made by allocating a small percentage of ministry budgets to HIV/AIDS programmes. Drawing on planned state budget data for the centralised ministries for 2011,[15] Table 5.5 shows that if a 0.5% HIV/AIDS mainstreaming contribution was made by ministries receiving 1.5% or more of the state budget in 2011, the contribution would be in the range of VND 486bn per year, increasing to VND 971bn if the contribution was raised to 1% of each ministries budget.

5.2.4 Projections of potential revenue flows

For the purposes of the projections, we retain the assumption that a 0.5% HIV/AIDS mainstreaming contribution was made by ministries receiving 1.5% or more of the state budget. To obtain the projections through to 2020, we increase the mainstreaming resources in line with the government's current expenditure (excluding interest costs). This is illustrated in 0 below.

Potential revenue from mainstreaming, 2012-2020, VND trillions

Year	Resources (Dong Trillion)
2012	0.55
2013	0.62
2014	0.70
2015	0.79
2016	0.91
2017	1.03
2018	1.17
2019	1.32
2020	1.50

Source: author calculations

5.2.5 Recommendations and next steps

Preliminary consultations between VAAC, the Ministry of Finance and UNAIDS have indicated that there is very little appetite to pursue the option of mainstreaming any further at this point in

[15] Source: MoF, Annual Report of State Budget, 2011.

time. The main reason is that it would necessitate a change of the Budget Law which specifies which ministries can incur 'Health, population and family planning' related expenses. Currently this are only the ministries of Construction, Defence, and Culture, Sports and Tourism, apart from the Ministry of Health. A full application of public sector mainstreaming would need that a significant proportion of public agencies would be allowed to incur health/AIDS related expenditure. This is deemed not desirable at this point in time.

5.3 Contribution from private enterprises

5.3.1 Rationale

HIV/AIDS mainstreaming in the private sector is the process whereby private sector actors "address the causes and effects of AIDS in an effective and sustained manner, both through their usual work and within their workplace" (UNAIDS, 2005).

The trend towards private sector mainstreaming can be motivated by a sense of corporate citizenship or, especially in generalised epidemics,by the direct effect that HIV/AIDS has or could have on their business including increased costs such as sick leave and reduced productivity.

In a concentrated epidemic such as Vietnam not many businesses undergo a direct and visible impact from AIDS. It is therefore more likely that social responsibility is the motivator for private sector involvement in AIDS.

Private companies and businesses can play a unique role in the fight against HIV/AIDS both because of their interaction with the age group that are disproportionately affected by the virus and because structures, communications systems and training capacities that are already in place can be used for prevention, care and support programmes. Workplace programmes are increasingly recognised as effective, cost-efficient and sustainable approach to combating HIV/AIDS. In addition to workplace programmes, some companies go further than their own workplace and advocate for increased engagement in HIV/AIDS work by other companies, sectors, communities, consumer groups and governments.

This section considers the potential of the private sector to contribute towards the HIV/AIDS funding gap.

5.3.2 International Practice

The international literature offers a number of interesting insights into the role of the private sector in contributing towards HIV/AIDS prevention / treatment activities. Businesses worldwide have found that the most important spur to developing their own HIV/AIDS programmes has been the impact of the disease on their bottom line. Numerous studies from Kenya and South Africa conducted by companies such as Daimler Chrysler and De Beers have shown that direct business action in preventing and treating HIV/AIDS cases ensures benefits that influence the company balance sheet and protect their greatest resource, their people. The productivity of HIV-infected workers who are not on medication invariably falls over time, and these workers are forced to take sick leave and in most cases leave their work permanently. [16]

The IFC/ World Bank (2002) highlight a number of examples of successful private-sector involvement in the fight against HIV/AIDS, many of which come from African countries, mainly South Africa**.** These include a variety of prevention and treatment activities such as peer education, voluntary testing and counselling activities (De Beers, DaimlerChrysler, Ford Motor

[16] IFC / World Bank Good Practice Note: HIV/AIDS in the Workplace, December 2002, number 2

Company among others), and providing medical support for care and treatment. In most cases, these activities are aimed at company employees and their families. One interesting case study is the Coca-Cola Company. The Coca-Cola Africa Foundation works with the company's 40 bottlers in Africa to help them expand their employee health care benefits for HIV/AIDS, including antiretroviral drugs. The cost of the project to Coca-Cola is approximately $5 million per annum and the foundation's partners include GlaxoSmithKline, PharmAccess International, and Population Services International (PSI). Through the expanded health care program, Coca-Cola bottlers and their spouses can get access to antiretroviral drugs and other benefits. Coca-Cola is interested in adopting a similar program in India, but the plan is still in its initial phase.

In Thailand, the Thailand Business Coalition on AIDS (TBCA) has been working with businesses since 1993 "to create AIDS supportive work environments by providing HIV/AIDS education and prevention seminars and promoting the adoption of appropriate HIV/AIDS workplace policies". In addition to providing services to more than 80 member companies, the TBCA has helped in the development of sister organizations for the private sector in Malaysia, South Africa, Botswana, and Zambia.

International businesses with branches in Thailand have also played an important role in supporting HIV/AIDS programmes. For example, Shell Thailand launched a programme with UNICEF called "Peer Education at the Pump", providing AIDS education to more than 800 young people working as service station attendants. Smaller-scale businesses have also had an impact on raising awareness and sponsoring services. In Phayao province, the Business AIDS Network for Development (BAND) — a coalition of small businesses, government, NGOs, and Public Health agencies — helps youth who are infected or whose parents have AIDS through a referral network that includes technical training, scholarships, social support, and income generating projects.

The American International Assurance company, the largest life insurance company in Thailand, will offer as much as a 10% reduction in the life insurance premium to their policy holders if they have workplace HIV/AIDS education programs. Major hotels in Bangkok, Thailand, such as the Grand Hyatt Erawan, the Regent Hotel, the Pan Pacific and the JW Marriott provide HIV/AIDS education for staff during working hours.[17]

The Indo-U.S HIV/AIDS Private-Sector Corporate Initiative seeks to establish an HIV/AIDS Corporate Sector Fund, which will accept contributions from private sector companies. The goal is to develop projects that will help to expand corporate initiatives, support innovative projects for small and medium-size enterprises, and foster linkages and partnerships with U.S and Indian businesses. In addition, USAID, the lead agency behind this initiative, wants to document and publicize industry best practices.[18]

The experience of the employee-based programmes suggests that an HIV/AIDS program, whether oriented toward prevention, treatment, or both, will be more successful if it is part of a larger health intervention that is a normal part of an employee's benefit package. Employees and their families are much more willing to take advantage of testing or even peer education if it is part of an overall health effort, rather than if it just bears the label−and by implication the stigma−of being HIV/AIDS specific.

[17] Business taking action to manage HIV/AIDS, Asian Business Coalition on AIDS (2002)

[18] Centre for Strategic and International Studies, The Private Sector and HIV/AIDS: Finding Models for India, South Asia Monitor, February 2006, Number 91

5.3.3 National practice

The number of private enterprises is likely to expand in the future in Vietnam. This makes private sector engagement in AIDS an attractive option. Because the adult prevalence rate in Vietnam is low, it is unlikely that a direct impact of AIDS on businesses will be the prime motivator for companies to engage in AIDS. However, companies can become interested in AIDS because of a number of reasons, including making engagement mandatory, corporate social responsibility and the desire to participate in social life more broadly.

Currently businesses already engage to some extent in AIDS in Vietnam. Chemonics, an International NGO, has been working directly with enterprises and through national and local business associations, chambers of commerce, government, and civil society organizations that provide micro financing to develop capacity for introducing, managing, and sustaining workplace programmes. The NGO undertakes these activities with the support of a USAID grant but, importantly, the NGO also mobilises its own funding to support workplace activities. By the end of Year 2, the Chemonics project had expanded workplace-based HIV prevention activities to 118 enterprises. Of those, 36.4 percent carried out a comprehensive HIV workplace programme, reaching 16,670 people with HIV education communication. Chemonics data shows that 21 (18%) out of 118 companies contributed a total of VND 383.5mn towards HIV/AIDS prevention activities over a one year period (2009-2010). The average amount each enterprise contributed for these programmes was approximately VND 18.2 million per enterprise. There is large variation in the sums contributed but nonetheless, these figures suggest that enterprises are willing to invest in HIV/AIDS prevention programmes.

Another clear expression of Vietnam's growing interest in the private sector is demonstrated in the "Stewardship Plan on public private partnership on HIV/AIDS prevention and control for the period 2011-2015" developed by VAAC. Although the focus of this strategy is very much on the private medical sector, e.g. private providers, labs and drug stores, the document points out that the potential contribution of commercial businesses for AIDS services such as workplance programmes and IEC remain largely untapped because of a lack of awareness on AIDS. This is seen as an opportunity for future funding.

5.3.4 Projections of potential revenue flows

This section considers the potential role of the private sector in funding HIV/AIDS programmes. As of January 2005, Viet Nam had an estimated 150,000 private registered enterprises with tax codes (ADB, 2005). Table 5.6 presents a summary of private enterprises by size. The bulk of firms are micro enterprises which employ less than 10 individuals (46.6%). The second largest group (35%) are small enterprises which typically employ between 10 and 49 workers. Medium size (10-49 workers) and large (>300 workers) enterprises represent 13.8% and 4.6% of the sector respectively.[19]

Registered private enterprises in Viet Nam (2005), by size

Enterprise size	Definition: Number of workers	% of firms	Number of companies	Average taxes and fees paid by one firm (VND bns)
Micro	<10	46.6%	69,900	0.095

[19] On average, small enterprises employ 19 people, while medium enterprises count 112 employees.

Small	10-49	35.0%	52,500	0.294
Medium	50-299	13.8%	20,700	2.629
Large	=>300	4.6%	6,900	22.097
Total		100%	150,000	

Source: ADB (2005)

Chemonics has costed HIV/AIDS workplace programmes with adjustments for different size of companies. Using this data and data from the ADB on average numbers of employees for different sizes of enterprise it is possible to calculate potential contributions from the private sector. The Chemonics survey of 118 enterprises found that 18% of enterprises provide some funding for HIV/AIDS programmes.

Table 5.7 presents the estimated costs for providing workplace HIV/AIDS programmes.[20] These costs reflect a fixed cost element and a variable cost related to the average number of employees in the firm. These figures are reasonably modest when put into context of average taxation by firm size (see Table 5.7). Microenterprises are excluded from the analysis.

Cost of providing workplace programmes

Size of company	Cost per firm
Small	5,625,691
Medium	14,567,339
Large	32,642,927

Source: Chemonics / author calculations

Based on the estimated costs of the workplace programmes, presented in Table 5.8, and the distribution of small (66%), medium (26%) and large enterprises (8%), the weighted average costs of workplace programmes is VND10.2mn.

In order to undertake projections of private sector contributions an assumption needs to be made regarding the proportion of private companies that implement workplace programmes over the period 2012-2020. The small sample from Chemonics found that 18% implemented some type of workplace programme.

Table 5.9 presents revenue estimations from private enterprises, assuming an increase in the level of private sector participation from 2012. In 2012, we assume only 18% of companies were to implement workplace programmes giving potential revenue collection of VND 0.1 trillion, rising to VND 0.8 trillion by 2020 when 60% of companies are engaged. We also incorporate the effect of inflation in the cost per programme.

[20] Annex E provides a breakdown of the costs for each size of enterprise.

Private sector contributions to workplace programmes, impact of increasing participation of firms, VND BNs

Year	Number of firms	% of firms with workplace programme	Number of workplace programmes	Resources per Programme (Dong Million)	Available Resources (Dong Trillion)
2012	80,100	18%	14,418	10.2	0.1
2013	80,100	25%	20,025	10.8	0.2
2014	80,100	30%	24,030	11.4	0.3
2015	80,100	35%	28,035	12.1	0.3
2016	80,100	40%	32,040	12.7	0.4
2017	80,100	45%	36,045	13.5	0.5
2018	80,100	50%	40,050	14.2	0.6
2019	80,100	55%	44,055	15.0	0.7
2020	80,100	60%	48,060	15.9	0.8

Source: Author calculations

5.3.5 Recommendations and next steps

The analysis above shows that there is scope for increasing private sector contributions. The estimations are illustrative; however they show that up to VND 0.8 trillion could be collected in 2020. The costs of enforcement of these workplace programmes need to be considered however and this cost is not built into the above analysis.

To move towards the implementation of this programme, the following steps need to be taken.

First, currently 18% of businesses in Vietnam undertake voluntary engagement in AIDS activities. This shows that the concept of enterprises contributing to AIDS is well encroached in business practice, especially knowing that Vietnam experiences a concentrated epidemic. However, inversely, 82% of businesses do not engage in AIDS activities in a formal way. There is therefore a need to engage in advocacy with business forums to share experiences across the entire business community. The objective is to build up buy-in to make contributions by enterprises for AIDS mandatory.

Second, the cost of workplace programmes suggested in the analysis above needs to be validated.

Third, once the cost of the workplace programme per type of business confirmed, the fiscal impact on business needs to be analysed. The question is how much the cost of workplace programmes adds to the fiscal pressure on Vietnamese businesses. The expectation is that this is marginal. It will be important to engage in a transparent fashion with the business community on this matter. This will help compliance with the measure down the route. This process must involve centre of Government stakeholders such as the Prime Minister's Office and the Ministry of Finance, supported by VAAC. The objective of this consultative process is to confirm the level of contribution and nature of the programmes per type of business. It is likely that this will require changes to the legislative and regulatory framework.

Fourth, businesses will be particularly concerned about the universal application of the rule across businesses in Vietnam in order to avoid competitive disadvantage. It will therefore be

important that the Government, VAAC, demonstrates how the application of the measure by all businesses will be monitored, and what sanctions will be imposed for non-compliance. The function of policing this measure must be embedded in the operational mechanism discussed below.

Fifth, an important challenge will be to ensure that businesses set up high quality AIDS programmes. For this many businesses will need support from a service provider. In fact it may well be the case that most businesses will outsource this activity to external providers, and 'purchase' workplace activities. Therefore a network of accredited service providers needs to be build up across the country. This must be organised by VAAC and will come at a cost. However, it is expected that the cost will taper off over the years.

5.4 Airline levy

5.4.1 Rationale

One of the innovative funding mechanisms currently being implemented in a number of countries in Europe and a few in Africa is a solidarity levy on airline tickets. An aviation solidarity levy has been used to help mitigate what are seen as negative impacts of globalization and also provide funds to finance HIV/AIDS treatment.

Member countries agree to donate the revenues of a solidarity tax added to on plane tickets to existing national and international development institutions. A levy on airline tickets is both long-term and predictable, as air travel is growing and is expected to continue to grow in years to come. The main advantage of the airline solidarity levy is that it can be implemented in participating countries even if other countries do not wish to participate in the initiative.

Some opponents of the initiative argue that the levy will reduce demand for plane tickets and therefore might not generate the expected revenue. However, there is evidence that the price elasticity on demand for plane tickets is low and that the airline industry is not be affected by this additional tax. Further, the levy is to be small relative to the cost of air travel (WHO, 2007).

5.4.2 International Practice

UNITAID, the International Drug Purchase Facility, was established specifically to oversee the use of aviation solidarity levies. UNTAID's mission is to provide people in the developing world with long-term access to quality drug treatment for diseases such as malaria, tuberculosis and HIV and AIDS at the lowest price possible (WHO, 2007). Since its creation in 2006 on the initiative of Brazil, France, Chile, Norway and the UK there are now 34 member countries, the majority of which contribute through aviation solidarity levies.

France - which was the first country to implement an international solidarity airline levy in 2006 - charges 1 Euro on all European economy class flights (10 Euros in business class) and 4 Euros on other international economy flights (40 Euros in business class) departing from its territory. It was meant to generate more stable and more predictable revenue in order to meet the needs of the developing countries in achieving the MDGs. At the time, the levy was projected to generate revenue of 200 million Euros per annum, to be spent on the fight against pandemics, including access to anti-retroviral treatments for HIV/AIDS (IAPAL, 2008). In general, the air levy is applied to all passenger flights originating from countries that impose it. The levy rate is normally adjusted for the destination and type of ticket class (UNITAID, 2008).

Typically, all levies represent a small fraction of the cost of travel and are not expected to negatively influence passenger traffic volumes.

Over 70% of UNITAID's long-term financing, approximately 250 million USD annually, comes from a solidarity levy applied to each airline ticket bought in the participating countries. It is estimated that close to one billion USD has been generated from the UNITAID solidarity levy to combat HIV/AIDS, malaria, and tuberculosis (Ministry of health, Kenya 2010). A recent meeting held in Geneva in June 2010 agreed to step up efforts to enlist more countries to apply a solidarity levy on air tickets to provide additional funding for the health MDGs.

5.4.1 Projections of potential revenue flows

The total airline levy for the period 2012-2020 is derived using the formula:

$$Totalrevenue = \sum_{y=2012}^{2020} (v_y l)(1-a)$$

Where
y = year
v = air traffic volume
l = levy rate
a = administrative percentage

The net revenue from the proposed airline levy was obtained by deducting the administration of collecting this levy, assumed to be IATA, the current agency responsible for collecting air passenger departure fees. We assume the administrative costs to be equivalent to 2% of the collected fees – based on current administrative fees charged by IATA.[21]

Air Passenger traffic, Viet Nam

	Airport	Number of passengers
1	Hanoi (Noi Bai)	9 million (2009)
2	HCMC (Tan Son)	15.5 million (2010)
3	Da Nang	4 million (2009)
4	Hue (Phu Bai)	2 million (2009)
5	Can Tho	500,000 (2009)
6	Cat Ba	374,000 (2009)

Source: UK Trade and Investment, 2011[22]

0 shows the most recent passenger numbers for Viet Nam. Taking the numbers above for 2012 and then increasing the passengers each year in line with real GDP growth, we are able to project the revenues from the airline levy to 2020, based on an illustrative US$ 5 levy. The air passenger data are both for national and international flights, which typically vary quite a lot in price. The US$5 levy across the board is therefore an average levy and the expectation is that a levy on international flights is higher than on national flights. If this mechanism is to be taken further it will be important to carry out more detailed projections. The projections provide, however, an estimate of the order of magnitude of resources that can be generated for AIDS.

[21] Lievens et al, Sustainable financing for HIV/Aids in Namibia Managing the transition towards a new AIDS financing strategy, OPM Draft Report, November 2011
[22] The Airport Sector in Viet Nam, UK Trade and Investment, 2011

These estimates are presented in Table 5.11.

Estimates of levy revenues, 2012-2020

Year	Number of passengers (Millions)	Fee per passenger (US$)	Total Fees (less administration cost) (US$m)	Available Resources (Dong Trillion)
2012	31.4	5.0	154	3.1
2013	33.6	5.0	168	3.5
2014	36.1	5.0	181	3.8
2015	38.8	5.0	194	4.2
2016	41.6	5.0	208	4.7
2017	44.6	5.0	223	5.2
2018	47.8	5.0	239	5.7
2019	51.3	5.0	256	6.3
2020	55.0	5.0	275	7.0

Source: Author calculations

Given the non-substitutability of air travel especially for both regional and international flights, we assume that the demand for air travel is inelastic and the proposed levies will not reduce traffic volume.

5.4.2 Recommendations and next steps

An airline levy of US$ 5 on outbound flights provides a substantial amount of revenue for financing HIV/AIDS: This financing option could constitute a reliable financing strategy that is sustainable and predictable. This is based on conservative estimates of growth in passenger movement in the coming years. This is seen as a solid contender for alternative financing due to the relatively small charge on the cost of an airfare and it is not a tax on the poor.

Steps to implement this measure include:

Although the application of an airline levy for AIDS has been implemented in a wide range of countries by UNITAID, there is no experience with this measure in Vietnam. It is therefore important to engage in a consultative process with the airline industry in Vietnam, and associate the relevant tax authorities to the process. The aim of the consultative process is to obtain buy-in from the industry. VAAC and UNAIDS may consider to associate UNITAID representatives to this process, as they will be able to share detailed international experience.

Second, the figures in this analysis need to be validated. This can be done as part of the consultative process.

Third, once an agreement has been reached on this measure, the implementation needs to be discussed with the Tax Revenue Authority. The most commonly applied process of levying the tax is that airlines are responsible to collect the tax at the moment of ticket sale. Normally the airline levy for AIDS is added onto existing airline taxes. Airline companies then transmit the levy to the tax authority. It should then be transferred onwards to the final recipient, probably VAAC.

Fourth, the possibility of raising tobacco and alcohol levies for health expenditure are currently being explored in Vietnam. It could be useful to pool resources from various levies into one 'Health and HIV and AIDS' fund. This may improve the effectiveness of the allocation of resources. This is an ongoing agenda and may need to be follow up.

5.5 Additional borrowing

If the other sources of financing are not adequate, additional fiscal space can be created through borrowing. For political reasons, governments may also prefer to borrow rather than raise tax revenues. For the purposes of this analysis, we therefore consider whether a modest increase in the size of the deficit in each year could be put towards HIV and AIDS.

There are no universal rules that set a limit on how much debt a country can incur without facing repayment problems. A country must set its own debt strategy based on a wide range of country specific factors, such as the share of foreign denominated debt, the share of variable interest rate debt and the volatility of the country's economy, government revenues and exports.

In Viet Nam's case, the government has increased its borrowing in recent years to counter act the impact of the global financial crisis. As a consequence, the total stock of public and publicly-guaranteed debt had increased to 44% of GDP at the end of 2010 (based on the government's definition, the IMF definition would imply 50% of GDP). This is to be compared to the government's strategy of setting a ceiling on public and publicly-guaranteed debt at 50% of GDP. (based on the authorities'

This suggests that there is some limited room to increase borrowing. However, some further considerations suggest otherwise. First, the limit of 50% of GDP is a ceiling not a target, it is prudent for a country to retain some contingency (especially in the current uncertain economic environment). Second, the IMF recommends that, over time, the ceiling be reduced to 40% of GDP. Third, although the IMF-World Bank Debt Sustainability Analysis (DSA) suggests Viet Nam has a low risk of debt distress, it also shows that the debt stock is vulnerable to an adverse exchange rate shock or continued large fiscal deficits.

As such, though there is the potential in the short term to raise resources for HIV and AIDS from additional borrowing, this report does not consider the option further and the projections exclude any resources from new borrowing.

5.6 Financing gap with alternative funding sources

Drawing on the above, it is possible to examine the total resources available for HIV. This is achieved by combining the baseline resources calculated above with the innovative sources discussed in this section. 0 shows the projections for each innovative source as calculated above. The airline levy is the largest revenue, representing 70% of the total innovative sources.

Total Innovative Sources, 2012-2020 (Dong Trillions)

	Social Health Insurance	Public Sector Mainstreaming	Private sector contributions	Airline levy	Innovative Resources
2012	0.45	0.55	0.15	3.07	4.22
2013	0.55	0.62	0.22	3.46	4.57
2014	0.65	0.7	0.27	3.83	5.17
2015	0.76	0.79	0.34	4.24	5.86
2016	0.85	0.91	0.41	4.68	6.6
2017	0.93	1.03	0.49	5.17	7.42

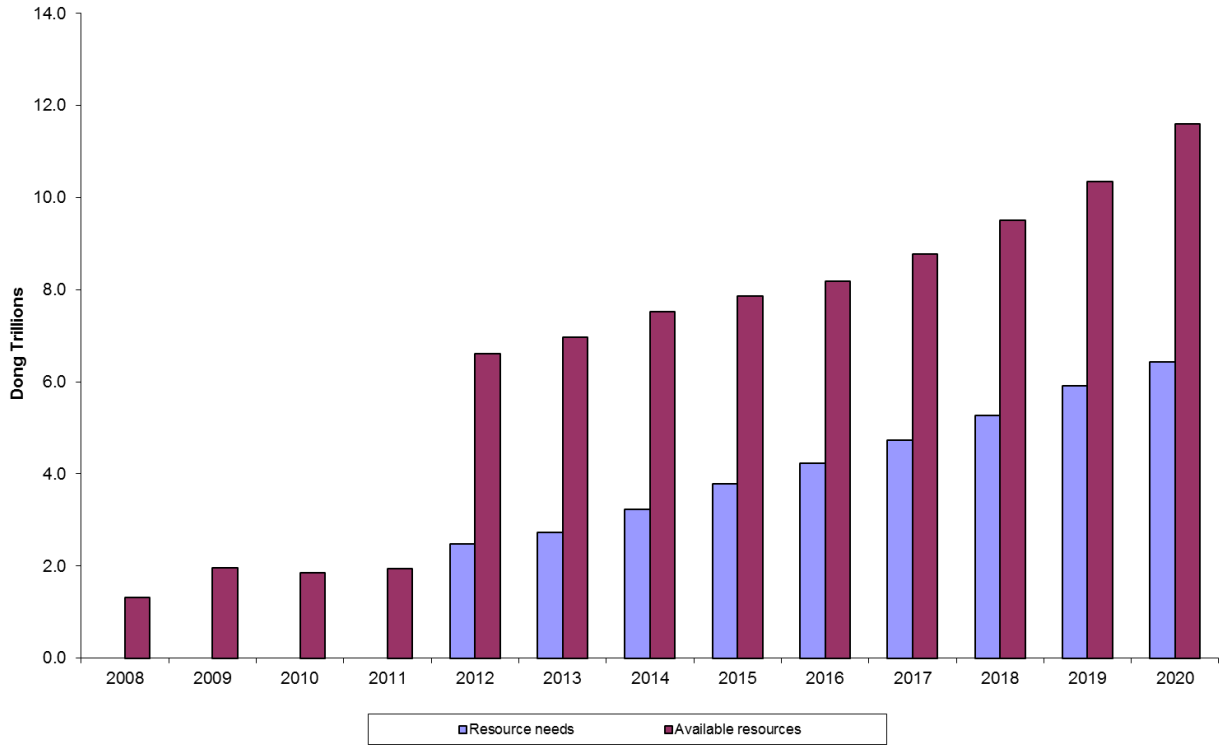
2018	1.02	1.17	0.57	5.71	8.33
2019	1.13	1.32	0.66	6.3	9.34
2020	1.25	1.5	0.76	6.96	10.47

When these resources are added to the baseline resources, it is clear that the financing gap is easily covered. This is illustrated in 0 and Figure 5.2 below.

Financing Gap after Innovative Resources for HIV/AIDS, 2012-2020 (Dong Trillions)

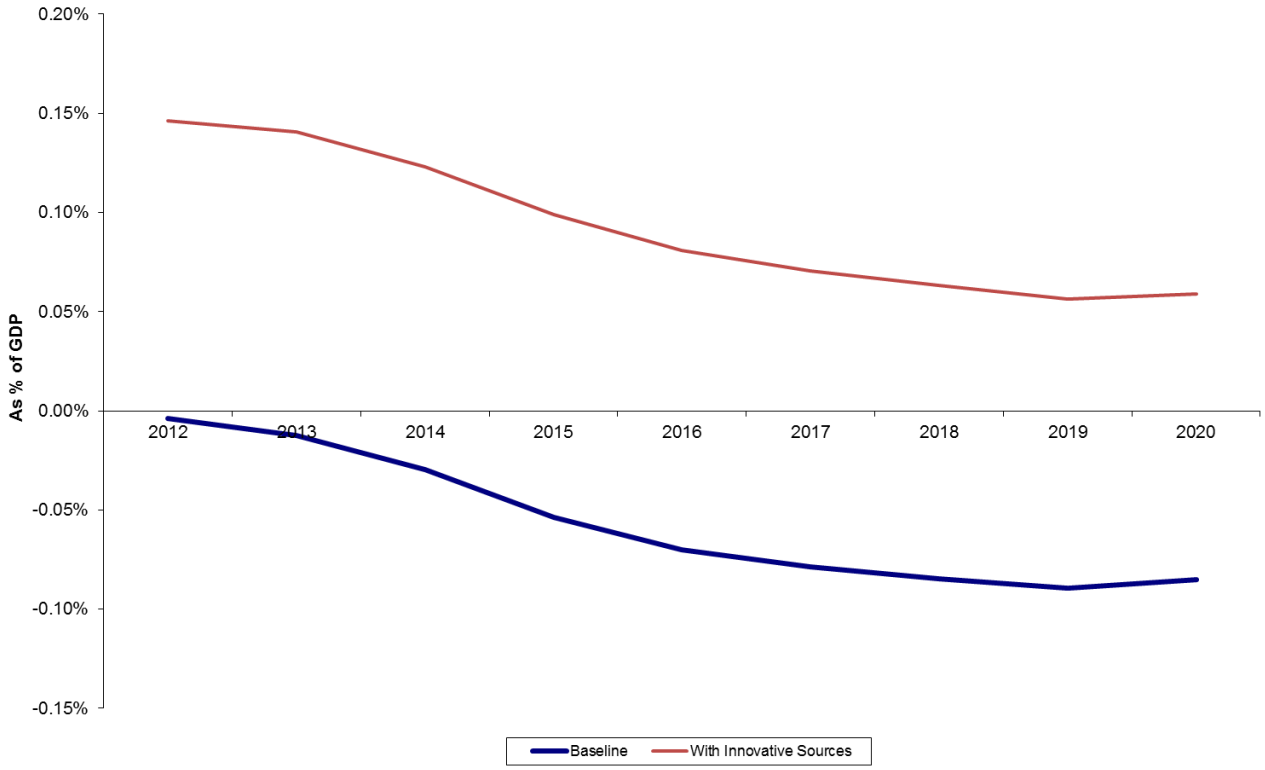
	Baseline Total	Innovative Resources	Total Resources	as % of GDP	Financing Gap	as % of GDP
2008	1.32		1.32	0.12%		
2009	1.96		1.96	0.13%		
2010	1.85		1.85	0.11%		
2011	1.94		1.94	0.10%		
2012	2.39	4.22	6.61	0.29%	-4.13	-0.182%
2013	2.40	4.57	6.97	0.27%	-4.25	-0.165%
2014	2.36	5.17	7.53	0.26%	-4.30	-0.147%
2015	2.00	5.86	7.86	0.24%	-4.08	-0.123%
2016	1.58	6.6	8.18	0.22%	-3.95	-0.105%
2017	1.35	7.42	8.77	0.20%	-4.05	-0.095%
2018	1.17	8.33	9.50	0.20%	-4.23	-0.087%
2019	1.00	9.34	10.34	0.19%	-4.43	-0.081%
2020	1.13	10.47	11.60	0.19%	-5.17	-0.083%

Figure 5.2 Resource Needs and Available Resources – Baseline plus Innovative Sources, 2012-2020



The impact on the financing gap is illustrated in Figure 5.3. The gap is reduced from a deficit of approximately 0.085% of GDP in 2020 to a surplus of 0.060% of GDP in 2020.

Figure 5.3 Financing Gap – Baseline and Innovative Sources, 2012-2020

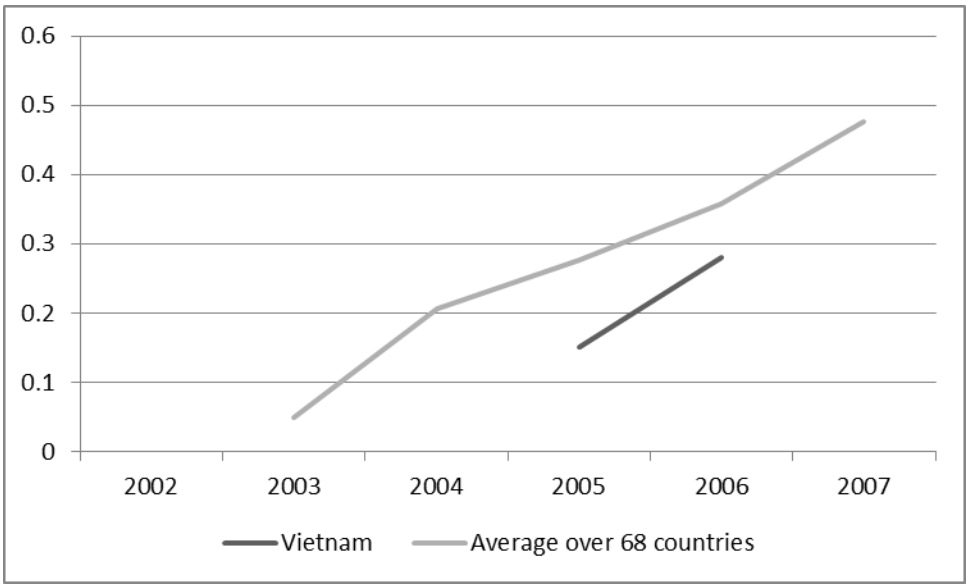


6 Improved Efficiency

During consultations held for this work stakeholders suggested that there is room to improve the efficiency of AIDS spending. When looking into whether countries are getting value for money for their HIV/AIDS spending it is important to consider the technical efficiency of programme implementation. Technical efficiency refers to the delivery of a given output using the minimum number inputs. So in the case of the HIV/AIDS Response this means achieving any set of specified results, such as people treated with ARVs or number of people who have received Voluntary Counselling and Testing (VCT) at the lowest cost.

To gauge the efficiency of the Vietnamese AIDS response we use data from a cross country study carried out by Wu Zeng. Annex G provides the methodological background and reference. The graph below shows the efficiency score for Vietnam over the years 2003 to 2007 and compares this with the average values in the sample of 68 countries (Zeng, 2010). Whereas we have one observation per year for the sample, we only have two observations for Vietnam (for 2005 and 2006).

Figure 6.1 Efficiency score in Vietnam



In 2005 and 2006 the technical efficiency score of Vietnam's AIDS programme was lower than the average of all countries, at 15% and 29%, compared with 27% and 36% respectively in the sample. During the same period some countries scored 100% efficiency in selected years, indicating important room for improvement in Vietnam. The methodology used by Zeng produces an inherent negative bias against Vietnam's efficiency score. This is because a component of the programme's output (harm reduction) is not taken into account in Zeng's study. However, as harm reduction is not a very significant share of the AIDS Response, a little higher than 10% of total resources spent in the last two years, we make abstraction of this negative bias.

The interest in efficiency savings is increasing with the decreasing availability of resources for HIV and AIDS. The area is relatively new, and there is only little evidence available that can be applied to the context of Vietnam (as our methodology used above clearly shows).

The Clinton Health Initiative is currently carrying out a multi-country study in five countries in Africa and preliminary findings show a high variation in unit costs of programmes, both

between the countries (which is to be expected) as within the countries (between different providers). It is especially the latter finding that may indicate scope for efficiency.

The Institute of Health in Mexico, in collaboration with the World Bank, implements an approach which focuses on four different types of efficiency: service delivery efficiency, transactional efficiency, information efficiency and institutional efficiency. Service delivery efficiency examines the provision of services, on implementation bottlenecks and linkages and referrals between service delivery levels. It compares unit costs of different providers or networks of providers, and tries to understand whether differences represent real costs differences in service delivery or rather inefficiencies. Transactional efficiencies consists of a detailed analysis of the flow of funds from source to beneficiary. This approach is grounded in the observation elsewhere that part of the budgets for frontline providers are often siphoned off at intermediary administrative levels. Information efficiency looks at whether information for strategic decision is available and made use of; and institutional efficiency is about the HIV and AIDS policy cycle from planning over budgeting and implementation to monitoring and evaluation, and whether better alignment between different stakeholders can achieve higher levels of effectiveness and efficiency.

Both the approaches of CHAI and the Institute of Mexico are illustrations of developing tools to examine the efficiency of AIDS Responses. Within this study, which doesn't allow for an elaborate investigation, we use Zeng's study results to project forward Vietnam's efficiency savings path.

6.2 Efficiency gains projection

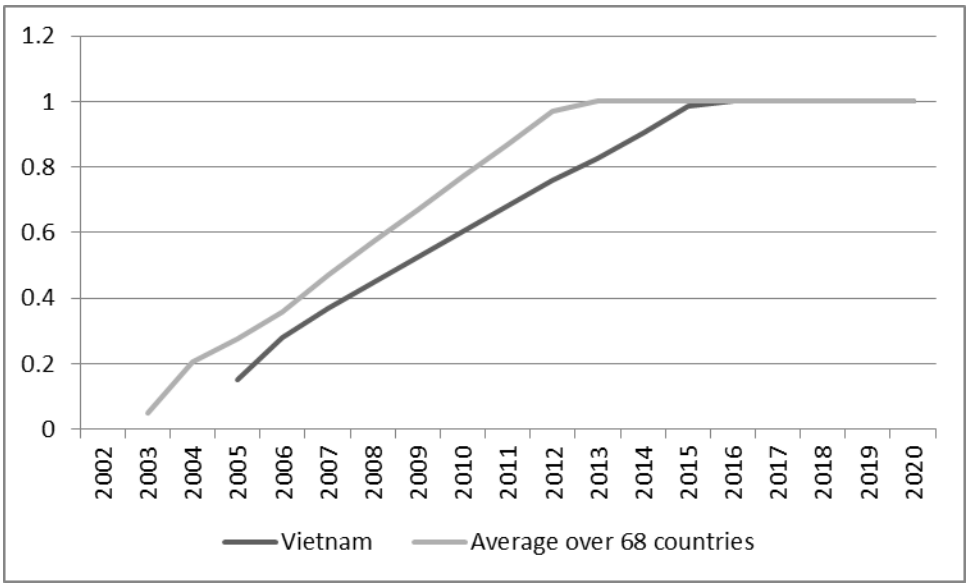
Even if Zeng's methodology creates some negative bias for the efficiency of Vietnam's AIDS Response, we use the data in what follows. Because of the limitations of this approach, we need to interpret the results with caution. To project forward the efficiency savings path of Vietnam's AIDS Response, we assume the following:

- First, using a linear projection we extrapolate the efficiency path of the average efficiency in the pool of 68 countries. Doing so, the average country achieves full efficiency in 2013.

- Second, we apply the yearly average efficiency growth rate in the pool of countries to the data of Vietnam. From 2013 onwards, we apply the average growth rate in efficiency in the pool of the three years (2011-2013) to the Vietnam efficiency level, until Vietnam achieves full efficiency in 2016.

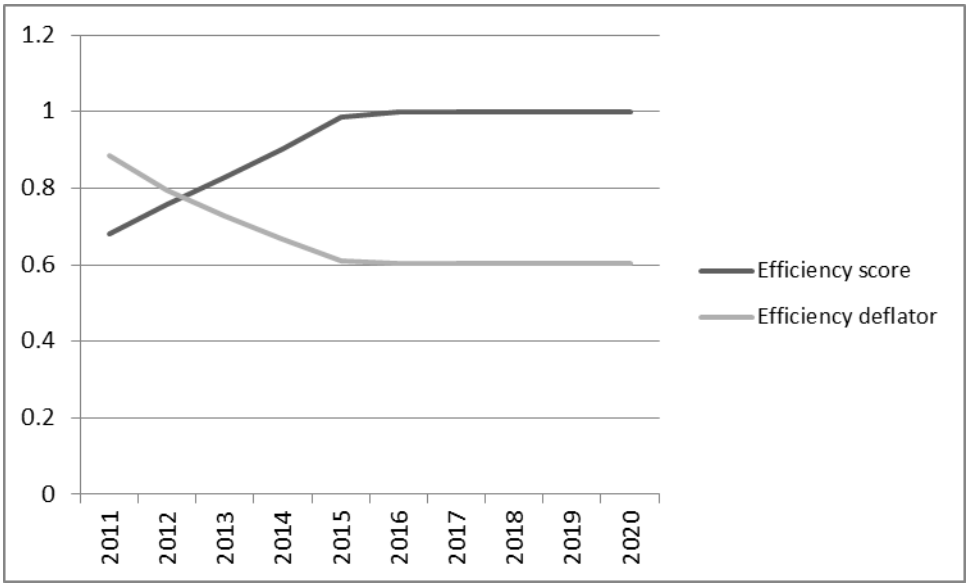
This is shown in the graph below.

Figure 6.2 Efficiency projection



Corresponding with a gain in efficiency, we can compute a 'deflator' for the resource needs. In case of Vietnam the deflator is quite important, and shown in the figure below. From 2016 onwards the resource needs could be discounted with about 40%, as then full efficiency is achieved. In other words, 40% less resources than estimated today would be needed in 2016 without loss in level of output.

Figure 6.3 Efficiency score and efficiency deflator



6.3 Drug Efficiency

The previous section suggests that there are important efficiency gains to be made. However, it doesn't indicate how and where these can be made. ARV costs are typically a high share of total AIDS programmatic costs. That is why in this section we examine whether Vietnam could be purchasing its ARV at a lower price.

Treating people with antiretrovirals constitutes the single greatest cost to the HIV/AIDS response in many middle and low income countries. This is true in spite of the historic reductions in the cost of first line ARV medication from over $10,000 to roughly $175 per person per year. While this has resulted in significant improvements in the affordability of these drugs and an increase in treatment coverage from 7% to 42% between 2003 and 2008, the continued high cost of second line treatment means that most low and middle income countries fall far short of meeting their target ART coverage, which many have now set at about 80% of those in need[23].

A number of global strategies are currently being implemented to reduce the cost of antiretroviral medicines. These include the following:

1. **Pooled procurement arrangements.** This mechanism is designed to group multiple purchasers into a single purchasing unit in the hope that an increase in purchasing volumes will lead to economies of scale. The Global Fund is currently operating this kind of arrangement.
2. **Third-party price negotiations.** This was first introduced by the Clinton Foundation HIV/AIDS Initiative (CHAI) in 2003. In this case CHAI negotiates a price ceiling with suppliers of generic ARVs and based on this, all member countries of the CHAI procurement consortium are entitled to purchase drugs from these suppliers at a price less than or equal to the CHAI negotiated price.
3. **Differential pricing.** This strategy, which is applied only to branded ARVs, is used to link ARV prices with affordability by applying a lower prices for ARV medication for low and middle income countries. The criteria for grouping countries are determined by the manufacturer, usually based on income level and prevalence rates.
4. **The Doha declaration and TRIPS flexibilities.** As of June 2010, 17 low and middle income countries have benefited from TRIPS flexibilities, making low cost generic ARVs available to their populations [1]. Other low and middle income countries have until 2016 to make use of TRIPS flexibilities to scale up treatment access.
5. **Patent pooling.** The UNITAID Executive Board adopted a patent pooling initiative in December 2009 whereby ARV patents are brought together on a voluntary basis and made available non-exclusively to generic manufacturers in exchange for royalty payments to patent holders.

Unfortunately, not all of these strategies have achieved the desired results. A recent study for example found that the association between purchase volume and price for 19 out of the 24 dosages included in the study were not statistically significant suggesting that increases in purchasing volumes has not necessarily resulted in lower ARV prices [3]. With regards to differential pricing, a study by Medicins Sans Frontieres (MSF) showed that in practice there are a number of barriers preventing eligible countries from purchasing ARV medicines at a differential price such as the manufacturer not marketing the drugs in their country. In cases where the drugs are available for purchase, the study found that even the differential prices, particularly for *second-line* medications were extremely high [4].

Using data from the Global Price Reporting Mechanism (GPRM) [24] and summary report of this data compiled by the WHO [2] we compared the average annual treatment cost per patient for 6 selected *first-line* ARV medicines to the median transaction price per patient per year among selected lower-middle income countries (LMICs)[25]. The ARV medicines used in our analysis include all those in the summary report for which there is also data available for Viet Nam. As

[23] http://www.avert.org/universal-access.htm

[24] http://www.who.int/hiv/amds/price/hdd/

[25] Countries with a GNI per capita between US$ 936 and US$ 3,705

can be seen in Annex D1, in the majority of cases, the price paid by Vietnam for first line ARVs is relatively low compared to other lower middle-income countries. There also does not seem to be a large difference in price across the different manufacturers or the sources of funding.

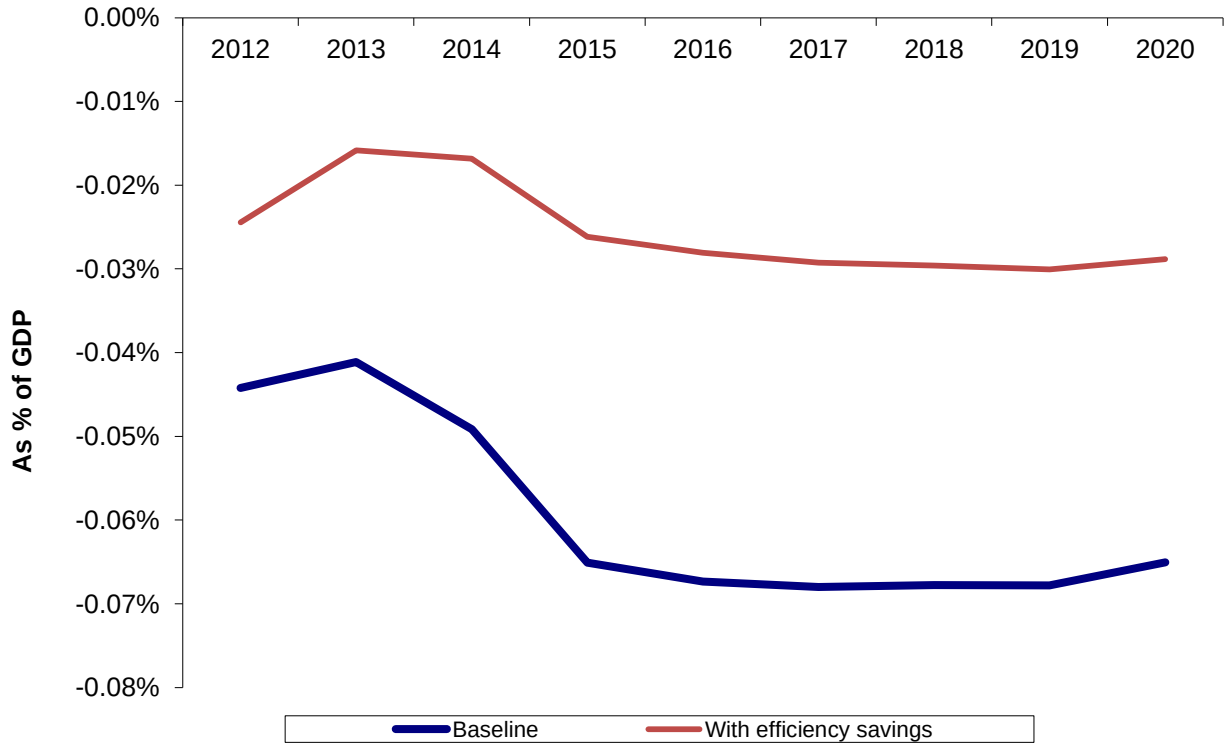
Applying the same methodology, our analysis of *second-line* ARVs shows that, again, Vietnam fares well in terms of the prices paid in comparison to other lower middle-income countries (see Annex D2). In all but one of the second line ARVs presented here, the prices paid by Vietnam are lower than the median price in other lower middle-income countries. In the case of Didanosine, there was a considerable saving in 2010 when the drug was procured by UNITAID.

While there does not appear to be to be a huge amount of scope for saving by reducing the prices paid by ARVs, since Vietnam already appears to be paying less than a lot of other lower middle-income countries, it may be worth investigating the reasons for price-differentials in ARVs that are currently being procured to see if it would be possible to increase the supply of lower priced drugs.

6.4 AIDS financing gap with additional sources and efficiency gains

The impact on the financing gap is illustrated in Figure 6.4. The gap is reduced from an average of 0.06% of GDP to an average of 0.03% of GDP.

Figure 6.4 Financing Gap – Baseline and after Efficiency Savings, 2012-2020



6.5 Next steps towards improved efficiency

Efficiency gains are an important instrument to increase fiscal space for AIDS. Using data from a global cross-country analysis, we find suggestive evidence that Vietnam's AIDS response is not fully efficient, and that the Response could be delivered with about 40% less resources.

However, we have no insights in how efficiency in the AIDS response could be achieved in practice. That is why it is important to:

First, embark on a number of efficiency studies in Vietnam. At the core of any technical efficiency study is a unit cost analysis. The unit cost of delivering HIV and AIDS services by different providers in different regions must be computed, and compared. Any differences that cannot be attributed to differentials in the cost of delivering the services, for example costs of delivering one VCT may be higher in a remote rural area compared to a densely populated urban area, must be seen as differences in efficiency between service providers. These studies must be compared in each of the AIDS response programmatic components: prevention, treatment and coordination. It will also be useful to benchmark the unit costs against international standards.

Second, a deeper analysis in the cost of ARV must be carried out. Our preliminary analysis suggests some scope for efficiency gain here. Because ARV cost is such a high share in total AIDS programmatic cost, it deserves special attention.

Third, the results of further efficiency studies must lead to decisions about a different way to implement the AIDS response. Services must be consistently carried out by those providers that are cheapest. Contracts with expensive providers must be phased out, unless they can offer services at a lower cost.

7 Prioritisation of HIV/AIDS Programmes

7.1.1 A New HIV/AIDS Investment Framework

An obvious solution to underfunding, where available resources do not match identified needs (i.e. the funding gap cannot be decreased completely by alternative sources), is to prioritise funding towards those services that are the highest priority and subsequently, to withdraw funding from those services that are not considered a high priority. These types of difficult decisions are taken by every health care system at some level on a daily basis either explicitly or implicitly. It is sometimes argued by advocates that all of the HIV/AIDS programmes are high priority and that it is not possible to prioritise. In the event that sufficient funds are not made available to fill the funding gap then this option is untenable. Prioritisation decisions will need to be made.

Schwartländer et al (2011)[26] propose an investment framework to support management of national and international HIV/AIDS responses. The authors state that the framework will encourage countries to make the most of their programmatic responses to the epidemic through careful targeting and selection of the most effective interventions. Specifically, the framework promotes prioritisation of efforts on the basis of an understanding of country epidemiology and context, and assumes major efficiency gains as delivery of care evolves from facility-based to community-based structures. Through its encouragement of more targeted investment and better priority setting, the framework proposes an important advance in achieving value for money in the HIV/AIDS response, which is crucial given the constraints on available resources.

Schwartländer et al state that there proposed framework differs from the traditional HIV/AIDS investment framework in five ways:

1. Elements are included in the framework on the basis of a graduated assessment of the existing evidence of what works in HIV/AIDS prevention, treatment, care and support and is intended to support systematic strengthening of the evidence base when needed.

2. It applies a rigorous approach to estimation of the size of the populations in which new infections occur on a country-by-country basis and provides a basis for discontinuation of the inefficient application of programmes to the wrong populations or without regard to their outcomes.

3. The framework assumes that major efficiency gains are possible through shifting of service provision techniques to place greater emphasis on community mobilisation.

4. The framework emphasises synergies between programme elements and makes an initial attempt to quantify these interactions.

5. Although not a prescriptive approach to programming, the framework is intended to close the conceptual gap between global resource estimation and large-scale programming to help shape investment strategies to achieve the best outcomes for fewest resources.

The authors state that the non-linear relation that exists between the epidemic spread of HIV/AIDS and epidemiological features means that substantial changes might be possible with

[26] Schwartländer et al,Towards an improved investment approach for an effective response to HIV/AIDS, www.thelancet.com Published online June 3, 2011 DOI:10.1016/S0140-6736(11)60702-2

a few appropriately targeted efficacious interventions. They present the effects of interventions through modelling of two epidemiological contexts: one in a concentrated epidemic represented by Karachi, Pakistan, where transmission occurs mainly through injecting drug use, and the second in a generalised epidemic represented by KwaZulu-Natal, South Africa, where the main route of transmission is through heterosexual sex. Schwartländer compared three scenarios for these regions: first, a baseline scenario assuming present interventions continue; second, a broad and shallow target assuming moderate increases in treatment coverage and declines in multiple sexual risk behaviours; and third, a narrow and deep target assuming widespread treatment and a high coverage of the most demonstrably efficacious interventions..

Their modelling results suggest that the most targeted approach provides the greatest effect, especially in locations where the HIV/AIDS epidemic is most concentrated. However they stress that any comparison of programmes depends on the costs of combining the different interventions within the programmes and the ability of the programmes to achieve pre-specified intermediate outcomes. The authors conclude that *"our modelling of the effectiveness of the investment framework suggests that striking numbers of new infections and deaths could be averted"* (Schwartländer et al, 2011).

7.1.2 Recommendations and next steps

Within the Viet Nam context it would be worth using this framework to ensure that programme responses to the epidemic are well targeted using the most effective interventions. It is not excluded that for historical reasons the Response contains some elements which are more suited to a generalised than a concentrated epidemic. Practical steps for implementation include:

First, carry out some cost-benefit analysis across programmatic areas of the Response. Cost-benefit analysis sets out the costs against the benefits (in monetary terms) for the different programme components. Such an analysis allows to say what the comparative benefit is (in monetary terms) of investing 1 dollar in different types of prevention, treatment and mitigation activities.

Second, this information can then feed into a debate about the relative priority of the current AIDS activities. It will clearly show which activities yield the highest benefit. It will allow policy makers to take decisions about which activities to discontinue, if confronted with a lack of resources to fund all currently programmed activities.

Third, a related area is that of the integration of HIV and AIDS services into health service delivery frameworks. This agenda can be tackled once a clearer view is obtain about cost-effective health services packages. At that stage it will be important to engage with the donor community to ensure that donor financed (and implemented) activities support service integration, rather than perpetuate forms of parallel service delivery.

8 Sensitivity analysis

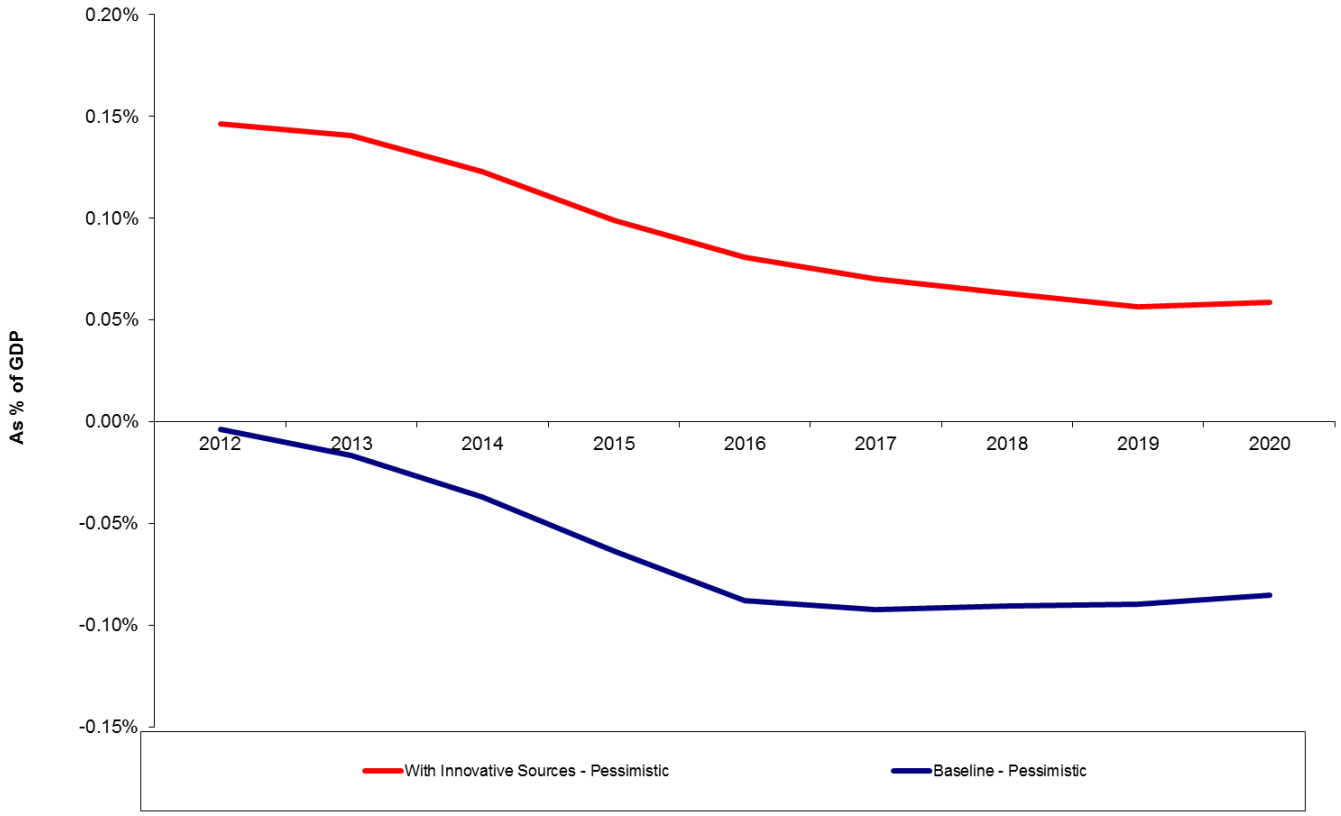
In this section, we consider the implications of changing some of the assumptions shown above. As international flows currently represent such a large proportion of the resources, we consider different scenarios for these flows in the future. We go on to look at changing the key macroeconomic assumptions and the efficiency savings assumptions.

8.1 External HIV and AIDS flows

Since donor financing currently constitutes a significant part of current HIV/AIDS financing in Viet Nam, we look at two alternative international financing scenarios. Under scenario 1, a more pessimistic scenario, we assume donor financing to be between 5-20% below our current estimate, with the percentage deviation increasing from 5% in 2012 to 20% in 2020. Under the second scenario we assume a more optimistic outlook with donor financing being 5-20% higher than current estimates.

Figure 8.1 shows the implications of the changes for both the baseline and innovative sources scenarios. The general trend in each case is maintained and the difference is surprisingly minor. The reason for the small difference is that aid flows are a relatively small part of the financing sources beyond the first few years, so even a change as large as 20% has comparatively little effect.

Figure 8.1 HIV/AIDS Financing Gap as % of GDP – Alternative Scenarios for External Flows



Nevertheless, it serves as an important reminder of the inherent uncertainties in extrapolating so far into the future. This is particularly the case with the macroeconomic variables, as we shall see in the following section.

8.2 Macroeconomic Assumptions

Equally important for the projections are the macroeconomic assumptions that underpin them. It is clearly not possible to accurately determine the level of GDP in 10 years time and the long run growth rate used in this analysis is simply an average of recent (5 year) economic performance. In this section, we consider the implications of changing that assumption.

Again, we present a pessimistic and an optimistic scenario. In the pessimistic scenario, real GDP growth is one percentage point lower in every year than in the main scenarios presented above.[27] In the optimistic scenario, real GDP growth is one percentage point higher in every year. Note that these effects are shown independent of the scenarios for external flows presented above (i.e. we return to the main assumption for external flows and do not combine these new assumptions with the pessimistic and optimistic assumptions for external flows above).

Figure 8.2 HIV/AIDS Financing Gap as % of GDP – Alternative Macroeconomic Scenarios

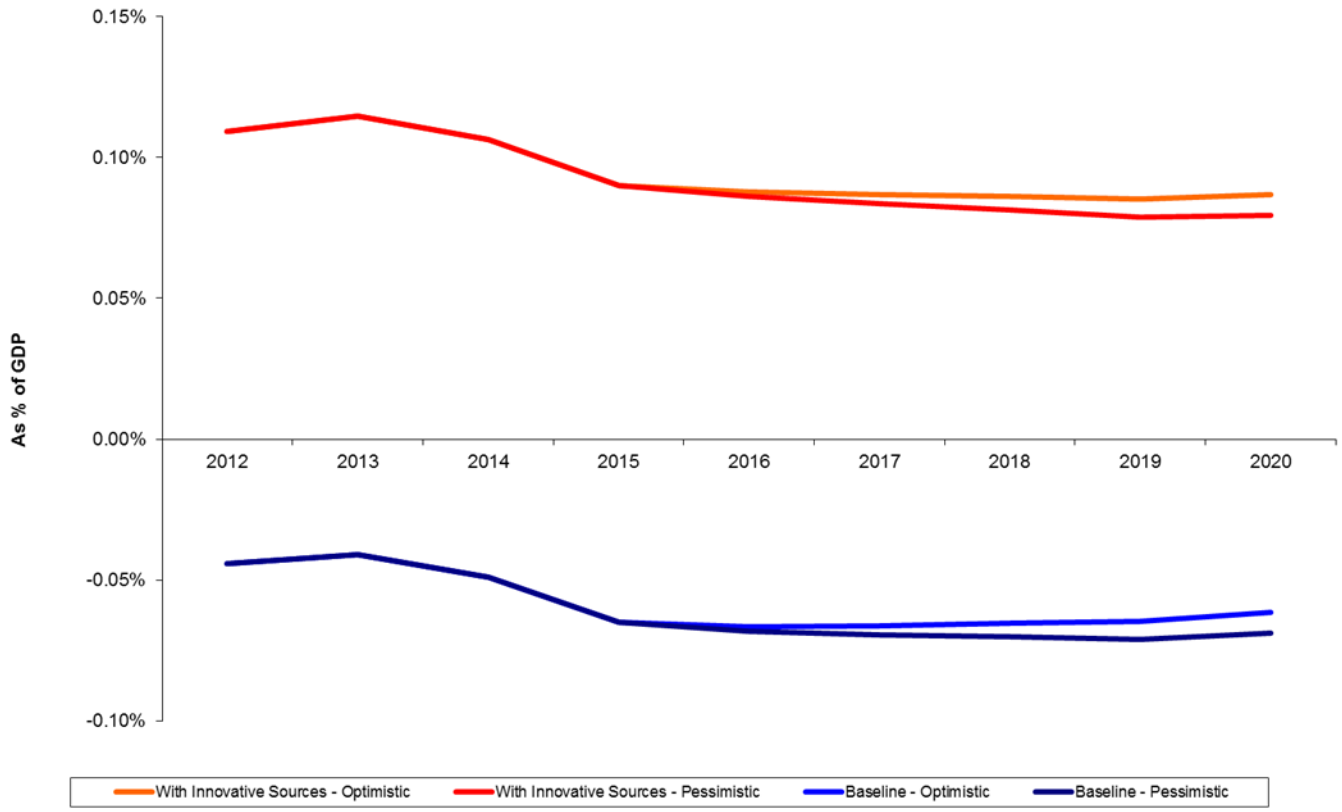


Figure 8.2 shows the impact of the pessimistic and optimistic scenarios on both the baseline case and the case where innovative sources have been added to the baseline. The change in the assumptions has a more significant difference as time progresses.

[27] The scenarios start in 2016, as IMF projections are retained up to this point.

Over time, this change can have a fairly substantial impact. This impact is the result of the increasing proportion of HIV expenditure met from government own resources. If GDP is higher, then government expenditure (including that spent on HIV and AIDS) can be higher.

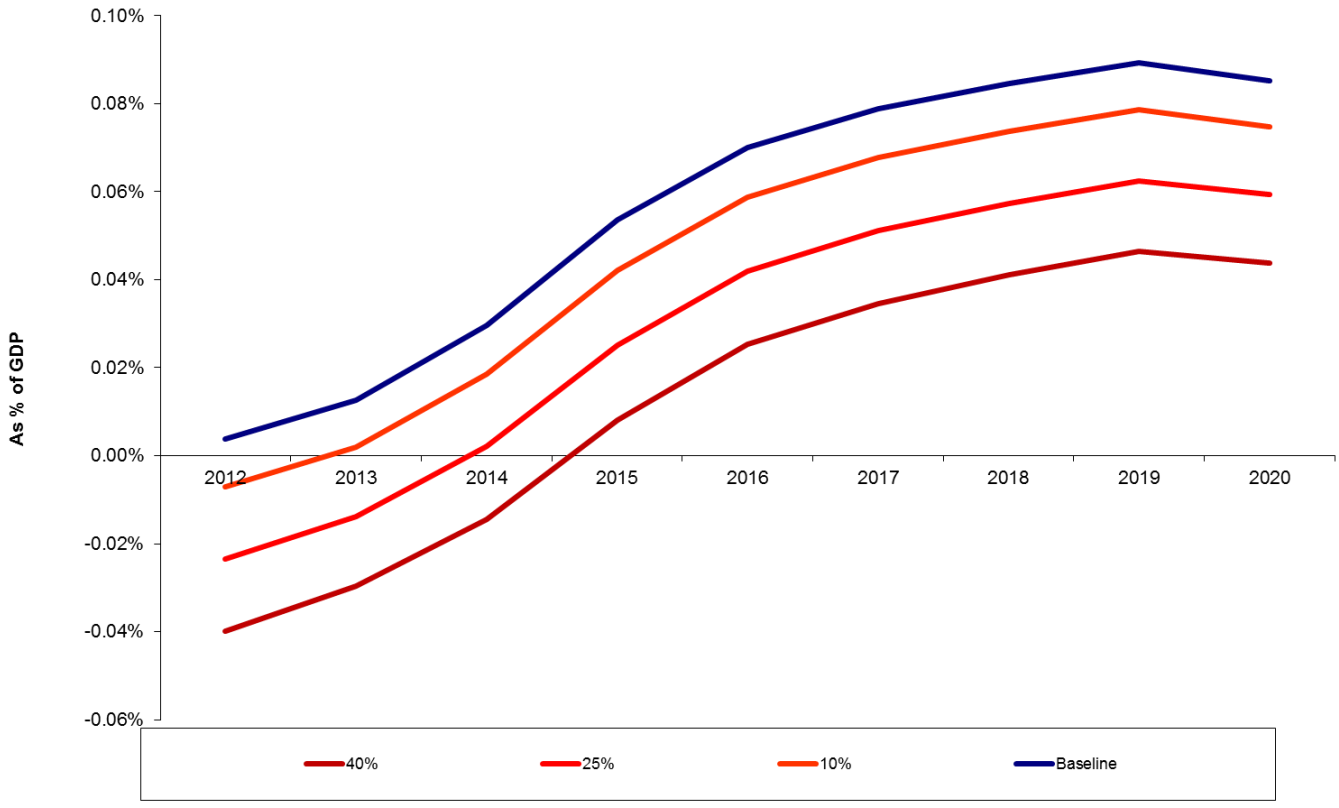
A further source of uncertainty in these projections is the exchange rate. A change in the exchange rate will affect the value of the external resources (in Dong terms), However, the impact on the financing gap is not easy to determine, as some of the resource needs will be imported (e.g. drugs) and as such will be denominated in foreign currency. Ultimately, how a change in the exchange rate will affect the financing gap will depend on the relative proportions of external resources in the available resources and imports in the resource needs.

There is insufficient information to be able to accurately carry out such an analysis, but it serves as a further reminder of the uncertainties inherent in extrapolating financial flows so far into the future.

8.3 Efficiency Savings

As noted above, there is the potential for very large efficiency savings in Viet Nam. In this section, we consider the impact of smaller savings on the financing gap. The efficiency savings estimated above are up to 40% of resource needs. In Figure 8.3 below, we also present the impact of 25% savings and 10% savings.

Figure 8.3 HIV/AIDS Financing Gap as % of GDP – Alternative Efficiency Scenarios



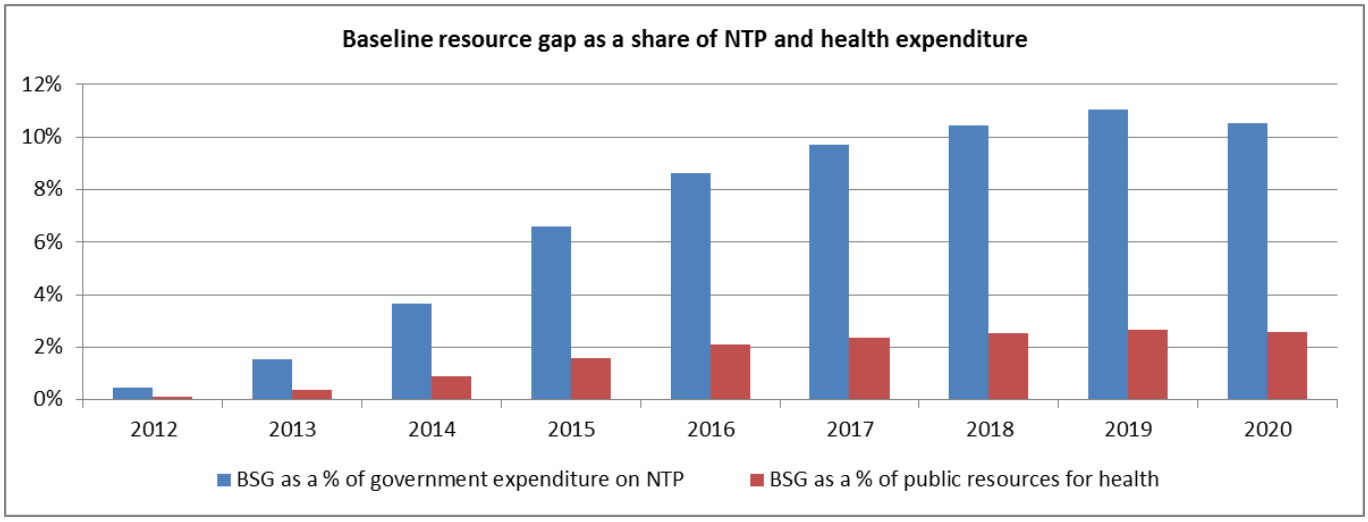
9 AIDS contribution out of public resources: how much is enough

In the assessment of the financing gap we used the assumption that the government would contribute the same share of recurrent expenditure to AIDS over the entire study period. In other words we do not assume that relatively spoken more resources are devoted to AIDS than in 2010 and 2011, years in which donor contributions were still very high.

In Annex 8 we set out projections for various expenditure categories over a 10 year period (till 2020): recurrent government expenditure, health expenditure and expenditure for NTP, and we then compare these with the AIDS resource needs, and the baseline AIDS financing gap.

The figure below shows the baseline AIDS resource gap as a share of projected NTP and health expenditure. Towards the end of the study period the gap is slightly higher than 10% of projected NTP spending. The AIDS financing gap is however never higher than 3% of the projected health spending.

Baseline resource gap as a % of projected NTP and health expenditure



This clearly indicates how relatively small the baseline AIDS financing gap is. We showed above that it can be easily filled with alternative sources of funding such as the social health insurance. However, it could be argued that the AIDS financing gap could also be filled from regular government resources.

10 Roadmap to develop a sustainable financing strategy for HIV and AIDS

A series of activities to move to decision making and implementation of a new financing strategy for AIDS fall out of the analysis presented above. First, the analysis tables a number of proposals to finance HIV and AIDS sustainably into the future. Many of these proposals concern both the highest level decision makers, Presidency, Prime Minister and Ministry of Finance, as well as technical stakeholders such as VAAC, the Ministry of Health, private businesses and so on. To ensure a smooth and coherent process of developing the AIDS financing strategy, it is recommended to set up a Task Force on sustainable financing for AIDS. This Task Force should be led by either the Presidency or the Prime Minister's office. VAAC can ensure the Secretariat. This working group should start with setting the agenda of actions to be undertaken, and draw up a timeline. It should also develop a budget for this process, and identify how it will be financed. The various activities, described below, can be carried out by technical working groups. They report to the Task Force. As such there would be the following technical working groups:

- Technical Working Group on Resource Needs for HIV and AIDS
- Technical Working Group on current sources of funding for HIV and AIDS
- Technical Working Group on Social health insurance and HIV and AIDS
- Technical Working Group on contributions from Private Enterprises for HIV and AIDS
- Technical Working Group on the Airline levy for HIV and AIDS
- Technical Working Group on efficiency savings in the AIDS Response

Second, it is important to validate the costing of the National HIV/AIDS Strategic Plan. The costing of the Plan was exogenous to this work and has not been examined in detail. As the costing is crucial to understanding the extent of the financing gap, it is important for this to be validated.

Third, in each of the sections regarding the innovative financing mechanisms we have set out what can be done to move towards implementation for each of them. Preliminary discussions have indicated that the Government first wants to explore Social health insurance, Contributions from private enterprises and the airline levy. These mechanisms must therefore be brought forward first, and the estimations, and the timing thereof, be estimated more precisely. If these mechanisms would not be enough to cover any residual financing gap, additional borrowing, or even public sector mainstreaming, two mechanisms currently seen as not desirable, may have to be reconsidered.

Fourth, the working group should embark on a number of efficiency studies such as described in section six and seven.

Fifth, a precise picture of the fiscal space for AIDS programmatic funding will be available once all analytical data have been confirmed, that is when all Technical Working Groups have submitted their results. This will be the moment where final decisions in respect of each of the areas can be taken.

11 Conclusions

Vietnam has achieved considerable success in scaling up its programmatic response to address the HIV/AIDS pandemic in recent years. However while public agencies and civil society organisations have played a key role in this success, 74% of total resources have come from Development Partners.

As a result of the global financial crisis and era of fiscal austerity in many developed countries, donor funding is expected to decline in the coming years. This creates significant challenges for policy makers in Vietnam to ensure that the level and quality of services to HIV/AIDS are maintained and expanded.

In response to these challenges, this report explores a number of domestic financing options for the HIV/AIDS response and assesses their potential contribution to the current and future projected HIV/AIDS needs of the country.

The movement towards universal coverage will witness an increase in the numbers of PLHA enrolled within the SHI scheme. In the absence of other funding sources for ART the ability of the VSS should be explored further to establish whether it is in a position to cover ART therapy. We estimate that over the period 2012-2020 the VSS could potentially contribute in the region of VDN 5.84 trillion towards the costs of ART. A number of implementation steps are required.

Internatonal experience highlights the role of public sector mainstreaming in contributing resources to HIV/AIDS programmes. Within the Vietnam context whilst a number of ministries undertake HIV/AIDS activities there is little appetite to pursue the option of mainstreaming any further at this point in time, largely because this would necessitate a change of the Budget Law.

There is scope for increasing private sector contributions in Vietnam. Movement towards greater private sector participation will require a number of steps, including (i) increasing advocacy to encourage private companies to play a greater role in funding HIV/AIDS workplace programmes, (ii) validating the costs of these programmes; and (iii) estimating the fiscal and business impact on firms.

Introducing an airline levy on international departures has the potential to raise revenue. A number of steps would be required to implement the levy, including engaging in a consultative process with the airline industry in Vietnam, and relevant tax authorities to the process. The aim of the consultative process would be to obtain buy-in from the industry. VAAC and UNAIDS may consider to associate UNITAID representatives to this process, as they will be able to share detailed international experience.

It is important to highlight the importance of efficiency savings and prioritisation where in situations where additional resources are not forthcoming. An obvious solution to underfunding, where available resources do not match identified needs (i.e. the funding gap cannot be decreased completely by alternative sources), is to prioritise funding towards those services that are the highest priority and subsequently, to withdraw funding from those services that are not considered a high priority. These types of difficult decisions are taken by every health care system at some level on a daily basis either explicitly or implicitly.

In conclusion, drawing on the summary of additional sources described above, it is possible to examine the total resources available for HIV. The airline levy is the largest revenue, representing 82% of the total innovative sources. When all the above additional resources are added to the baseline resources, it is clear that the financing gap is easily covered. A roadmap

lays out a step-wise approach to developing and implementing a sustainable financing strategy for HIV and AIDS services in Viet Nam.

12 Limitations

The approach to this work suffers from several limitations which must be kept in mind when interpreting the results.

First, at the basis of the quantitative work is a projection of resources required to finance HIV and AIDS programmes over a 10 year period. We use the cost estimates provided by VAAC for 2012-2020. More details about costing methodology are provided in Annex A.2. Crucially, projections of cost-estimates involve an estimation of programme unit-costs and coverage rates over the projection period, which are very difficult to predict.

Second, we calculate resource needs and available resources separately, and assume that resources available will be used to cover programme costs. However, there is no guarantee that available resources will be allocated where needed. It is possible that there are too many resources in one area (say treatment) and not enough in another (say prevention), while our methodology will state that, in the aggregate, an adequate level of resources is available. The issue of resource allocation, and underlying donor coordination, is not dealt with in this work, but is important to the delivery of the AIDS Response.

Third, inevitably there is a high degree of uncertainty associated with projecting forwards macro economic variables such as GDP growth, inflation, foreign exchange rates, and so on. It is important to recall that our projections are scenarios rather than forecasts.

These limitations suggest that it is important to annually check the detailed funding situation of the AIDS Response. Resource needs, resource availability including resource allocation needs to be reviewed say every two years to analyse whether enough resources are available for HIV and AIDS.

However, these limitations do not affect another use of this work which is to serve as a guide to take long term strategic policy decisions regarding resource availability for AIDS, for example with respect to VSS coverage of HIV and AIDS or the introduction of an airline levy for AIDS.

References

ADB, Private Sector Assessment, 2005

VSS, Health Insurance data (Excel spreadsheet obtained by local consultant, 2001)

Wilson, D. et al. HIV Prevention, Care, and Treatment in Two Prisons in Thailand, PLoS Medicine, June 2007, Volume 4, Issue 6.

Fang, C. et al. Decreased HIV Transmission after a Policy of Providing Free Access to Highly Active Antiretroviral Therapy in Taiwan, JID 2004:190 (1 September)

Population Estimate http://www.indexmundi.com/Viet Nam/population.html (Accessed 31/10/11)

Mc Leod, R. AIDS in Asia – Prioritizing and sustaining the response in the economic crisis. Background Paper for Conference on the " The Impact of the Global Economic Slowdown on Poverty and Sustainable Development in Asia and the Pacific", 28-30 Sept 2009, Hanoi.

http://www.adb.org/documents/events/2009/poverty-social-development/impact-on-hiv-aids-McLeod-paper.pdf

MoH (VAAC) Viet Nam HIV/ AIDS estimates and projections 2007-2012

MoH (VAAC) Summary of estimating resource needed HIV/AIDS NATIONAL STRATEGY, PERIOD 2011-2020, undated document provided by VAAC.

Ministry of Health / Health Partnership Group 2008 Joint Annual Health Review (2008)

Ministry of Health / Health Partnership Group 2010 Joint Annual Health Review (2010)

National Committee for AIDS, Drugs, and prostitution prevention and control, Forth Country Report on following up the implementation to the declaration of commitment on HIV and AIDS, 2010 (UNGASS)

Nguyen, C et al. National AIDS Spending Assessment (NASA) in Viet Nam, undated

Nguyen, T. et al. A hidden HIV epidemic among women in Viet Nam, BMC Public Health 2008, 8:37

Nguyen, V. & Scannapieco, V. Drug abuse in Viet Nam: a critical review of the literature and implications for future research, Addiction, 103, 535–543, 2010

Nguyen, T et al. The social context of HIV risk behaviour by drug injectors in Ho Chi Minh City, Viet Nam, AIDS CARE (2000), VOL. 12, NO. 4, pp. 483–495

UNAIDS, Estimation of Resource Needs and Availability for HIV Prevention and Care in Viet Nam 2011-2015, 9th October 2009

UNAIDS, Terms of Reference, Expanding long term financing options for HIV in Viet Nam, 2011

UNDP, Impact of HIV/AIDS on household vulnerability and poverty in Viet Nam, 2009

A1. Terms of reference

Expanding Long Term Financing Options for HIV in Viet Nam

Terms of Reference

Background

AIDS is a long-term epidemic that requires a commitment of resources that is sustained in the long term, and can be sufficiently predictable to allow the affected countries to plan effectively the scaling up of services. The underlying challenge for attaining the Millennium Development Goals (MDGs), and for economic development in general, applies also to overcoming the HIV epidemic – insufficient resources have been committed towards them, and all of the diverse development and health concerns must compete for those same inadequate resources. It is important to distinguish between strategies to increase the overall level of resources for health and development, and those to increase the priority given to HIV within existing allocations. Both will be important for developing sustainable financing for HIV over the next 10-20 years.

According to the first National AIDS spending Assessment (NASA) conducted in Viet Nam for the period 2008-2009 NASA, the volume of financial resources channelled to the national HIV response is substantial. In 2008-09, more than US$ 222 million was spent on HIV-related activities. During this period, the per capita annual AIDS expenditure was US$1.3 and US$ 469 was spent per each Person Living with HIV (PLHIV) in Viet Nam. Overall, between 2008 and 2009, total actual AIDS expenditure increased by 31%. Viet Nam's HIV response is funded by public, private and international sources. Public source, including the central and provincial budgets, provided 13% of national AIDS expenditures. International partners are the cornerstone of Viet Nam's HIV response- they have provided US$ 162 million (73% of national expenditures) for HIV-related activities in 2008-09 and directly administered US$ 84 million (38% of national expenditures) during this same period. In 2008-09, 82% of HIV prevention, and 51% of HIV treatment and care, expenditures were covered by external funds.

Clearly, the scale up path toward Universal access to HIV prevention, treatment , care and support will raise challenges of budgetary management and delivery capacity, and cannot take place without substantial external financing, from bilateral or multilateral sources, or in the form of concessional loans, or other non-loan mechanisms available through institutions such as the World Bank. For most countries, their domestic capacity to finance the proper response to the epidemic cannot meet the needs. Apart from the needs related to the current economic crisis, additional external financing will be necessary over the medium and long term; and governments will need to initiate alternative financing mechanisms at national and regional level in order to insure a sustainable financing of the response to HIV over the long term.

In Viet Nam, the bulk of the financing of HIV prevention and treatment and care is currently coming from external sources, rather than the Government budget. This has led to concerns that the financial need to maintain prevention efforts and even the existing cohorts of people on anti-retroviral drugs may be difficult to sustain financially if the policies of bilateral or multilateral donors change significantly in the medium term.

The purpose of this consultancy is to investigate the available sources of financing in Viet Nam in relation to planned expenditure or estimated resource needs, and to recommend measures that could meet the identified financing gaps in a sustainable way.

Tasks

UNAIDS is seeking to support further work in Viet Nam and help national partners design a financial strategy that will ensure funding for their HIV programme over a 10-15 years time horizon in a sustainable manner. The aim is to enable Viet Nam to design a *sustainable long-term financing map* for its national HIV response.

Specific Objectives

To undertake a quantitative analysis of all existing and potential financing mechanisms of the national programme for HIV over the next 25 years.

To identify the constraints and opportunities each financing mechanism faces in its implementation.

To recommend measures to meet identified financing gaps in a sustainable manner.

Work of the Consultant

The following tasks will be undertaken:

In consultation with the appropriate stakeholders in the country, analyse the existing financing mechanisms directed towards the HIV response, including, but not limited to government budget allocations, aid flows, loan and non-loan mechanisms and out of pocket expenditure by individuals, social health mechanisms either at the point of service delivery or through public or private insurance. For each of them, their long-term trend and potential should be assessed. The study will seek to understand the macroeconomic context of HIV funding over the next 10-15 years, including an assessment of IMF/ WB / ADB data on growth assumptions and assumptions regarding potential budget allocation scenarios to health and HIV/AIDS specifically. A baseline growth scenario will be presented along with optimistic and pessimistic scenarios. The study will also need to explore how the development of health insurance in Viet Nam might contribute resources towards HIV/AIDS over the time period. The current health insurance scheme covers approximately 60% of the population. Understanding the services covered for patients with HIV will need o be explored (e.g. medicines and consultations for opportunistic infections). The Government intend to move towards universal coverage by 2014, however the current milestones for incorporating different groups are not being universally met by provinces across the country. Given HIV/AIDS is concentrated around the country cross-subsidization between provinces would need to be considered. The study would need to consider how improved efficiency of HIV programme implementation could potentially release resources to fund other HIV/AIDS programmes. Careful thought will need to be given to the inclusion and role of current and future out of pocket spending on HIV programmes. It will be important to understand the nature and magnitude of out of pocket spending, however the equity implications of basing projections on out of pocket spending suggest that this source of funding could hinder access to critical services. Analysis will need to understand how this out of pocket spending may be reduced and covered by other sources.

Compare these to the estimated needs[28] and existing planned expenditures for prevention, treatment and care programmes over a 10-15 year period, and to estimates of the potential impacts of HIV on the economy of the country (review of secondary data) . Estimates of productivity and carer costs associated with HIV/AIDS are available (e.g. DfID costing study) and can be assessed within the overall analytical framework.

[28] HAPSAT Viet Nam scenario

Identify the range of the financing shortfall during the forthcoming 10-15 years.

With the assistance of stakeholders at country level, particularly the Ministry of Finance, Viet Nam HIV/AIDS Administration for HIV/AIDS prevention and Control (VAAC), and UNAIDS Viet Nam identify additional potential financing mechanisms (including multi-country or regional mechanisms). For each of them, identify the costs and benefits and the preliminary steps for implementation. Another study focus on is the potential for mainstreaming in Viet Nam. One possible mainstreaming strategy is to oblige government ministries and agencies at national and province level to include a budget line for activities to combat HIV, including prevention and treatment of staff members who are HIV positive.

Define a *Long-term sustainable financing map* which highlights the key components, a tentative sequencing for implementation, and a financial simulation compatible with the trend of HIV expenditures. A long term sustainable funding map will include baseline, optimistic and pessimistic annual estimates for each funding source over the 10-15 year period.

With the assistance of VAAC and with support from UNAIDS CO Viet Nam , convene the relevant stakeholders from the country national AIDS programme, the ministries of finance, health, social security, education (and others where appropriate), donors (PEPFAR, DFID, GF), UN , civil society and other key stakeholders in a country workshop for a discussion of the financing options.

Provide recommendations for additional and stable financing. This should include estimates of the limits to what can realistically be financed from public or private domestic sources, and what needs to be drawn from external sources. The macroeconomic analysis will provide insights into financing estimates over the medium to long term. The analysis will also consider other innovative sources of raising tax revenue for HIV programmes (e.g. airtime, flight, tobacco taxes.

When the country level analysis has been completed, draft an issues paper that summarises the findings on financing options for Viet Nam

Deliverables

An inception report describing the methodology, operational plan and timeline. (The inception report will be delivered by second week of August 2011).

A report containing the information, analysis and recommendations as specified above, and proceedings of the national workshop.(Draft report delivered by first week of December 2011, final on by end of December 2011)

An issues paper outlining recommendations for financing options applicable to Viet Nam.(Draft issues paper delivered by first week of December 2011, final one delivered and of December 2011)

Timetable

It is envisaged that the work will be completed over a 6 month period, as illustrated below:

	July 2011	Aug 2011	Sep 2011	Octo 2011	Nov 2011	Dec 2011
Initial briefing and logistical arrangements						
Country level consultation and analysis						
Report writing						

Team Profile

We are looking for a team of consultants providing a strong knowledge of public economics, development economics, health economics and HIV financing (public, private and domestic).

The senior international consultant should have a minimum of 15 years of experience in one of the above fields including demonstrated experience in financing mechanisms with applications at country level. S/He will also have demonstrated experience in team management.

The other expert (preferably national expert) should have a minimum of 5 years of experience in the two other fields mentioned above, with direct experience at country level in Viet Nam .

Applicants might apply as a team or as individuals to fill one or more of the positions specified above.

A2. Needs Estimates (VAAC estimates)

Summary of estimating resource needed

HIV/AIDS NATIONAL STRATEGY, PERIOD 2011-2020

I. Method of estimation

- Estimation of resource needed consists of 4 components:
  1) Indentify size of target group
  2) Indentify current coverage, objective of strategy upto 2020 and roadmap to extend scope of intervention
  3) Collect and analyse cost of some services and cost of HIV/AIDS program
  4) Estimate resource needed according to the changes toward extending coverage

- The main hypothesis:
  1) Population growth is 1.2%/year. Changes in size/dimemsion of infected and target group in period 2016-2020 is as the same as period 2011-2015
  2) Target increases gradually upto expected objective of strategy.
     - Method of calculating unit cost for program activities:
     - Micro Cost Analysis was applied for VCT, ART, PMTCT.
     - Cost analysis based on activities applied for condom and needle program.
  3) Macro Cost Analysis, top-down approach, applied for activities such as Pubic education, monitoring, supervision, evaluation, laboratory or capacity building
  4) Cost was calculated equivalent value in 2010. Resource was estimated for 2011-2020. Exchange rate of 2009, 1 USD = 20.500 VNĐ. Inflation was calculated equivalence in 2009.
  5) Resource needed was adjusted according to the changes of cost and need of different services between Care Level, region and donors.
  6) The available resource based on two main sources: (i) Government budget: consist of current expenditure and capital investment; included local budget. The estimated Government Budget growth for program period 2011-2015 is 20% annually, period 2016-2020 Government Budget commits to ensure at least equal to growth rate of period 2011-2015; (ii) Fund from donor was identified is committed fund to 2015. This commited resource was taken into account implementation and deducted 30% management fee for some fund was managed directly by donor.

II. Some indicators related to target group (Calculation of Needs)

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
I. Dimension/Size										
Population	87,907,325	88,962,213	90,029,759	91,110,116	92,203,438	93,309,879	94,429,598	95,562,753	96,709,506	97,870,020
Infected	257,303	265,352	273,258	282,145	292,906	292,906	292,906	292,906	292,906	292,906
Number of Pregnant W.	2,000,000	2,024,000	2,048,288	2,072,867	2,097,742	2,122,915	2,148,390	2,174,170	2,200,260	2,226,664
II. PMTCT										
Treatment PMTCT	95%	95%	95%	95%	95%	95%	95%	95%	95%	95%
III. ART										
% ART - Adults	59.4%	60.6%	61.8%	63.0%	64.1%	65.3%	66.5%	67.7%	68.8%	70.0%
% ART – Paediatric	69.0%	71.9%	74.8%	77.7%	80.6%	83.4%	86.3%	89.2%	92.1%	95.0%
IV. MMT										
Coverage of IDU	4.5%	15.9%	27.3%	38.6%	50.0%	55.0%	60.0%	65.0%	70.0%	70.0%
V. VCT										
Coverage of IDU	17.9%	28.4%	39.0%	49.5%	60.0%	65.0%	70.0%	75.0%	80.0%	80.0%
Coverage of FSW	34.8%	41.1%	47.4%	53.7%	60.0%	65.0%	70.0%	75.0%	80.0%	80.0%
Coverage of MSM	19.1%	29.3%	39.6%	49.8%	60.0%	65.0%	70.0%	75.0%	80.0%	80.0%
VI. Condom										
Coverage of IDU	51.9%	56.4%	61.0%	65.5%	70.0%	72.5%	75.0%	77.5%	80.0%	80.0%
Coverage of FSW	77.7%	75.8%	73.9%	71.9%	70.0%	72.5%	75.0%	77.5%	80.0%	80.0%
Coverage of MSM	66.5%	67.4%	68.3%	69.1%	70.0%	72.5%	75.0%	77.5%	80.0%	80.0%
VII. Needle / syringes										
Coverage of IDU	0.60	0.63	0.65	0.68	0.70	0.73	0.75	0.78	0.80	0.80

A3. Overview of the Macroeconomic Framework

Introduction

The macroeconomic approach adopts a numeric framework, known as a financial programming framework, which is designed to assist in the development of a consistent approach to the different aspects of economic policy. The key feature of the financial programming framework is that it is based on a comprehensive view of the national economy, comprising four inter-dependent sectors. The four sectors are:

- The Real Sector, which relates to productive activities of the economy.
- The Fiscal Sector, which captures government transactions.
- The External Sector, which includes all transactions between the country in question and other countries.
- The Monetary Sector, which includes the transactions of the banking system and of the central bank.

Whilst not a sector in its own right, attention is also given to the debt of the central government, as the stocks and flows of the government's debt are reflected in the fiscal, external and monetary sectors.

At the outset, it should be clearly understood that the macroeconomic framework is not an economic model. It does not constitute a set of equations which attempt to model the behaviour and interaction between different sets of economic agents. In economic terminology, it is not based on a set of econometrically estimated behavioral and/or structural relationships which drive economic outcomes.

The macroeconomic framework is a tool for ensuring the consistency between different sets of assumptions about the future course of the economy. In other words, by starting with a set of assumptions about the economy (e.g. GDP growth), the framework assesses the impact of different policy options on the four sectors of the economy in a consistent manner.

Key Components

The starting point for the macroeconomic framework is the tables published on the country's macroeconomic performance by the IMF. These tables are produced in a standard format for all countries as part of the IMF's Article IV surveillance activities. The standard IMF documents include five tables that are replicated in the macroeconomic framework used for this analysis. These are:

- Table 1: Selected Economic Indicators, containing summary data from the real, fiscal, monetary and external sectors.
- Table 2: Balance of Payments, including indicators on gross international reserves.

- Table 3: Fiscal Operations of Central Government, describing the government budget and its financing.

- Table 4: Monetary Survey, showing the paths of broad money, net foreign assets and net domestic assets.

In the case of Viet Nam, we also draw on Table 5, which presents the medium term projections for the key macroeconomic variables.

These tables are transposed into Excel and expanded further as necessary, to produce data for the fours sectors of the economy described above. This is done through the following six work sheets:

- **Overview:** The Overview sheet includes projections for headline macroeconomic variables such as real GDP growth, GDP deflator and the exchange rate.

- **Real:** The Real sheet provides the projections of the real sector, including values for GDP and its components (including consumption and investment).

- **Fiscal:** The Fiscal sheet provides information on the annual budget for the Government, including projections for domestic revenue, expenditure, grants and deficit financing.

- **Money:** The Money sheet provides projections for the monetary sector. It includes the path of key monetary aggregates, such as credit to the private sector.

- **External:** The External sheet provides forecasts for the Balance of Payments, including projections for imports, exports, and gross international reserves.

- **Debt:** Whilst the Debt sheet does not reflect a sector as such, it performs a simple function by taking the debt disbursements, combining these with the existing debt stock and forecast repayments, to project the debt variables into the future.

The different sheets are all linked to each other to ensure consistency, as discussed further below. Additional worksheets are used to group together the key macroeconomic assumptions, to include the data on HIV and AIDS resources and to present charts of macroeconomic indicators.

Theoretical Approach

The framework uses four macroeconomic accounting identities to ensure consistency between the different sectors of the economy. A macroeconomic accounting identity is a relationship between a set of economic variables that must hold true by definition. For example, GDP must be equal to the sum of its components (investment, consumption, imports and exports). Each sector has its own accounting identity.

The framework ensures consistency between the sectors in two ways. Firstly, the macroeconomic framework ensures that all of the accounting identities are met. It does this through the use of a “residual” item, which is set via a formula to ensure that the

identity is always true. For example, if we have already determined GDP, investment, imports and exports, then there can only be one value for consumption that is consistent with the accounting identity for the real sector (i.e. Consumption = GDP – Investment – Exports + Imports). In this case, consumption is known as the "residual".

Secondly, the macroeconomic framework ensures that wherever a variable features in more than one sector, the projections for that variable are the same in both sectors. For example, Imports features in both the real sector (as a component of GDP) and the external sector (as a component of the Current Account). Thus, the macroeconomic framework will ensure that whatever values are used for Imports in the external sector are also used in the real sector.

Macroeconomic Accounting Identities

This section will examine the accounting identities used in each sector and the residual that is used to balance them.

The Real Sector

Basic Identity:

GDP = Consumption (Private + Public) + Investment (Private + Public) + Exports – Imports

Residual:

Private Consumption

The primary assumption in this sector is that of growth in real GDP. This is used to extrapolate the current figure for GDP into the coming years. An assumption is also made about the future path of the GDP deflator in order to convert between real GDP and nominal GDP.

Having determined the value of GDP in future years, it is necessary to determine its composition. Public consumption (i.e. government current expenditure) and public investment (i.e. government development expenditure) are determined by the Fiscal sheet (see below). By making assumptions about the share of investment in GDP, it is possible to produce forecast figures for investment. Finally, Imports and Exports are linked from the External sheet (see below).

Therefore, having determined the total value for GDP and all but one of its components, the residual component must be set to ensure consistency with the basic accounting identity. In this case, private consumption is used as the residual and is equal to GDP plus imports, less exports, private investment and total government spending.

The Fiscal Sector

Basic Identity:

Total Revenue – Total Expenditure = Net Borrowing

Residual:

Net Disbursements of Domestic Debt

This sector is focused on the government budget. Firstly, tax revenue is determined (based on an assumption about its share of GDP) as well other sources of revenue, such as grants and non-tax revenue. External grants are converted to local currency using the exchange rate.

Assumptions are made about the government's expenditure (excluding debt service). The interest payments on debt are calculated in the Debt sheet, such that a higher deficit in one year is reflected in higher interest payments in the subsequent year. These factors determine the government's overall deficit and hence the government's borrowing requirement. Future disbursements and principal repayments on external debt are determined by assumption and converted to local currency using the exchange rate.

All that remains is to determine the net disbursements on domestic debt. This is the residual in this sector and it set at a level to balance government borrowing with the overall deficit.

The Monetary Sector

Basic Identity:

Net Foreign Assets + Net Domestic Assets = Broad Money

Residual:

Net Claims on Other Sectors (a component of Net Domestic Assets)

Net foreign assets are determined by the net flow of foreign currency into the country, which is given by the change in official reserves in the balance of payments (i.e. from the External sheet).

Net domestic assets includes net claims on government and net claims on other sectors (i.e. the private sector). Net claims on government is determined by the outstanding stock of government debt, which is taken directly from the Debt sheet. Net claims on other sectors is the residual in this sector and therefore calculated at the end.

Broad money can derived from the economic relationship between nominal GDP, broad money and the velocity of money (PY=vM). Broad money is therefore calculated by dividing nominal GDP by an assumed figure for the velocity of money.

Having determined everything else using the above assumptions, net claims on other sectors is the residual and is set to ensure compliance with the accounting identify for this sector. It is equal to broad money less net foreign assets and less net claims on government.

The External Sector

Basic Identity: *Current Account + Capital Account + Financial Account + Errors & Omissions = Change in Official Reserve Assets* Residual: *Change in Official Reserve Assets*

The external sector is essentially a representation of the balance of payments, which captures the flow of foreign currency into and out of the country in question. The current account is determined by assumptions about the import and export of goods and services, income and remittances. Also included in the current account are government interest payments on external debt (taken from the Debt sheet) and external budget support grants (taken from the Fiscal sheet).

The capital account includes external project grants (taken from the Fiscal sheet). The financial account requires assumptions about foreign direct investment and portfolio investment. The only other significant components of the financial account are the disbursements and repayments of external loans to government, which are taken from assumptions in the Fiscal sheet.

Errors and omissions are assumed to be zero in the future. The only item left is the change in official reserve assets, which is used as the residual to ensure consistency in this sheet. The change in official reserves is therefore given by the sum of the current account, the capital account and the financial account.

Key Linkages between the Sectors

As discussed above, the second source of consistency comes from the use of only one set of forecasts wherever a variable appears in two different sectors. Table 1 summarises the linkages between different sheets. It is important to note that the link is created from the sheet listed on the left hand side to the sheet list along the top of the table (i.e. imports from the External sheet are transferred to the Real sheet.) To avoid confusion, only the most important linkages are shown, these correspond with the linkages discussed in the text above.

Table 1: Key Inter-Sector Linkages in the Macroeconomic Framework

To From	Real	Fiscal	Debt	Money	External
Real		GDP (for Revenue projections)		GDP (for Broad Money projections)	
Fiscal	Government Spending		Net Disbursements on Domestic Debt Disbursements on External Debt		External Grants Disbursements on External Debt
Debt		Interest Payments Principal Repayments on External Debt		Debt Stock (for Net Domestic Assets)	Interest on External Debt Principal Repayments on External Debt
Money					
External	Imports Exports		Exchange Rate	Change in Official Reserve Assets	

Using the above framework, it is possible to condense the forecasting of the economy, and its various sectors, to just a handful of key assumptions. Using these assumptions, the linkages and identities described above, and a few further details, it is possible to then project a range of macroeconomic variables and indicators into the future.

The framework therefore operates by retaining the IMF projections for the short and medium term and then making a number of high level assumptions for key macroeconomic variables over the long term. These assumptions are based upon an extrapolation of the medium term IMF projections and an analysis of the available information on the economy of the country in question.

Incorporating HIV and AIDS Resources

HIV and AIDS resources can be divided into two forms; revenues and expenditures. It is important to be clear on the distribution to avoid double-counting the resources. For example, a grant from a donor would be included as a revenue but may also be counted as an expenditure by the government. Table 9.1 shows the HIV and AIDS resources incorporated into the macroeconomic framework and the sectors that they are linked directly to.

HIV and AIDS Resource Flows in the Macroeconomic Framework

Resource Flow	Sector Linkages
Revenues	
External project grants included in the budget	Fiscal, External
External project grants not included in the budget	None
External project loans	Fiscal, External, (Debt)
Tax and non-tax revenues collected by the government and earmarked for HIV and AIDS	Fiscal
Domestic borrowing by the government and earmarked for HIV and AIDS	Fiscal, (Debt)
Expenditures	
Government (Current) Expenditure	Fiscal
Expenditure by external project grants not included in the budget	None
Expenditure by private individuals and companies	Real

These resources are integrated into the appropriate sectors of the macroeconomic framework. This ensures consistency in both the macroeconomic projections and the HIV expenditure projections in two ways.

First, those resources that are determined exogenously (either through external factors or by policy decisions) are linked to the macroeconomic framework so that changes in these variables have a macroeconomic impact. For example, higher grants from external donors may

(i) increase government expenditure in the fiscal sector and (ii) increase the change in official reserves in the external sector (amongst other effects). Equally, a decision to increase taxes to finance HIV will (i) increase the deficit and domestic borrowing and (ii) by higher interest payments on that debt, further increase the deficit in future years (again amongst other effects).

Second, HIV and AIDS resources can be linked to macroeconomic variables to model their size under different scenarios. For example, external grants and loans will be converted into local currency via the exchange rate and domestic resources can be linked to GDP growth to see how they change under different scenarios.

Using the framework above, it is then possible to insert different assumptions for key macroeconomic variables and different HIV and AIDS financing mechanisms to examine scenarios for HIV and AIDS expenditure into the future. These scenarios can be supported by various indicators to assess the plausibility of the scenario (e.g. is the share of HIV/AIDS expenditure of GDP excessive?) and its macroeconomic stability (e.g. is government debt sustainable? Is the balance of payments stable?).

A4. 2011 Planned State Budget (Centralised Ministries)

	Ministry	VND (Mns)
1	State President's Office	117,200
2	Assembly Office	1,456,500
3	Communist Party Office	992,850
4	Government Office	467,220
5	Central office for preventing and fighting Corruption	30,140
6	Academic National Political HCM Institute	543,370
7	The Supreme People's Court of Vietnam	1,869,930
8	The Supreme People's Procuracy of Vietnam	1,827,740
9	Foreign Affair Ministry	2,237,140
10	Agricultural Ministry	6,907,717
11	Mekong River Committee	19,560
12	Transport Ministry	11,196,220
13	Industry Ministry	1,578,934
14	Construction Ministry	1,511,718
15	Ministry of Health	4,317,790
16	Ministry of Education	5,081,609
17	Ministry of Science and Technology	734,595
18	Ministry of Culture, Sport and Tourist	2,061,303
19	Ministry of Labour, Invalid and Social Affair	21,013,650
20	Ministry of Finance	12,138,940
21	Ministry of Justice	1,351,110
22	State Bank	229,780
23	Ministry of Planning & investment	1,810,576
24	Internal Ministry	999,035
25	Ministry of Environment	2,457,634
26	Ministry of Public Information/Propaganda	805,321
27	Minority group commission	70,040
28	Government Inspection	190,430
29	State Audit	336,510
30	Vietnam News	409,060
31	Vietnam Television	98,400
32	Vietnam Radio	523,160
33	Institute of Science and Technology	513,577
34	Institute of Social Science	358,125
35	Hanoi University	549,896
36	HCM City University	814,330
37	Vietnam Fatherland Front Committee	49,160
38	Youth central office	299,145
39	VN Women Association	141,508
40	VN Farmer Association	159,290
41	VN Old solder	27,045
42	VN Labour association	164,205

43	VN cooperative association	124,580
44	Bank of VN development	2,060,000
45	Bank of social policy	3,260,000
46	VSS	29,700,000
47	Other	6,774,576
	Total	130,380,619

Source: MoF, Annual Report of State Budget, 2011.

A5. Estimates of enterprise workplace programmes

#	Cost items	Cost explanation (per year)	Unit cost (VND)	
1	**Establish an HIV/AIDS prevention committee**			
	- Meeting among enterprise managers	2 meetings x 0.5 hour (salary of 28,842 VND/hour) x 3 persons	86,525	/enterprise
	- 1 active staff to implement (get consensus, prepare paper work, get approval, organization of meeting, etc)	1 staff x 2 days (salary of 138,400 VND/day)	276,880	/enterprise
	- Stationary and facility	will not be counted		
	Total		363,406	/enterprise
2	**Develop HIV/AIDS workplace prevention policy**			
	- 1 active staff to attend project training, draft and finalize the policy	1 staff x 2 days (salary of 138,400 VND/day)	276,880	/enterprise
	- 2 managers to review and approve the policy	2 managers x 0.5 hour (salalry of 28,842 VND/hour)	28,842	/enterprise
	- Stationary and facility	will not be counted		
	Total		305,722	/enterprise
3	**Develop a work plan and report**			
	- 1 active staff to draft and finalize workplan and prepare quarterly report	1 staff x 0.25 day (salary of 138,400 VND/day) x 6 times	207,660	/enterprise
	- 1 managers to review and approve workplan and reports	1 manager x 0.5 hour (salary of 28,842 VND/hour) x 5 times	72,104	/enterprise
	- Meeting among HIV committee to review workplan and report	1 meeting x 0.5 hour (salary of 28,842 VND/hour) x 3 persons	43,263	/enterprise
	- Stationary	copy of 20 pages x 200 VND/page	4,000	/enterprise
	- Facility	will not be counted		
	Total		327,027	/enterprise
4	**Establish enterprise's peer education team**			
	- Meeting among HIV committee to select PE team	1 meeting x 0.5 hour (salary of 28,842 VND/hour) x 3 persons	43,263	/enterprise
	- 1 staff to prepare decision to establish and SOW for PE team	1 staff x 0.25 day (salary of 138,400	34,610	/enterprise

		VND/day)		
	- Training to PE	1 worker x 3 days (salary of 92,293 VND/day)	276,880	/worker
	- 1 staff to coach and supervise PE	1 staff x 0.25 day/month x 12 months	415,321	/enterprise
	- PE prepare monthly report to submit	1 worker x 0.1 day/month x 12 months	110,752	/worker
	- Stationary	copy of 6 pages x 200 VND/page x 12 months	14,400	/enterprise
	- Facility	will not be counted		
	Total			
5	**Carry out HIV communication activities**			
	- PE to carry out group communication event and IPC	1 PE x o.25 day/month	276,880	/PE
	- Workers to attend HIV communication event	1 worker x 2 hours/year	46,147	/worker
	- Stationary and facility to conduct communication event	300,000 VND/event	300,000	/event
	- Sub-contract for communication event/training			
	Total			
6	**Carry out social marketing condom program**	Not yet implemented		
7	**Refer employees to VCT, RTI/STI, ART, MMT or detoxification**			
	- 1 health staff to be in charge	1 staff x 2 hours/month x 12 months	830,641	/enterprise
	- Carry out VCT at workplace setting	1 worker x 50,000 VND/test+counseling	50,000	/worker
	Total			
8	**Provide care and support for PLHIV, HRIs, and their families**			
	- Financial support for HIV+ employees	2 persons x 500,000 VND	1,000,000	
9	**Promote partnership with communities and local government authorities on HIV prevention, care, and support**			
	- Conduct communication events for community (Nam Trieu)	500,000 VND/event	500,000	
10	**Raise funds for HIV prevention and support to PLHIV in the workplace or community**			

Source Chemonics, 2009-2010 data

A6. Drug Efficiency

Median transaction price of *first-line* ARV medicines for adult treatment per patient per year (US$ppy) for Lower middle-income countries and Average Annual Treatment cost per patient in Vietnam in 2008, 2009 and 2010

ARV (first line)	Dosage	DDD (tablets or capsule)	Median Transaction Price (US $/ppy)			Viet Nam Data					
			2008	2009	1st Quarter 2010	Average Annual Treatment Cost Per Patient			Manufacturer	Country of manufacture	Source
						2008	2009	2010			
Stavudine (d4T)	30 mg	2	26 (23-30)	19 (19-34)	19 (19-19)	18	18		Aurobindo Pharma Ltd.	India	SCMS
						19	18		Strides Arcolab Ltd.	India	SCMS / Global Fund
Lamivudine (3TC)	150 mg	2	40 (37-45)	35 (24-38)	31 (31-32)	32	30		Aurobindo Pharma Ltd.	India	SCMS / UNITAID
						36	32	32	Matrix Laboratories Ltd.	India	SCMS / Global Fund
								28	Ranbaxy Ltd.	India	Global Fund
								29	Strides Arcolab Ltd.	India	SCMS
Nevirapine (NVP)	200 mg	2	48 (43-51)	43 (41-46)	43 (41-46)	37	36		Aurobindo Pharma Ltd.	India	SCMS / UNITAID
						40	42	30	Hetero Drugs Ltd.	India	SCMS / Global Fund
								32	Ranbaxy Ltd.	India	Global Fund
								32	Strides Arcolab Ltd.	India	SCMS
Zidovudine (ZDV) + Lamivudine (3TC)	300 mg + 150 mg	2	124 (119-134)	113 (112-120)	106 (106-110)	107	105	104	Aurobindo Pharma Ltd.	India	SCMS
						114		102	Hetero Drugs Ltd.	India	SCMS / Global Fund
							106		Matrix Laboratories Ltd.	India	Global Fund
Efavirenz (EFV)	200 mg	3	230 (195-447)	319 (169-343)	192 (158-288)	177		107	Aurobindo Pharma Ltd.	India	UNITAID
Efavirenz (EFV)	600 mg	1	169 (148-188)	95 ((90-114)	64 (64-64)	136	81	54	Matrix Laboratories Ltd.	India	SCMS / Global Fund
						179			Ranbaxy Ltd.	India	Global Fund
							68		Emcure Pharmaceuticals Ltd.	India	Global Fund

Median transaction price of *second-line* ARV medicines for adult treatment per patient per year (US$ppy) for Lower middle-income countries and Average Annual Treatment cost per patient in Vietnam in 2008 - 2010

ARV (Second Line)	Dosage	DDD (tablets or capsule)	Median Transaction Price (US $/ppy)			Viet Nam Data					
						Average Annual Treatment Cost Per Patient					
			2008	2009	1st Quarter 2010	2008	2009	2010	Manufacturer	Country of manufacture	Source
Abacavir (ABC)	300 mg	2	350 (313-374)	271 (236-299)		308	230		Aurobindo Pharma Ltd.	India	SCMS
								199	Matrix Laboratories Ltd.	India	SCMS
Didanosine (ddI)	100 mg	4	212 (187-235)	217 (191-272)		189			Aurobindo Pharma Ltd.	India	SCMS
Didanosine (ddI)	200 mg	2	311 (218-350)	266 (241-286)				317	Aurobindo Pharma Ltd.	India	SCMS
								134	Aurobindo Pharma Ltd.	India	UNITAID
Didanosine (ddI)	250 mg	1	799 (675-874)	190 (184-194)		159			Aurobindo Pharma Ltd.	India	SCMS
Lopinavir (LPV) + Ritonavir (RTV)	250 mg + 50 mg	6	1107 (574-1000)	1000 (575-1000)	621 (621-1000)	1001	1001	1001	Abbott Laboratories Ltd.	Germany	SCMS
								1171	Abbott Laboratories Ltd.	Germany	IDA
Ritonavir (RTV)	100 mg	2	283 (99-811)	762 (217-871)			167	511	Abbott Laboratories Ltd.	UK & France	SCMS

Sources for drug efficiency:

1. UNAIDS (2010) "The HIV Response and the Doha Declaration on TRIPS and Public Health" Policy Paper. 30 June 2010
2. WHO (2010) "Transaction prices for Antiretroviral Medicines and HIV Diagnostics from 2008 to March 2010" A summary report from the Global Price Reporting Mechanism (GPRM) May 2010
3. Waning. Brenda *et al* (2009) "Global Strategies to Reduce the Price of Antiretroviral Medicines: Evidence from Transactional Databases" World Health Organization Bulletin 2009; 87:520–528
4. MSF "The second Wave of the Access Crisis: Unaffordable AIDS Drug Prices… Again" Briefing note December 10 2005

A7. Methodological note on technical efficiency cross-country study

A recent study carried out by Zeng *et* al used data envelop analysis (DEA) to evaluate the technical efficiency of national HIV/AIDS programmes in low and middle income countries (Zeng *et al* 2009). Using data on inputs (national HIV/AIDS expenditure) and outputs (HIV/AIDS services, namely PMTCT, VCT and ARV), the DEA methodology allows to determine a production frontier for HIV and AIDS services against which less efficient countries can be benchmarked. The study can be seen as a landmark study because its results indicate at country level the extent to which efficiency gains can be made. This information is, obviously, of crucial importance to any approach to sustainable financing for HIV and AIDS. In the paragraphs below we run through Zeng's most important findings and apply them to the case of Viet Nam.

The study determines technical efficiency levels for different country AIDS programmes. National AIDS Spending Assessments (NASA) compiled by UNAIDS were used to determine the inputs for national HIV/AIDS programs. The number of people receiving voluntary counselling and testing (VCT), the number of HIV+ pregnant women receiving HIV/AIDS treatment for prevention of mother-to-child transmission (PMTCT), and the number of patients receiving antiretroviral treatment (ART) were selected as programme outputs. Note that outputs such as 'harm reduction programmes' are not considered, which will inevitably negatively bias the results for Vietnam in this study. The final data set covers 68 countries with 151 observations, spanning the years from 2002 through 2007.

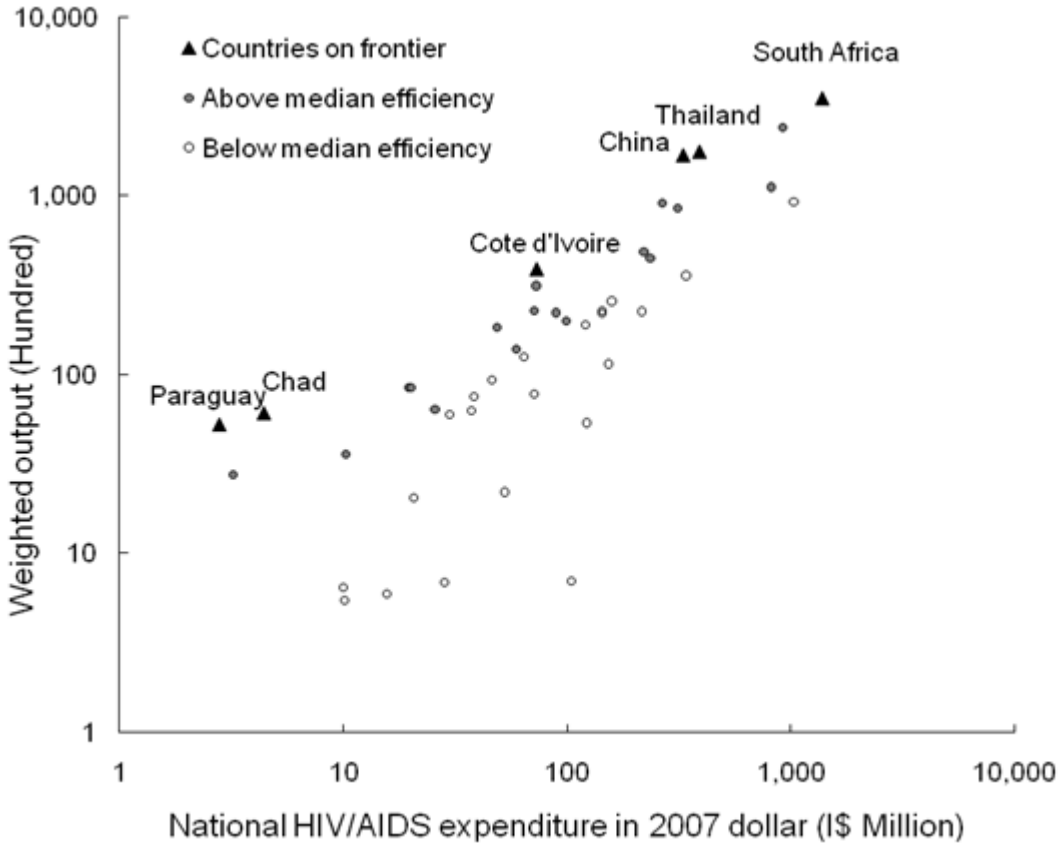
In a first stage the authors used output-oriented data envelopment analysis (DEA), a classic approach to evaluating technical efficiency to estimate the efficiency of national HIV/AIDS programs. The efficiency score from output-oriented DEA models is a ratio of the current level of weighted outputs to its potential level if the country performed optimally. Considering the limitation that the conventional CCR DEA model does not incorporate prior knowledge of the relative importance of inputs and outputs in estimating weights, the authors used the DEA model with an assurance region (AR), setting weight boundaries for the outputs.

In a second stage the authors attempted to explain efficiency differentials and identified indicators on governance, health financing mechanisms, HIV/AIDS prevalence, and economic and demographic characteristics of a country as potential determinants of the technical efficiency of the program. After obtaining the efficiency scores from the pooled output-oriented DEA model, a random-effects Tobit regression model with finite population adjustment was used to explore the determinants of the efficiency of HIV/AIDS programs. The Tobit model was built on 120 observations in 2006 only because of data restrictions.

When evaluating the efficiency of the AIDS response by year, of all 151 observations, 18 are on the production frontier with efficiency scores of 100%. The high performers include countries that have been recognized for their successful HIV/AIDS programs including Thailand, Brazil, and Rwanda, which further validates the methodology used. The overall average efficiency was 49.8% (standard deviation 31.2%), indicating that, on average, the countries could have doubled their outputs if they used money as efficiently as their comparison peers in the same year.

Figure 6.1 illustrates the results more intuitively by plotting them into a two-dimension graph by standardizing the weight for PMTCT and VCT relative to ART[29]. There are six countries with 100% efficiency on the production frontier, and there are 17 countries above the median efficiency of 40% but below 100%.

Figure 12.1 HIV/AIDS production frontier 2002-2007

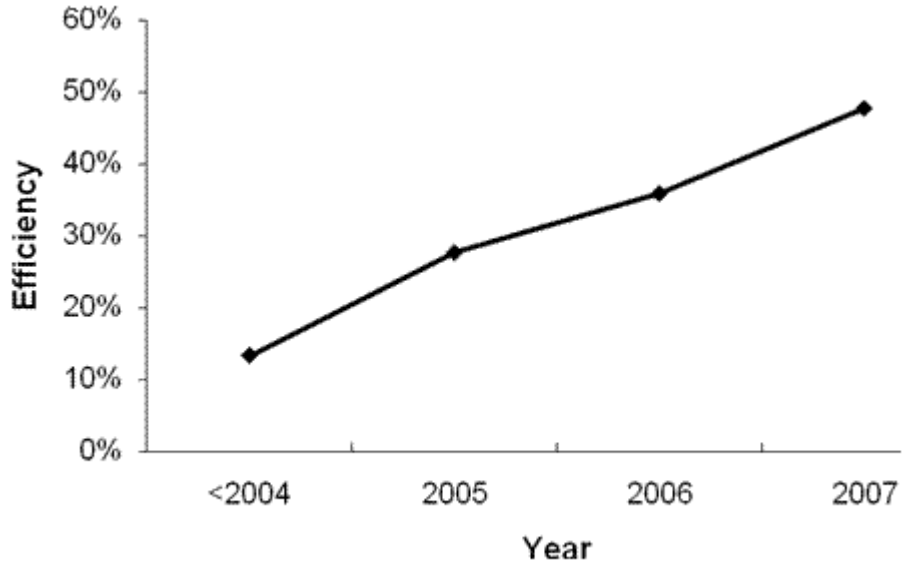


A notable result from the pooled DEA analysis (country observations from all years are pooled) is that efficiency of AIDS responses increases significantly over time, from 13.3% before 2004 (including 2004) to 47.7% in 2007[30]. This is shown in the graph below.

[29] The authors standardized the relative weight assigned to each output by averaging the corresponding relative weights from the DEA model across observations, setting the weight for ART as 1, for PMTCT as 0.10 and for VCT as 0.01.

[30] Data compiled from 68 low and middle income countries from 2002 to 2007. Each point represents the mean efficiency in a given year.

Figure 12.2 Change in efficiency of national HIV/AIDS programs over time (2002-2007)



This finding then throws up the question what drives efficiency of HIV/AIDS programmes. The authors consider a series of variables and verify the extent to which they impact on the efficiency scores. The table in Annex D shows the statistically significant results, their level of significance, and their contribution in explaining efficiency (size of coefficient). The most important explanatory variables[31] are:

- Income measured as log [GNI/cap], with a negative value for the square of this variable
- An interaction effect between 'control of corruption' and 'rule of law'
- Voice and accountability

The determinant 'income' (and the negative value for its square) indicates that countries' AIDS responses become more efficient when they become richer up to a point, and then become less efficient again (the path has an inverted U-shape). The authors suggest that this is because poor countries reap off efficiency gains by augmenting their service delivery infrastructure but then at some point (the turning point of the curve) shift focus on quality of service while service delivery workers (mainly health workers) earn comparatively higher salaries, leading to a decrease in efficiency. This otherwise plausible explanation also points at one of the limitations of the approach, as quality of the AIDS programmes is not taken into account.

The positive interaction term 'control of corruption' with 'rule of law' indicates that both measures work together in contributing to efficient AIDS programmes. This finding suggests that the more the rule of law is respected and the more public power is exercised for the benefit of the public good, the more efficient AIDS programmes are implemented.

[31] The variable 'Voice and accountability', measures "the degree to which citizens participating in government affairs, and freedom of expression, freedom of association and a free media"; the variable 'Rule of law' measures "the extent to which agents have confidence in and abide by the rules of society" and 'Control of corruption' refers to "the extent to which public power is exercised for private gain". These variables are obtained from World Bank databases.

The significance of ‘Voice and accountability’ is likely to reflect that higher levels of beneficiary group participation in decision making lead to better value for money in the production of VCT, PMTCT and ART services. This finding is in line with best practice guidance from UNAIDS.

Not surprisingly all year dummies are significant as well suggesting that specific events in each year, and which are not captured in the other variables, explain the efficiency differential as well.

While the Zeng study is significant far beyond its application in this study, its insights directly contributes to this work in that it indicates the scope for efficiency gains in Vietnam. However, before we apply the study results to the case of Vietnam, we report some of the limitations of the approach. First, the study takes into account one input (expenditure) and three outputs (VCT, PMTCT, ART), which obviously is a simplification of the research question motivated by lack of available data. The study results are in that sense indicative and the underlying assumption is that the efficiency levels found for the production of VCT, PMTCT and ART apply to other programme interventions as well. Second, technical efficiency, which is studied here, is not the only relevant criterion to assess an AIDS response. AIDS programmes may, for example, be most effective while not being fully efficient. Third, some evident drivers related to the management and structure of the AIDS response, including the cost of ARV, are not taken into account when examining the drivers of efficiency. Last, as indicated before, abstraction is made of the quality of the services provided. These are important limitations and the policy implications of the analysis below can therefore only be indicative.

A8. Comparison between current government, health and AIDS expenditure

Dong Trillion	2012	2013	2014	2015	2016	2017	2018	2019	2020
GDP	2,581	2,930	3,325	3,777	4,280	4,849	5,495	6,226	7,055
Current expenditure	542	609	688	782	891	1,007	1,140	1,290	1,460
VIII. Public resource for Health (V+VI+VII)	77	87	98	111	126	143	162	183	207
as a % of current expenditure	14.20%	14.20%	14.20%	14.20%	14.20%	14.20%	14.20%	14.20%	14.20%
IX. Gov. Expenditure for NTP (included loan and foreign aids)	19	21	24	27	31	35	39	44	50
as a % of current expenditure	3.45%	3.45%	3.45%	3.45%	3.45%	3.45%	3.45%	3.45%	3.45%
Resource needs	2.48	2.72	3.23	3.78	4.23	4.72	5.27	5.91	6.43
as a % of government expenditure on NTP	13.28%	12.96%	13.59%	14.02%	13.76%	13.60%	13.42%	13.29%	12.78%
as a % of public resources for health	3.22%	3.15%	3.30%	3.40%	3.34%	3.30%	3.26%	3.23%	3.10%
Baseline resource gap	0.087	0.323	0.867	1.780	2.644	3.372	4.099	4.911	5.300
as a % of government expenditure on NTP	0.47%	1.54%	3.66%	6.60%	8.61%	9.71%	10.43%	11.04%	10.53%
as a % of public resources for health	0.11%	0.37%	0.89%	1.60%	2.09%	2.36%	2.53%	2.68%	2.56%

The data sources and assumptions behind these figures are as follows:

- GDP and current expenditure projections are taken from our macroeconomic projections (see above);
- Current expenditure include interest payments;
- “VIII Public resources for Health (V+VI+VII)” comprise Total Government expenditure for health, expenditure on facility expenditure from Government bond and investment expenditure from lottery;
- Resource needs are those as used in our mode, source VAAC but converted into nominal prices;
- Baseline resource gap as calculated in this work.