



# ISSUES PAPER

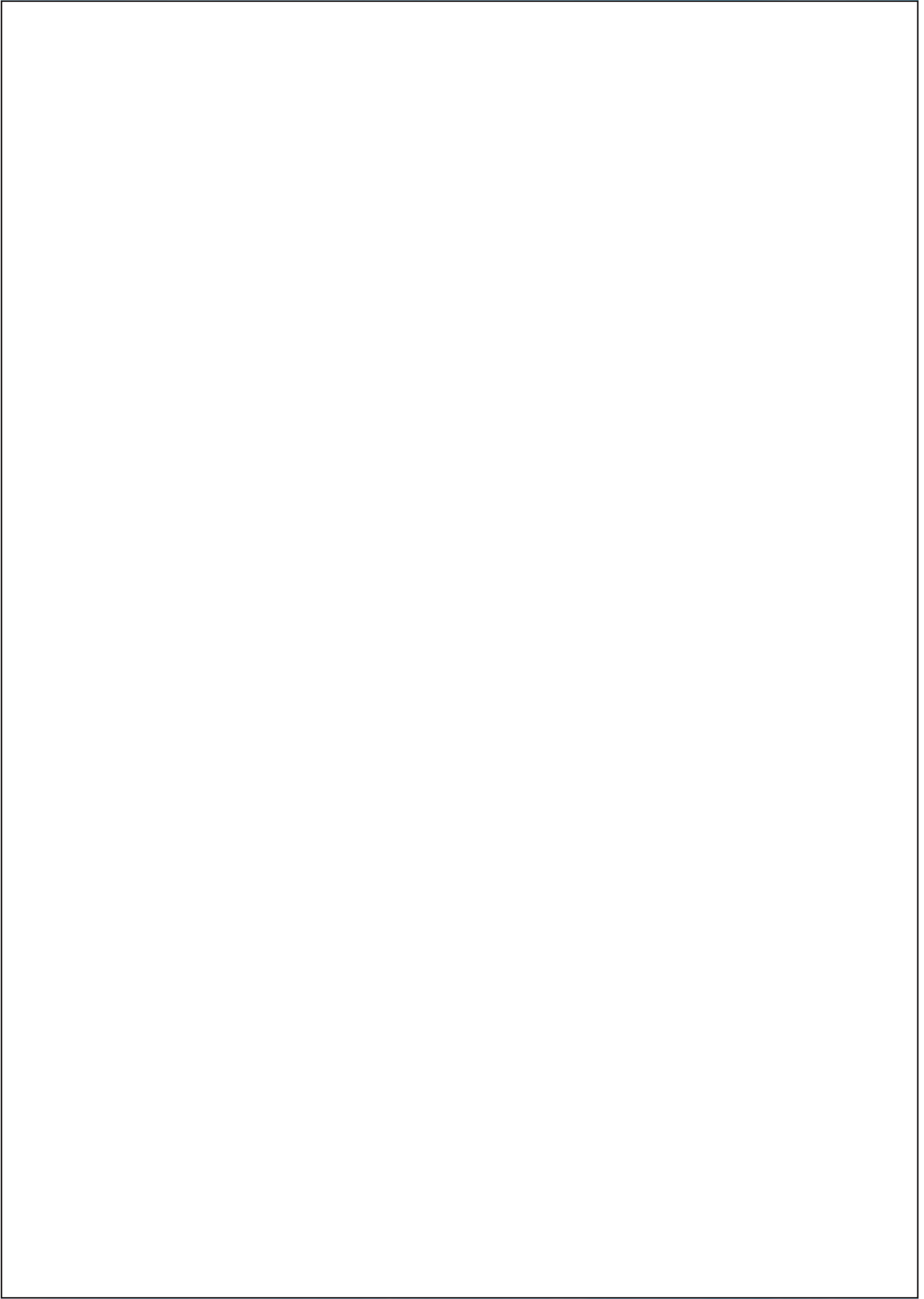
## MACROECONOMIC IMPACT OF HIV/AIDS IN UGANDA



Uganda AIDS Commission

Ministry of Finance, Planning & Economic Development,  
Uganda AIDS Commission and  
United Nations Development Programme  
Kampala  
2009





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September 2009

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## LIST OF ACRONYMS

ABC+	Abstinence, Being faithful, Condom use, Circumcision & other prevention/ care interventions
ACP	AIDS Control Programme
AGM	Aggregate Growth Model
AIDS	Acquired Immune Deficiency Syndrome
ART	Anti-Retroviral Treatment
CGE	Computable General Equilibrium Model
CSOs	Civil Society Organisations
DALY	Disability Adjusted Life Year
GDP	Gross Domestic Product
GFATM	Global Fund for Fighting HIV/AIDS, Tuberculosis and Malaria
GIPA	Greater involvement of People Living with HIV in Response to HIV
GNI	Gross National Income
GOU	Government of Uganda
HCT	HIV Counselling and Testing
HIV	Human Immunodeficiency Virus
IDU	Injecting Drug Users
IEC	Information, Education and Communication
JCRC	Joint Clinical Research Centre
M&E	Monitoring and Evaluation
MACA	Multi-sectoral AIDS Control Approach
MOES	Ministry of Education and Sports
MOFPED	Ministry of Finance, Planning and Economic Development
MOH	Ministry of Health
MOLG	Ministry of Local Government
MOPS	Ministry of Public Service
MSM	Men having Sex with Men
MTEF	Mid-term Expenditure Framework
NAADS	National Agricultural Advisory Services
NHSBS	National HIV/AIDS Sero-Behavioral Survey
NOP	National Operational Plan
NSDS	National Service Delivery Survey
NSF	National Strategic Framework
NSP	National Strategic Plan
PEAP	Poverty Eradication Action Plan
PEPFAR	President's Emergency Plan for AIDS Relief
PHA	Persons Living with HIV/AIDS
PIASCY	Presidential Initiative on AIDS Strategy for Communication to Youth
PLHIV	Person(s) Living with HIV

PLWA	Person Living with HIV/AIDS
PMTCT	Prevention of Mother to Child Transmission
PNFP	Private Not for Profit
RCT	Routine Counselling and Testing
REER	Real Effective Exchange Rate
SPEAR	Supporting Public Sector Workplaces to Expand Action & Responses against HIV/AIDS
TASO	The AIDS Support Organization
UAC	Uganda AIDS Commission
UBOS	Uganda Bureau of Statistics
UGANET	Uganda Network on Law, Ethics and HIV/AIDS
UNAIDS	Joint United Nations Program on HIV/AIDS
UNDP	United Nations Development Programme
UNHS	Uganda National Household Survey
UNICEF	United Nations Children's Fund
UPPAP	Uganda Participatory Poverty Assessment Project
USAID	United States Agency for International Development
VAR	Vector Autoregressive Analysis

## ACKNOWLEDGEMENT

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The United Nations Development Programme and its collaborating partners especially UNAIDS and the United Kingdom's Department for International Development (DFID) need to be recognized for the financial assistance, while Dr. Romano L. Adupa, the consultant, is appreciated for the excellent work done.

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# EXECUTIVE SUMMARY

## Background

In the 1990's, the prevalence rate of HIV infection among pregnant women attending antenatal clinics reached about 30% at some sentinel sites although by 2005 the country had brought down adult HIV prevalence to a national average of about 6.4%. The government's response was by adopting a multi-sectoral approach in 1992; this was implemented using funds provided predominantly by donors. In view of this, Ministry of Finance, Planning and Economic Development (MOFPED) started to express some concern that the flow of donor support for AIDS might have adverse effects on the economy in that (a) foreign currencies inflows might place appreciation pressures on the exchange rate, and reduce international competitiveness of Ugandan products (b) large aid flows might threaten to accelerate inflation rate (c) increased AIDS spending might make sectors to spend more than what is consistent with macroeconomic stability. Consequently, MOFPED with support from United Nations Development Program (UNDP) commissioned the "Assessing the Macroeconomic Impact of HIV/AIDS in Uganda" study which was carried out between 2007 and 2008. This issues paper recasts the findings of the study in practical policy and programmatic format that can be used for discussing the way forward based on evidence obtained from the study.

## Methodology

This issues paper was based mainly on secondary information contained in the macro-economic impact study. Additional information was obtained from other documents such as the National Strategic Plan, the National HIV/AIDS Sero-behavioural Survey, etc.

## Impact of HIV/AIDS on Key Economic Variables

### *Population*

The study through simulation established that by 2025, HIV/AIDS could cause the Ugandan population to be about 9% smaller than it would have been without HIV/AIDS; in particular, a lower population of 58.8 million was estimated for 2025 instead of 64.5 million because of the impact of HIV/AIDS. However, the introduction of the ART in the simulation demonstrated that the use of ART is beneficial in maintaining a relatively large population size for Uganda which would not have been the case under the no ART scenario. Thus, with low ART provision, the population in 2025 is only 0.1% higher than in the no ART scenario, while in the high ART scenario the population is 0.8% higher than in the no ART scenario.

### *Economic Sectors*

Although the prevalence of HIV among adults in the general population was 6.4%, an analysis of the survey data indicated that there were major variations in sero-prevalence across the economic sectors and also across gender. Non-agricultural sectors such as Public Administration (16.3%), Hotels and Restaurants (10%) and Sales (8%) had relatively higher prevalence rates than Agriculture (6%). The domestic employment and Hotels & Restaurants sectors were

women dominate workforce had more than 80% infection in each sector occurring among women compared to Construction, Transport & Communication, Fishing, Mining and Public Administration sectors where the workforce is predominantly men who also account for more than 75% of the prevalence in each of these sectors. When the disease burden was considered, it was found that agriculture which is the largest sector in the economy employing over 60% of the country's labour force accounted for 67% of the HIV positive workers in the country.

#### *Gross Domestic Product*

The economy was also found to be significantly affected by the epidemic. The GDP of Uganda would grow at an average rate of 6.5% per year between 2005 and 2025 without HIV/AIDS, but this would decline to only 5.3% with AIDS without treatment. The rate of GDP per capita would be 2.7% per annum without HIV/AIDS but falling to only 1.7% per annum in the presence of AIDS without treatment.

#### *Poverty*

It was also projected that HIV/AIDS would also increase poverty level nationally from 26.8% to 28.2%; regionally, the Central and Western regions would experience greater increase in poverty (increase of 2.1% and 1.8% respectively) due to the epidemic than the Eastern (1%) and Northern regions (0.8%). The major impact on poverty was attributed to HIV/AIDS health related costs (1% increase in headcount poverty), especially in rural households; loss of income due to AIDS contributed 0.5% while funeral costs was responsible for only 0.1% increase in poverty.

#### *Issues*

The issues which arose out of the study were as follows. First, in the national effort to eradicate poverty, should the country focus on HIV/AIDS which is likely to increase poverty by only 1.4% or focus on other macro-economic determinants that between 1992 and 2006 helped reduce poverty from 51% to 31%. Secondly, there was a higher prevalence of HIV among working adults than non-working adults; in this regard, how can income of those in formal and in-formal employment be improved in order to reduce their vulnerability to HIV infection? Thirdly, how should agriculture sector that employs the majority of the population be addressed in order to improve food production, storage and distribution as well as availability and access to food throughout the year by all particularly PHAs. Fourthly, could national health insurance scheme reduce medical costs of households. Finally, how should the youths in and out of school be protected from HIV infection?

The study also indicated areas where there is need for more data. There was an apparent lack of data on the spending and investment patterns of households with an HIV infected member. There is still lack of data on the impact of HIV/AIDS in the work place. For instance, the HIV/AIDS programmes that have been implemented in the workplace have not been evaluated for their effectiveness and efficiency with regard to reducing the transmission of HIV or its impact within the sector. Similarly, quantitative and simulation based macro economic impact studies on the various sectors is lacking. For instance, there is need to study cost of administration, cost of transport in public and private sector, relationship between corruption and HIV/AIDS in the public and private sector etc so that valuable data is generated for helping in planning and resource allocation.

#### **Funding of national HIV/AIDS Programmes**

##### *Source of Funds for national HIV/AIDS response*

The spending on HIV/AIDS programmes in Uganda increased from US\$ 38m in 2003/04 to an estimated US\$ 170m in 2006/07; it was projected in the National Strategic Plan (NSP) to

rise annually from US\$ 276m in 2007/08 to US\$ 511m in 2011/12. The funding of HIV/AIDS is predominantly supported by donors. The contribution from the GOU between 2003/04 and 2006/07 rose from about US\$ 6m to US\$ 8m and it is expected to increase further between 2007/08 and 2011/12 from US\$ 19m to US\$ 75m. In the period 2003/04 the actual government contribution represented a decline from 16% to 5% of total spending, this situation is expected to be reversed in the period 2007/08 and 2011/12 where it is projected to increase from about 7% to 15% of total spending on HIV/AIDS. The contribution of USA in 2005/6 and 2006/07 was more than the combined contribution of all the other funders even when government funding was included; this situation continues to be the same to-date.

#### *Spending of Funds for the HIV/AIDS response*

The findings also indicated that in general, nearly 60% of total spending in the national response went directly or indirectly to procurement of external goods and services, leaving only about 40% to be spent within Uganda. Thus, it was projected that under the NSP, the net flows due to HIV/AIDS funding would only rise from US\$ 68m in 2006/07 to US\$ 200m in 2011/12 instead of US \$162m and US \$436m as most of the funds would be focused on provision of ART drugs that are procured externally.

#### *Issues*

The National Strategic Plan was seen to be highly dependent on donor funds. This over dependence on external funding for the national HIV/AIDS response is a long term problem that needs to be addressed, particularly if the donor(s) pull out. This requires consideration of local options for funding such as scaling down HIV/AIDS response to the size that the country can manage and raising funds domestically.

Data on expenditure on HIV & AIDS spending by both public and the private sector was insufficient and incomplete. Data was similarly lacking on how firms track the effects of HIV/AIDS on their labour force and investment plans. Thus, the direct and indirect costs of HIV/AIDS at an individual employee level, at departmental level and when aggregated at the organizational/firm level are generally unknown for most businesses and private firms across all sectors in Uganda.

### **Impact of HIV/AIDS Funding on the Macro-economy of Uganda**

#### *Impact on Budget*

The increase in government spending from US\$ 8m to US\$ 75m between 2006/07 and 2011/12 when expressed as a share of domestic revenues (assuming the ratio of domestic revenues to GDP remains unchanged) represented an increase from 0.6% of total spending to 2.3%. On this basis, the macro-economic study concluded that this would have minimum impact on the economy. However, if the projected 85% donor component of the funding is not forthcoming and available, the government would be forced to generate the money internally through cutting down allocations to other sectors, borrowing from the public or raising through increased taxation in order to maintain the same level of ART programme. This would not be easy.

#### *Impact on Money Growth*

There were concerns that there could be increased money supply in the domestic economy resulting from an increased aid-induced spending by government because of the up-surge in aid flows. This study found that, for the period July 1994 – June 2007, as expected, an increase in aid flows would be associated with a long term increase in the money supply. However, because about 60% of HIV/AIDS programme expenditure goes on imports, net inflows would only rise from US\$ 68m to US\$ 200m over the same period. The magnitude of the relative impact of this on the Balance of Payments (BoP) and the currency would therefore be much

smaller, and unlikely to cause any significant macroeconomic instability.

#### *Impact on Inflation and Exchange Rate*

It was found that although injection of liquidity due to increases in aid-induced spending could have led to volatility in money supply, this did not lead to volatility in prices and exchange rates because Bank of Uganda (BOU) took appropriate measures for sterilization between 1998/99-2002/03. In consonance with this finding, it was also found through simulations that the increase in money supply observed in the period July 1994 – June 2007 did not lead to any long term increase in prices or to REER appreciation, possibly because BOU's monetary policy and sterilisation strategy had been successful. Similarly, it was demonstrated that as a result of aid inflows, the shilling did not massively appreciate consequently, it was concluded that although aid may have an adverse impact on the economy through causing short-run volatility in prices and REER, the impact is small. Hence, the arguments that increased HIV/AIDS-related inflows could hurt the economy were not supported by the results of this study.

#### *Impact of Providing ART on Real Exchange Rate and Exports*

The study also considered the impact of the real effective exchange rate (REER) as a result of aid inflow on total exports and six major Ugandan exports (coffee, tea, cotton, fish, maize and flowers) over the period 1994-2006. It was found that there was no relationship between the REER and total exports although the impact of the REER was largest for flowers, where a 1% appreciation in the REER was associated with a 2.9% decrease in exports, and for fish, a 1% depreciation of the exchange rate would lead to a 2.7% increase in fish exports; the impact of the REER on cotton exports was much smaller at 0.04%. The study therefore concluded that even if there is some REER appreciation and effects in certain sectors, it would not have a major impact on overall exports. Therefore the arguments that increased HIV/AIDS-related inflows could hurt the economy were not supported by the findings from the simulations in the study.

#### *Issues*

Three options were presented for discussions in an effort to address a reduction in donor inflow for HIV/AIDS. The choices are (i) have a trade off by removing resources from other sectors and shift it to HIV/AIDS programmes (ii) fund domestically by borrowing in order to meet what is lost by donors not providing resources (iii) cut down on other spending that might be perceived to be unnecessary. The issue of producing ART drugs locally instead of importing from outside was also presented as an issue arising from this study for further consideration.

### **Managing Macro-economy and Provision of ART**

#### *ART Financing*

The study reported that for the period 2008 – 2016, there was improved economic growth (i) when ART is included in the national response and (ii) when donors provided at least some of the funds for ART. The worst case scenario with the least average GDP growth is that in which only government alone funds the national response which also does not include provision of ART.

#### *Economic Returns to Investment on ART*

The study compared the cost of education of workers in different sectors with the cost of providing ART. The total cost of providing ART to an HIV+ person over an assumed lifetime of 10 years would be US\$ 5,000 yet the average cost of educating a worker ranged from US\$ 350 in domestic service to US \$5,000 in financial intermediation. This means that, in the absence of other considerations, provision of ART is not a good investment as the cost of the lost education (or the cost of educating a worker to replace the lost one) is less than the cost of

providing ART in all sectors except for the Finance sector.

#### Comparison of the Effectives of Treatment to Prevention

Based on a WHO approach in assessing effectiveness of interventions, the study found that currently prevention expenditure is very cost effective but treatment was probably not. It was therefore concluded that, to-date, to the extent that a choice had to be made between expenditure on prevention and on treatment, prevention is far more cost effective.

#### *Speed for Scaling-up ART Treatment*

In order to achieve universal access to ART as envisaged in the NSP, at least all the 350,000 PHAs that are eligible to ART should be brought on treatment between now and 2012; this roll out could be slow or rapid. The faster programmes are scaled-up, the more likely will the economy face absorptive capacity constraints which could lead to inflation, reduction in the effectiveness of expenditure, and reduction in the value for money in donor financed spending. A speedy roll-up will also experience challenges in national capacity to implement the new or expanded programmes quickly as programmed. Thus, money is a necessary but insufficient condition for scaling-up ART treatment; other considerations have to be made as well. Even when ART has been scaled-up, there would be the question of sustaining [donor funding for] the scaled-up HIV/AIDS programmes. This is because treatment for HIV/AIDS is a life time undertaking which therefore requires a long term commitment of resources. Long term sustainability would require either credible long term donor funding commitments or Uganda government to take on the burden.

#### *Issues*

It was demonstrated that to minimize the impact of investment in ART, most of the funding should come from donors and that Uganda should not attempt to fund ART provision on its own. What needs to be discussed is how to maintain the current level of donor support and avoid the situation like that of 2005 when donors suspended funds for Global Funds for Fighting HIV/AIDS, Tuberculosis and Malaria. Other issues include (a) how to address the targeting of treatment as it was demonstrated that it is not cost effective to provide ART to all eligible (b) where government should put more emphasis – strengthening health delivery systems or putting more people on ART?

#### **Suggested Programmes/Interventions**

Based on the findings of the study, it was recommended that

- Government should put special attention to prevention by ensuring that all development programmes by various stakeholders focus and incorporate HIV prevention
- New generation of information, education and communication approaches including materials and messages need to be developed and disseminated
- Revision of policies/laws that promote prevention need to be expedited.
- Improve on education system so that more youths are kept at schools
- Strengthen mainstreaming of HIV/AIDS in Uganda and integrate HIV/AIDS in the planning and budgeting processes
- Strengthen the health service delivery system in the country
- Increase efforts to fight corruption in the health service delivery at national and local government levels.
- Empower leaders and communities to play more proactive roles in the national response to HIV/AIDS Fight
- Support research in order to generate more evidence for supporting policies and programmatic decisions

# 1

## OVERVIEW OF THE MACRO-ECONOMIC IMPACT STUDY

### 1.1 INTRODUCTION

#### 1.1.1 Background to the Macro-economic Impact Study

Since 1997 Uganda has used Poverty Eradication Action Plan (PEAP) as its overarching comprehensive development strategy for guiding public action to eradicate poverty. It is against the PEAP that all government policies and development programmes at national and local levels have been developed; PEAP was revised in 2000 and 2004 although the process of developing a National Development Plan (NDP) to succeed PEAP is ongoing. The current PEAP which is also consistent with the Millennium Development Goals has five pillars namely, Economic management; Production, Competitiveness and incomes; Security, conflict-resolution and disaster-management; Good governance; and Human development. The government's primary macro-economic objective is to promote rapid, broad based and sustainable private sector led economic growth that is adequate to reduce poverty. The target is to attain 7% growth rate per annum, maintaining price inflation at 5% or below, maintaining foreign exchange reserves to a minimum level of 5 months of imports and maintaining a complete exchange rate<sup>1</sup>.

In the implementation of PEAP, government of Uganda (GOU) uses the medium expenditure framework (MTEF) to balance allocation of resources among sectors and ensure that sectors remain within their ceilings. Thus, through MTEF, Ministry of Finance Planning and Economic Development (MOFPED) (a) more accurately compiles ex-ante and ex-post estimates of total government expenditures for enhancing macroeconomic planning (b) strengthens expenditure discipline (c) ensures donor funded projects better reflect the priorities set out by the sectors through respective Sector Working Groups (d) ensures that the national budget supports other government reforms, namely: switching from project to budget support; reducing fiscal deficit; and development budget rationalization. Indeed, from Financial Year (FY) 2005/06 all

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<sup>1</sup> MOFPED (2008). Prevalence and Effects of Mortgaging and Caveating Land in Uganda. Discussion Paper 15. Kampala.

government project support was integrated into the medium term expenditure framework (MTEF) such that if a sector accepted a new project that would cause the donor projects total to exceed the total in the MTEF for the sector, then there would automatically be a corresponding reduction in the GOU contribution to the sector so that the established MTEF ceiling for the sector would remain intact. Using PEAP and MTEF, Uganda has been able to enjoy a positive economic growth pattern with real Gross Domestic Product (GDP) averaging 6% per annum.

The above notwithstanding, the HIV/AIDS, which was first reported in the country in 1982, continued to spread and reached epidemic proportions with serious health and socio-economic impact. Indeed by the 1990's, the prevalence rate of HIV infection among pregnant women attending antenatal clinics had reached about 30% at some sentinel sites although by 2005 the country had brought down adult HIV prevalence to a national average of about 6.4%. The government's response was by adopting a multi-sectoral approach in 1992 which has been implemented through (a) the National Operational Plan (NOP) for period 1993/4-1996/7 (b) the National Strategic Framework (NSF) for period 1998-2002 (c) the Revised NSF for period 2000/01-2005/6 and (d) the more recent National Strategic Plan (NSP) for HIV/AIDS 2007/8-2011/12. It should be noted that in all these cases, the national response has continued to rely heavily on donor funding.

In view of the above, MOFPED started to express some concern that the flow of donor support for AIDS might have adverse effects on the economy in that (a) foreign currencies inflows might place appreciation pressures on the exchange rate, and reduce international competitiveness of Ugandan products (b) large aid flows might threaten to accelerate inflation rate (c) increased AIDS spending might make sectors to spend more than what is consistent with macroeconomic stability. Consequently, in June 2005, Uganda AIDS Commission (UAC) organized a Uganda Think Tank on AIDS (UTTA) meeting for the purpose of brainstorming on the impact of HIV/AIDS funding on the country's macro-economic stability in order to find an appropriate way forward. Similarly, the AIDS Development Partners and Partner's Economist Group had in April 2006 discussed the Budget Framework Paper for FY2006/7. In both instances, it was concluded that there was need for a study to generate evidence on the macro economic impact of investing or not investing in the national HIV/AIDS response. Accordingly MOFPED with support from United Nations Development Program (UNDP) commissioned the "Assessing the Macroeconomic Impact of HIV/AIDS in Uganda" study which was carried out between 2007 and 2008 and results presented at a nation workshop in July 2009. It is against this background that this issues paper has been developed in order to recast the findings of the study in practical policy and programmatic format that can be used for discussing the way forward based on evidence.

### **1.1.2 Objectives of the Macro-economic Impact Study**

The purpose of the study, which was carried out in three phases was to assess the known and unknown concerns in the national response to HIV/AIDS epidemic. The known concerns were (a) what impact HIV/AIDS can have on poverty, demography, economic sectors, labour force etc (b) what extent the provision of anti-retroviral treatment (ART) could go in reversing the negative impacts of HIV/AIDS and (c) what the likely impact of ART provision could have on the macro-economy of Uganda. These would involve quantifying these effects empirically through calculations using available local and international data as well as modelling and computer simulations. The unknown concerns, as shown in the outer ring of Figure 1.1 below, were on what policy and programmatic options the country needs to take cognizance of in order to ensure that there is a win-win situation between implementing an effective, efficient and sustainable national HIV/AIDS response and maintaining a stable macro-economy. These unknown and known concerns constituted the framework of the study.

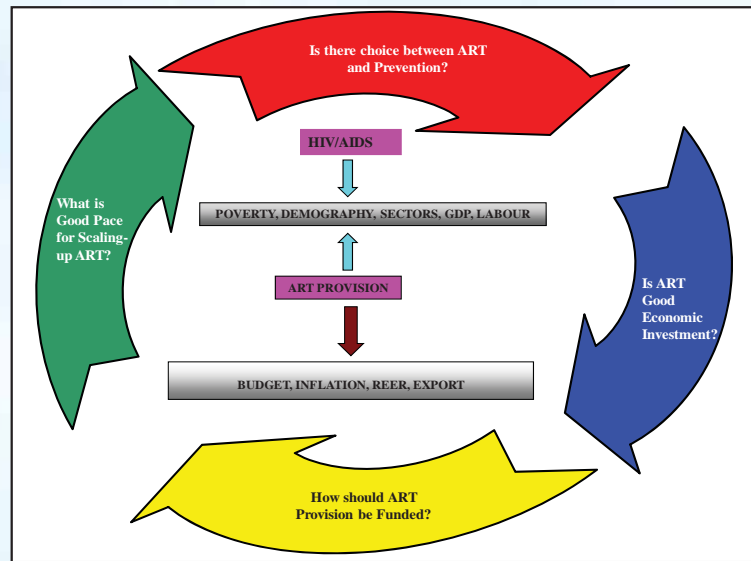


Figure 1.1: Framework for the Macro-Economic Study on Impact of HIV/AIDS in Uganda

In view of the above, the objectives of the study were:

- To review existing economic/sector impact studies of HIV/AIDS in Uganda or in the region.
- To identify and undertake selected mini-studies in order to gather empirical evidence to strengthen the macro-economic assessment of the impact of the epidemic in Uganda
- To undertake a quantitative and qualitative analysis and provide empirical evidence of the macro-economic mechanisms through which AIDS impacts on the national economy can be addressed.

### 1.1.3 Objectives of the Issues Paper

The macroeconomic study was carried out in three phases between 2007 and 2008. Phase I report<sup>2</sup> on “Literature Review: the Macroeconomic Impact of HIV/AIDS” was produced in October 2007. Phase two<sup>3</sup> was on five selected studies, namely, (1) The impact of HIV/AIDS on Poverty (2) Assessing sectoral vulnerability to HIV/AIDS (3) HIV costing, financing and expenditure (4) The demographic impact of HIV/AIDS and (5) Macroeconomic linkages between aids flows, the exchange rate, inflation and export. The last phase<sup>4</sup> was on Analysis of the Macro-economic impact. A launch of the study findings was made in July 2009.

As a follow-up of the study and launch, it was necessary to develop an issues paper. Thus, it was envisaged that by synthesizing, translating and re-packaging the findings, conclusions and recommendations from the macro-economic impact study into a simpler format, the

<sup>2</sup> Ministry of Finance Planning and Economic Development and United Nations Development Programme (2007). Assessing the Macroeconomic Impact of HIV/AIDS in Uganda, Phase I Report: Literature Review - the Macroeconomic Impact of HIV/AIDS. Kampala.

<sup>3</sup> Ministry of Finance Planning and Economic Development and United Nations Development Programme (2008). Assessing the Macroeconomic Impact of HIV/AIDS in Uganda, Phase II Report: Selected Studies. Kampala.

<sup>4</sup> Ministry of Finance Planning and Economic Development and United Nations Development Programme (2008). Assessing the Macroeconomic Impact of HIV/AIDS in Uganda, Phase III Report: Analysis of the Macroeconomic Impact. Kampala.

purpose of the issues paper would be to (i) identify gaps in existing national strategies and policies from the perspective of the macro-economic assessment (ii) suggest a set of new practical policies that need to be put in place (iii) identify programmatic interventions to enhance implementation of existing and new policies. This was on the premise that there is need for the debate on the macro-economic impact of HIV/AIDS to be not only inclusive and participatory but also to be enriched, as much as possible, with objectively verifiable evidence from Uganda's own situation and circumstances. Hence, it is hoped that this issues paper will be a basis for stimulating such discussions engaging a wide cross section of key stakeholders in order to explore and arrive at important decisions and consensus relating to the issues identified here on policies and programmes.

## **1.2 METHODOLOGY**

This issues paper was based mainly on secondary information contained in the macro-economic impact study. Additional information was obtained from other documents such as the National HIV/AIDS Strategic Plan, the National HIV/AIDS Sero-behavioural Survey, etc. It is appropriate to note up-front that all the figures in the report except Figures 1.1 and 4.1 were extracted from the study reports; and unless otherwise indicated, the data reported here are also from the study reports.

## **1.3 STRUCTURE OF ISSUES PAPER**

The report is divided into four sections. Section one is introduction while Sections two and three present the major findings from the macro-economic impact study by focusing on the impact of HIV/AIDS on the economy are in section two and what the implications of the national response to the economy in section three. At the end of each sub-section, issues arising from the findings are presented. In the last section, some interventions and policies are suggested.

# 2

## IMPACT OF HIV/AIDS ON THE ECONOMY

### 2.1 HIV/AIDS AND KEY ECONOMIC VARIABLES IN UGANDA

#### 2.1.1 Impact on Demography of Uganda

The demographic impact of HIV/AIDS in Uganda was studied using the Spectrum Model from which the results on total population, death, life expectancy and labour force are highlighted below for the period 1980 to 2025.

*Total Population:* The study through simulation established that with no HIV/AIDS scenario Uganda's total population in the year 2025 could be at 64.5 million. However, with AIDS, a lower population of 58.8 million was estimated for 2025. Thus, HIV/AIDS was projected to cause the Ugandan population to be about 9% smaller than it would have been without HIV/AIDS. HIV/AIDS would also increase the proportion of the population below 20 years of age. In particular, the percentage of this age group would increase from 52.4% in 2006 to 59.4% for scenario with HIV/AIDS instead of only 58.5% with no-HIV/AIDS.

*Death and Life Expectancy:* The projections from the simulations showed that the number of AIDS deaths had fallen since the late 1990s, reflecting the earlier decline in HIV prevalence that occurred during the period. However, the projections also indicated that this number of deaths would start to rise following the increase in the number of HIV+ people in the population by around 2017.

Phase I report<sup>2t</sup> indicated that the Ministry of Public Service (MOPS) studies of 2000 and 2003 had noted that in the Public Service, the HIV/AIDS related deaths occurred among workers of mean age 40 years compared to 47 for those that were not HIV/AIDS related. Through simulation, this finding corroborated this as it was found that the impact of HIV/AIDS on life expectancy was such that by the late 1990s it had reduced it to an estimated 44 years, compared to 56 years without HIV/AIDS. By 2025, life expectancy was projected to be 60 years in the with AIDS scenarios, compared to an estimated 64 years without AIDS.

<sup>2t</sup> Ministry of Finance Planning and Economic Development (2007). Assessing the Macroeconomic Impact of HIV/AIDS in Uganda. Phase I Report: Literature Review on the Macroeconomic Impact of HIV/AIDS.

*Death and Labour Force:* In a population without HIV/AIDS, death rates tend to be higher for the elderly (> 50 years) and very young children (< 5 years) than for the rest of the population. This largely reflects the impact of disease relative to levels of health and bodily resistance to infection. However, HIV/AIDS changes the pattern of deaths by raising the number of deaths amongst young and middle aged adults, i.e. those who are economically most productive and who are more likely to be skilled and employed. According to the projections in this study, AIDS related deaths were mainly concentrated in people of productive age, implying that Uganda has been losing a large number of the country's potential labour force (15-59 year old) since the late 1980s. A sharp increase in these deaths was recorded in the 1990s, when the HIV prevalence was at its peak. Thereafter, the death rate started declining as HIV prevalence declined. Thus, it was concluded that the country will have lost 8.5% of the labour force (compared to the no AIDS scenario) by 2025. In support of this, it was reported in the macro-economic impact study that earlier studies by Ministry of Public Service in 2000 and 2003 indicated that during the period 1995-99, an average of 8% of the workforce in the selected departments died each year and just over half of deaths were thought to be due to AIDS. In deed, in some enterprises, the HIV/AIDS epidemic had doubled the expected number of deaths among the workforce. A study by FAO in 2001 had also projected that HIV/AIDS would reduce the labour force in Uganda from what it should have been without HIV/AIDS by 12.8% in 2000 by 13.7% in 2020.

The introduction of the ART in the Spectrum model resulted in partly reducing the gap in total population between the no AIDS and with AIDS scenarios discussed earlier. Thus, with low ART provision, the population in 2025 is only 0.1% higher than in the no ART scenario, while in the high ART scenario the population is 0.8% higher than in the no ART scenario. Thus, the use of ART is beneficial in maintaining a relatively large population size for Uganda which would not have been the case under the no ART scenario.

Regarding deaths, under the high ART scenario, the number of AIDS related deaths is projected to keep falling steadily until around 2011, when ART provision levels out at 90% of the relevant eligible population. During this period, the rapid rollout of ART dramatically cuts the number of AIDS related deaths. After 2011, the number of AIDS related deaths starts rising again. It should be noted that the provision of ART delays AIDS related deaths but does not prevent them, due to various factors associated with ART, including adherence lapses by patients and the emergence of drug resistance.

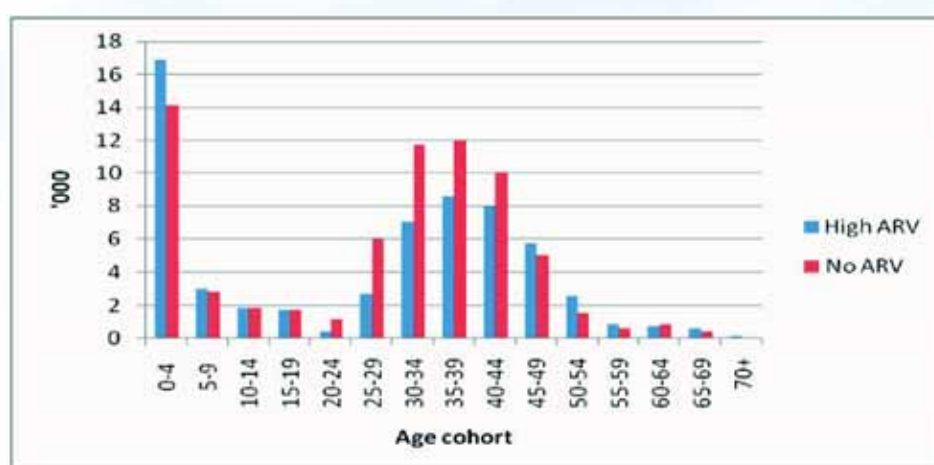


Figure 2.1: Age-specific AIDS-related Deaths in 2015

The figure above shows that without ART, the number of people dying in the productive age groups 20-44 would be much higher than when ART is provided. Thus, the projections also indicated that there are benefits of using ART in that with the provision of ART, the country will lose only 7.7% of the labour force compared to 8.5% without ART.

### 2.1.2 Impact on Economic Sectors

In 1992, the country adopted the multi-sectoral approach to the fight against the HIV/AIDS epidemic. However, since that time, no study had been conducted on the impact of the epidemic on the economic sectors within the country. This was addressed in this study.

Although the prevalence of HIV among adults in the general population was 6.4%, an analysis of the survey data indicated that there were major variations in sero-prevalence across the economic sectors. In particular, non-agricultural sectors such as Public Administration (16.3%), Hotels and Restaurants (10%) and Sales (8%) had relatively higher prevalence rates than Agriculture (6%). Secondly, there was also gender variation in the prevalence of HIV. The domestic employment and Hotels & Restaurants sectors where women dominate workforce had more than 80% infection in each sector occurring among women compared to Construction, Transport & Communication, Fishing, Mining and Public Administration sectors where the workforce is predominantly men who also account for more than 75% of the prevalence in each of these sectors.

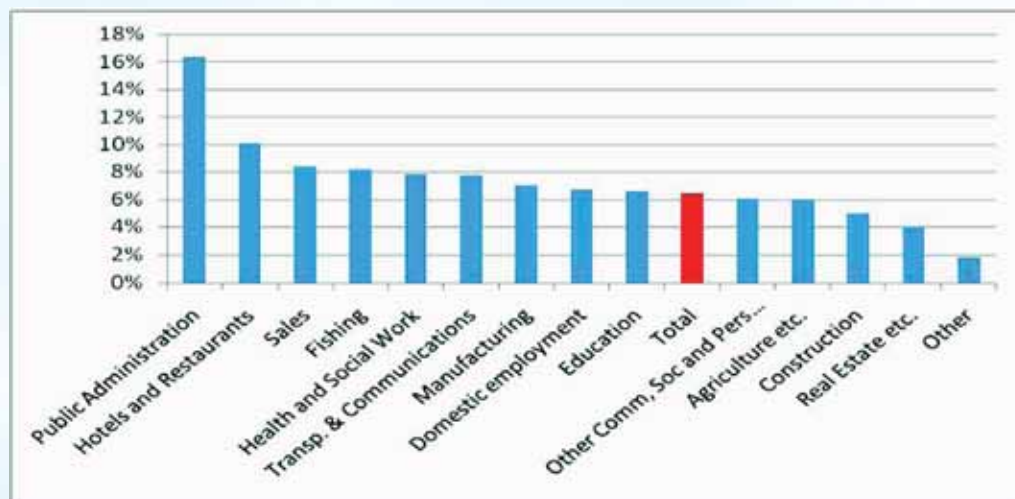


Figure 2.2: HIV Prevalence by Sector

While in general there is a higher prevalence rate among working adults than non-working adults, amongst the working adults, the prevalence was relatively higher amongst Sales, Clerical and Service sector workers who can be classified as semi-skilled. The results of the study also confirmed that unskilled workers have a lower HIV prevalence rate than the semi-skilled and skilled workers; unskilled manual workers and workers in the agriculture sector in particular were demonstrated to have the lowest HIV prevalence compared to workers in other occupation viz sales, clerical, services, professional, technical and management and skilled manual.

Agriculture is the largest sector in the economy employing over 60% of the country's labour force. In this regard, when the disease burden was taken into account, it was found that the estimated number of HIV positive workers was greatest for agriculture sector compared to others as is shown in Figure 2.3 below.

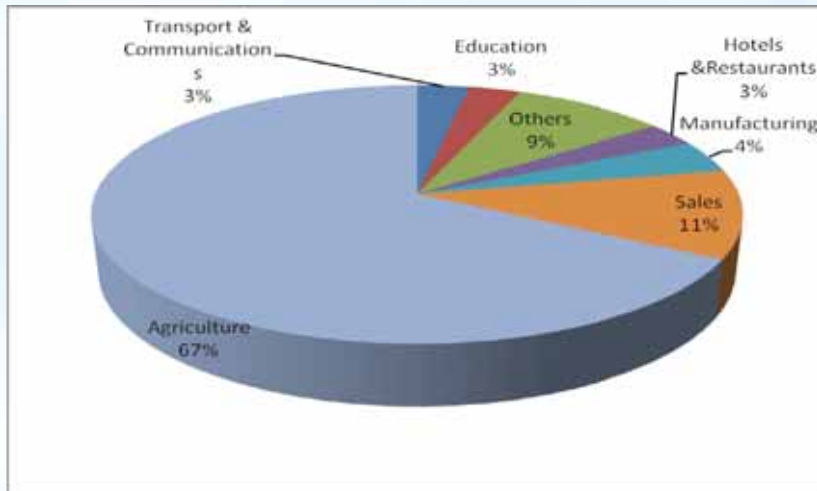


Figure 2.3: Distribution of HIV Positive Workers by Sector

In order to assess sectoral vulnerabilities to HIV/AIDS, the information on HIV prevalence by occupation was combined with that on sectoral composition of labour force and the importance of different labour occupations to the output of each sector (i.e. reflecting the fact that a skilled worker makes a greater contribution to output than an unskilled worker, and is more difficult to replace). The results are shown in Figure 2.4 which indicates that overall, the most vulnerable sectors are Education, Health & Social Work, Finance and Public Administration because of their high dependence upon skilled workers than Domestic employment and agriculture.

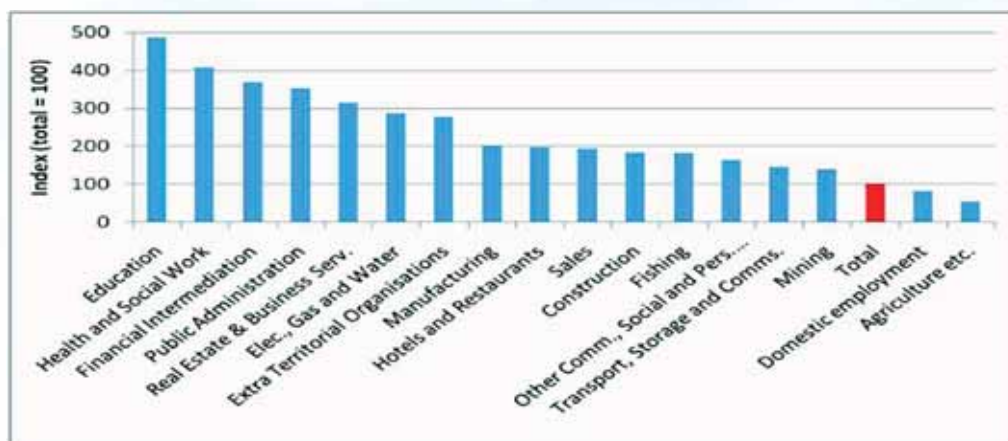


Figure 2.4: Index of Sectoral Vulnerability

Regarding the performance of the sectors, the study found that there was considerable variation across the sectors. For instance, in agriculture, because HIV/AIDS mostly affects the supply of unskilled labour, and the fact that HIV/AIDS tends to cause a labour shortage, the growth in the sector was projected to fall by 0.6 percentage points each year (a reduction in growth of around 16%). On the other hand, in the industry sector, the reduction in growth as a result of HIV/AIDS was projected to be much greater (2.2 percentage points), with a proportionate reduction in growth of 34%. This reflects the high dependence of industry on investment (which is affected by reduced savings) and skilled labour. In services, the impact was expected to be intermediate, a reduction in growth of 1.0 percentage points.

### 2.1.3 Impact on Growth of the Economy

The impact of HIV/AIDS on the growth of the economy was simulated using the Aggregate Growth Model (AGM). Thus, without AIDS, the model projected that the GDP of Uganda would grow at an average rate of 6.5% per year between 2005 and 2025 but this would decline to a significantly lower rate of 5.3% when AIDS is introduced without treatment into the model. In the scenario without AIDS, with an average population growth rate 3.7%, the rate of GDP per capita would be at 2.7% per annum. The presence of AIDS without treatment would reduce the rate of GDP per capita to only 1.7% per annum.



Figure 2.5: Real GDP Growth Forecasts, 2005-2025 using AGM Simulation Approach

Based on the above findings, it is clear that AIDS has a negative impact on the rate of economic growth of Uganda that would result in the economy being 33% smaller in 2025 than it would have been without AIDS. In this regard, however, an important observation that needs to be stated is that even if the growth rate would reduce, it nonetheless, remains positive, and hence even with HIV/AIDS, the economy will still grow.

### 2.1.4 Impact on Poverty in the Country

In 2002<sup>6</sup>, the poor defined poverty as (a) a lack of [access to] basic needs and services such as food, clothing, beddings, shelter, paraffin, basic health care, roads, markets, education,

<sup>6</sup> Ministry of Finance Planning and Economic Development (2002). Second Participatory Poverty Assessment Report: Deepening the Understanding of Poverty. Kampala.

information and communication (b) the lack of opportunities for survival and employment, and having limited or no productive assets such as farm tools and land. When a household has a person(s) infected or affected by HIV/AIDS, all these aspects of poverty come into focus as the family experiences morbidity, mortality and the associated care, support and impact mitigation measures. Consequently, HIV/AIDS affects a household economically through increased household expenditures for meeting medical bills and burial expenses and reduced income because of less capacity to engage in economic activities due to morbidity and mortality. This economic impact of HIV/AIDS on a family may lead it to transit to poverty level if the coping mechanisms are not robust enough.

In the macroeconomic impact study the short and long term economic impact of HIV/AIDS at the household level was simulated using the person-level and household data from the 2005/06 Uganda National Household Survey (UNHS) and the HIV/AIDS Sero-Behavioral Survey data of 2004/05. Thus, in estimating the short term impact of HIV/AIDS on household poverty levels, (i) health and related costs (ii) funeral costs and (iii) the effects on income were considered while for long term impact, income effects and household composition effects were considered. The study combined the data on HIV prevalence with those on sources of income and expenditure patterns at person and household levels and accordingly compared two scenarios, one where there is no HIV/AIDS in the households and the other with one or more HIV/AIDS over a period of ten years.

The study found that in the short term, the overall impact of HIV/AIDS was to increase poverty level nationally from 26.8% to 28.2%; regionally, the Central and Western regions experienced greater increase in poverty (increase of 2.1% and 1.8% respectively) due to the epidemic than the Eastern and Northern regions that had increases of 1% and 0.8% only respectively as is shown in Figure 2.6 below. Rural households were also more affected (1.6 percentage points) than urban; poor households were even worse affected since they were pushed deeper into poverty. The major impact on poverty was attributed to HIV/AIDS health related costs (1% increase in headcount poverty), especially in rural households; loss of income due to AIDS contributed 0.5% while funeral costs was responsible for only 0.1% increase in poverty.

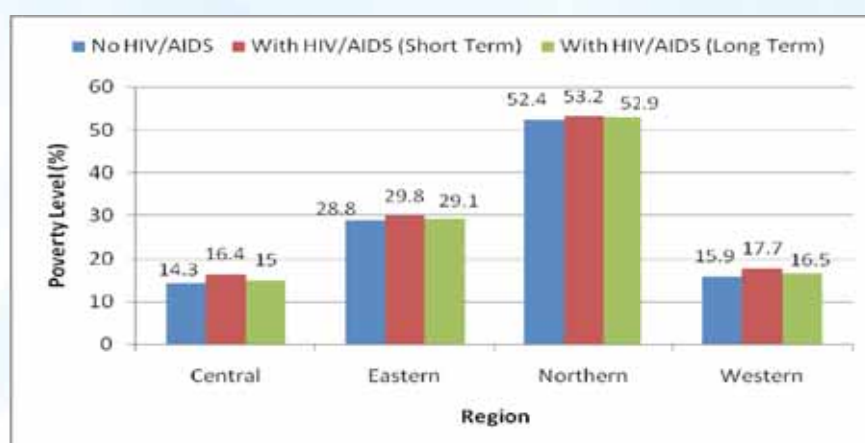


Figure 2.6: Short and Long Term Impact of HIV/AIDS on Household Poverty in Uganda

The long term impact of HIV/AIDS on household poverty rate was estimated to be smaller than the short-term impact, at about 0.5% because in the long-term, once the affected household members have died, the household did not continue to bear additional health costs.

### 2.1.5 Emerging Issues

**Focus on HIV/AIDS or Not?** Against the finding that HIV/AIDS will only increase poverty by 1.4% points it is pertinent to note that this impact of the epidemic could be offset by other prudent macro-economic measures. Only 6.4% of the adult population (about 1.4 million) is infected with the virus and out of this, only about 350,000 have developed AIDS with a fraction of them not being able to engage in economic activities. On the other hand, nearly 95% of adult Ugandans are HIV/AIDS free. In 1992 when HIV prevalence was at its peak of 18%, government liberalized the economy and this boosted household income considerably. Such measures made it possible for poverty level to fall from 51% in 1992 to 31% in 2005/06.

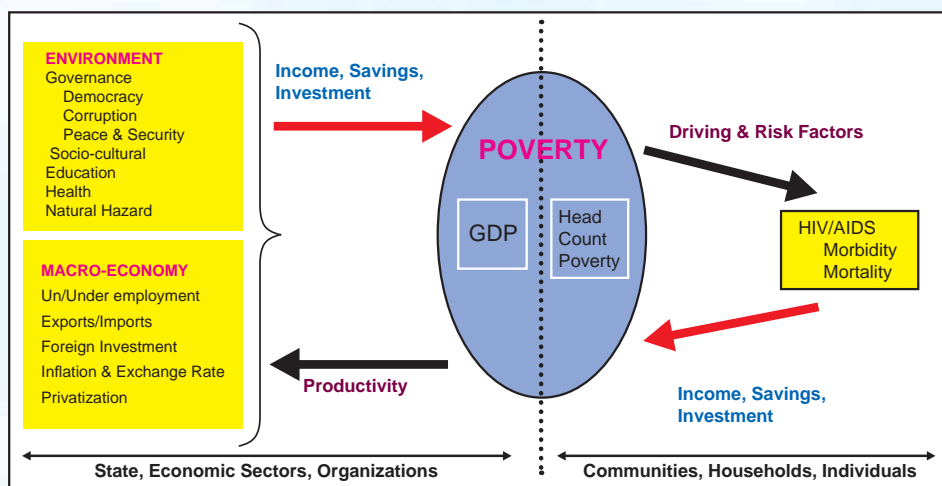


Figure 2.7: Determinants of Poverty in Uganda

Based on the perspective above, and as is shown in Figure 2.8, it could be argued that because of the economic growth noted during the period 1992 to 2005/06, there is need for the government to concentrate more on those other factors in the economy that contribute more significantly to increasing poverty than HIV/AIDS, because eliminating those factors would offset the negative impact of HIV/AIDS in relation to poverty. This does not however mean that HIV/AIDS will be relegated to a level of insignificance.

**Why is mainstreaming of HIV/AIDS in sectors slow?** It was noted that there was a higher prevalence of HIV among working adults than non-working adults. Because these working people would have more disposable incomes than the non-working people, and are likely to be more mobile, chances are that they are more likely to engage in sex with concurrent multiple partners that would increase opportunities for the spread of HIV infection. On the other hand, the non-working adults would most likely also engage in sex for material gains in order to make ends meet. Against this background, some sectors are more affected than others because of their vulnerability or having a relatively higher prevalence of HIV among their workers or having huge total number of HIV positive people compared to those in other sectors; this affects the delivery of their mandate in the delivery of the Poverty Eradication Action Plan. Hence it is important that HIV/AIDS is mainstreamed in sectors and effective work place programmes are implemented in both public and non-public institutions in order to prevent spread of HIV/AIDS or mitigate its impact on the labour force.

Multi-sectoral AIDS Control Approach (MACA) was adopted in 1992 and with support from UNDP<sup>7</sup>, AIDS Control Programme (ACP)s were established in 13 line Ministries including Education and Sports; Information; Internal Affairs (Police and Prisons); Gender, Labour and Social Development; Local Government; Justice and Constitutional Affairs; Defence; Finance, Planning and Economic Development. This was in addition to the ACP in MOH. Uganda AIDS Commission has also produced Mainstreaming policy and guidelines<sup>8</sup>. However, to-date, most ministries have not yet integrated HIV/AIDS into their sectoral programs and policies. Quite often, HIV/AIDS is only mentioned in sectoral documents and activities are only planned when there are donor funded projects despite efforts by UAC in advocacy through the MOFPED to have HIV/AIDS included in the BFP for each sector. Consequently, HIV/AIDS activities such as those funded by UNDP (HIV/AIDS Prevention and Poverty Reduction Programme), World Bank (Sexually Transmitted Infections Project, Uganda HIV/AIDS Control Project) etc ended with the closure of those projects. Now that there is evidence of relative vulnerability of the sectors, it is important that sectors take the necessary action in planning and budgeting for HIV/AIDS.

**How could incomes of those in employment be improved?** The Uganda National Household Survey of 2002/03 showed that unemployment rate was at 3.5 per cent and under employment rate was 17 percent; Uganda's labour force was estimated at 9.8 million persons, of which 2.6 million were in non-agriculture informal sector and 3.5 million were the working poor. More than 400,000 youths enter the labor market annually but only 113,000 are absorbed into the formal employment leaving the rest to join the informal sector. There is no minimum wage in Uganda and by 2002, UBOS in UNHS (2002/3) noted that one in every five employed persons earned only shillings 20,000 per month from his/her main occupation. However between 1992 and 2006, Uganda Bureau of Statistics (UBOS) abstracts for 2006 reported that out of the 85 strikes, 19 % were because of failures/delay in payment of salaries; 26% demand wage increases and 16% suspension of allowances. While salary reviews are few and far in between, the cost of living keeps rising and the workers have to pay for food, accommodation and other expenses based on their static income. These are likely to lead to risky behaviours that may pre-dispose the civil servants to HIV infection. A low level of income also affects how they respond in mitigating the health and socio-economic impact of the epidemic. Consequently, if the incomes of those in employment as well as the increasing level of unemployment are not addressed, the impact in the context of HIV/AIDS will eventually aggravate the macro-economic effects of the epidemic in the country.

**How should agriculture sector that employs majority of population be addressed?** If one considers those that are likely to be affected by HIV/AIDS in the context of poverty, it is clear that in the west and central regions which are relatively better off in poverty, it will most likely be those near the poverty line compared to the north and east where those already in poverty will be plunged deeper into poverty; the rural households would also be more affected than urban. Because the majority of the rural households are engaged in agriculture, if poverty is to be reduced and impact of HIV/AIDS ameliorated, these projections put into question (i) national allocation of resources to the agriculture sector (ii) allocation of resources within the agriculture sector. While there has been a modest increase from 3.8% to 4.4% in the allocation of resources to the agriculture sector between 2008/9 and 2009/10, this may be too small for the task at hand. Besides, the utilization of these resources in major agricultural programmes such as National Agricultural Advisory Services (NAADS) and Research appear not to take

<sup>7</sup> United Nations Development Programme (2007). Fighting the HIV/AIDS Epidemic in Uganda: UNDP's Response from 1986-2007.

<sup>8</sup> Uganda AIDS Commission (2008). National Policy on Mainstreaming HIV and AIDS in Uganda. Kampala

into consideration this likely impact of HIV/AIDS. For instance, the criteria used for selection of target beneficiaries of these programmes need not only to take cognizance of the HIV/AIDS but also to prioritize households affected by the epidemic.

Against this background, it should be noted that if agriculture is not adequately addressed, then there will be hunger for the population yet, apart from driving people to sex for food, hunger reduces efficacy of drugs and adherence to treatment by People Living with HIV/AIDS (PHAs). Thus, PHAs and food insecure people and household members experiencing famine are also more likely to indulge in risky sexual behaviours that predispose them to HIV infection. It should also be noted that food security is affected by, among others, droughts, floods, seasonal variation in production, prices fluctuations, lack of production, and purchasing power, lack of knowledge about nutritional needs and dietary practices. There is therefore need to discuss how to improve food production, storage and distribution as well as availability and access to food throughout the year by all particularly Persons Living with HIV/AIDS (PHAs).

**Could National Health Insurance Scheme reduce medical costs of households?** Regarding mechanisms for reducing the health costs to the affected families, it is important that the proposed National Health Insurance Scheme<sup>9</sup> be expeditiously discussed and instituted. According to the Uganda National House Survey (UNHS) of 2006 survey<sup>10</sup>, while 40% of the population fell sick in the 30 days preceding the survey, up to 32% were unable to access medical treatment because they were too costly; the National Service Delivery Survey (NSDS)<sup>11</sup> of 2005 had indicated that only 33% of the household members sought treatment from a government facility as first source. In general, about 20 percent of the population sought first treatment from health facilities, which were located in distances longer than 5 kilometres. Thus, by enacting the Bill, the proposed scheme would significantly improve financial access to health care for many through a pooled financial risk mechanism where (i) the rich can subsidise the poor (ii) the single can subsidise families (iii) the healthy can subsidise the unhealthy and (iv) the young can subsidise the old. It is envisaged that if the scheme is implemented for the formal public sector, there is a potential to generate Shs. 33 billion in 2010, gradually to Shs. 202 billion by 2015 onward; the contributions will increase with more enrolment from formal private sector, informal sector and all citizens and residents in Uganda.

**How should the youth in and out of school be protected?** The projections indicated that the population of Uganda would be reduced by 9% with HIV/AIDS by 2025 and that the percentage of the young people below 20 years would be 59.4% with AIDS. Although this huge number of youths is not economically active, they are the ones that will replenish the labour force in future. Hence, it is important that strategies such as Presidential Initiative for HIV/AIDS Strategy for Communication with Youth (PIASCY) started in 2004, Universal Primary Education started in 1997 and Universal Post Primary Education and Training started in 2007 are strengthened in order to (a) have these people comprehensively informed about HIV/AIDS before they are sexually active and to (b) keep them in school as a way of delaying their sexual activities while at the same time building their capacity for gainful employment in future. Rate of school drop outs need to be addressed by parents, teachers and students. To-date there are issues such as (a) alcohol and drug consumption in and out of school (b) weak parental guidance (c) teachers sexually abusing students (d) replacement of local values by western culture and values due to influence of TV, internet etc (e) inadequacy of Universal

<sup>9</sup> Runumi F (2009). The National Health Insurance Scheme Bill. Presentation made at Fresh Air National Malaria Workshop- Counting Malaria Out in Partnership with CSOs. March 31 – April 2nd, 2009. Hotel Africana, Kampala.

<sup>10</sup> Uganda Bureau of Statistics (2006). The Uganda National Household Survey 2005/06. Kampala

<sup>11</sup> Uganda Bureau of Statistics (2005). The 2004 National Service Delivery Survey (NSDS). Kampala

Primary Education (UPE) and Universal Secondary Education (USE) grants to students in covering the educational needs of the learners particularly the girl child and orphans. There is also the issue of children who were infected at the time of birth and are now of adolescent age; the prevention messages to them and their colleagues need to address this. In this regard, the draft School Health Policy which was developed in 2004 needs to be discussed, approved and implemented in order to include these challenges.

**Which areas need more data?** Timely, adequate and reliable data are very important raw materials for planning at different levels in the country. In the recent years UBOS has done a commendable job in collecting, analysing and disseminating significant sample and population based information about the economy.

The study noted that there was an apparent lack of data on the spending and investment patterns of households with an HIV infected member. This lack of data remains a gap which could be addressed through (a) community based survey of people accessing ART and other HIV/AIDS related services in selected regions of the country (b) integration of household spending in the HIV sero-behavioural survey, the demographic and health survey, the national service delivery survey or the (Health) Service provision assessment survey by MOH (c) the national aids spending assessment (NASA).

This macro-economic impact study has helped to generate evidence on different aspects of HIV/AIDS and the economy. However, to-date, there is still lack of data on the impact of HIV/AIDS in the work place. For instance, the HIV/AIDS programmes that have been implemented in the workplace have not been evaluated for their effectiveness and efficiency with regard to reducing the transmission of HIV or its impact within the sector. Similarly, quantitative and simulation based macro economic impact studies on the various sectors is lacking. For instance, there is need to study cost of administration, cost of transport in public and private sector, relationship between corruption and HIV/AIDS in the public and private sector etc so that valuable data is generated for helping in planning and resource allocation.

## 2.2 POLICY AND PROGRAMMATIC RESPONSE

### 2.2.1 National Response in the Period 1987-2006

The national response to the epidemic in the 1980's and 1990's was through the implementation of the AIDS Control Programme under MOH and the multisectoral NOP and NSF. During the period, the focus was, among other things, on development of many important policy frameworks and technical guidelines for most areas of HIV/AIDS response for use countrywide; tremendous emphasis on community mobilization; promotion and expansion of prevention interventions particularly voluntary HIV counseling and testing (HCT), sensitization through IEC and involvement of PLWA in the national prevention campaigns; care and support through treatment of opportunistic infections and STIs, advocacy for community based home care of PHAs, positive living among PHAs; home based care and support to orphans and vulnerable children; and coordination through national and district structures and resource mobilization. There was no ART in the country, but these strategies worked and brought down the prevalence of HIV from a high of 18% to a low of 6.4% alluded to above. Later on in 2004 ARTs were introduced into the national response.

### **2.2.2 Planned National Response in the Period 2007/8-2011/12**

Recently, the country developed the National Strategic Plan 2007/8-2011/12<sup>12</sup> focusing on three thematic priority service areas namely, prevention, care and treatment and social support that are to be supported by a strengthened service delivery system and structure in order to ensure quality, equity and timely service provision. The NSP is seen as an instrument for planning and resource mobilization in order to enhance universal access to treatment, care and support during the period.

In the NSP, the allocation of resources across the thematic areas of focus are: 28.3% for prevention, 38.7% for care and treatment, 24.7% for social support (mostly for orphans and vulnerable children -OVCs), and 8.3% for programme support. Taking cognizance of availability of relatively cheap and cost effective treatment (ART) and aiming at providing universal access to ART to those who need it, provision of antiretroviral treatment in the NSP would account for over 90% of the resources required for care and treatment programmes.

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<sup>12</sup> Uganda AIDS Commission (2008). National HIV/AIDS Strategic Plan 2007/8-2011/12. Kampala

# 3

## IMPLICATIONS OF NATIONAL RESPONSE TO HIV/AIDS ON THE ECONOMY

### 3.1 FUNDING OF NATIONAL HIV/AIDS PROGRAMMES

It was stated earlier that one of the key concerns in the country was that large amounts of external funds flowing into the country in the fight against HIV/AIDS would boost aggregate demand, which in turn could cause inflation and real exchange rate appreciation (and loss of international competitiveness), and hence destabilise the macroeconomic achievements that have been secured over the past 15 years. Before this is discussed, it is appropriate to review the sources of funds for the national response and how the funds were spent.

#### 3.1.1 Sources of Funds for HIV/AIDS Programmes

As stated above, one of the major determinants of the macroeconomic impact of HIV/AIDS expenditure is the extent to which that spending is sourced domestically (from the Government budget) or externally (from donor funds).

In the recent years, the spending on HIV/AIDS programmes in Uganda was reported to have increased sharply, up from US\$ 38m in 2003/04 to an estimated US\$ 170m in 2006/07. Furthermore, according to the NSP, it is projected that this expenditure will continue to rise annually from US\$ 276m in 2007/08 to US\$ 511m in 2011/12 as is shown in Figure 3.1 below. Regarding the source of funding, of the total spending amounts alluded to above, the contribution from the GOU between 2003/04 and 2006/07 rose from about US\$ 6m to US\$ 8m. This is also expected to increase further between 2007/08 and 2011/12 from US\$ 19m to US\$ 75m. While in the period 2003/04 the actual government contribution represented a decline from 16% to 5% of total spending, this situation is expected to be reversed in the period 2007/08 and 2011/12 where it is projected that the proportion of government contribution will increase from about 7% to 15% of total spending on HIV/AIDS. Thus, it is clear that the funding of HIV/AIDS is predominantly supported by donors now and in the medium-term future. This is good news in that it means (a) development partners are assisting Uganda to implement its NSP (b) relatively more local resources are relieved and made available for other sectors other than HIV/AIDS, (c) there is more relief from use of savings and foreign exchange constraints.

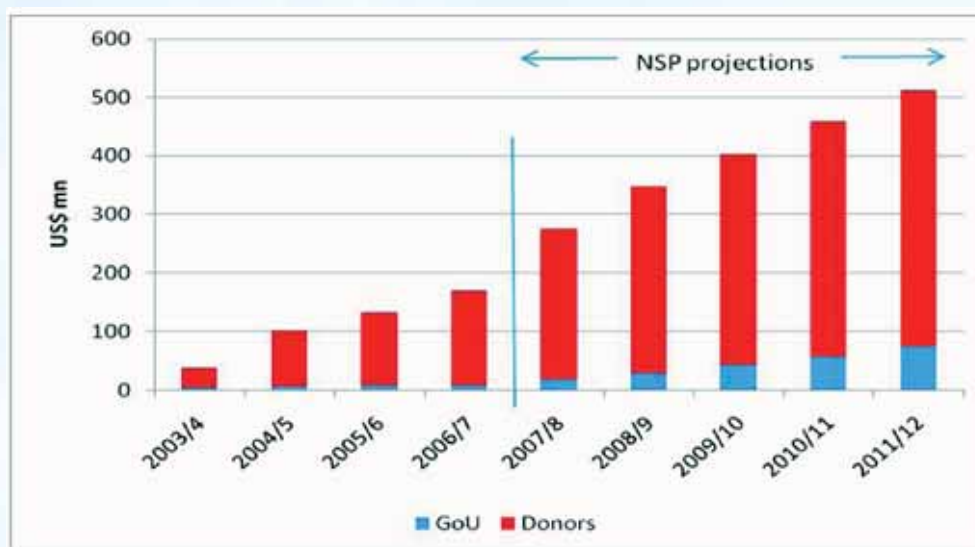


Figure 3.1: Total Spending on HIV/AIDS Programmes (US\$m)

In the period 2003/4- 2006/07 the external funds for HIV/AIDS programmes came from both bilateral (Denmark, Ireland, Italian Cooperation, Norway, Sweden, United Kingdom and United States of America) and multi-lateral (UN-agencies, World Bank and Global Fund for HIV/AIDS, Tuberculosis and Malaria, GFATM) sources. Indeed, the coming in of President's Emergency Plan for AIDS Relief (PEPFAR) catapulted USA to be the major and dominant funder for the national HIV/AIDS response than any other source in the period 2003/04 and 2006/07 (Figure 3.2). Thus, the contribution of USA in 2005/6 and 2006/07 was more than the combined contribution of all the other funders even when government funding was included.

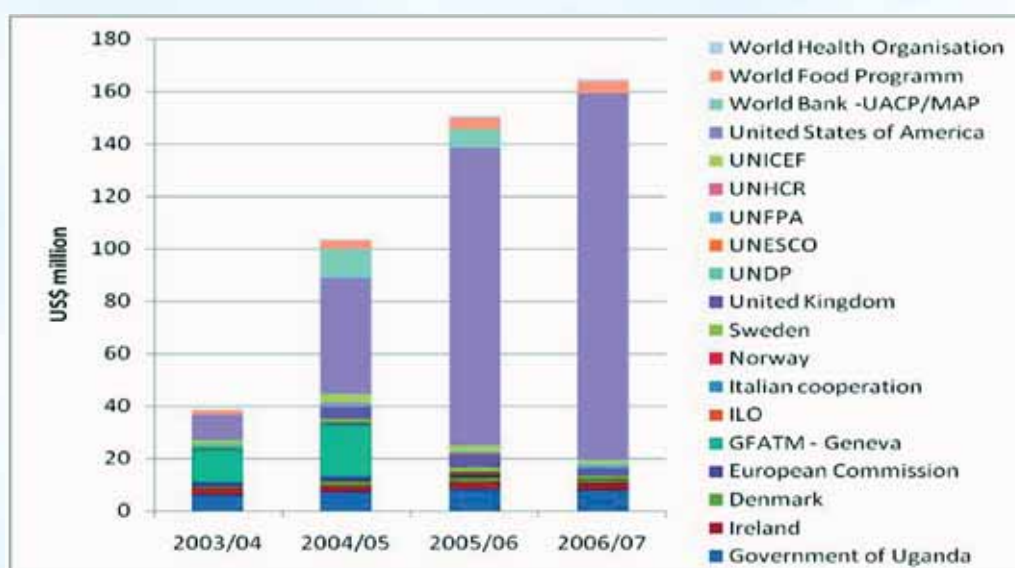


Figure 3.2: Financing of HIV/AIDS-related Spending in Uganda, 2003/04-2006/07

### 3.1.2 Spending of HIV/AIDS Funds

It is of value to critically follow how the externally funded inflows for HIV is utilized because there has been concern that it could create macro-economic instability by impacting on the exchange rate and competitiveness. The current findings on this matter are presented below.

Information has generally been poor on spending of external funds in the country. However, data was collected from 21 institutions (6 government, 3 local and 12 international organizations) on the items they spent their total funding of US\$ 278m for the period 2004/05 and 2006/07; their spending constituted 67% of total funding (US\$ 438m) for HIV/AIDS in Uganda during the same period.

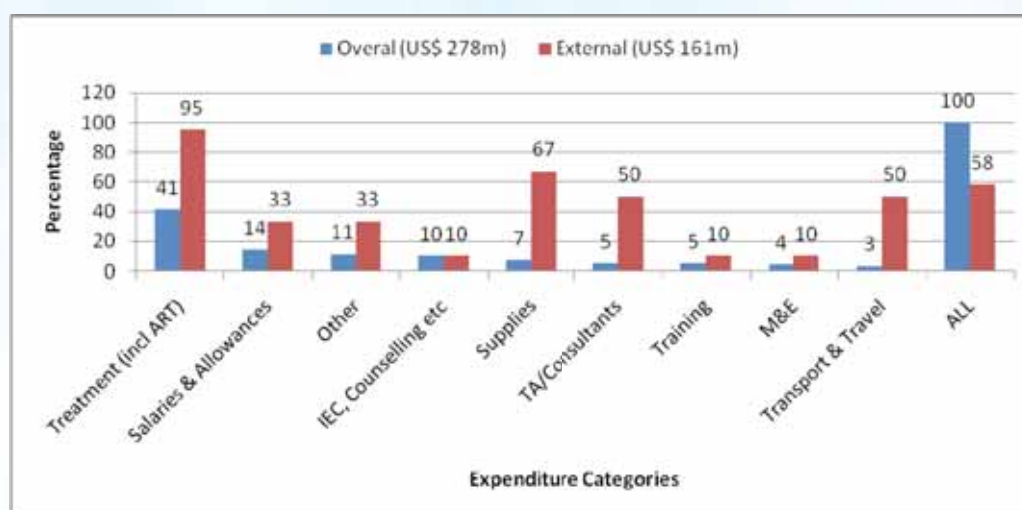


Figure 3.3: Spending of HIV/AIDS funds on major categories by Institutions 2004/05-2006/07

As is shown in the figure above, treatment had the largest share of the expenditure; it took over 41% of the \$278m spent by the 21 institutions on their HIV/AIDS programs. The findings also indicated that in general, nearly 60% of total spending went directly or indirectly to procurement of external goods and services, leaving only about 40% of the \$278m to be spent within Uganda. Against this, however, there was considerable variation in the proportion spent externally under the different budget categories. In this regard, 95% of the treatment costs, 67% of expenditures on supplies and 50% of costs for hiring technical assistants and consultants as well as transport and travel costs were spent outside Uganda. On the other hand, expenditures on the remaining 42% of the \$278m were incurred on salaries and wages, Information, Education and Communication (IEC), Counseling, Training and Monitoring and Evaluation (M&E) and others; only between 10% and 33% of their respective expenditures were spent outside Uganda. Applying these findings to the period 2003/04 -2006/07, it means that out of the total estimated donor funding for HIV/AIDS programmes of US\$ 418m, up to US \$243m was spent on externally sourced goods and services while only US\$175m was spent inside Uganda

Under the NSP, it is projected that gross donor flows will rise from US\$ 162m in 2006/07 to US\$ 436m in 2011/12 but overall funding would increase from US\$ 170m to US\$ 511m in the same period. Against this, expenditures for care and treatment is expected to be 38.7% of the overall budget which is comparable to the 41% observed above for the 21 institutions that

was reported. Again, similar to the scenario in the period 2003/4 to 2006/07 in which 95% of expenditure on treatment went for procurement of ART drugs from abroad, within care and treatment, antiretroviral treatment is projected to account for over 90% of the resources required for care and treatment programmes. Based on these similarities, if up to 60% of total funds of the HIV/AIDS programme expenditure goes on imports, then the net flows would only rise from US\$ 68m in 2006/07 to US\$ 200m in 2011/12 instead of US\$ 162m and US\$ 436m.

### 3.1.3 Emerging Issues

**Dependence on external funding is a long-term problem in national response.** Based on the realities on the ground, it appears that the NSP is over ambitious especially in the high funding scenario because there is no guarantee from donors that all that is projected will be mobilized. Granted, in the first year of implementation of NSP (2007/08) when the levels of resources required were low, Uganda was able to mobilize and spent over \$290m compared to the projected \$260m in the NSP. But, this is small compared to what is required in successive later years and secondly, most of this money was mobilized and spent outside the budget system (where government has no control over); this study did not evaluate its impact on the economy. In the coming years, it is most likely that the country will not be able to mobilize the resources from the donors. For instance, the credit crunch that all the major economies supporting the budget of Uganda are grappling with (and had neither been expected nor integrated in the projections of NSP) is not likely to end in the near future. Consequently, AIDS Development Partners (ADPs) are beginning to signal and inform Uganda that there will most probably be no additional funds for HIV/AIDS and hence they are only likely to maintain the current level of support. To illustrate this situation, recently the PEPFAR Coordinator in the country stated that "We expect that PEPFAR funding for Uganda will continue at its current level of around \$280m annually through 2013. But this will still leave a large gap between national treatment needs and the funds available to provide treatment. Uganda needs to identify other sources to fill this gap."

It was noted that USAID is the largest contributor to national response to HIV/AIDS. Indeed, through PEPFAR, Uganda's HIV/AIDS response is planned to receive about \$280m in 2009; since 2004, USAID has provided over \$1.2b to combat HIV/AIDS in the country. Although the USA is committed to supporting the HIV/AIDS response for the foreseeable future, to the extent that this support may not be permanent and Uganda is unlikely to cover the contribution of USA and other donors through domestic financing, there could be some long-term problem in the national response to the epidemic. This suggests that government should (a) have a favourable climate that enhances the key development partners to continue supporting HIV/AIDS activities (b) continue to look for funds from other non-traditional funders of HIV/AIDS programmes. Favourable climate includes good governance, democracy, transparency and accountability, good investment environment, peace and security, observance of human rights, etc.

**Local options for addressing donor dependence for HIV/AIDS funding.** In addition to looking for funds from development partners, government also has other avenues for solving the problem internally that need to be discussed. One such option is by addressing over dependence on donors through scaling down HIV/AIDS response to the size that the country can manage. Thus, in the event that the country cannot fund all the activities within the NSP, there is need to discuss how the country can scale down the response by re-prioritizing the activities based on the economic realities. Secondly, the country could explore possibilities of raising additional funds domestically by, for instance, establishing a tax for supporting HIV/AIDS and an account specifically for HIV/AIDS or raising it from expected oil revenue.

Regarding the later, it should be noted that Uganda has been variously reported to have the potential of producing in the next few years 100,000-150,000 barrels of oil per day<sup>13</sup> in addition to having found other mineral deposits that could support the economy. One could consider the possibility of using some of the proceeds from the oil and mineral mining to fund HIV/AIDS activities in the country. On the other hand, some people could argue that because oil and all the mineral deposits are an asset, as they are exploited, it is better for the country to use the proceeds in generating/creating other replacement assets (e.g. financial and physical assets) through economic investment in higher yielding returns abroad (off-shore investments) or locally so that even the future generation will be able to partake from it rather than the current generation expending most of the proceeds in meeting the costs for HIV/AIDS activities. A counter argument relating to this could run as follows. Based on this study, HIV/AIDS is projected to (i) increase poverty by 1.4 % and reduce GDP by 1.2% only compared to when there is no HIV/AIDS (ii) affect the demography of the country only minimally between now and 2025. Thus, others would argue that, proceeds from oil and other minerals should not be spent on HIV/AIDS because there are other diseases and conditions that affect more people than does HIV/AIDS. These different points of view warrant serious discussions from the technical and ethical point of view.

**Limited data on how money is spent and what it is spent on.** One of the indicators on United Nations General Assembly Special Session (UNGASS) is on expenditure. Similarly, under M&E system by UAC, there are specific indicators on funding. However, there has been a serious gap in getting data pertaining to spending on HIV/AIDS in the country. In the UNGASS report for 2007 it was noted that it was very difficult to obtain all data on expenditure on HIV & AIDS spending by both public and the private sector due to insufficient and incomplete data in different reports as well as methodological differences in data collection. In the public sector, where HIV/AIDS is treated as a cross-cutting issue, there was no special budget line/vote. Secondly, (a) at the local government level, funds are allocated from GoU to the District Local Governments from where it is difficult to tease out the proportion that goes to HIV & AIDS due to the integrated approach to service delivery; (b) at the central government level, it may be difficult to distinguish expenditure on HIV/AIDS from what is spent on other health activities e.g. expenditures on blood transfusion includes those incurred in ensuring blood is free not only of HIV infection but also free of hepatitis B, malaria, syphilis etc. Among the civil society, (i) most organizations do not divulge information on their funding and spending (ii) many agencies do not keep their funding data in the formal way. In terms of methodology, different organizations use different formats for capturing data on expenditures and reporting depending on the requirements of the funding agencies and quite often, if the data is available, it is not disaggregated according to the spending categories that were discussed above. In the private sector, data is lacking on how firms track the effects of HIV/AIDS on their labour force and investment plans. Thus, the direct and indirect costs of HIV/AIDS at an individual employee level, at departmental level and when aggregated at the organizational/firm level are generally unknown for most businesses and private firms across all sectors in Uganda.

## 3.2 IMPACT OF FUNDING NATIONAL RESPONSE TO HIV/AIDS ON THE MACRO-ECONOMY

### 3.2.1 Impact of HIV/AIDS induced-Aid Inflow on Budget

The increase in government spending from US\$ 8m to US\$ 75m between 2006/07 and 2011/12

<sup>13</sup> Saturday Monitor, Aug 8, 2009.

was noted to represent an increase in the GoU share from 5% of the total to 15% in the same period. This means that as a share of domestic revenues (assuming the ratio of domestic revenues to GDP remains unchanged), government spending on HIV/AIDS would increase from 0.6% of total spending to 2.3%, a large increase, or from 0.1% to 0.4% of GDP. On this basis, the macro-economic study concluded that this would have minimum impact on the economy.

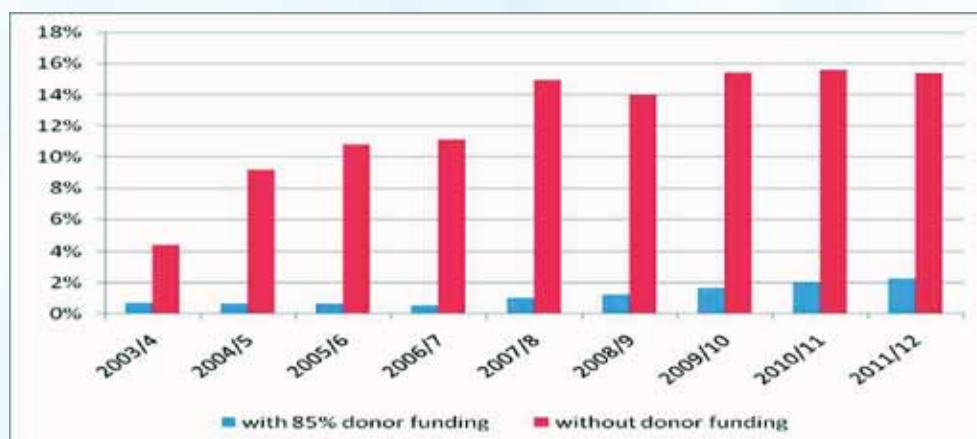


Figure 3.4: GoU Spending on HIV/AIDS Programmes as Percentage of Domestic Revenues

While that may be the case, if for one reason or the other the 85% donor component of the funding is not forthcoming and available, the government would be forced to generate the money internally in order to maintain the same level of ART programme. This in practical terms would necessitate government to use about 15% of its domestic revenues to meet the expenditures on HIV/AIDS. This is almost certainly unachievable and unsustainable.

The above magnitude of spending would not only necessitate government to cut down from other sectors, borrow from the public or raise through increasing taxation but would also be extremely difficult for government to sustain. Already according to MOFPED projections<sup>14</sup>, domestic revenue as percentage of GDP improved between 2006/7 and 2008/9 from 13.5% to 14.1%, this is projected to reduce from 14.1% in 2008/09 to 13.7% in 2011/12; similarly, tax revenue as a percentage of GDP would also reduce from 13.8% to 13.6% during the same period. Besides, there is already a lot of fiscal pressures being experienced in allocation of resources to the different sectors of the economy. For instance, between 2008/09 and 2009/10, there were reductions in the percentage allocations to eight sectors including health as is shown in the figure below. For the health sector, with a reduction from 10.7% in 2008/9 to 10.4% in 2009/10, there is considerable cry about inadequate resources being allocated to the different areas within the sector. Thus, it is most likely that this type of resource allocation would be resisted by other sectors and even by participants within the health sector.

<sup>14</sup> MOFPED (2009). National Budget Framework Paper FY2009/10-2013/14.

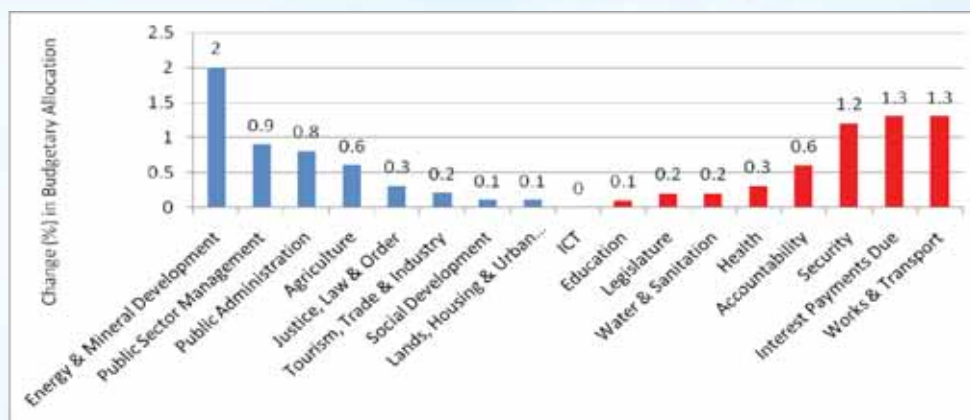


Figure 3.5: Percentage changes in Sectoral Allocations between FY 2008/09 and 2009/10 excluding Arrears and Amortisation)

### 3.2.2 Impact of HIV/AIDS induced-Aid Inflow on Money Growth/Liquidity/Currency

There were concerns that there could be increased money supply in the domestic economy resulting from an increased aid-induced spending by government because of the up-surge in aid flows. This study found that, in general, liquidity injections caused by government expenditures were not always associated with increases in money supply during the period 1992/93 and 2006/07. However, regarding spending related to HIV/AIDS programmes, the study found that donor inflows would indeed increase from US\$ 32m in 2003/04 to US\$ 436m in 2011/12 which would represent a significant addition to foreign exchange receipts into the country. Secondly, through simulations using the VAR (Vector Autoregressive Analysis) for the period July 1994 – June 2007 it was found that, as expected, an increase in aid flows would be associated with a long term increase in the money supply. However, because 60% of HIV/AIDS programme expenditure goes on imports as demonstrated above, net inflows would only rise from US\$ 68m to US\$ 200m over the same period. The magnitude of the relative impact on the Balance of Payments (BoP) and the currency would therefore be much smaller, and unlikely to cause any significant macroeconomic instability.

### 3.2.3 Impact of HIV/AIDS induced-Aid Inflow on Inflation and Exchange Rate

Considering the entire economy, it was found that although injection of liquidity due to increases in aid-induced spending could have led to volatility in money supply, this did not lead to volatility in prices and exchange rates because Bank of Uganda (BOU) took appropriate measures for sterilization between 1998/99-2002/03. Thus, in the present circumstances, the study found that if the same approach is used by BOU in the short run, then (a) at the projected exchange rates, sterilization would increase from Shs 121b/= in 2006/07 to Shs 365b/= in 2011/12 (b) the cumulative sterilization would represent an estimated 44% of total treasury bill issuance in 2011/12 compared to an estimated 9% in 2006/07 (c) the additional cost to government, at a 10% interest rate would be \$85m a year. Obviously, this amount would be far greater than the projected annual contribution by government in the period up to 2011/12 for the national HIV/AIDS response. Besides, there could be a crowding out effect on private investment if the impact on interest rate is large. If these measures are taken and because 60% of donor funds is spent externally, the liquidity injection would not translate into inflationary and exchange rate appreciation pressures.

Through simulations using the Vector Autoregressive Analysis (VAR) it was also found that the increase in money supply observed in the period July 1994 – June 2007 would not lead to any long term increase in prices or to REER appreciation, possibly because BOU's monetary policy and sterilisation strategy had been successful. Further more, using the CGE (Computable General Equilibrium) model, it was demonstrated that as a result of aid inflows, the shilling does indeed appreciate but that, once again, the overall degree of REER appreciation was small.

It should be noted that sterilization would only be necessary if GOU/BOU decided not to absorb the additional foreign exchange currency inflows from HIV/AIDS response and instead used it to add to Uganda's foreign exchange reserves. Consequently, it was concluded that although aid may have an adverse impact on the economy through causing short-run volatility in prices and REER, the impact is small. Hence, the arguments that increased HIV/AIDS-related inflows could hurt the economy were not supported by the results of this study.

#### **3.2.4 Impact of Providing ART on Real Exchange Rate and Exports**

One implication of increased aid inflow that was analysed is the potential danger on real exchange rate appreciation. In this regard, the study considered the impact of the real effective exchange rate (REER) as a result of aid inflow on total exports and six major Ugandan exports (coffee, tea, cotton, fish, maize and flowers) over the period 1994-2006. The study found that there was no relationship between the REER and total exports although this was not the case for all individual export commodities. The study found that the REER would affect specific exports, namely, fish, flowers and cotton, which accounted for nearly a quarter of total exports: the impact of the REER was largest for flowers, where a 1% appreciation in the REER was associated with a 2.9% decrease in exports, and for fish, a 1% depreciation of the exchange rate would lead to a 2.7% increase in fish exports; the impact of the REER on cotton exports was much smaller at 0.04%.

Although the extent of the appreciation varies considerably across the various scenarios, the overall degree of REER appreciation is small consequently, (a) the negative impact of REER appreciation on growth is smaller than the positive impact of ART provision and the real transfer of resources from the rest of the world that results from donor financing (b) the negative impact of domestic financing is greater than the negative impact of donor financing. The study concluded that even if there is some REER appreciation and effects in certain sectors, it would not have a major impact on overall exports. Therefore the arguments that increased HIV/AIDS-related inflows could hurt the economy are not supported by the findings from the simulations in this study.

#### **3.2.5 Emerging Issues**

Hard choices if donors reduce funding. To-date, total government spending is at \$3.6b out of which \$8m is required for HIV/AIDS. Against this background, even if government component increased to \$75m, it will not be significant. However, this is at a time when there is need for resources in the other sectors as was demonstrated by shifts in budgetary allocations due to pressures from different sectors. This pressure is likely to increase requiring harder choices and trade offs to be made particularly as donor funding is levelling off yet NSP stipulates increase of government contribution from \$8m to \$75m under the assumption that donor funding would also increase. Choices are (i) have a trade off by removing resources from other sectors and shift it to HIV/AIDS programmes (ii) fund domestically by borrowing in order to meet what is lost by donors not providing resources (iii) cut down on other spending that might be perceived to be unnecessary. The first choice is not very feasible considering that

the other sectors also have pressing needs and if resources are removed from them then the economy will have a reduction in growth. The second option would lead to deficit which in the long run is even more dangerous for the economy as this might trigger increases in interest rate, reduced economic growth and consequently increase in poverty. The third has two dimensions that need to be addressed, namely, reducing on wastes and losses in use of funds and cutting down on expansion of new frontiers for expenditures. Inefficiency in resource use includes corruption, lack of transparency and accountability in resource allocation and usage. Expansion of frontiers for spending have been illustrated with creation of new districts which increase cost of administration by Shs 3.5b/= annually for salaries of staff in addition to money required for elections for filling positions in the new administrative units<sup>15</sup>. Once again, discussions on these need to be carried out up-front before donors significantly cut down their funding for HIV/AIDS.

Future for local production of ART. It was observed that in the period 2006/07 and 2011/12 when the NSP will be implemented not only is treatment the largest share of the resource envelope but the import component of expenditures on ART is the highest. Hence, if ART drugs continue to be imported from outside, then the effect of external funding inflow will not be large enough to affect the macro economy significantly. However, because an ART drug producing facility (Quality Chemicals Ltd) has been built in Uganda, to the extent that ART drugs are produced locally, the import would be reduced, and this is likely to worsen the negative macroeconomic impact. Against the statement it is pertinent to note that Quality Chemicals Ltd in which government has an interest is currently producing ART drugs that are more expensive than the ones imported. Secondly, the active pharmaceutical ingredients used in the production process are being imported with no capacity to produce them locally. Thirdly, the factory is not yet accredited by WHO as a registered source of ART and hence it cannot currently compete regionally and globally thus making it unable to produce the drugs on a larger and more economically feasible scale. Finally, as young organizations typically experience, the bottlenecks in management and operations that could affect production may need to be addressed. Should it be difficult to address the above challenges, how will costs of running the factory be met if big programmes such as GFATM, PEPFAR etc cannot procure their drugs even locally? Even if those challenges are addressed, should neighbouring countries start producing their own ARTs, will the consumption of ART by Uganda alone be adequate to sustain the factory? Already, before the factory is up and running at a commercial rate it was reported that out of the Shs 60b/= that Parliament had approved for procurement of ART drugs, MOH<sup>16</sup> had diverted Shs 31b/= to pay salaries of health workers. That said, however, it is more sustainable to access ART from a Ugandan firm than from outside.

### 3.3 OPTIONS IN MANAGING MACRO-ECONOMY AND PROVISION OF ART

#### 3.3.1 ART Financing

In order to evaluate the different options for funding ART, nine options were considered and the impact of each on the growth of the economy computed. In addition to the nine options, there was the baseline case where there was no HIV/AIDS. Combinations 1 and 7 represent situations where ART is not provided but greater emphasis is put on prevention with government meeting only 15% and 100% of the expenses respectively. Option 9 implies ART provision with 100% funding being raised domestically while option 3 allows for external

<sup>15</sup> Naturinda S (2009). EC Blows Shs 2.4b to fix Contested Polls. Saturday Monitor Newspaper. August 8, 2009.

<sup>16</sup> Daily Monitor, Newspaper August 7, 2009.

Table 3.1: Scenarios used in Assessing Options for Funding ART under CGE Model

GOVERNMENT FUNDING	DONOR FUNDING			
	Low (0%)	Medium (50%)	High (85%)	
Low (15%)			1. No ART	
			2. Medium <sup>a</sup> ART <b>(Good)</b>	
			3. High ART <b>(Best)</b>	
Medium (50%)			4. No ART	
			5. Medium ART	
			6. High ART <b>(Fairly Good)</b>	
High (100%)	7. No ART <b>(Worst)</b>			
				8. Medium ART
				9. High ART

<sup>a</sup>Medium ART= provision grows from current level but does not reach universal coverage; High ART= provision grows from current level and reaches near universal coverage;

funding of ART up to 85% as is envisaged in the NSP under the high scenario. The results of the simulation indicated that for the period 2008 – 2016, there was improved economic growth when ART is included in the response and when donors provided at least some of the funds for ART. Indeed, when average GDP (%) was computed for the period, it was found that the best funding scenarios shown in the table above were numbers 3 (D85G15HighART), 2 (D85G15MeddART ) and 6 (D50G50HighART ) in that order of decreasing level of average GDP growth they generated. Figure 3.6 is illustrating this point and is also indicating that the worst case scenario with the least average GDP growth is that of number 7 (D0G100NoART) in which only government alone funds the national response which also does not include provision of ART.

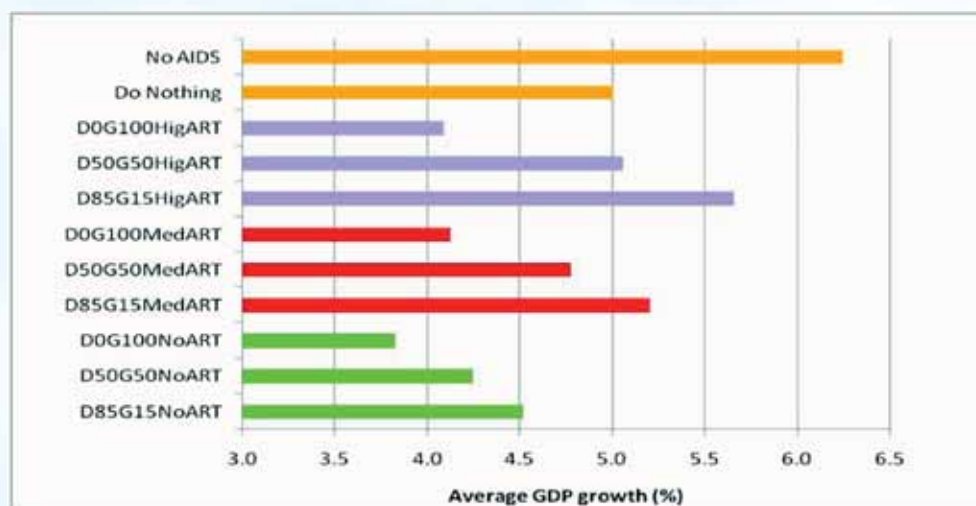


Figure 3.6: Average GDP Growth Rates 2008 to 2016 – Financing Scenarios

### 3.3.2 Economic Returns to Investment on ART

In Section 2.1, it was demonstrated that there are benefits in using ART in the national response to HIV/AIDS based on the positive impact it would have on, among others, poverty, demography, economic sectors and GDP. However, the question as to whether investing on ART was economically sensible or not remained hanging.

The study compared the cost of education of workers in different sectors with the cost of providing ART. In this regard, it was noted that the average cost of educating a worker varied from sector to sector ranging from US\$ 350 (Shs 590 000) in domestic service sector to US \$5,000 (Shs 8 561 000) in financial intermediation. In order to compare this cost to that of AIDS, the study computed the total cost of providing ART to an HIV+ person by assuming that the annual cost of providing ART per person was about US\$ 500 and that the average (median) additional life years resulting from ART was taken to be 10 years. On this basis, the lifetime total cost of providing ART to an HIV+ person would be US\$ 5,000. This means that, in the absence of other considerations, provision of ART is not a good investment as the cost of the lost education (or the cost of educating a worker to replace the lost one) is less than the cost of providing ART in all sectors except for the Finance sector.

The CGE model was also used to explore this question. The results of the simulation showed that under both high and low ART provision, the expenditure incurred in providing ART far exceeded the additional GDP created from using ART during the period 2007/8 – 2011/12 (Figure 3.7). Indeed, the findings demonstrated further that the GDP realized was only about 50% of the cost of providing the requisite ART. There are no studies to-date focusing on productivity of PHAs who are on ART.

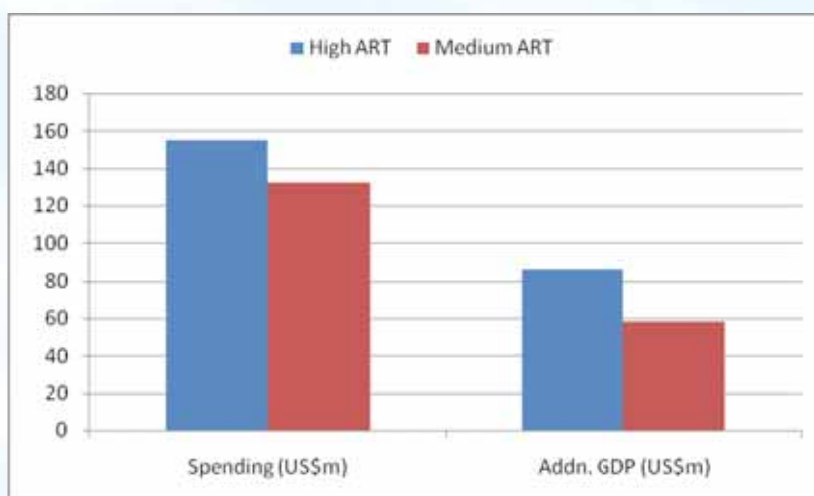


Figure 3.7: ART Spending and Additional GDP (Annual Average, 2007/08-2011/12)

### 3.3.3 Treatment vs Prevention

Because of the weak returns to investment from expenditure on ART, the macro-economic impact study attempted to assess the cost efficiency between treatment and prevention. In the exercise, a WHO approach was used. In the approach, a health intervention is considered (a) very cost effective if the cost per disability adjusted life year (DALY) is less than Gross National Income (GNI) per capita, (b) cost effective if less than three times GNI per capita.

Thus, the study found that currently prevention expenditure is very cost effective as a result of comparing Uganda's cost of US\$ 50 per DALY with the GDP per capita of about US\$ 400. On the other hand, treatment was found to be probably not cost effective (using the 3xGNI per capita benchmark). It was therefore concluded that, to-date, to the extent that a choice had to be made between expenditure on prevention and on treatment, prevention is far more cost effective.

### 3.3.4 Speed for Scaling-up Anti-Retro Viral Treatment

In order to achieve universal access to ART as envisaged in the NSP, the rollout could be slow or rapid; the faster the speed the more people who are eligible could be brought on treatment since currently only 170,000 out of the 350,000 who need treatment are on drugs. Against this background, however, it is appropriate to note that the faster programmes are scaled-up, the more likely will the economy face absorptive capacity constraints which could lead to inflation, reduction in the effectiveness of expenditure, and reduction in the value for money in donor financed spending. A speedy roll-up will also experience challenges in national capacity to implement the new or expanded programmes quickly as programmed. Thus, money is a necessary but insufficient condition for scaling-up ART treatment; other considerations have to be met as well.

The study used the successful experience of Botswana to highlight that a rapid scale-up is feasible but requires that in addition to money, there should be sufficient human resources (doctors, nurses, pharmacists, counsellors), physical resources (health and related facilities), health information systems (for tracking and monitoring diagnoses, prescriptions, treatment adherence, drug resistance, etc.), health management system void of corruption etc in place. It was noted in a World Bank report<sup>17</sup> that "Overall, approximately 3 in 10 health facilities report having a HIV/AIDS testing facility, which includes almost all hospitals and HC IVs (98 and 97 percent, respectively), 46 percent of HC IIIs, and only 10 percent of HC IIs. Private facilities are more likely to have a testing lab than are public facilities (34 percent versus 28 percent). Beyond the initial testing availability, approximately 6 in 10 health facilities have HIV/AIDS care and support services."

Because of the above challenges, a modest rate for scaling-up (than that envisaged in the high ART scenario in NSP or implemented in Botswana) would be more cost effective and indeed less wasteful for Uganda. The "medium funding" NSP scenario fits this pace.

Even when ART has been scaled-up, there would be the question of sustaining [donor funding for] the scaled-up HIV/AIDS programmes. This is because treatment for HIV/AIDS is a life time undertaking which therefore requires a long term commitment of resources. Long term sustainability would require either credible long term donor funding commitments or Uganda government to take on the burden.

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<sup>17</sup> The World Bank (2008). Fiscal Space for Health in Uganda. Contribution to the 2008 Uganda Public Expenditure Review. Kampala

Table 3.3: Projected expenditures on ART in Uganda

Number of Patients on ART	Annual Cost (US \$)	Estimated Total Costs (US \$)		Comments
		Ten Years	Fifteen Years	
1	500	5,000	7,500	Annual cost > per capita GDP; Annual cost > per capita expenditure on health (US \$25)
170,000	85,000,000	850,000,000	1,275,000,000	Annual cost > Government's projected contribution of US\$ 75m under NSP in 2011/12
350,000	175,000,000	1,750,000,000	2,625,000,000	Annual cost > half health sector budget for 2009/10 (excluding arrears and amortization)

It is clear that not any donor will be willing to commit such a huge amount of money to one type of intervention in the context of fighting HIV/AIDS. PEPFAR has been very supportive, but it was only able to provide \$1.2b to the entire HIV/AIDS response of Uganda since 2004 and not only ART. Now, when Uganda needs to increase access to ART to the 350,000 eligible patients, PEPFAR has restricted recruitment of new patients under its funding support.

### 3.3.5 Emerging Issues

**Donor funding for ART is critical.** It was illustrated in the study that although HIV has a negative impact on growth (1.2% reduction), ART can off-set this negative impact because the labor force is sustained through reduction in morbidity and mortality. However, although from the economic point of view, ART was found not to be cost effective and the study concluded that ART should not be the highest priority for investment in Uganda in the context of the economy and national response to AIDS, from the social and ethical point of view, ART should still be provided in the country to save lives. In this regard, it was demonstrated that to minimize the impact of investment in ART, most of the funding should come from donors and that Uganda should not attempt to fund ART provision on its own.

Against this background, it is pertinent to note that only 170,000 patients are on ART compared to 350,000 that need them. Challenges related to efforts to provide ART to all who need are presented in the narrative below.

**Challenges in scaling-up of ART.** There are political and social/ethical pressures to scale-up and reach as many people and as quickly as possible with ART, but one should not lose sight of the long term sustainability concerns. In this regard, even if the current spending on ART is affordable and allows rapid scaling-up, if there is no long term commitment by donors to provide the resources as is the case, how will the country handle the boomerang effects and repercussions when there may be no free ART for not only those on treatment but also for those that become eligible for treatment under Uganda ART provision guidelines. It is important that the guidelines are structured to support appropriate targeting and speed of scaling up; for example, if the cut-off for CD4 count is too high, the demand for ART will be higher and it will be more difficult to achieve the roll-out. Currently the threshold for CD4 cell counts that makes an HIV infected person eligible to ART drugs in Uganda is at 250 cells/mm<sup>3</sup> which is far lower

than the 350 cells/mm<sup>3</sup> recommended by WHO due to scarce resources<sup>18</sup>. It will suffice to state that the immunity of a PHA is much better at 350 cells/mm<sup>3</sup> hence he/she would more likely not experience instances of opportunistic infections except for tuberculosis.

For those already on treatment, if ART is not sustained, it may not be an understatement to suggest that many PHAs (a) will die in large numbers with bitter feeling that their government has abandoned them at time of most need when not only is the cost of drug declining but there is also an ART factory in the country (b) might out of frustration start spreading the virus intentionally under the notion of "I will not die alone" as was reported in the 90's when there was no treatment for AIDS (c) might start massive embezzlement/corruption in order to get money to pay for the drugs which they are unable to afford through their salaries (d) will develop drug resistant strains which will be more virulent and requiring even more expensive drugs for those that may need thus driving them deeper into poverty.

For those that will become eligible to drugs, if ART is not scaled-up and made accessible to them, one can imagine what the medical workers and politicians will say. There will be many instances, as it is already happening today, where a child and his/her father, for example, are on ART but when the mother becomes eligible, she cannot be enlisted on ART and has had to be turned away by the doctor. This is already pausing a major challenge. A PHA on ART informed the consultant that it has come to their notice that to-date "(a) there are some families whose members are having to share the drugs (b) some medical workers have to discriminate between the patients as they cannot provide ART to all that are eligible which is contrary to their ethics". Knowing that counseling and testing opens avenue to many interventions in HIV/AIDS response, many people are willing to test their blood for HIV infection. Now, the question is "What will happen to the RCT and HCT programmes if the clients learn that when you are tested, found positive and indeed eligible for ART, there are no drugs to support you?". This will significantly affect the prevention programmes as well.

**Lack of capacity to scale-up ART.** It is clear that the current health delivery system cannot accommodate a massive scale-up of ART as envisaged in the NSP because, apart from money, Uganda lacks the requisite human resource, health infrastructure and systems. The recent Service Provision Assessment Survey<sup>19</sup> indicated that, among others, PHAs (a) the health facilities do not meet international standards for infection prevention putting clients and service providers at risk of infection of HIV and other life-threatening diseases (b) only three in ten health facilities offer HIV testing, six in ten offer care and support services for PHAs, three in ten offer PMTCT, and fewer than one in ten reach out to youth or provide ART, post-exposure prophylaxis, and advanced care (c) stock-outs of first-line ART and TB medicines that contribute to drug-resistance is common. In this regard, with reference to human resource, Uganda needs for instance to work out the number of different categories of human resource/professionals (e.g. doctors, nurses, pharmacists, counsellors etc) in employment (public and private) against what is required and accordingly not only project but also plan on how to bridge the gap through training and/or external technical assistance. In this regard, the extent to which MOFPED (resource allocation), MOLG (recruitment and service delivery in health sub-districts), MOH (policy, technical support supervision and service delivery in referral hospitals) and MOES (training of health and social workers) coordinated and aligned in the context of implementing NSP and providing universal access to ART in the country, in particular, is not only unknown but should be a matter of great concern.

<sup>18</sup> The Centers for Disease Control and Prevention (United States of America) considers HIV-infected persons who have CD4 counts below 200 cells/mm<sup>3</sup> to have AIDS, regardless of whether they have any signs or symptoms .

<sup>19</sup> Ministry of Health and Macro International Inc. (2008).

Apart from the above, there is also a lot of inefficiencies in resource use that need to be addressed in order for them not to undermine the scaling-up efforts. For instance, within the health sector, recently it was reported that MOH (a) diverted Shs 31b/= for ART drugs to pay salaries of health workers in the country without Parliamentary approval (b) is being investigated by Public Procurement and Disposal of Assets (PPDA)<sup>20</sup> for a \$17.3b Global Fund pharmaceutical deal in which the tendering process was reportedly flouted. If this type of inefficiency feeds back to the donors, not only will it be difficult for the ADPS to mobilize additional funds from their countries but they will also be compelled to reduce or withhold even the little that they are currently providing as was witnessed in 2005 in the context of GFATM. In view of the above, a slower scaling-up is preferred because it is more manageable, achievable and efficient.

**Who to give ARVs?** It was demonstrated that from the economic perspective, treatment needs to be focused by having it targeted to some selected categories of the labour force (such as skilled labour) in order to make it more cost effective. This is because in most sectors, treatment cost is far higher than the benefits obtained from treatment. Therefore focused treatment could be in sectors where (a) there is scarce labour force due to skills required (b) output of the sector is adversely affected by the loss of the labour force due to AIDS. In other words, mainstreaming HIV/AIDS and implementation of work place programmes should be a priority because within this, employees can be provided ART. Already some organizations like Bank of Uganda, MOFPED are doing this. Another way of addressing this is to encourage the provision of private medical aid/insurance schemes for higher-paid / higher-skilled employees. With such coverage they will be better able to access ART and be less dependent upon govt. In Botswana the early availability of ART for skilled workers through private medical aid was an important factor in minimizing the adverse impact of HIV/AIDS on the labour force.

In view of the above, the current policy of government that stipulates universal access to ART by 2010, also as in commitment in UNGASS, may not be achievable. Hence, government might have to step up its contribution and progressively pick up on a sliding scale the cost of ART. Another option is for patients on ART to be segregated into those that can cost share/meet the cost and those that cannot afford to cost share and hence need free ART. A third option is not to take on new patients but maintain those already on treatment until they die. There is also the option of promoting/strengthening work place interventions that include provision of ART. Each of these options has both pros and cons in socio-economic and political contexts that need to be discussed with active participation of PHAs, civil society (including cultural and religious leaders), government and development partners before an appropriate policy can be reached.

It is appropriate to note here that the agriculture sector fails to meet the criteria above suggesting that provision of ART to farm workers as of today is not cost effective. Agriculture sector is the largest in size employing over 70% of the population but it is also small in relative vulnerability; productivity of the labour force here is also very low. However, from the social perspective, even if the prevalence of HIV among its workers is low, it still has to be prioritized. But the dilemma is the number of workers. This needs to be discussed.

While discussions are on going for agriculture, interventions that need to be looked at concurrently would be those that try to (i) reduce reliance on manual labor by promoting modernization of production (ii) invest in increasing value addition to whatever is produced for export (iii) reduce land fragmentation (subsistence farming) by promoting medium to large

<sup>20</sup> Daily Monitor, August 7, 2009. Uganda Service Provision Assessment Survey 2007. Kampala.

scale commercial farming . This will help improve efficiency of the labour force in the sector. The extent to which the current programmes of the sector such as PMA, NAADS etc are addressing this need to be critically analyzed and innovative ways of improving agricultural production identified and implemented.

**Opportunity to re-define the delivery of health services in the country.** Most ART accredited service providers outside government are religious based private not for profit (PNFP) health facilities and non-religious based civil society organizations such as The AIDS Support Organization (TASO) and Joint Clinical Research Centre (JCRC). While the religious based facilities might continue to get funds from their traditional donors, if external funding keeps dwindling, the non-religious based CSO service providers will be significantly affected. To-date, for instance, the TASO services are hosted on the same compounds with the government health facilities. Could this be the time to begin discussing (i) merger of such services with those of government in order to reduce: costs, duplication, skewing of services in favour of urban areas by Civil Society Organizations (CSOs), competition for clients and/or movement of clients between two service providers (ii) re-defining roles and responsibilities of CSOs in the fight against HIV/AIDS? Would it be more attractive for donors to invest in holistic health service provision through government health systems and religious PNFP health facilities while strengthening civil society capacity in advocacy, health rights campaigns, community empowerment and demanding for transparency and accountability from health service providers. Should more resources be allocated to strengthening health delivery systems (that benefits the majority of the population) compared to provision of ART that benefits only a few people? It is of value to stress that if certain proportion of donor resources are allocated and used for improving health systems and capacity of the country will be improved not only for an effective and efficient scaling-up of ART to the extent that funds permit but also for addressing all other ailments including opportunistic infections ( OIs) and Sexually Transmitted Infections (STIs). This is an opportunity for the questions posed in this sub-section to be discussed by the key stakeholders including government, development partners, CSOs and the private agencies in the health sector at various levels.

# 4

## CONCLUSION AND SUGGESTED PROGRAMMES/ INTERVENTIONS

The macro-economic study has clearly demonstrated that HIV/AIDS can have serious impact on the population and economy of Uganda. However, it was also noted that when ART is administered, these effects of the epidemic can be considerably reduced. In providing the ART, it was also noted that donors provide over 80% of the funds out of which over 60% is spent externally for the purposes of procuring ART drugs and related goods and services. The conclusions for the study were that (a) greater impact in fighting poverty can be achieved by focusing on other macro-economic determinants rather than HIV/AIDS (b) ART is beneficial but not cost effective for all those that may be eligible to receive it (c) over-reliance on external funding for the national response is risky in case the donors pull out (d) as long as donors support the national response which must include prevention, the macro-economic impact of donor inflows are not significant.

A number of issues were also identified in various programmatic areas which require serious debates involving key stakeholders and the general public. Hence, first and foremost, those discussions must be facilitated to take place as soon as possible in order to come out with an agreed set of actions. In addition to such actions, a number of interventions are suggested below.

### 4.1 HIV/AIDS RELATED INTERVENTIONS

**Focus on Prevention:** It was noted that for the country to succeed in the fight against HIV/AIDS, more effort is needed in preventing new cases of HIV infection. All the interventions in the HIV/AIDS response in the NSP and national strategies for eradicating poverty in the NDP should focus on addressing the driving and risk factors that lead to HIV infection. In other words, all activities to be carried out by the public and private sector, civil society, public-private partnership and development partners should be analysed from the perspective of prevention, namely, how it will empower the individuals and communities in promoting abstinence, fidelity, condom use and Prevention of Mother to Child Transmission (PMTCT). Advocacy, planning, budgeting, implementation, monitoring and evaluation should thereafter follow accordingly. This requires that everybody and change agents in Uganda should be talking and implementing their activities in the context of preventing new infection. This

should be the theme for the next phase of the war which was beginning to lose focus because of availability of ART which is now clear that not only is it unaffordable but the country also does not have the capacity to make it universally accessible by 2010 to those who are and will be infected. If this is not carried out and the number of new infections continues to rise, then the burden of HIV/AIDS will exacerbate and Uganda's GDP and development will in

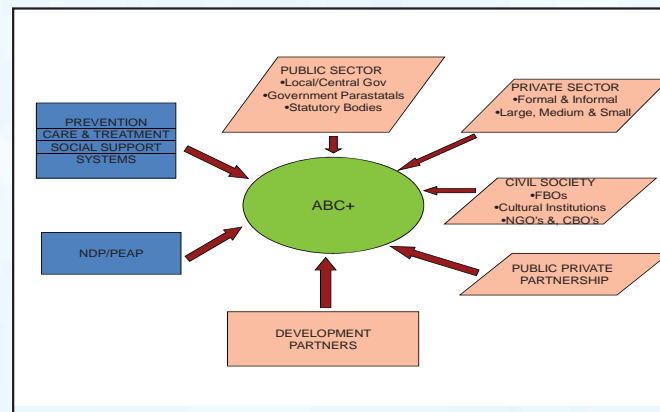


Figure 4.1: All HIV/AIDS interventions and development programmes implemented by key stakeholders should focus more on prevention

general be undermined. Once again, this should not be misunderstood to mean that activities on treatment, care and support as well as systems strengthening be frozen.

Figure 4.1: All HIV/AIDS interventions and development programmes implemented by key stakeholders should focus on prevention

The findings from the recent mode of transmission study<sup>21</sup> need to be repackaged and disseminated as soon as possible to all key stakeholders in order for them to integrate in their work plans. For instance, PMTCT that is relatively easy to deliver with limited amount of funding should be universal. This emphasis on prevention does not of course suggest that provision of ART should be stopped. Rather, to the extent that the issues raised in this report are discussed and consensus reached, ART should continue to be given to those who are eligible.

**Develop new generation of IEC materials:** New types of IEC materials need to be developed in order to take cognizance of the current challenges related to prevention. For instance, (i) forty three (43%) of the new infection is happening among married and monogamous relationships; appropriate materials are required for un-married youths, families, leaders (e.g political, religious and cultural and technical leaders) (ii) proliferation of internet access, videos, TV, etc that expose youths to other cultures, values, material goods which predispose them to sex require new materials (iii) availability of ART has associated challenges like adherence, 'increased' libido among healthy looking PHAs on ART, high costs involved at individual/national level, complacency in danger of HIV/AIDS as people feel AIDS is now a treatable disease, (iv) alcohol and drug consumption especially among youths; (v) increasing number

<sup>21</sup> Wabwire-Mangen F, Odiit M, Kirungi W, Kisitu D K and Wanyama J O (2009). Uganda HIV Modes of Transmission and Prevention Response Analysis. Uganda AIDS Commission. Kampala

of non-sexually active youths that were infected peri-natal stage etc. (vi) increasing perverse sexual activities viz MSM, anal sex, etc. All these require a new type of IEC materials for each category of audience in question.

**Expedite policies and laws that promote prevention.** There is need to put in place or review and enforce policies, laws and bylaws that support prevention interventions. A number of them are indicated below.

*Policy on ART.* It was noted that it is not advisable for government to fill the void that may be left by donors in the context of funding ART treatment because it is not realistic and sustainable. While taking ART drugs is a lifetime commitment, it was also noted that it is equally unrealistic to expect donors to commit themselves to funding ART for those on the drugs over a long period of time, say 20 years. This being the case, universal access to ART policy as planned in the NSP is unrealistic and unsustainable using both government and donor funds in the long run. Hence, there is need to review the current policy on ART.

*HIV and AIDS Prevention and Control Bill 2008.* A draft bill has been presented to Parliament on HIV and AIDS prevention and control. It is important and necessary that the concerns raised by the civil society<sup>22</sup> are widely disseminated and discussed as a basis for informing Parliament.

*The Domestic Relations Bill.* This law has been pending for such a long time yet it has direct bearings on HIV/AIDS prevention, control and mitigation within the context of family members. Government needs to expedite its discussions in Parliament in order that a law is put in place soon for handling, among others, commonly occurring problems such as domestic violence, inheritance of properties by widows and orphans that the Bill will address.

*Policy on Social Responsibility.* There are many multi-billion business firms in this country. It is necessary that government comes out with a policy that requires them to commit an agreed percentage of their profit to social responsibility by, for example, paying fees of orphans, supporting famine related projects among communities affected by natural hazards etc. To-date, it is at their discretion to contribute to this type of social concerns.

*Policy on coordination of donor support outside the budget.* It was noted that a large amount of the funding for HIV/AIDS programmes coming from development partners is outside the government planning and budgeting processes. This poses a challenge in the realignment of development finance from the UN, bilateral and multilaterals on the one hand and from the other donors, benefactors, philanthropists etc in accordance with the Paris Declaration on Aid Effectiveness. Hence, apart from guiding the national planning and resource allocation, the principle of transparency and accountability requires that inflows and expenditures by different stakeholders should be comprehensively documented. The government needs to take lead on this by developing appropriate policies and regulations. For instance, a policy that requires income of the CSOs involved in the fight against HIV/AIDS to be declared is required. Government departments are audited annually but CSOs are not. Secondly, there is need for more transparency, accountability, value for money in the utilization of resources mobilized; this can be achieved through improved financial monitoring and conducting a critical analysis of the plans, outputs and expenditures of the different actors in the fight against HIV/AIDS along the budget items identified in the study. A national HIV/AIDS Spending assessment needs to be carried out from time to time. In this way, government will be in a better position

<sup>22</sup> National Forum of Persons Living with HIV/AIDS Networks in Uganda (2009). HIV and AIDS Prevention and Control Bill, 2008 Consultations Report. July 2009. Kampala

to know the status of funding and hence be able to mobilize and allocate more resources and ensure implementation of interventions that are most needed strategically, programmatically, geographically, financially etc.

*Land Policy.* Widows orphans etc usually lose ownership to their property particularly land due to unscrupulous relatives. In this regard, recent efforts have been made in improving the land use policy; this needs to be expedited. The population also needs to be sensitized on their rights on ownership and access to land, general land laws, use of land in joint economic ventures vs selling outright. Similarly, investors need to be compelled to address environmental sustainability and social responsibility towards the communities (especially vulnerable and marginalized people like PHAs, orphans,) as they set and run their economic firms.

**Educate the youths and protect them from HIV infection:** Youths constitute over 50% of the population. Hence they must be supported to stay in school as much as possible. The implementation of the policy<sup>23</sup> on universal secondary education (USE) and universal post primary education and training (UPPET) should be reviewed and strengthened. At the tertiary institution of learning, the bursary scheme, particularly to the female students and those from relatively poor regions and families need to be considered as priority. Efforts to reduce school drop out rates are more necessary now than ever before. Currently Presidential Initiative on AIDS Strategy for Communication to Youths (PIASCY) programme is being scaled-up from primary to secondary school level. But, not all schools have been reached with the appropriate capacity; the tertiary institutions of learning to-date have been left out of the programme. Competitions in which all schools at the different levels participate in HIV/AIDS related music, dance and drama, debates, essays etc as was done in the 1990's must be revitalized. Similarly, the promotion of role models in the fight against HIV/AIDS in the context of different communities and cultures in Uganda also need to be revitalized.

It was observed that out of the 400,000 Ugandans that enter the labour market annually, only 113,000 are absorbed in employment resulting in only 17% of youths being employed between age 15-24 years and a high dependency ratio (of people younger than 15 or older than 64 to the working age population) to be 1:1, the highest in Africa<sup>24</sup>. This level of unemployment of youths has both economic and social implications with serious implications on efforts of government to eradicate poverty and inequality in Uganda. Hence, government's effort to promote access to micro-finance in order to establish/promote small micro-medium sized businesses, to advocate for value added exports and to provide UPE and UPPET need to be strengthened. Besides, foreign investors need to be attracted in order to create more jobs; the National Action Plan on youth unemployment as a framework for guiding employment creation needs to be expedited. However along side this, efforts should be made to ensure that existing policies pertaining to minimum wage and pension scheme be revised and a comprehensive employment policy should be put in place.

**Integrate HIV/AIDS in the planning and budgeting processes:** The development of the National Priority Action Plan from the NSP should cascade into annual operational plan of action by public, private sectors including CSOs so that all actors at a given level contribute to a common goal and plan. Against this, the contribution of each category should be monitored through a common monitoring plan. This implies that there is one coordinating mechanism at each level too. Thus, by operationalizing the principle of 3-one's in this way, the government and development partners should be able to ensure that targets set nationally are achieved. The National Planning Authority, the sectoral planning departments/sector working groups

<sup>23</sup> Ministry of Education and Sports (2007). Policy and Operational Arrangements for Implementation of Universal Secondary Education. January 2007. Kampala.

<sup>24</sup> New Vision, Wednesday August 12, 2009.

and the district technical planning committees need to be empowered to deliver this. In this regard, all planning and monitoring modules that have been developed need to be aligned to make them sensitive to HIV/AIDS. A starting point is to ensure that all BFPs should have HIV/AIDS reflected in them and vertical or parallel AIDS programmes outside the wider sector planning and budgeting process are minimized. As the National Development Plan (NDP) is currently being formulated to replace the PEAP, it is imperative that the NDP emphasizes the integration of HIV/AIDS in all sectoral and local government strategic and operational plans. In addition, one of the key areas that should be addressed in each sectoral performance review should be the extent to which the sector has addressed HIV/AIDS. The Joint Annual AIDS Review started by UAC and the integration of HIV/AIDS in the Annual Local Government Assessments are platforms that need to be strengthened.

**Mainstreaming of HIV/AIDS.** Uganda AIDS Commission has developed a policy and guidelines for mainstreaming HIV/AIDS. To-date, in the public sector, through resources from PEPFAR, the Supporting Public Sector Workplaces to Expand Action and Responses against HIV and AIDS (SPEAR) programme is being implemented in departments and affiliated private sector workplaces and workstations within the ministries of MOES, Ministry of Internal Affairs (MOIA) and Ministry of Local Government (MOLG). In MoES, for instance, it will cover the workers and their family members at the headquarters, national teachers colleges (NTCs), core primary teachers colleges, secondary schools, district education offices (DEOs) and primary schools. This type of effort needs to cover all the ministries; in short all sectors should be supported to internally and externally mainstream HIV/AIDS in their sectoral activities. Similarly, in the private sector, efforts should also be made to ensure that each business firm that employs a large number of workers has a work place policy and programme. Thus, the work place interventions that constitute internal mainstreaming should include, among others; developing a policy on HIV/AIDS; provision of IEC and condoms; enhancing access VCT and ART through an agreed scheme contributed to by the employee and employer; provision of first aid kits; having a vibrant work place HIV/AIDS committee, work plan and budget; etc.

**Strengthened health service delivery system.** It was noted that resources for provision of universal access to ART and indeed other health services in general are far beyond the capacity of government even with support from development partners. However, what is within the capacity of government is to provide the necessary infrastructure and resources for the health system to improve its delivery of primary health care and treatment of common conditions such as STIs and opportunistic infections that are also associated with HIV/AIDS. Government is also in a good position to fight corruption and improve on accountability in the health system. As new national health policy and health sector strategic plan –III are being developed, it is therefore important that (a) government scales up efforts to improve infrastructure and resources for the health system (b) prioritizes the fight against corruption in the health sector at both national and local government levels (c) development partners support government in implementing the products from these two initiatives.

**Empower leaders and communities to play more proactive roles.** An important area that helped reduce the impact of the epidemic in the 90s was leadership and community mobilization. Top leadership need to re-focus their advocacy and support. For instance, without ignoring synergy and complementarity, political leaders should address the governance and economic factors that drive the epidemic while the civil, cultural and religious leaders address the socio-cultural factors in their communities and technical program/project leaders address individual risk factors that increase vulnerability to HIV infection in the context of their mandate. In this regard, there is an urgent need for mobilizing and engaging the formal and informal social networks in the countryside to play a more proactive role in the national response. Time for uncoordinated advocacy and general awareness gone. This requires that these leaders are

adequately empowered with appropriate information and necessary materials and tools

**Support research to generate evidence to support policies and programmatic decisions.**

The country needs to commission studies on (a) the spending and investment patterns of households with an HIV infected member (b) impact of HIV/AIDS interventions in the work place (c) macro economic impact studies on expenditures that relate to service delivery viz cost of administration, cost of transport in public and private sector, relationship between corruption and HIV/AIDS in the public and private sector etc in order to support the planning and budgeting on one hand and strategic programme design and implementation on the other hand.

There is usually a wealth of information collected by UBOS viz UHSBS, UDHS, USDS, etc. These need to be analyzed from different perspective in order to guide response by each category of implementers. There is need for a policy on access to population based data collected on HIV/AIDS in order to ensure that planning and resource allocation are based on location specific information. In newer areas, Uganda could also benefit enormously by establishing school health (including HIV/AIDS related) behavioural surveys as a cross-sectional or longitudinal study conducted every five years.

## 4.2 NON-HIV/AIDS RELATED INTERVENTIONS

**Implement economic policies that reduce poverty.** It was noted that HIV/AIDS is just one of the determinants of poverty. The themes of successive national budgets have been on promoting economic growth and reducing poverty (through public expenditure) in 2004/05; focusing on economic growth (by increasing the production of goods and services), improving macroeconomic management (by encouraging competitive efficiency and controlling inflation) and providing public goods (by improving security, law and order, infrastructure and disease control) in 2005/06; enhancing economic growth and households incomes through increased production and productivity in 2006/07; re-orienting government expenditure towards prosperity for all in 2007/08. In this regard, it is necessary for government to keep focusing on other determinants which could bring down poverty faster. Currently, a national development plan is being developed. These economic measures should form cornerstones for the plan.

It was observed that currently, less than 30% of the national budget of Uganda is funded externally. However, over 85% of HIV/AIDS are externally funded. To the extent that GOU cannot fund either the national budget or HIV/AIDS programme independently, support from development partner must be encouraged, at least in the short to medium term. In this regard, government needs to pay particular attention to issues like human rights, democracy, national institutional building and corruption which tend to make donors withdraw from funding a country. Importantly, in order to support the economy, government should ensure that investment climate is improved for both local and foreign investors.

**Intensify efforts for elimination of corruption.** The current Prevention of Corruption Act is restrictive by confining the acts of corruption to situations only involving public officers yet experience shows that there is private sector corruption that directly impacts negatively on the public sector and service delivery in this country. Similarly, the leadership code does not include leaders of CS organizations that use resources from government or development partners. In addition, in order to fight corruption, the public should be engaged in monitoring the office bearers in public and private sector and also in discussing how corruption can be tackled from the grassroots where programmes are implemented to the centre where resources are allocated. Corruption causes inefficiency and inefficiency causes corruption, hence need to remove corruption and other bottlenecks in the use of resources not only in the national

response to HIV/AIDS but in the entire country. Procurement tends to be the most abused process in the use of public resources. This requires a critical analysis of why it is the case and measures to curb the same identified and implemented.

**Increase income through Agriculture:** Need to encourage investors and donors to support investment in agricultural transformation and development in the country through promotion of large and medium scale farming businesses and transitions from subsistence to commercial production. This could be achieved more rapidly by (a) increasing productivity per unit of resource used viz land, labour and shs through better technologies and practices (b) expanding the acreage under agricultural production (c) increasing value addition through analyzing the value chain for each of the major agricultural products and accordingly strengthening the weak links (d) reducing post-harvest loses and facilitating access to local and international markets (e) diversifying agricultural enterprises taking advantage of adjacent opportunities that help in minimizing costs, maximizing profits while increasing production and productivity more efficiently.

It was noted that agriculture employs about 70% of the population; most of these are subsistence producers with limited surplus for marketing. In this regard, while in the public sector there is a pension scheme, for those in the informal agricultural sector after the age of 65 when their level of production goes down, there is no safety net. Unfortunately, these people are the ones that take care of the orphans. In addition to this, the current food insecurity due to natural hazards poses a bigger challenge not only to the old people but to the general population. In this regard, government should ensure that there are appropriate food storage facilities with food reserves in place; early warning strategies should be shared among key partners and the communities.

