



The POLICY Project

The Economic Impact of AIDS in Swaziland

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AIDS has the potential to create severe economic impacts in many African countries. It is different from most other diseases because it strikes people in the most productive age groups and is essentially 100 percent fatal. The effects will vary according to the severity of the AIDS epidemic and the structure of the national economies. The two major economic effects are a reduction in the labor supply and increased costs:

Labor Supply

- The loss of young adults in their most productive years will affect overall economic output
- If AIDS is more prevalent among the economic elite, then the impact may be much larger than the absolute number of AIDS deaths indicates

Costs

- The direct costs of AIDS include expenditures for medical care, drugs, and funeral expenses
- Indirect costs include lost time due to illness, recruitment and training costs to replace workers, and care of orphans
- If costs are financed out of savings, then the reduction in investment could lead to a significant reduction in economic growth

LABOR FORCE STATISTICS		
Sector	Employment by Industry*: 1986	
	'000s	%
AGRICULTURE		
Agriculture, hunting, forestry and fishing	23.1	30.2
INDUSTRY		
Mining and quarrying industries	2.4	3.1
Manufacturing industries	10.9	14.3
SERVICES		
Electricity, gas and water	1.4	1.8
Construction	5.3	6.9
Trade, restaurants and hotels	7.4	9.7
Transport, storage and communications	5.6	7.3
Finance, insurance, real estate and business services	3.4	4.5
Community, social and personal services	16.8	22.0
TOTAL EMPLOYED	76.4	100.0

Source: United Nations, Statistical Yearbook, 1992, table 30

* excluding armed forces

The agricultural sector employs the greatest number of people in Swaziland; in 1996, about 33% of the labor force was in this sector, although it contributed only 11.6% of GDP. The main cash crops are sugar cane and cotton; livestock is also raised. Commercial forestry is also an important element in this sector. Manufacturing contributed 33.1% of

GDP in 1996, consisting mainly of processing food, livestock, and forestry products. The services sector is the largest sector in Swaziland in terms of GDP contribution, accounting for 47% of GDP in 1996. Due to its close geographic proximity, economic

events in South Africa have a strong effect on the economy of Swaziland. It is also vulnerable to weather conditions and fluctuations in international commodity prices.¹

The economic effects of AIDS will be felt first by individuals and their families, then ripple outwards to firms and businesses and the macro-economy. This paper will consider each of these levels in turn and provide examples from Swaziland to illustrate these impacts.

Economic Impact of AIDS on Households

The household impacts begin as soon as a member of the household starts to suffer from HIV-related illnesses:

- Loss of income of the patient (who is frequently the main breadwinner)
 - Household expenditures for medical expenses may increase substantially
 - Other members of the household, usually daughters and wives, may miss school or work less in order to care for the sick person
 - Death results in: a permanent loss of income, from less labor on the farm or from lower remittances; funeral and mourning costs; and the removal of children from school in order to save on educational expenses and increase household labor, resulting in a severe loss of future earning potential.
- Since approximately 90% of AIDS cases in Swaziland are projected to occur between the ages of 15 to 49, the earning capacity of households will be reduced significantly.²
 - The number of orphans due to AIDS is projected to increase from 10,060 in 1994 to 85,910 in 2006. Orphans tend to attend school less frequently, due to lack of financial resources for fees, uniforms, and books, as well as being more likely to work.³

Economic Impact of AIDS on Agriculture

Agriculture is the largest sector in most African economies accounting for a large portion of production and a majority of employment. Studies done in Tanzania and other countries have shown that AIDS will have adverse effects on agriculture, including loss of labor supply and remittance income. The loss of a few workers at the crucial periods of planting and harvesting can significantly reduce the size of the harvest. In countries where food security has been a continuous issue because of drought, any declines in household production can have serious consequences. Additionally, a loss of agricultural labor is likely to cause farmers to switch to less-labor-intensive crops. In many cases this

¹ Europa World Year Book 1998, Volume 2 (1998) Europa Publications Limited (London).

² Nkurlu, JI and Ilo Samat. (1994) "HIV/AIDS and Employment Policy and Practices." Prepared for Southern African Conference on AIDS and Employment, Harare, 28-30 November, 1994.

³ Whiteside, A and G Wood (1994) "The Socio-Economic Impact of AIDS in Swaziland," Government of Swaziland, Mbabane.

may mean switching from export crops to food crops. Thus, AIDS could affect the production of cash crops as well as food crops.

- A case study of the Mhlume Sugar Company examined the effect of HIV/AIDS on all aspects of the operation of the estate. The sugar estate provides both housing and health care for all of its employees and their families. The study concluded that AIDS will have a major impact on the estate, including effects on the production process, employee benefits, the medical costs and facilities, and the overall well-being of the estate.⁴ The senior medical officer there attributed 30% of all employee deaths over a three-year period to AIDS.⁵

Economic Impact of AIDS on Firms

AIDS may have a significant impact on some firms. AIDS-related illnesses and deaths to employees affect a firm by both increasing expenditures and reducing revenues. Expenditures are increased for health care costs, burial fees and training and recruitment of replacement employees. Revenues may be decreased because of absenteeism due to illness or attendance at funerals and time spent on training. Labor turnover can lead to a less experienced labor force that is less productive.

Factors Leading to Increased Expenditure	Factors Leading to Decreased Revenue
Health care costs	Absenteeism due to illness
Burial fees	Time off to attend funerals
Training and recruitment	Time spent on training
	Labor turnover

- Firms initially saw HIV/AIDS as a medical problem, to be handled by the government. After it became more widespread, firms began working with the government and NGOs on various campaigns, particularly to raise awareness. They have begun to recognize that cost-effective strategies include reducing labour requiring time away from families, such as migrant labour or driving long distances.⁶
- In Swaziland, a government employee may have up to six months sick leave at full pay and then another six months at half pay before undergoing a medical retirement. Thus morbidity due to HIV/AIDS will have a significant effect on the government wage bill. A worker in the private sector will generally have about 21 days sick leave.⁷

⁴ Gilbertson, I and AW Whiteside. (1993) "AIDS and commercial agriculture," Int Conf AIDS. 1993; 9(2):918 (abstract no. PO-D28-4202);

⁵ Ian Gilbertson, Senior Medical Officer, Mhulume Sugar Estate, Swaziland, quoted in Toupouzis, D (1998) "The Implications of HIV/AIDS for Rural Development Policy and Programming: Focus on Sub-Saharan Africa." HIV and Development Programme, UNDP, June 1998.

⁶ Toupouzis, D (1998) "The Implications of HIV/AIDS for Rural Development Policy and Programming: Focus on Sub-Saharan Africa." HIV and Development Programme, UNDP, June 1998.

⁷ Whiteside A and G Wood (1994) "The Socio-Economic Impact of AIDS in Swaziland," Government of Swaziland, Mbabane.

For some smaller firms the loss of one or more key employees could be catastrophic, leading to the collapse of the firm. In others, the impact may be small. Firms in some key sectors, such as transportation and mining, are likely to suffer larger impacts than firms in other sectors. In poorly managed situations the HIV-related costs to companies can be high. However, with proactive management these costs can be mitigated through effective prevention and management strategies.

Impacts on Other Economic Sectors

AIDS will also have significant effects in other key sectors. Among them are health, transport, mining, education and water.

- **Health.** AIDS will affect the health sector for two reasons: (1) it will increase the number of people seeking services and (2) health care for AIDS patients is more expensive than for most other conditions. Governments will face trade-offs along at least three dimensions: treating AIDS versus preventing HIV infection; treating AIDS versus treating other illnesses; and spending for health versus spending for other objectives. Maintaining a healthy population is an important goal in its own right and is crucial to the development of a productive workforce essential for economic development.
- The cost per patient per year is estimated to be E4,000 in Swaziland. Therefore, it is estimated that by 2000, the AIDS epidemic will result in an annual health care cost of E62.9 million, and by 2006, that cost will be E73.4 million.⁸ The effect of HIV-related illnesses accounted for 13% of the Ministry of Health budget in 1994. The overall effect of HIV/AIDS is expected to double the number of outpatient visits by 1999.⁹
- Another earlier study estimates that, in 1994, about 250 hospital beds would be required for adults due to AIDS and another 149 beds would be required for the pediatric AIDS cases, requiring a significant percentage of the 1,540 total beds in the country. By 1998, this study projected that over half of the hospital beds in the country would be taken by AIDS patients.¹⁰
- **Transport.** The transport sector is especially vulnerable to AIDS and important to AIDS prevention. Building and maintaining transport infrastructure often involves sending teams of men away from their families for extended periods of time, increasing the likelihood of multiple sexual partners. The people who operate

⁸ Whiteside, A and G Wood (1994) "The Socio-Economic Impact of AIDS in Swaziland," Government of Swaziland, Mbabane.

⁹ Loewensen, A and A Whiteside. (1997) "Social and Economic Issues of HIV/AIDS in Southern Africa," SAfAIDS Occasional Paper No. 2, SAfAIDS, Harare, Zimbabwe.

¹⁰ Whiteside, A and G Wood (1994) "The Socio-Economic Impact of AIDS in Swaziland," Government of Swaziland, Mbabane.

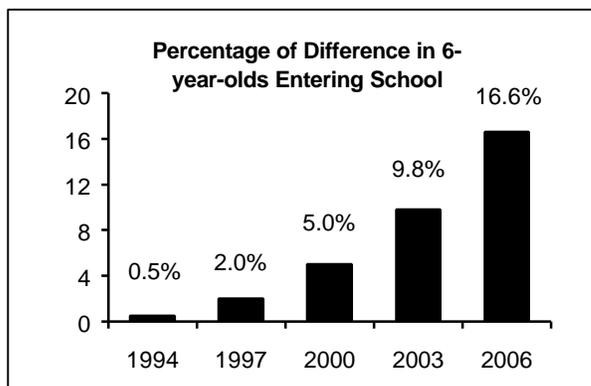
transport services (truck drivers, train crews, sailors) spend many days and nights away from their families. Most transport managers are highly trained professionals who are hard to replace if they die. Governments face the dilemma of improving transport as an essential element of national development while protecting the health of the workers and their families.

- In Swaziland, the country is small enough that few truck drivers are required to spend the night away from home while working. There are two groups who are at risk however; those who make cross-border deliveries, and those who in transit from other countries.¹¹
- **Mining.** The mining sector is a key source of foreign exchange for many countries. Most mining is conducted at sites far from population centers forcing workers to live apart from their families for extended periods of time. They often resort to commercial sex. Many become infected with HIV and spread that infection to their spouses and communities when they return home. Highly trained mining engineers can be very difficult to replace. As a result, a severe AIDS epidemic can seriously threaten mine production.
- Miners working in South Africa send a considerable amount of money home to Swaziland to support their families there; in 1983, 15.1 percent of rural incomes were derived from this source. As migrants become ill and unable to work in the mines, they will return home, and that income will be lost. High HIV prevalence will also reduce the number of new miners recruited from Swaziland to work in South Africa. Since miners have a relatively high prevalence rate, this will have a significant impact on household income.¹²
- **Education.** AIDS affects the education sector in at least three ways: the supply of experienced teachers will be reduced by AIDS-related illness and death; children may be kept out of school if they are needed at home to care for sick family members or to work in the fields; and children may drop out of school if their families can not afford school fees due to reduced household income as a result of an AIDS death. Another problem is that teenage children are especially susceptible to HIV infection. Therefore, the education system also faces a special challenge to educate students about AIDS and equip them to protect themselves.
- In 1994, there were 0.5% fewer six-year-olds entering school, as a result of the AIDS epidemic. That is expected to increase to 5.0% in 2000 and 16.6% by 2006.¹³

¹¹ Whiteside, A and G Wood (1994) "The Socio-Economic Impact of AIDS in Swaziland," Government of Swaziland, Mbabane.

¹² Whiteside, A and G Wood (1994) "The Socio-Economic Impact of AIDS in Swaziland," Government of Swaziland, Mbabane.

¹³ Whiteside A and G Wood (1994) "The Socio-Economic Impact of AIDS in Swaziland," Government of Swaziland, Mbabane.



- In Swaziland, between 1994 & 1996, the mortality rate among teachers was expected to rise from .78% to 1.18%. The number of AIDS deaths in this group was expected to rise from 75 to 129 within those same years¹⁴. This was expected to result in a cost of E1.3 million for replacing ill teachers in 1994, and E2.4 million in 1996. Further, the cost of training additional teachers was estimated to be E1.4 million in 1994 and E2.6 million in 1996.¹⁵

- One survey found that, in the early 1990s, the HIV prevalence rate among university students was 18.4 percent; it was predicted that most of these students would die within 10 years of their graduation. Thus the investment society has made in their human capital will not be fully realized.¹⁶
- **Water.** Developing water resources in arid areas and controlling excess water during rainy periods requires highly skilled water engineers and constant maintenance of wells, dams, embankments, etc. The loss of even a small number of highly trained engineers can place entire water systems and significant investment at risk. These engineers may be especially susceptible to HIV because of the need to spend many nights away from their families.

Macroeconomic Impact of AIDS

The macroeconomic impact of AIDS is difficult to assess. Most studies have found that estimates of the macroeconomic impacts are sensitive to assumptions about how AIDS affects savings and investment rates and whether AIDS affects the best-educated employees more than others. Few studies have been able to incorporate the impacts at the household and firm level in macroeconomic projections. Some studies have found that the impacts may be small, especially if there is a plentiful supply of excess labor and worker benefits are small.

There are several mechanisms by which AIDS affects macroeconomic performance.

¹⁴ Nkurlu, J.I. and Ilo Samat. "HIV/AIDS and Employment Policy and Practices". Prepared for Southern African Conference on AIDS and Employment, Harare, 28-30 November, 1994.

¹⁵ Whiteside A and G Wood (1994) "The Socio-Economic Impact of AIDS in Swaziland," Government of Swaziland, Mbabane.

¹⁶ Southern African Economist, 1997. "AIDS toll on regional economies," April 15-May 15, 1997.

- AIDS deaths lead directly to a reduction in the number of workers available. These deaths occur to workers in their most productive years. As younger, less experienced workers replace these experienced workers, worker productivity is reduced.
- A shortage of workers leads to higher wages, which leads to higher domestic production costs. Higher production costs lead to a loss of international competitiveness which can cause foreign exchange shortages.
- Lower government revenues and reduced private savings (because of greater health care expenditures and a loss of worker income) can cause a significant drop in savings and capital accumulation. This leads to slower employment creation in the formal sector, which is particularly capital intensive.
- Reduced worker productivity and investment leads to fewer jobs in the formal sector. As a result some workers will be pushed from high paying jobs in the formal sector to lower paying jobs in the informal sector.
- The overall impact of AIDS on the macro-economy is small at first but increases significantly over time.
- Life expectancy in Swaziland is projected to decline to 49.2 years in 2006, versus a life expectancy of 63.2 years in 2006 without the impact of AIDS. In 1991, life expectancy in Swaziland was 55.1 years.¹⁷
- Since the economy of Swaziland is dependent on scarce skilled manpower and investment, it is predicted that the impact of AIDS will be severe. Migrant remittances from South Africa will decline and government spending will either increase in various sectors or have to be reallocated.¹⁸

What Can Be Done?

AIDS has the potential to cause severe deterioration in the economic conditions of many countries. However, this is not inevitable. There is much that can be done now to keep the epidemic from getting worse and to mitigate the negative effects. Among the responses that are necessary are:

- **Prevent new infections.** The most effective response will be to support programs to reduce the number of new infections in the future. After more than a decade of research and pilot programs, we now know how to prevent most new infections. An effective national response should include information, education and communications; voluntary counseling and testing; condom promotion and

¹⁷ Whiteside, A and G Wood (1994) "The Socio-Economic Impact of AIDS in Swaziland," Government of Swaziland, Mbabane.

¹⁸ Whiteside, A and G Wood (1994) "The Socio-Economic Impact of AIDS in Swaziland," Government of Swaziland, Mbabane.

availability; expanded and improved services to prevent and treat sexually transmitted diseases; and efforts to protect human rights and reduce stigma and discrimination. Governments, NGOs and the commercial sector, working together in a multi-sectoral effort can make a difference. Workplace-based programs can prevent new infections among experienced workers.

- **Design major development projects appropriately.** Some major development activities may inadvertently facilitate the spread of HIV. Major construction projects often require large numbers of male workers to live apart from their families for extended periods of time, leading to increased opportunities for commercial sex. A World Bank-funded pipeline construction project in Cameroon was redesigned to avoid this problem by creating special villages where workers could live with their families. Special prevention programs can be put in place from the very beginning in projects such as mines or new ports where commercial sex might be expected to flourish.
- **Programs to address specific problems.** Special programs can mitigate the impact of AIDS by addressing some of the most severe problems. Reduced school fees can help children from poor families and AIDS orphans stay in school longer and avoid deterioration in the education level of the workforce. Tax benefits or other incentives for training can encourage firms to maintain worker productivity in spite of the loss of experienced workers.
- **Mitigate the effects of AIDS on poverty.** The impacts of AIDS on households can be reduced to some extent by publicly funded programs to address the most severe problems. Such programs have included home care for people with HIV/AIDS, support for the basic needs of the households coping with AIDS, foster care for AIDS orphans, food programs for children and support for educational expenses. Such programs can help families and particularly children survive some of the consequences of an adult AIDS death that occur when families are poor or become poor as a result of the costs of AIDS.

A strong political commitment to the fight against AIDS is crucial. Countries that have shown the most success, such as Uganda, Thailand and Senegal, all have strong support from the top political leaders. This support is critical for several reasons. First, it sets the stage for an open approach to AIDS that helps to reduce the stigma and discrimination that often hamper prevention efforts. Second, it facilitates a multi-sectoral approach by making it clear that the fight against AIDS is a national priority. Third, it signals to individuals and community organizations involved in the AIDS programs that their efforts are appreciated and valued. Finally, it ensures that the program will receive an appropriate share of national and international donor resources to fund important programs.

Perhaps the most important role for the government in the fight against AIDS is to ensure an open and supportive environment for effective programs. Governments need to make AIDS a national priority, not a problem to be avoided. By stimulating and supporting a

broad multi-sectoral approach that includes all segments of society, governments can create the conditions in which prevention, care and mitigation programs can succeed and protect the country's future development prospects.