



The POLICY Project

The Economic Impact of AIDS in Ghana

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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	Economically Active Labor Force: 1984 ^a		Employment by Industry: 1991 ^b	
	'000s	%	'000s	%
AGRICULTURE				
Agriculture, hunting, forestry and fishing	3,311	61.1	14.7	7.9
INDUSTRY				
Mining and quarrying industries	26.8	0.5	17.1	9.2
Manufacturing industries	588.4	10.9	20.6	11.1
SERVICES				
Electricity, gas and water	15.4	0.3	1.7	0.9
Construction	64.7	1.2	7.8	4.2
Trade, restaurants and hotels	792.2	14.6	7.5	4.0
Transport, storage and communications	122.8	2.3	10.4	5.6
Finance, insurance, real estate and business services	27.5	0.5	8.4	4.5
Community, social and personal services	473.7	8.7	98.1	52.7
TOTAL	5,422.5	100.0	186.3	100.0
Source: a – Europa World Year Book, 1998; b - United Nations, Statistical Yearbook, 1995, table 29				

Agriculture is the most important sector of the economy, contributing 46% of GDP in 1996. Products include cocoa, coffee, bananas, cassava, various nuts, timber, and fish. Ghana is one of the world's leading producers of cocoa; cocoa exports accounted for 30.5% of total exports in 1996.

There is also a developing manufacturing industry in Ghana, including food processing, textiles, vehicles, cement, paper, chemicals and petroleum. The economy is vulnerable to

bad weather conditions, due to its reliance on agricultural production, and to 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 Ghana 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.
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- One study in Ghana found that the extended family is likely to provide financial support when a member is suffering from HIV/AIDS. Over 33% of the households surveyed reported receiving assistance in some form from their extended family. The same survey also found that families drew down asset holdings in order to pay for medical costs; 25% of household surveyed either borrowed or sold property for this purpose.²
 - Another study found that, even though the majority of AIDS patients depended on their own resources to pay for their health care needs, most of them depend also on other family members. The survey of 141 AIDS patients and 122 relatives or carers of the patients found that 56% of the patients were relying on their own income for living expenses, compared to 92% of the relatives, who were not AIDS patients. Only 5% of the respondents reported relying on spouses for support, 2% relied on friends, and the rest of the patients relied on parents or siblings for financial support.³
 - Accounts from health workers in the Eastern and Ashanti regions, where the majority of AIDS cases have been reported, show that some patients are unable to settle their

¹ Europa World Year Book 1999, Volume 1 (1999) Europa Publishing Limited (London).

² Cited in Forsythe, S and G Siegel (1994) "Socioeconomics and AIDS in Developing Countries," Presentation by Policy Unit, AIDSCAP/FHI, Arlington, VA, May 26, 1994.

³ Anarfi, JK (1995) "The condition and care of AIDS victims in Ghana: AIDS sufferers and their relations," Health Transition Review, Supplement to Volume 5, 1995, 253-63.

hospital bills because most of their life savings have been exhausted on account of their illness.⁴

- The National AIDS Control Programme projected that the number of AIDS orphans will increase to about 160,000 by the year 2000, and will be greater than 400,000 by the year 2010. Enrollment rates are significantly lower for orphans than for other children, leading to lower productivity for the economy in the long run.⁵

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

- Most of the agricultural sector in Ghana is subsistence farming; evidence from other countries suggests that the decline in labor supply due to morbidity and mortality from HIV/AIDS will have a negative impact on production, and thus the food supply for households.⁶

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

⁴ Antwi, P (1999) Consultant's report on "Economic Impact of AIDS in Ghana."

⁵ Asamoah-Odei, E, P Antwi, D Dickerson (1995) "AIDS in Ghana," National AIDS/STD Control Programme, Ministry of Health, Accra, Ghana.

⁶ Antwi, P (1999) Consultant's report on "Economic Impact of AIDS in Ghana."

- A study commissioned by the Ministry of Employment and Social Welfare on the workplace response to the HIV/AIDS epidemic indicates that AIDS has had little demonstrable social and economic impact on companies. Furthermore, the study concluded that the magnitude of the costs relating to HIV/AIDS can be managed or contained by corporate policy, although management may review benefit packages as the epidemic spreads.⁷

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.
 - One study projects that the percentage of hospital beds occupied by AIDS patients, estimated at about 20% of all beds in 1994, will reach about 50% in 2000, and over 90% by 2010. This represents a serious crowding out of other patients, impeding the provision of health care services.⁸
 - Data from Korle-Bu indicate that the average lifetime cost for caring for an AIDS patient in the hospital is 100,000 cedis. Estimations that assume only a limited number of AIDS patients receive care (20% in urban areas, 10% in rural areas) calculate the total cost for in-hospital care was over 200 million cedis. Using these figures as a basis, with expenditure and access remaining constant, the total cost for hospital care is projected to reach 1 billion cedis in 2000, or about 4% of total public health expenditure, and 1.82 billion by 2010.⁹

⁷ Antwi, P (1999) Consultant's report on "Economic Impact of AIDS in Ghana."

⁸ Asamoah-Odei, E, P Antwi, D Dickerson (1995) "AIDS in Ghana," National AIDS/STD Control Programme, Ministry of Health, Accra, Ghana.

⁹ Asamoah-Odei, E, P Antwi, D Dickerson (1995) "AIDS in Ghana," National AIDS/STD Control Programme, Ministry of Health, Accra, Ghana.

- Recent estimates from three health facilities in Accra indicate that the average annual cost for caring for AIDS patients ranged from US\$97.85 to US\$254.65. The two clinics are quasi-government clinics for workers and their dependents, and tend to have a generous benefits package which includes the use of expensive treatments.¹⁰

Annual AIDS Costs at Accra Health Facilities	
Korle-Bu Teaching Hospital	US\$97.85
Ghana Ports and Harbours Authority Clinic	US\$97.98
Cocoa Clinic	US\$254.65

- 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 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.
- The second major economic activity for women in Ghana is itinerant trading, where women live away from home for days, and sometimes for weeks. A qualitative study on the risk of HIV for these women suggested that these female itinerant traders are highly vulnerable to HIV infection, and education programs should target them to prevent further infection.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.
- 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.

¹⁰ Antwi, P (1999) Consultant's report on "Economic Impact of AIDS in Ghana."

¹¹ Anarfi, JK, EN Appiah, K Awusabo-Asare (1997) "Livelihood and the risk of HIV/AIDS infection in Ghana: the case of female itinerant traders," Health Transition Review; 7Suppl:225-42.

Therefore, the education system also faces a special challenge to educate students about AIDS and equip them to protect themselves.

- **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.
- **Migrants.** After leaving their villages to search for work in the urban areas, many young men return after 2-3 years. They have been exposed to HIV/AIDS in the urban areas, and thus bring HIV/AIDS back with them.¹²

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.

- 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.

¹² Hemrich, G and B Schneider (1997) "HIV/AIDS as a cross-sectoral issue for Technical Cooperation." GTZ: Eschborn, Germany, May 1997.

- 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.
- The infant mortality rate is projected to decline to 40/1000 live births by the year 2010; including the impact of AIDS implies a reduction to only 45/1000 live births. A similar projection for child mortality indicates that, instead of reaching a low of 51/1000 live births in 2010, the child mortality rate would be around 75. The annual number of deaths of adults aged 15-49 without the impact of AIDS would be 63,000 per year by 2010; with AIDS, the number is projected to be more than double, 132,000 per year by 2010.¹³
- Discrimination against people living with HIV/AIDS is likely to worsen, as the virus spreads. “In Ghana, some insurance companies and churches are exceeding their rights by demanding HIV tests before issuing insurance or allowing marriages, despite the fact that there are no mandatory testing statutes in the country.”¹⁴

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 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.
- A longitudinal study of the impact of an intervention for commercial sex workers found that the long-term impact, four years later, was minimal. Although in the

¹³ Asamoah-Odei, E, P Antwi, D Dickerson (1995) “AIDS in Ghana,” National AIDS/STD Control Programme, Ministry of Health, Accra, Ghana.

¹⁴ Gasu, J (1996) “Legal and ethical aspects of sexual health and living with HIV/AIDS,” In: Summary of proceedings of the 1st African Youth Conference on Sexual Health, Accra, Ghana, Sept 30 – Oct 6, 1996, compiled by Ghana United Nations Students and Youth. Accra, Ghana, GUNSA, 1996:25-7.

short-term, self-reported use of condoms increased, in the long-term, the number of sex workers using condoms who had participated in the intervention was 64%, about the same as those who had not participated. The follow-up rate was 43% over the four-year period.¹⁵

- **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.
- In order to clear the land to build the Volta River Dam forty years ago, many farmers were displaced. Most of the men found jobs either as construction workers or subsequently fishermen on Lake Volta; many of the women, however, became commercial sex workers to service the construction workers. The prevalence of HIV is 5-10 times higher by the dam than in the rest of the country.¹⁶
- **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.
- One author in Ghana suggests making the district hospital a focus for counselling and general support efforts, including training people for home care.¹⁷ A home care program through St. Martin's Clinic in Agomanya, Ghana, was seen to reduce costs as well as provide psychological benefits to AIDS patients.¹⁸
- **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

¹⁵ Asamoah-Adu, A, S Weir, M Pappoe, N Kanlisi, A Neequaye, P Lamptey (1994) "Evaluation of a targeted AIDS prevention intervention to increase condom use among prostitutes in Ghana," AIDS; 8(2):239-46.

¹⁶ Decosas, J (1996) quoted in Gerry Toomey, "HIV and Development: Decosas Advocates Local Solutions," The Daily Progress, newsletter of the XI International Conference on AIDS, Vancouver, 11 July 1996; and AIDS Analysis Africa, Vancouver AIDS Conference Special Report, 6(4), Aug-Sep 1996.

¹⁷ Brugha, R (1994) "HIV counselling and care programmes at the district level in Ghana," AIDS Care 1994; 6(2):129-37.

¹⁸ Chela, C, S Lal, BB Thakur (1995) "Home and hospital," AIDS ACTION. 1995 Mar-May;(28):1-3.

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.