



The POLICY Project

The Economic Impact of AIDS in Mali

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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

Mali is ranked as the fourth poorest country in the world; there are few extra resources available to cope with the added burden of HIV/AIDS. The economy of Mali is heavily reliant on agriculture, which contributed 48.6% of GDP in 1995, including forestry and fishing. Over 84% of the population were employed in that sector in 1995. The principal crop is cotton, which accounted for 59% of total exports in 1996. The country's other cash crops include produces Shea-nuts, groundnuts, vegetables and mangoes to export. Food production consists of millet, sorghum, rice, and maize, although almost every year the country imports cereals. Both fishing and raising livestock are important components of the country's food supply. Since the 1980s, mining has become more important to the economy, with the exploitation of new gold mines contributing 17% to exports in 1996. Disadvantages for the economy consist of a high population growth rate and its reliance on agriculture. Note that over two-thirds of the population in Mali is under the age of 25.¹

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 Mali to illustrate these impacts.

¹ Europa World Year Book 1998, Volume 2 (1998) Europa Publications Limited (London); Andrea Yates, personal communication, August 1999.

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.

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.

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

- One study examined fifteen different firms throughout Africa, three of which were identified only as being located in Western Africa. These three firms included a

telecommunication firm, an agriculture-based firm that owns and operates a sugar processing plant, and a railway company, providing both passenger and freight rail services. None of the three companies has a formal HIV/AIDS prevention program, although the company physicians in the first two firms both plan on starting one, and the railway company does hold periodic “open house” meetings about HIV/AIDS and its prevention. In general, none of the three companies has felt much of an impact from HIV/AIDS, with only a couple of cases reported in each firm. The agriculture-based company is aware that its workers are at risk due to the migratory nature of some of its labor force; the railway company is aware of the higher risk due to the mobility of its labor force. The telecommunication company is concerned about finding skilled workers to replace current workers, as the company trains its workers, both formally and informally. All three of the companies have the potential of experiencing a financial impact should prevalence rates increase, as the employee benefits packages include medical care and funeral expenses.²

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

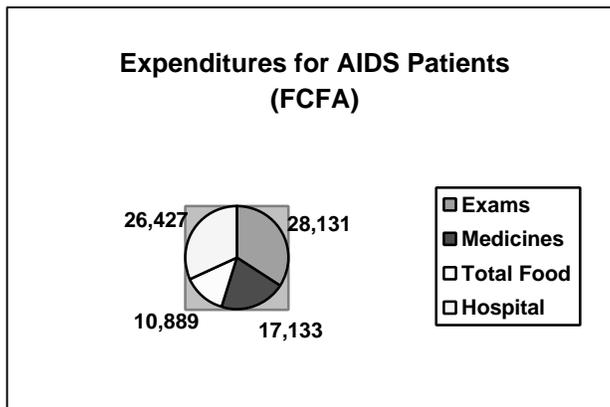
AIDS will also have significant effects in other key sectors. Among them are health, transport, mining, education and water.

- **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.
- Because Mali is landlocked, all transport of goods takes place via land transport. A recent study sponsored by USAID traced the social and sexual interactions in the land transport system, to identify risk groups for HIV/AIDS/STDs. The

² Roberts, M and B Rau (1997) “Private Sector AIDS Policy African Workplace Profiles: Case Studies on Business Managing HIV/AIDS,” The AIDSCAP Electronic Library (Family Health International/The AIDS Control and Prevention Project, Durham, North Carolina).

results indicate that the interactions are more complicated and numerous than anticipated, thus increasing risks present in such interactions.³

- **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 performed in 1990 examined the amount of expenditures experienced by AIDS patients during hospitalization. The largest amount spent by the patients was on exams, followed by hospitalization costs. Total food expenditures consisted of food brought by relatives to the hospital, along with the cost of transporting the meals. If the hospitalization lasted less than 30 days, the total

cost was less than 100,000 FCFA; the cost was between 100,000 and 150,000 FCFA if the patient stayed between 31 and 60 days; while a stay of longer than 60 days cost more than 150,000 FCFA.⁴

- **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.

³ Andrea Yates, personal communication, August 1999.

⁴ Tall, CT (1990) "Le cout et la prise en charge du SIDA en milieu hospitalier au Mali," These de Medecine, no. 5, Bamako 1990.

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.

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.
- 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. In Mali, over 70% of the labor force is in the informal sector, which increases their vulnerability to the financial demands of contracting HIV/AIDS.⁵
- The overall impact of AIDS on the macro-economy is small at first but increases significantly over time.

⁵ Andrea Yates, personal communication, August 1999.

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.
- **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.