

IV. IMPACT ON FIRMS

The impact of the HIV/AIDS epidemic goes far beyond the household level. Firms and businesses may also be affected as HIV-infected people are usually in the prime working years and are involved in the process of production. If HIV prevalence reaches a high level in a country or within a firm, the impact of the disease may be dramatic for the business or firm involved. The present chapter introduces a conceptual framework for the analysis of the impact of HIV/AIDS on firms. It then assesses the empirical evidence available on costs, productivity and profitability. It also considers the response of firms to the epidemic.

A. CONCEPTUAL FRAMEWORK FOR THE IMPACT OF HIV/AIDS ON FIRMS

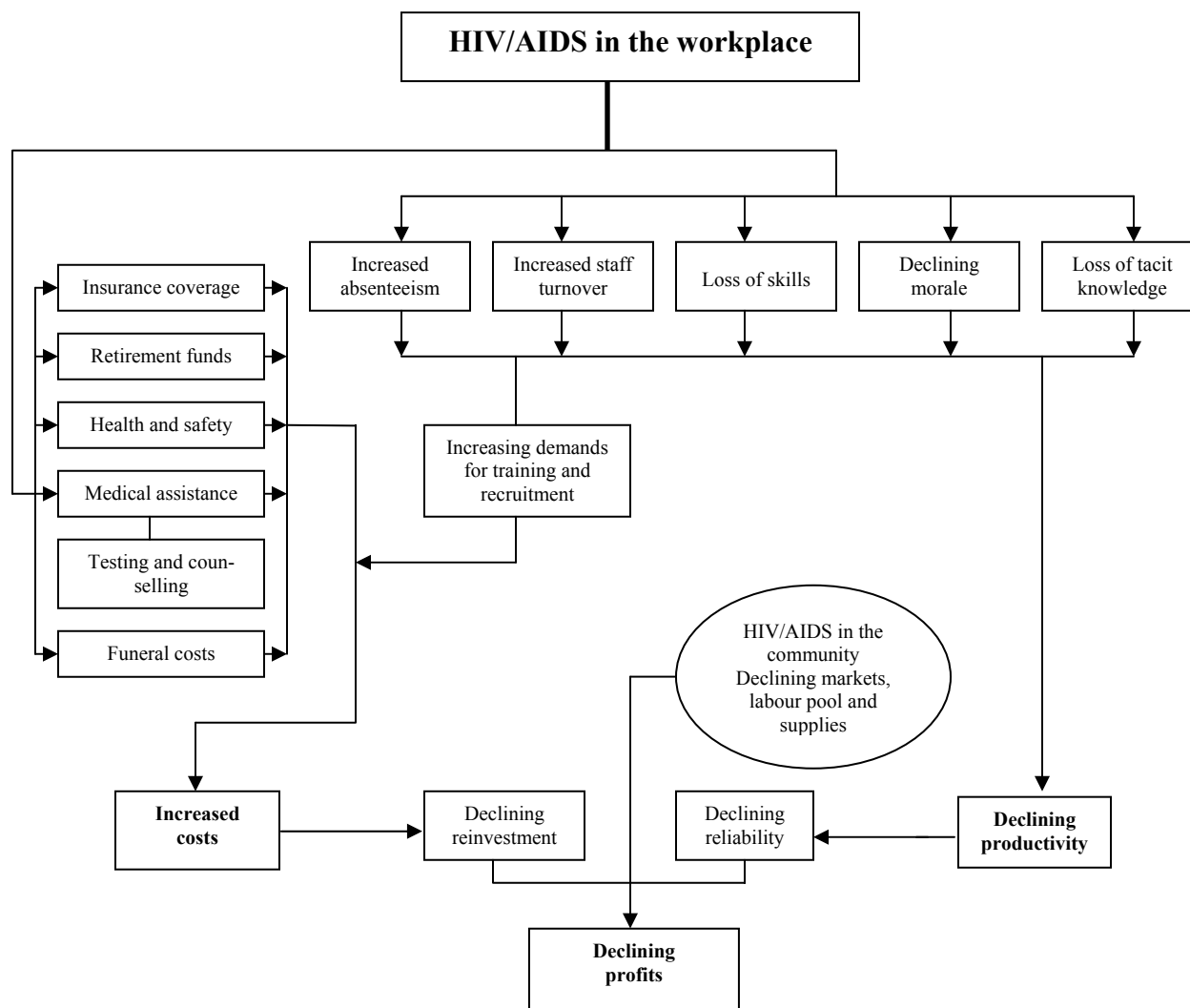
As HIV infection progresses to AIDS, affected workers are likely to be absent from the workplace more and more often. The periods of absenteeism may affect the productivity of the firm, especially if the worker occupies an important position in the firm and consequently is more difficult to replace. The framework in figure 9 maps out the following processes through which HIV/AIDS affect firms:

- AIDS deaths may lead directly to a reduction in the number of available workers, since the deaths occur predominantly among workers in their most productive years. As younger, less experienced workers replace experienced workers, worker productivity may be reduced.
- The impact of AIDS also depends on the skills of affected workers. In the event that skilled workers who occupy important positions in the firm become sick or die from AIDS, the company may lose its institutional memory—the know-how accumulated through many years of experience.
- Firms that have a health programme may find themselves responsible for substantial medical costs. The insurance scheme of the firm may become more expensive as insurance companies increase the costs of coverage in response to high HIV prevalence rates in firms. Higher costs could impede saving for investment. HIV/AIDS in the workplace may also lead to increased funeral expenses for workers.
- Morale and productivity of the remaining workers may also suffer as co-workers fall ill and die. Equally important in the increase of costs may be the growing demand for training and recruitment to replace the ailing personnel of the firms.
- Another impact of the HIV/AIDS epidemic in the community is the impoverishment of households, which leads to a decline in the demand for some types of goods. The companies producing those goods may find themselves with a shrinking market, which may eventually lead to declining profits for the firms involved in the production of the goods.

To sum up, the HIV/AIDS epidemic is likely to result in increased costs and declining productivity for firms, which ultimately will lead to declining profits. However, the magnitude of the impact of HIV/AIDS will depend primarily on five factors (Loewenson and Whiteside, 1997):

1. The number of people infected in the firm;
2. Their role in the company;
3. The structure of the production process and its ability to cope with absenteeism;
4. The benefits provided by the company;
5. The effect on the business environment of HIV/AIDS in other companies and in the Government.

Figure 9. Conceptual framework for the socio-economic impact of the HIV/AIDS epidemic on firms



Source: UNAIDS, Global Business Council on HIV/AIDS and Prince of Wales Business Leaders Forum, *The Business Response to AIDS: Impact and Lessons Learned* (Geneva, 2000).

The following section presents the evidence available concerning the impact of AIDS on firms and companies.

B. EMPIRICAL EVIDENCE OF THE IMPACT OF HIV/AIDS ON FIRMS

Many companies have undertaken studies on the impact of AIDS on their workforce and productivity. Unfortunately, the results of most of the studies are not available to the public. Nevertheless, the few studies whose results are available

point to a serious impact of HIV/AIDS on companies in some settings and to the potential for the effects to grow rapidly as the epidemic advances.

A review in 2001 characterized the literature on AIDS and business as “remarkably thin”, with many studies having small sample sizes and a narrow focus on one or two industries in a particular country. In addition, most of the stronger studies pertain to the early 1990s, a time when the epidemic was only beginning to have a noticeable effect in many countries. The authors of the re-

view found “a pattern of small but significant impacts” and observed that, “as the epidemic deepens, so will the effects on businesses change, meaning that some of the more robust studies may have little to tell us about the current situation, let alone the one that businesses will face in ten years” (Bloom, Mahal and River Path Associates, 2001, pp. 8 and 12).

1. *Absenteeism and deaths*

High levels of absenteeism seem to be one of the characteristics of the impact of HIV/AIDS on firms. For example, a study of 15 different establishments in Ethiopia found that the companies were experiencing considerable absenteeism. The number of HIV/AIDS-related illnesses was 53 per cent of all reported illnesses, totalling 15,363 incidents over a five-year period (Bersufekad, 1994). Out of 19 individuals interviewed in detail, 11 lost 30 days over a period of one year from HIV/AIDS-related illnesses and 7 lost on average 60 days, while one person said he had been absent for 240 days because of AIDS. The study was not able to quantify the impact of HIV/AIDS on the productivity of those establishments.

As a result of the absenteeism of infected workers, which ultimately is followed by their deaths, the impact of AIDS can be devastating in some companies. A study of a sugar estate in Swaziland illustrated how quickly the number of AIDS-related deaths could increase, sapping the progress made by the company and resulting in declining productivity. The study showed that 25 per cent of the estate’s workforce was infected with the HIV virus and would die within the next 10 years (Morris, Burge and Cheevers, 2000).

In Namibia, NamWater, the largest water purification company, announced in 2000 that HIV/AIDS was crippling its operations (Angula, 2000). They reported a high staff turnover from HIV-related deaths, increasing absenteeism and a general loss of productive hours.

A study of Lonrho companies in Malawi found that death-in-service benefits increased by more than 100 per cent between 1991 and 1996 (Ntirunda and Zimda, 1998). The study also found that AIDS-related costs were 1.1 per cent of the

total costs and 3.4 per cent of gross profits of the companies in 1992. Another study of five firms in Botswana found that the impact of HIV/AIDS depended on the type of business, the skill level of employees, the types of benefits provided and the amount of savings held (Stover and Bollinger, 1999).

A study of 18 firms in Lusaka, Zambia, showed that, of 68 deaths in a 10 month-period in 1993, 37 per cent were general workers, 30 per cent were from lower management, 21 per cent were from middle management and 12 per cent were from top management. AIDS-related symptoms accounted for 56 per cent of deaths in general workers and 62 per cent of top management (International Labour Organization, East Africa Multidisciplinary Advisory Team, 1995). The study showed an association between HIV/AIDS and longer periods of absenteeism, but the loss of staff and its impact on productivity is only one part of the impact of HIV/AIDS.

The impact of HIV/AIDS on firms depends on the age structure of the workers in the firm. For example, a study conducted in Zambia in Barclays Bank showed that mortality peaked in the age group 30-39. The death rate rose from 0.4 per cent to 2.2 per cent between 1987 and 1991, and the bank paid more than 10 million Kwacha (\$58,140) in payments to the families of employees who died from HIV/AIDS (Smith and Whiteside, 1995). The study also showed that medical expenses and training costs were on the increase, whereas man-hours were reduced.

2. *Costs to the companies*

Most available studies have reached the conclusion that the HIV/AIDS epidemic causes an increase in costs of production and a decrease in revenues. Table 10 presents the costs of the HIV/AIDS epidemic to six companies. Companies offering health benefit packages (as opposed to firms offering no health provision) suffer the greatest loss.

The cost of HIV/AIDS to companies depends on the type of company. In Kenya, the AIDS Control and Prevention Project (AIDSCAP), funded by the United States Agency for International

TABLE 10. COST TO SELECTED COMPANIES OF THE HIV/AIDS EPIDEMIC IN AFRICA
(United States dollars)

<i>Company name</i>	<i>Total annual cost of AIDS</i>	<i>Annual cost of AIDS per employee</i>
Botswana Diamond Valuing	125 941	237
Botswana Meat Commission.....	370 200	268
Côte d'Ivoire food processing.....	33 207	120
Côte d'Ivoire packing firm	10 398	125
Muhoroni Sugar, Kenya	58 398	49
Uganda Railway Corporation.....	77 000	300

Source: J. Stover and L. Bollinger, The economic impact of AIDS (Glastonbury, Connecticut: The Futures Group International, 1999).

Development, conducted a study on the costs of HIV/AIDS per employee by type of industry and found that wood processing and sugar estates were the two industries where HIV/AIDS-related costs consumed much of the profits (table 11). The differences observed in the costs are probably a result of the way in which the companies treat their employees. Although wages in the sugar industry and wood processing plants are lower than those in heavy industry and transport, employees tend to be housed on estates and provided with many benefits, such as medical care. Projections of the costs in the near future show a three-fold increase in costs per employee in the wood processing industry and on sugar estates between 1992 and 2005, rising from \$115 to \$331 and from \$237 to \$720 respectively.

TABLE 11. COSTS OF HIV/AIDS PER EMPLOYEE IN KENYA
(United States dollars)

<i>Type of industry</i>	<i>1992</i>	<i>2005</i>
Heavy industry	16.45	39.03
Transportation	30.83	75.12
Wood processing	114.62	331.09
Sugar estate	237.81	720.05

Source: AIDSCAP, "Comparative experience with worksite prevention programmes in Africa: Zimbabwe, Tanzania and Kenya", XI International Conference on AIDS, Vancouver, Canada, 7-12 July 1996 (abstract Th. D. 373).

Not only do HIV-affected firms lose their workers as a result of absenteeism or AIDS-related deaths, but they also experience an increase in their medical benefits and costs. At the present time, it is difficult to measure the impact, as most countries are still in the early stages of the epidemic.

In the United Republic of Tanzania, a survey of six firms found that the annual average medical and burial costs per employee increased 3.5 times and 5.1 times respectively between 1993 and 1997 because of AIDS (Clancy, 1998). Another survey of three businesses in Abidjan calculated AIDS-related costs, including medical care, HIV screening, prevention, funeral attendance and lost productivity. The average annual cost as a percentage of wages ranged from 0.8 per cent to 3.2 per cent in the three firms, depending on the firm's social policies (Aventin and Huard, 1997).

In a recent cost-benefit analysis of six firms in Botswana and South Africa, Rosen and others (2003) estimated that AIDS was responsible for 1 to 6 per cent of labour costs per year and concluded that investment in prevention and treatment would result in a net gain for most companies.

Models of the costs of AIDS in Zimbabwe estimated that costs to the Zimbabwe mining industry would increase 12-fold between 1995 and 2010 and that training costs to replace skilled

workers would increase five-fold by 2000 (Forgy, 1993). Another study evaluated the costs of AIDS as a percentage of wages, production or profits and found that the cost of AIDS was between 0.8 per cent and 3.2 per cent in Abidjan in 1997 (Aventin and Huard, 1997).

While many studies have focused on the total additional costs attributable to HIV/AIDS, fewer have attempted to measure the share of costs incurred by firms by the type of costs. Table 12 presents HIV-related costs by comparing the findings of three surveys in Kenya, Zambia and Makandi, Zimbabwe. In Kenya and Zambia, absenteeism seems to account for the largest share of the costs, whereas medical costs are more important than any other costs in the Makandi study. Deaths seem to take the second largest share of the costs in Zambia and Makandi, where they represent 16 and 32 per cent of the total costs respectively. In the 1992 Zambia study, replacement of managers or skilled workers by expatriate workers is responsible for 13 per cent of all costs due to HIV/AIDS.

The impact of HIV/AIDS on small-sized firms may be even more devastating. As pointed out by Loewenson and Whiteside (1997), “anecdotal evidence indicates that the consequences may be even more significant for small enterprises. They do not have the human or financial resources to weather the impact and may, as a result, collapse”.

3. Impact on productivity and profitability

A study of 992 firms in five sub-Saharan African countries (Ghana, Kenya, United Republic of Tanzania, Zambia and Zimbabwe) used data collected in 1994 from the World Bank Regional Programme on Enterprise Development to examine the attrition of workers caused by illness or death and the cost to firms of replacing them (Biggs and Shah, 1997; World Bank, 1999, box 1.4, p. 35). The study found that the rate of attrition from illness and death was indeed higher in the countries with a higher prevalence of HIV/AIDS (table 13). However, even in the settings where HIV/AIDS prevalence was highest,

TABLE 12. HIV/AIDS-RELATED COSTS: A COMPARISON OF VARIOUS SURVEYS
(Percentage)

	Zambia 1992	Kenya 1994	Makandi, Zimbabwe 1995-1996
Absenteeism.....	31.8	54.3	25.2
Expatriate employment	12.7	—	—
Medical service	14.7	12.0	37.8
Funerals.....	5.1	10.1	4.7
Deaths in service.....	15.9	—	32.3
Travel.....	12.5	—	—
Training and recruitment.....	7.3	26.3	—
Total.....	100	100	100

Source: R. Loewenson and A. Whiteside, “Social and economic issues of HIV/AIDS in Southern Africa” (Harare, Southern Africa AIDS Information Dissemination Service, 1997).

NOTE: A dash (—) indicates the amount is nil or negligible.

TABLE 13. WORKER ATTRITION IN GHANA, KENYA, UNITED REPUBLIC OF TANZANIA, ZAMBIA AND ZIMBABWE, TOTAL, AND BY SICKNESS OR DEATH, 1994

Country	Urban HIV Prevalence	Total sample		Percentage of workers leaving	
		Number of firms	Number of workers	Due to all causes	Due to sickness or death
Zambia.....	24.7	194	14 582	20.8	2.5
Zimbabwe.....	20.5	199	59 210	9.1	1.2
Kenya	17.1	214	17 126	7.7	0.9
United Republic of Tanzania.....	16.1	197	14 611	19.3	0.6
Ghana	2.2	188	9 607	11.6	0.3
Total		992	115 136	11.9	1.15

Source: World Bank, *Confronting AIDS: Public Priorities in a Global Epidemic*, Revised Edition (New York, Oxford University Press, 1999).

illness and death were responsible for only around 12-13 per cent of worker attrition. In addition, about three quarters of the workers who left owing to illness or death were classified as unskilled or semi-skilled, and such workers were quickly replaced (in two weeks on average for unskilled workers and three weeks for the semi-skilled). It took longer—about 24 weeks—to replace professional workers. At the same time, as a result of economic conditions, many firms chose not to replace workers who left: employers did not replace 38 per cent of the professionals and 51 per cent of the unskilled workers. The authors concluded that worker attrition significantly affected firm performance but that AIDS-related attrition had not yet had a significantly negative effect on African firms.

The study by Biggs and Shah (1997) is unusual in covering a wide range of firms in a comparable manner in a range of African countries. It should be noted that the study's results pertain to 1994 and that the number of deaths from HIV/AIDS has risen substantially since then. Bloom, Mahal and River Path Associates (2001) have advocated updating this study in particular, in order to test ideas about how the deepening HIV/AIDS epidemic is affecting the workforce.

Few studies have attempted to quantify the effects of HIV/AIDS on workers' productivity or efficiency. A study of a tea estate in western

Kenya (Fox and others, 2003) provided some of the first empirical estimates of the impact of HIV/AIDS-related morbidity on labour productivity. Company records showed lower output in kilograms of tea leaves plucked and higher use of leave time on the part of HIV-positive workers as compared with non-infected workers. Productivity continued to decline as the disease progressed. In the last year of life, workers who died of AIDS produced 38 per cent less tea and took nearly twice as much leave time as others. Those figures were almost certainly underestimates because workers often brought unrecorded "helpers" to assist them and prevent them from losing their jobs.

Studies concerning the impact of AIDS on profitability in Africa have had mixed results. Studies completed in South Africa (Morris, Burdge and Cheevers, 2000) and Kenya (Roberts, Rau and Emery, 1996) suggested that the economic impact of HIV/AIDS on profitability was likely to be substantial. On the contrary, studies in Zambia (Smith and Whiteside, 1995), Malawi (Jones, 1996) and Botswana (Greener, 1997) indicated that the impact of HIV/AIDS on profitability was not substantial.

4. Indirect impact of HIV/AIDS on firms

In addition to the direct effects arising from increased costs and loss of productivity, firms

confronted with a high level of adult HIV prevalence may be faced with other, less quantifiable effects. For example, HIV/AIDS can result in a substantial decline in morale among workers. As employees witness the deaths of their co-workers, they may adopt a fatalistic attitude towards work and life in general, which may have a detrimental impact on the production of firms.

Absenteeism may also result in extra work for healthy workers who have to stand in for sick colleagues. In some companies, healthy workers were increasingly working extra hours to compensate for the time lost by their sick colleagues. The result was that companies not only paid more extra hours but also exhausted the healthy workers. Working long hours can produce stress among employees, which may result in a decline in both the quantity and quality of the final product.

5. Business response to HIV/AIDS

The response of businesses to the HIV/AIDS epidemic has taken many forms. Some companies have increased medical care and instituted prevention programmes to help workers avoid contracting the virus. As mentioned above, a cost-benefit study by Rosen and others (2003), concluded that company investment in prevention and treatment would result in a net gain for most companies. Other companies have taken the opposite approach. Some have changed hiring practices to screen out high-risk and infected applicants or have dismissed workers who are suspected of having HIV/AIDS. Some firms have reduced employee benefits, restructured employment contracts, outsourced less-skilled jobs and changed production technologies to require fewer workers. Some of the practices are illegal, and much of the information is anecdotal (Rosen and Simon, 2002). Firms are also hiring and training older workers, who are less likely to have HIV/AIDS (Engel, 2002). The private sector has greater scope than Government, households and non-governmental organizations to shift the burden and avoid the costs of the disease.

In South Africa, more than two thirds of large employers have recently reduced health care benefits or required larger contributions by employees. A survey of 56 large South African employers in

1999 found that 78 per cent had restructured their health care benefits in the previous two years, mainly by capping company contributions, reducing benefit levels and increasing employees' share of the cost. As a result, 36 per cent of the employees with access to company-sponsored medical plans had opted out, mainly because of the cost (Rosen and Simon, 2002).

Many companies are attempting to cut costs and prevent new HIV infections at the same time. Prevention programmes usually include AIDS education for workers and their families, treatment of sexually transmitted diseases (STDs) and distribution of condoms (Simon and others, 2000). Reliable information about the success of prevention efforts is scarce.

Studies on the impact of HIV/AIDS conducted within companies will be beneficial to policymakers only if the results of the studies are made available. Hence, efforts should be made to disseminate results while protecting the privacy of infected persons within the company. Many companies regard this information as too sensitive to release.

C. CONCLUSIONS

Available studies of the impact of HIV/AIDS on firms point to an impact of the epidemic on the labour force, costs and productivity, depending on the skills of those who are affected and whether they are replaceable or not. The following effects have been established:

- **Firms and companies are facing substantial cost increases resulting from HIV/AIDS that threaten their viability.** The situation has been documented in Botswana, Kenya and Uganda. The annual cost of AIDS per employee was estimated to range from \$49 for a Kenyan sugar firm to \$300 for the Uganda Railway Corporation.
- **The impact of HIV/AIDS on firms depends on the age structure of the workers in the firm.** For example, in the Barclays Bank in Zambia, mortality peaked in the age group 30-39.

- **The extent to which people living with HIV/AIDS will continue to be part of the workforce depends largely on the type of work performed, the stage of the disease and the existing policies in the relevant companies.** Workers in physically demanding jobs may find it more difficult to maintain their jobs when they become ill. Depending on the work legislation available, certain companies may be required by Government to continue to offer benefits for the employees who fall ill. Hence, those companies are more vulnerable to the impact of HIV/AIDS. However, the impact depends both on the types and costliness of the benefits offered and on the value the business gets back in terms of healthier workers and the firm's ability to attract and retain qualified employees.
- **The impact of the HIV/AIDS epidemic on companies may be concealed by the economic structural adjustments that many African countries are undergoing.** In some cases, the programmes lead to a downsizing of the workforce or, in other cases, to the closing down of the companies. In that environment, some managers may view the loss of staff as not necessarily a bad thing. As a result, it is sometimes difficult to separate the impact of HIV/AIDS on the workforce from the impact of other forces.
- **The varying levels of the impact of HIV/AIDS on firms may also reflect the production structures and benefits packages of the firms.** Firms that are more labour intensive and those that provide substantial benefits are likely to be the hardest hit.