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If you've got global operations,
you've got an HIV-infected workforce.
Doing something about it will save
lives – as well as money.

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IF YOUR COMPANY DOES BUSINESS in a developing country anywhere in the world, be it Russia, China, South Africa, or Brazil, AIDS is your business.

The global epidemic of HIV/AIDS is rapidly becoming the worst infectious-disease catastrophe in recorded history, surpassing the bubonic plague of the fourteenth century and the influenza epidemic of 1917, each of which killed some 20 million people. More than that number have already died because of AIDS, according to UNAIDS, which coordinates the United Nations' response to the epidemic. The human immunodeficiency virus, which causes AIDS, has infected more than 40 million people.

In Africa's hardest-hit countries, such as South Africa, Botswana, Swaziland, Zimbabwe, and Zambia, one in five working-age adults is infected with HIV. While Africa has received the most attention, AIDS is spreading swiftly in other parts of the world, too. Russia and Ukraine had the fastest-growing epidemics last year. An eponymous UNAIDS report in 2002 called HIV/AIDS "China's titanic peril." And many epidemiologists believe that India's 1 billion people will suffer the next tidal wave of infection.

(The exhibit "A Worldwide Peril" provides a global view of the epidemic.)

For people in most developing countries, widespread access to the medicines that are keeping many HIV-positive North Americans alive and active remains a distant goal. Although the price of the treatment fell from $12,000 a year per person in 1998 to $500 in 2002, the therapy is beyond the means of the vast majority of those infected in Africa, Asia, and other low-income regions. Almost everyone who gets the virus there will die within eight to ten years of being infected.

Why should executives be concerned about AIDS? Very simply, AIDS is destroying the twin rationales of globalization strategy: cheap labor and fast-growing markets. Because it erodes those rationales, the epidemic is forcing executives to think twice about investing in countries where people are heavily affected by HIV/AIDS. Fortunately, there are strategies for managing the impact of the disease on companies worldwide. A growing body of evidence suggests that for many businesses, investments in programs that prevent infection and provide treatment for employees who have HIV/AIDS are profitable in that their cost is less than the savings they can lead to. In this article, we present fresh findings about how the epidemic is affecting companies in one of the hardest-hit countries, South Africa, and explain why responses that are good for public health – prevention and treatment – are also good for business.

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How AIDS Destroys Globalization

AIDS has a devastating impact on developing economies because, unlike other diseases that primarily affect young children and old people, it kills young and middle-aged adults in their most productive years as employees and customers. As a result, the epidemic both adds to companies' labor costs and slows growth rates in many developing economies.

Many corporations derive a competitive advantage from the low cost of labor in developing countries. AIDS is eroding that advantage by adding, both directly and indirectly, to wage bills. The disease not only drives up health care costs and benefits payments, it also reduces productivity for years – not weeks or months as other illnesses do. Rising absenteeism and higher employee turnover due to HIV/AIDS have forced companies to employ and train more people than usual. For instance, managers in companies in Zambia and Congo invest in training each worker to handle two or three tasks, or they hire two or three workers for every job on the expectation that at least one will die. AIDS has also forced executives to spend more time coping with lower morale in their organizations and addressing the difficult legal, social, and political issues that stem from the epidemic. For instance, companies in many developing countries face considerable pressure from governments and nongovernmental organizations to spend more on tackling AIDS and to provide jobs and additional money for victims' families.

The rising cost of labor isn't the only reason executives should worry about AIDS. The epidemic is also reducing the demand for goods and services in developing markets. Often, the virus strikes the only breadwinner in a large family, and the family is forced to spend its meager savings on medical treatment for the victim and is left impoverished. In addition to creating a generation of orphans, the epidemic forces many children to drop out of school, which erodes the country's skills base. As more and more families drop out of the economy, it slows down. According to the recent report *AIDS and Macroeconomic Impact*, from the Botswana Institute of Development Analysis, AIDS could reduce GDP growth rates by 0.5% to 2.6% a year in several African countries. When AIDS mixes with poverty, the humanitarian problem becomes an economic crisis as well.

Measuring the Epidemic's Cost

If you are an executive in a corporation with operations in South Africa or one of its neighbors, chances are that anywhere from 10% to 40% of your employees there are HIV positive. In the absence of effective treatment, almost all of them will die during the next decade. Although there is a degree of ill health in every workforce, particularly in developing countries, the number of severe illnesses, disability retirements, and deaths over the coming years will be much higher than usual. It's essential to get a clear sense of how many people are affected and how much the disease will cost the company, but neither number is easy to pin down.

How many? One way of getting a reliable estimate of the number of employees suffering from HIV/AIDS in your company is to conduct a voluntary survey at all levels of the organization. Maintaining the anonymity

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A Worldwide Peril

This map of HIV prevalence, chilling though it is, shows only a snapshot of the epidemic as of the end of 2001. What it doesn't show is that more than 20 million people have already died because of AIDS and that the disease is spreading swiftly in places as disparate as India, China, Russia, and Ukraine. (Source: UNAIDS)

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of participants is essential because employees worry that the company will fire those who test positive. In South African companies, where such studies are common, medical personnel ask participants only for general information, such as age and sex. They collect saliva samples in cups, mark them with the data, and place the containers randomly into boxes so that neither employers nor employees can find out who tested positive for HIV. The results are usually available in two to ten days. They serve as a basis on which executives and epidemiologists can draw up forecasts of the epidemic's impact over, say, the next ten years.

Such surveys are not expensive; testing costs have fallen to between $3 and $4 per employee. That's an expense of $3,000 to $4,000 for a company that employs 3,000 people, 1,000 of whom volunteer to take part in the study. Our experience suggests that participation can rise to more than 80% when executives launch awareness campaigns; involve employees, trade unions, and staff associations in planning surveys; and share results with all employees. Companies that want to monitor changes in the epidemic and check to see whether their anti-HIV programs are working can conduct such surveys regularly.

A less expensive, less reliable method is to apply the local or national estimate of HIV prevalence to your workforce. The estimates are generated by governments, which survey pregnant women visiting public clinics for prenatal care, and they are collated by both UNAIDS and the U.S. Census Bureau for almost all countries.

Although such surveys understate the extent of the epidemic in some countries, they are fairly reliable. The prevalence ratio must be qualified before you apply it to your company, however, because your workforce will differ from the general population in several respects. First, there's a good chance the majority of your employees are men, not women (infection rates vary by gender). Second, your staff will have incomes that are higher and more stable than the average person's. That may increase or decrease the risk of infection, depending on the country, the stage of the epidemic, and other local factors. For instance, in some African countries, higher-paid professionals and civil servants had the highest infection rates

early in the epidemic, but the trend reversed as the epidemic progressed. Third, if employees live apart from their families for months at a time – at distant manufacturing or mining facilities, for example – they are more likely to use the services of commercial sex workers, which increases the risk of infection. Finally, the prevalence of the virus can also vary by age.

What does it cost? Companies potentially incur a wide range of costs due to HIV/AIDS and related illnesses. The exhibit "The Costs of AIDS to an Employer" categorizes costs by type and the circumstances under which they are incurred. Direct costs are additional expenses that show up on the income statement. Indirect costs are productivity losses–lower production levels or higher-than-normal output costs. Some expenses are incurred when even a single employee becomes ill; others are organizationwide costs, such as rising health care premiums, that mount as more employees succumb to the epidemic.

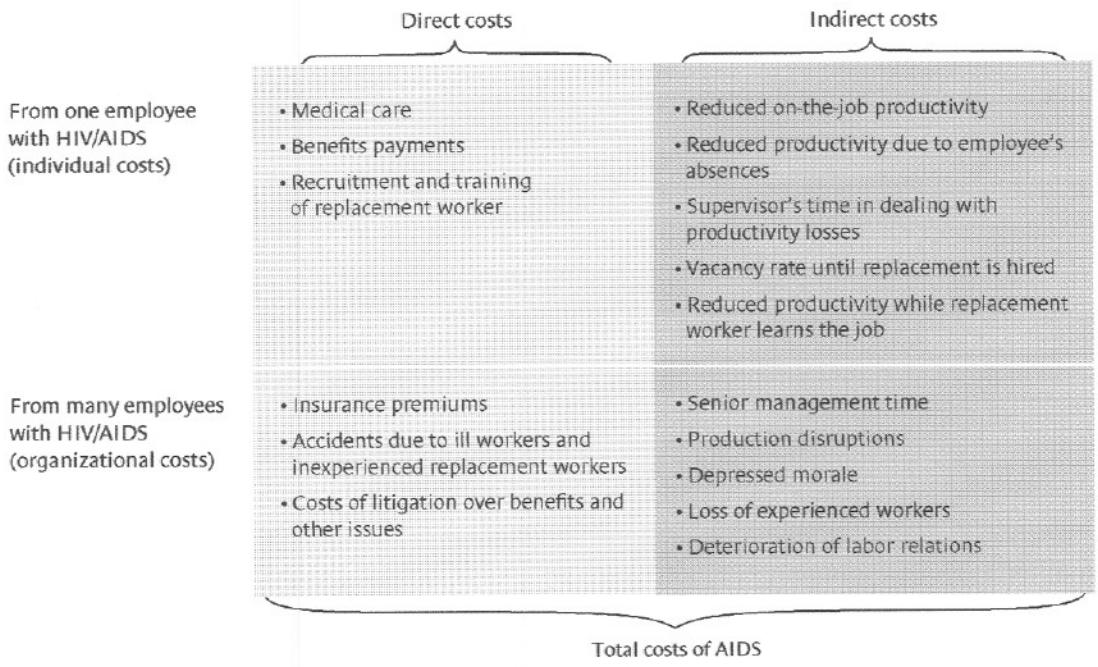
Due to the long latency period between infection and the onset of a patient's symptoms, a company is not likely to see the costs of HIV/AIDS until five to ten years after an employee is infected. During most of that period, the infected employee will be fully productive at work. However, the company acquires the liability for a stream of future costs from the time the infection occurs. Those costs cannot be avoided because in an increasing number of countries, it is illegal to dismiss a worker on the grounds that he or she is infected with HIV. The exhibit "The Timing of AIDS Costs" illustrates the timing of infections, costs, and liabilities.

Companies can calculate the present value of those costs by using the discount rate to weigh each according to its timing. The cost of AIDS to the organization every year over, say, a decade can then be predicted by combining the present values with a forecast of the number of likely HIV/AIDS victims. That allows companies to think about HIV/AIDS prevention and treatment programs not merely as expenses but as investments whose benefits are the costs the company saves because employees do not fall ill.

Calculating the AIDS "Tax"

Between 1999 and 2001, we analyzed the impact of AIDS on six corporations, four of which were subsidiaries of transnational corporations, based in South Africa and Botswana. The companies were large by the standards of developing countries, reporting sales of between $35 million and $3.4 billion at the time of the study. They operated in six industries–mining, metals processing, utilities,

The Costs of AIDS to an Employer



agribusiness, retail, and media – and employed between 500 and 35,000 people each. We refer to them as companies A–F because they asked to remain anonymous.

All the organizations first carried out voluntary surveys to estimate the number of employees who were infected with HIV. We divided the workforce into groups based on risk factors such as sex, age, job level, and location. Then, using the survey data, we estimated the likely incidence of HIV in each of the groups. The results of all the surveys, supplemented by epidemiological data from other sources, allowed us to create ten-year forecasts of new HIV infections and AIDS-related deaths for each company, and we used these later in the cost-benefit analysis.

The only cost-effective way for corporations to respond to HIV/AIDS is to fight the epidemic. That can take two forms: prevention and treatment.

If any of the executives in these companies doubted the seriousness of the AIDS threat, the surveys laid those doubts to rest. The prevalence of HIV ranged from 7.9%, approximately one in every 12 employees in company A, to 29%, nearly one in three in company C (South Africa's national prevalence rate was 25% in 2001). Companies in mining, metals processing, and agribusiness were affected the most, with more than 23% of their employees suffering from HIV/AIDS. Unskilled and skilled workers were two to three times more likely to be infected than supervisors and managers. In company C, for example, an estimated 39% of unskilled and skilled workers and 14% of supervisors and managers were infected. Most U.S. companies would regard even the lower infection rate as a disaster.

We worked with human resources managers, finance executives, and medical personnel to estimate the direct and indirect costs the companies had incurred because of HIV-infected employees. We then worked out the cost to each company of losing one HIV-infected employee at different levels of the organization. Since we could not assess the indirect organizational costs (the expenses on the lower right side of the exhibit "The Costs of AIDS to an Employer"), our estimates were much lower than the costs the companies actually incurred. Finally, we discounted each cost using the 7% real lending rate in South Africa in October 2001.

The Timing of AIDS Costs

Time frame (typical)	Progression of HIV/AIDS in the workforce	Current cost to company	Liability acquired by company
Year 0	Employee becomes infected with HIV.	Company incurs no cost at this stage.	Discounted sum of all costs from years 0 through 10+.
Years 0–7	Employee feels healthy and is fully productive.	Company incurs no cost at this stage.	
Years 7–9	Illness begins. Employee may die in first few years or remain free of illness for years.	Sickness-related costs are incurred (leave and absenteeism, productivity loss, supervisory time, medical care, accidents).	
Years 9–10	Employee dies or leaves workforce due to disability.	End-of-service costs are incurred (benefits payments, funeral expenses, management time, depressed morale).	
Years 10+	Company hires replacement employee.	Turnover costs are incurred (vacancy, recruitment, training, reduced productivity while replacement learns job).	

We found that the cost of one HIV infection ranged, on average, from less than half the affected employee's annual salary at company E to more than 3.5 times the employee's yearly pay at company C. After generating the present values of the costs of AIDS for five different levels of the workforce, we combined them with the forecast of infections to arrive at the cost that AIDS would impose on each company over the next ten years. The annual AIDS "tax" on business, as we called it, ranged from 0.4% of the annual wage bill at company E to 5.9% of the wage bill at company C in 2001. In absolute terms, it was as high as $11.9 million per year at company A. The exhibit "The AIDS 'Tax'" presents the results of the financial study.

It's worth noting that the AIDS tax effectively divided the six companies into a high-cost group (companies A, C, and F) and a low-cost group (B, D, and E), but only partly because of differences in HIV prevalence. Unskilled workers at B, D, and E were not eligible for many of the benefit payments that other employees received, and lower-level workers received only minimal health care benefits. The companies had also capped their annual contributions to employee benefits funds, holding costs constant even as claims rose, which left their workers to bear more of the financial burden of HIV/AIDS on their own.

Benefits Versus Costs

Given the staggering cost of HIV/AIDS, what can corporations do? The only cost-effective way to respond is to fight the epidemic. That can take two forms: prevention programs to reduce the number of employees who will get infected and treatment programs to extend the working lives of employees who already have HIV or AIDS. Prevention and treatment are not mutually exclusive options; they are two parts of a comprehensive anti-AIDS strategy. We looked at the tactics in isolation, however, in order to better understand their cost-benefit implications. When companies invest in HIV prevention and AIDS treatment programs, they incur certain costs and derive certain benefits. The benefits, as we pointed out earlier, are the savings to the company because employees do not fall ill due to the epidemic. So our estimates of the companies' savings served as the benefit side of the cost-benefit comparison. To complete the analysis, we needed the costs to companies of implementing prevention and treatment programs and an assessment of the programs' effectiveness.

Prevention Programs. Companies have tried many ways to prevent the spread of the virus in the workforce, but not all of them have proved to be effective. For exam-

The AIDS "Tax"

An analysis of the financial impact of the epidemic on six corporations in southern Africa.

Company studied	A	B	C	D	E	F
Year of the study	1999	1999	2000	2001	2001	2001
Industry	utility	agribusiness	mining	metals processing	retail	media
Workforce size	>25,000	5,000–10,000	500–1,000	500–1,000	<500	1,000–5,000
Estimated percentage of labor force HIV positive	7.9%	23.7%	29.0%	23.6%	10.5%	10.2%
Average cost per HIV infection as a multiple of median salary	3.23	0.82	3.63	0.76	0.46	2.90
Total annual cost of AIDS	$11.9 million	$594,000	$206,000	$93,400	$13,300	$1 million
Total annual cost of AIDS as a percentage of salaries and wages (AIDS tax)	3.7%	1.8%	5.9%	1.9%	0.4%	2.4%
Potential net returns on treatment programs	$4.88 million	$49,100	$34,400	$12,200	$184	$580,000
Potential reduction in AIDS tax due to treatment programs	32.5%	5.5%	15.7%	8.9%	0.8%	40.4%

ple, education programs that some businesses invested in during the 1990s produced no clear benefits. Recent studies, however, show that employees' risk of HIV infection is reduced when companies provide – in addition to education and counseling – treatment for other sexually transmitted diseases, which facilitate HIV transmission. And encouraging employees to discover their HIV status through voluntary testing allows them to protect themselves if the virus has not infected them – or protect others if it has. State-of-the-art prevention programs therefore have four elements: educating employees, families, and the surrounding community about HIV/AIDS and how it can be avoided; distributing condoms to employees; treating other sexually transmitted diseases; and providing free counseling and testing services for employees and families.

It is fairly well known that AIDS has raised both the risks and costs of doing business in South Africa, but the threat it poses to companies in other developing countries like China and India has so far been ignored.

Very little information is available about the returns on prevention programs, largely because their effectiveness in workplaces has rarely been measured. But according to our research, HIV prevention programs last year cost companies in South Africa between $10 and $15 annually per employee and achieved substantial reductions in the infection rate. For example, one South African mining company that wasn't in our sample estimated that its prevention program in a community of 4,000 miners would cut the HIV infection rate among employees by 50%. We calculated that if the companies we studied had reduced the workforce infection rate by 50% with programs that cost $10 per employee per year, the returns would have been positive for the three high-cost businesses. At the low-cost companies, we believe the investments would have been profitable if all the organizational costs of the epidemic had been taken into account. While the returns were not large, the fact that they were positive suggested that companies should invest more in HIV prevention programs.

Treatment Programs. A few companies in developing countries have begun providing employees, either directly or indirectly, with free treatment for HIV/AIDS in the form of highly active antiretroviral therapy (HAART). The therapy consists of a combination of three drugs taken daily, with close monitoring by a medical professional, either on-site or off. There are three basic models in use in South Africa. Some companies offer third-party health insurance plans, much like those in the United States, and eliminate or reduce the employee copayment. Others contract with stand-alone HIV/AIDS management programs to provide services to workers. And a number of the very large mining and agricultural companies manage the health care of their employees in-house through company clinics.

To come up with the cost for a treatment program, we first assumed that patients would require the medicines eight years after being infected, on average, and would stay on them for the rest of their working lives. Responses to the treatment vary, but we assumed, based on medical research conducted in North America and Europe, that the therapy would allow employees to extend their working lives an average of five years. The annual cost of treatment was taken to be $500 per patient per year.

All the companies would have earned positive returns on their investments had they provided HAART at no cost to employees, according to the mathematical model we used. The annual reduction in the AIDS tax would have ranged from 0.8% in the case of company E to 40.4% at company F. In fact, providing free antiretroviral therapy at every level of the workforce made eminent financial sense for all six companies.

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It is fairly well known that AIDS has raised both the risks and costs of doing business in South Africa, but the threat it poses to companies in other developing countries like China and India has so far been ignored. Just as it took a large number of deaths in the 1980s – including those of celebrities like Rock Hudson and Arthur Ashe – to focus attention on the problem in the United States, large death tolls may be necessary to shock people into noticing the epidemic in countries outside Africa. But by then, it will be too late for companies and investors – not to mention employees, families, and communities. AIDS does affect countries and industries differently, but prevention and treatment will pay off in financial terms for most companies, making workforces more productive and less expensive. Investing in such programs will also provide the intangible benefits of generating goodwill and raising the corporation's prestige. Not only is AIDS your business; fighting it also makes good business sense.

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