



The POLICY Project

The Economic Impact of AIDS in South Africa

by
Lori Bollinger
John Stover

September 1999

The Futures Group International
in collaboration with:
Research Triangle Institute (RTI)
The Centre for Development and Population
Activities (CEDPA)

POLICY is a five-year project funded by the U.S. Agency for International Development under Contract No. CCP-C-00-95-00023-04, beginning September 1, 1995. The project is implemented by The Futures Group International in collaboration with Research Triangle Institute (RTI) and The Centre for Development and Population Activities (CEDPA).

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: 1995 ^a		Employment by Industry: 1993 ^b	
	'000s	%	'000s	%
AGRICULTURE				
Agriculture, hunting, forestry and fishing	1,295	12.8	n/a	n/a
INDUSTRY				
Mining and quarrying industries	471	4.6	561.7	11.4
Manufacturing industries	1,526	15.1	1,400.5	28.3
SERVICES				
Electricity, gas and water	95	0.9	42.5	0.9
Construction	483	4.7	374.5	7.6
Trade, restaurants and hotels	1,769	17.4	764.4	15.4
Transport, storage and communications	520	5.1	303.1	6.1
Finance, insurance, real estate and business services	654	6.4	191.5	3.9
Community, social and personal services	3,137	30.9	1,312.4	26.5
TOTAL	10,152	100.0	4,950.5	100.0
Source: a – Europa World Year Book, 1998; b - United Nations, Statistical Yearbook, 1995, table 29				

In contrast to most of Africa, South Africa has a very small agricultural sector, employing a negligible number of people in the formal sector. It is important to note, however, that in the formal sector, as much as 52% of the people aged 16-30 are unemployed, with half of

those classified as marginalised, that is, with little chance of obtaining formal sector employment due to a lack of education. South Africa has a highly developed mining and manufacturing sector, but much of the labor force in the mining industry is foreign. South Africa is the largest producer of gold in the world, producing about 30% of total world production. The manufactured products are diverse, and include chemicals, petroleum and coal products, food products, and transport equipment. The per capita GNP figure for the country of US\$3,400 masks the disparities that exist within the country; 13 percent of the population are very well off, while 53 percent are very poor. Only 50 percent of this very poor group have a primary school education, over 33 percent of these children suffer from malnutrition, and only about 25 percent have electricity and running water.¹ The lowest 20 percent of the households spend only 3 percent of the total expenditure, while the highest 20 percent spends 61 percent of the total.²

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 South Africa 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.
- Over 100,000 children became AIDS orphans in South Africa in 1998 alone.³ One model predicts that there may be as many as 1 million maternal orphans in the country by the year 2005, where orphans are children under 15 years old.⁴ Another model projects, for KwaZulu-Natal alone, a total of between 759,700 and 833,520 maternal orphans by 2010.⁵

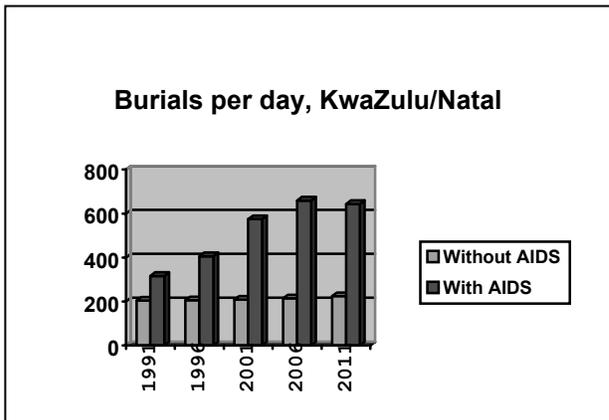
¹ The World Bank. <http://www.worldbank.org/html/extdr/offrep/afr/bw2.htm>. 6/10/99; Europa World Year Book 1998, Volume 2 (1998) Europa Publications Limited (London).

² Taylor, V (1998) "HIV/AIDS & Human Development: South Africa, 1998," UNDP/UNAIDS.

³ Kirby, A (1999) "South Africa's Growing HIV Crisis," BBC News (06/07/99).

⁴ Kinghorn, A and M Steinberg (1999) "HIV/AIDS in South Africa: The Impacts and the Priorities," Department for International Development in Southern Africa and the Department of Health, South Africa.

⁵ A Whiteside, N Wilkins, B Mason, G Wood (1995) "The Impact of HIV/AIDS on Planning Issues in KwaZulu-Natal," prepared for The Town and Regional Planning Commission of KwaZulu-Natal, draft report, 24 March 1995.



- One study for KwaZulu-Natal projects that there will be an increase of 419 burials a day by the year 2011 due to HIV/AIDS, from 224 per day to 643 per day. Not only does this increase the demand for cemetery plots, but costs will increase for the household, including burial costs, transport costs to and from the burial, and lost wages due to taking time off from work to attend funerals.⁶

- A project in Cape Town that works with families who have children with HIV, the Thuthuzela Abantwana project, found that the families were already stretched to their financial limits, and that external support was crucial if the families were to meet the needs of their children with HIV.⁷
- There is an estimated backlog of 3 million housing units to be provided by the government, mostly for Africans; 98 percent of whites live in either a house, flat, or townhouse, while only approximately 54 percent of African households live in this formal housing. The planning process for the government in providing this housing is made more complicated, and thus more lengthy, through the impact of HIV/AIDS. Although fewer units will probably be needed because of AIDS deaths, the structure of households may change, making planning more difficult: households may become headed by children; households may be even poorer than before, and so unable to pay for even the most basic services; and the number of people per household may decrease.⁸

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

⁶ A Whiteside, N Wilkins, B Mason, G Wood (1995) "The Impact of HIV/AIDS on Planning Issues in KwaZulu-Natal," prepared for The Town and Regional Planning Commission of KwaZulu-Natal, draft report, 24 March 1995.

⁷ Taylor, V (1998) "HIV/AIDS & Human Development: South Africa, 1998," UNDP/UNAIDS.

⁸ Taylor, V (1998) "HIV/AIDS & Human Development: South Africa, 1998," UNDP/UNAIDS.

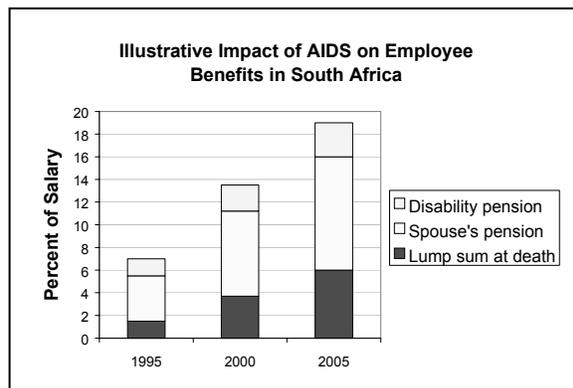
labor is likely to cause farmers to switch to less-labor-intensive crops. In many cases this may mean switching from export crops to food crops. Thus, AIDS could affect the production of cash crops as well as food crops. Because the agricultural sector is a relatively small part of the South African economy, little research has been focussed on the impact of HIV/AIDS on agriculture there.

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

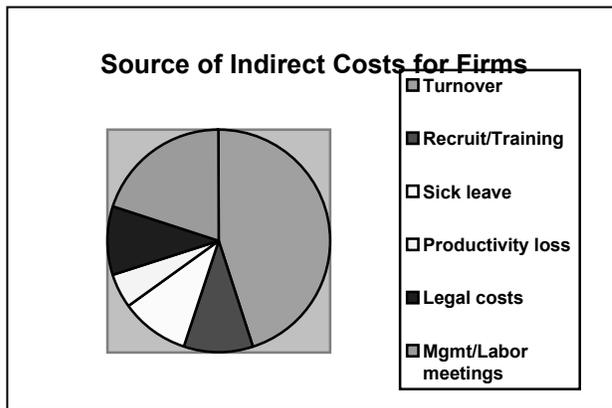
- A survey of 16 firms in South Africa asked whether the company prevalence rate was known, and whether HIV/AIDS had created any problems for the company. Only four companies returned the survey forms. Specifically, neither a major retail company nor a publishing house had felt any impact of HIV/AIDS yet, while a major platinum mining company stated that four employees were dying of AIDS per month. A major industrial company based in KwaZulu-Natal recorded a 31% increase in the number of ill-health retirements between 1995 and 1997; of these retirements, 17% of them were due to AIDS.⁹
- A study in South Africa examined the expected impact of AIDS on employee benefits, and thus on corporate profits. It found that at current levels of benefits per employee, the total costs of benefits would rise from 7 percent of salaries in 1995 to 19 percent by 2005. Since these additional costs will have to be paid at the same time that productivity is declining, due to AIDS, the net impact on profits could be significant.¹⁰



⁹ Galloway, MR and J Stein (1998) "HIV/AIDS in the Workplace: what South African companies are doing," AIDS Bulletin; 7(1):16-9, April 1998.

¹⁰ Southern African Economist, 1997. "AIDS toll on regional economies," April 15-May 15, 1997.

- Another survey examined the best practices of 18 South Africa companies regarding HIV/AIDS through an UNAIDS project. “The vast majority of companies are not considering HIV and AIDS...AIDS is not currently an issue for the South Africa private sector.”¹¹



- A recent set of estimates by the Metropolitan Life Insurance Company in South Africa predicted that the impact of HIV/AIDS would double employee benefits costs by 2005, and triple by 2010. Either benefits would be reduced, or the remuneration costs paid by firms would increase by about 15%. Total indirect costs would add a further 10% to the wage bill by 2005, and 15% by 2010. The sources of the

total indirect costs are shown in the chart.¹²

- One South African company, Gencor, projected that HIV/AIDS-related health would reach 60 percent of the total by the year 2000, which is 15 times greater than the costs had been in the past.¹³

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

¹¹ Cited in Whiteside, A (1998) “The Current and Future Impact of HIV/AIDS in South Africa,” HIV/AIDS and Human Development Report, Draft paper prepared for the United Nations Development Programme, Pretoria, 23 August 1998.

¹² Moore, D (1999) “The AIDS threat and the private sector,” AIDS Analysis Africa; 9(6):1-2.

¹³ Quoted in Curtis Knight, V (1997) “HIV/AIDS threatens size of Southern African market,” AIDS Analysis Africa; 7(4):7-8, August 1997.

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.

- Various hospitals report large numbers of HIV/AIDS illnesses; in Durban, 40% of adult medical in-patients at King-Edward VII Hospital were admitted with HIV-related conditions in 1997; the percentage of HIV-related admission in Guateng in 1997 varied between 26% and 70%; and in 1996, the Chris Hani Baragwanath Hospital in Soweto reported that about 30% of children under age 6 were HIV-positive.¹⁴
- A case study for a rural hospital in Hlabisa province indicated that total admissions had increased dramatically between 1991 and 1997, by 57 percent. About 55 percent of the adult medical patients surveyed were HIV positive, while 42 percent of the gynaecology patients were HIV positive, and 26 percent of the paediatric cases were HIV positive. A cost-effectiveness analysis undertaken there found that the number of maternal transmission cases would be reduced by 11 percent at a cost of US\$53,509, and would be reduced by 37 percent at a cost of US\$263,510, by following a course of antiretroviral therapy during pregnancy. The study concluded, however, that finding these funds would be very difficult.¹⁵
- An early, unpublished study estimating the costs of AIDS treatment found that the cost would vary between R150,000 and R300,000 per case on average over 13 years. Furthermore, only a small percentage of the population would be able to afford the most comprehensive treatment: 40-50% of the population, those who are poor and unemployed, would receive no treatment at all; 20-25% of the population, those who are employed in the informal sector, would receive limited treatment; and 12-20% would receive adequate treatment.¹⁶ A recent report estimated the cost of antiretroviral therapy to cost between R400 and R4000 per month, which makes it unavailable to most South Africans.¹⁷
- A policy paper for KwaZulu-Natal recommended that the needs of HIV/AIDS patients be met through the primary health care network, rather than through hospital care. If this course is followed, the paper estimated that the impact of HIV/AIDS on the demand for neighborhood clinics and community health centres would be high, but would be less expensive than providing care through

¹⁴ Kinghorn, A and M Steinberg (1999) "HIV/AIDS in South Africa: The Impacts and the Priorities," Department for International Development in Southern Africa and the Department of Health, South Africa.

¹⁵ Cited in Taylor, V (1998) "HIV/AIDS & Human Development: South Africa, 1998," UNDP/UNAIDS.

¹⁶ Taylor, G (1992) "AIDS and Medical Care Costs," uncompleted research, cited in Loewensen, A and A Whiteside (1997) "Social and Economic Issues of HIV/AIDS in Southern Africa," SAfAIDS Occasional Paper Series No. 2, Harare, Zimbabwe.

¹⁷ Kinghorn, A and M Steinberg (1999) "HIV/AIDS in South Africa: The Impacts and the Priorities," Department for International Development in Southern Africa and the Department of Health, South Africa.

hospitals.¹⁸ Another study showed that, of the 238 hospital visits made by AIDS patients during a three month period, 165 (69.3%) could have been handled at the primary care level. As the illness progresses, however, patients are less able to be treated at the primary care level.¹⁹

- **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.
- In KwaZulu-Natal, there are two major trucking routes, as well as two major harbor areas. Commercial sex workers are prevalent in this area, as they have clients in both the transport and harbor workers. There is also cross-border traffic among KwaZulu-Natal, Swaziland, and Mozambique; both of these countries have relatively high prevalence rates. KwaZulu-Natal has some of the highest prevalence rates in South Africa.²⁰ A survey of 213 truck drivers in this area found that 35% had more than one sex partner in the week immediately preceding the survey. Although most of those surveyed had heard of AIDS and knew how to protect themselves, it was not clear whether they were, in fact, doing so.²¹
- An early, unpublished study of the transport industry in South Africa found that truck drivers frequently engaged in risky sex, and had little knowledge of HIV/AIDS.²² A later study found that, although knowledge of HIV/AIDS by commercial sex workers was fairly detailed, their need for work meant that they did not have the power to negotiate safer sex.²³

¹⁸ A Whiteside, N Wilkins, B Mason, G Wood (1995) "The Impact of HIV/AIDS on Planning Issues in KwaZulu-Natal," prepared for The Town and Regional Planning Commission of KwaZulu-Natal, draft report, 24 March 1995.

¹⁹ Metrikin, AS, M Zwentstein, MH Steinberg, E Van Der Vyver, G Maartens, R Wood (1995) "Is HIV/AIDS a primary-care disease? Appropriate levels of outpatient care for patients with HIV/AIDS," AIDS; 9(6):619-23.

²⁰ A Whiteside, N Wilkins, B Mason, G Wood (1995) "The Impact of HIV/AIDS on Planning Issues in KwaZulu-Natal," prepared for The Town and Regional Planning Commission of KwaZulu-Natal, draft report, 24 March 1995.

²¹ Suvery cited in Whiteside, A (1998) "How the transport sector drives HIV/AIDS – and how HIV/AIDS drives transport," AIDS Analysis Africa; 8(2): 5-7, April 1998.

²² Fisher and Associates Management Consultants (1992) "AIDS and Truck Drivers," submitted to the Department of Health.

²³ Karim, QA, and SS Karim (1995) "Reducing the Risk of HIV Infection among South African Sex Workers: Socioeconomic and Gender Barriers," South African Medical Research Council in Durban, cited in Loewenson, R and A Whiteside (1997) "Social and Economic Issues of HIV/AIDS in Southern Africa," SAsAIDS Occasional Paper No. 2, March 1997.

- **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.
- It is estimated that approximately 284,000 men were employed in the mining sector in 1996, 122,000 of whom were foreigners.²⁴ These men live in single

The Cost of AIDS to the Mining Industry (R million 1992)		
	1995	2010
Prevention	5	10
Treatment	38	600
Compensation	39	480
Research	1	5
Replacement	1	16
Total Direct Costs	84	1,111
Foregone earnings	19	230
Productivity loss	11	168
Total Opportunity Costs	30	398
TOTAL COSTS	114	1,509

quarters and are not allowed to bring their families with them, creating a high risk for HIV transmission. Apartheid also made any South African miners migrants once they went beyond the “borders” of the homelands. The National Union of Mineworkers in South Africa introduced an education campaign about HIV/AIDS in the late 1980s, and has advocated the provision of family

accommodation.²⁵ Even with these programs, the Union estimates that there could be between 12,000-14,000 AIDS-related deaths per year by 2010.²⁶ The table shows the cost of AIDS to the mining industry, estimated for the years 1995 and 2010. The projections indicate that total costs will increase from 114 million Rand in 1995 to 1,509 million Rand in 2010.²⁷ In KwaZulu-Natal, an area of high HIV prevalence, many miners migrate to employment in the Free State and Gauteng, and are separated from their families for long periods of time.²⁸

²⁴ The Employment Bureau of Africa Limited, Annual Report 1997, Johannesburg 1997.

²⁵ A Whiteside, A (1993) “AIDS: Socio-economic Causes and Consequences,” Economic Research Unit Occasional Paper No. 29, University of Natal, Durban, 1993; Whiteside, A and D FitzSimons (1992) “The AIDS Epidemic: Economic, Political, and Security Implications,” Conflict Studies 251, Research Institute for the Study of Conflict and Terrorism, UK.

²⁶ King Akerele, O (1997) “Presentation by Ms. Olubank King Akerele,” The Alliance of Mayors and Municipal Leaders on HIV/AIDS in Africa, Annex 2, <http://www.undp.org/hiv/Mayors/anex2e.htm>

²⁷ Southern African Economist, 1997. “AIDS toll on regional economies,” April 15-May 15, 1997.

²⁸ A Whiteside, N Wilkins, B Mason, G Wood (1995) “The Impact of HIV/AIDS on Planning Issues in KwaZulu-Natal,” prepared for The Town and Regional Planning Commission of KwaZulu-Natal, draft report, 24 March 1995.

- **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.

- One early study estimated the lost human capital that had been invested in the education of AIDS patients according to three different scenarios. Using the 1991 distribution of educational attainment for various races in the economically active age group, the total lost educational investment was R26.9 million. Depending on the racial mix of the projection, the total lost investment ranged from R14.4 million to R41.3 million.²⁹

Total educational human capital invested in AIDS victims, with three educational distributions, 1991		
	Amount (R millions)	Index
Current distribution	26.9	100.0
Biased towards uneducated	14.4	53.3
Biased towards educated	41.3	153.9

- **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.

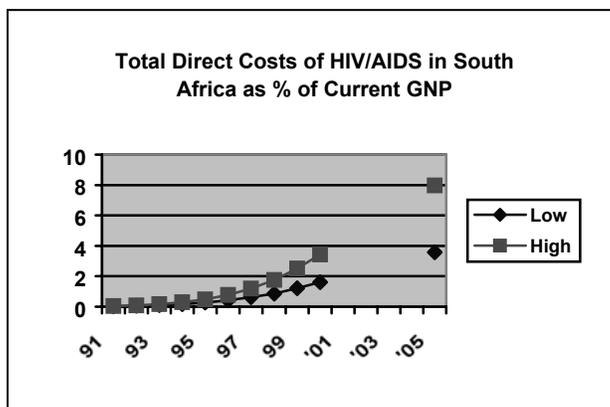
Macroeconomic Impact of AIDS

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:

²⁹ Trotter, G (1993) "Some Reflections on a Human Capital Approach to the Analysis of the Impact of AIDS on the South African Economy," in Facing Up to AIDS, The Socio-Economic Impact in Southern Africa, S. Cross and A Whiteside, eds. (Basingstoke, UK: Macmillan Press, 1993).

- 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.
- In South Africa, by the year 2010, child mortality will be 99.5 per 1000 children including the impact of AIDS, while the number would have been 48.5 per 1000 without the effect of HIV/AIDS. Life expectancy will decrease to 47.8 years from the previously expected 67.9 years, due to the impact of HIV/AIDS. Overall, the population growth rate with AIDS will be 0.4% by the year 2010, while the growth rate without AIDS would have been 1.4%.³⁰



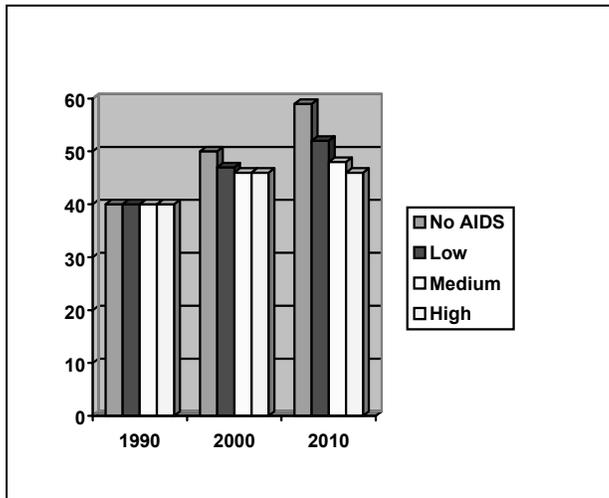
translates into an increase from 0.5 percent of total health expenditure in 1991 to 34 percent in 2005 for the low scenario, and from 0.8 percent in 1991 to 75 percent of total health expenditure in 2005 for the high scenario. Total direct costs of

- One study estimated the total direct and indirect costs due to HIV/AIDS through the year 2000, using two different scenarios. In the low scenario, using low hospital costs, the costs rise from US\$21.5 million in 1991 to US\$1.2 billion in the year 2000, while in the high scenario, using high hospital costs, the costs rise from US\$32 million to US\$2.9 billion. This

³⁰ US Bureau of the Census, World Population Profile, 1998, Population Division International Programme Centre, Washington DC, 1998.

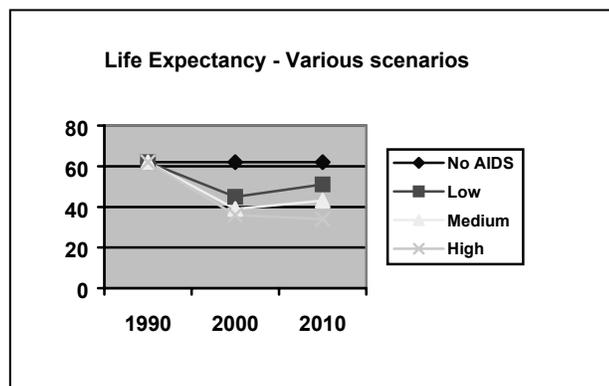
HIV/AIDS reach 3.6 percent of current GNP by 2005 for the low scenario, and 8 percent of current GNP by 2005 for the high scenario. The indirect costs, based on assumptions about lost earnings per worker, indicate that total lost work years decline by between 20 and 35 percent, but production decreases only 2.3-3.5 percent. Thus the overall macroeconomic impact, in monetary terms, will be small. This result is due to the disparity between the pay of skilled versus unskilled workers; because a large percentage of the population has relatively low earnings, although years lost is high, total monetary loss to the economy is low.³¹

- A recent set of projections of the macroeconomic impact of HIV/AIDS in South Africa estimated that under the high impact scenario, the population size would be 22% smaller in 2010 than it would have been without AIDS. Without AIDS, the model predicts that the population would be about 59 million people in 2010, while under the high impact scenario, the population would be only 46 million people. The same model predicts that life expectancy will decrease by 45



percent under the high impact scenario, from 62 years without the impact of AIDS to 34 years under the high impact scenario. Under the intermediate impact scenario, life expectancy decreases by 31 percent, from 62 years to 43 years. In comparison, this model predicts that the population in Zimbabwe decreases by 31 percent by 2010, and by 15 percent for Kenya.

Life expectancy is projected to decline by 47 percent for Zimbabwe by 2010, and by 25 percent for Kenya. The projections for both population size and life expectancy for South Africa, for all of the scenarios, are shown in the graphs.³²



³¹ Broomberg, J , M Steinberg, P Masobe, and G Behr (1993) "Economic impact of the AIDS epidemic in South Africa," in Facing Up to AIDS, The Socio-Economic Impact in Southern Africa, S. Cross and A Whiteside, eds. (Basingstoke, UK: Macmillan Press, 1993).

³² Gregson, S, B Zaba, G Garnet, R Anderson (1997) "Projecting the HIV/AIDS epidemic in Southern Africa," presented at the Socio-Demographic Impact of AIDS in Africa Conference, 3-6 February 1997.

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.
- During 1997, South Africa implemented a pilot program to introduce presumptive STD treatment in a mining community. The intervention included free monthly exams, community-based peer education on STD/HIV prevention, counseling, and one dose of an antibiotic for about 400 women over a nine-month period. Over that time period, there was a reduction of 20% in the reported number of clients, and an increase in the use of condoms from 13% to 29% of total sexual contacts. The AVERT model estimated that 237 new HIV infections had been averted through this intervention over a one-year time period, 41 among the women and 196 among the miners.³³ A similar program was followed in KwaZulu-Natal by the African Medical Research Foundation for commercial sex workers and truck firms, including peer education and STD treatment.³⁴
- **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.

³³ Rehle, T, TJ Saidel, SE Hassig, PD Bouey, EM Gaillard, and DC Sokal (1998) "AVERT: a user-friendly model to estimate the impact of HIV/sexually transmitted disease prevention interventions on HIV transmission," *AIDS* 1998; 12(suppl 2):S27-S35.

³⁴ Crowe, S (1997) "South Africa revolutionises HIV prevention and education strategies," *Lancet*; 349(9062):1377.

- **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.
 - South Africa has been in the process of rewriting their employment legislation; part of this process may classify HIV/AIDS as a disability. This classification would protect employees from unfair dismissal and discrimination.³⁵ Although discrimination against people living with AIDS is not allowed, as stated in the Government White Paper on Health System Transformation, stigma against AIDS is widespread in South Africa.³⁶
- **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 crucial element for the care of orphans in South Africa seems to be some sort of external financial support. One study found that, although 62 percent of families surveyed in KwaZulu were willing to care for orphans, this rose to 78 percent if some sort of external support would be provided. Two other efforts at community-based care did not succeed because external support was not provided.³⁷

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.

³⁵ Gresak, GA (1998) "AIDS in the workplace – HIV/AIDS and the law," AIDS Bulletin; 7(1):8-11.

³⁶ Taylor, V (1998) "HIV/AIDS & Human Development: South Africa, 1998," UNDP/UNAIDS.

³⁷ Cited in Taylor, V (1998) "HIV/AIDS & Human Development: South Africa, 1998," UNDP/UNAIDS.

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.