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Since its onset in 1981, when the first AIDS cases were reported, the human immunodeficiency virus (HIV) epidemic has become not only the deadliest epidemic in contemporary history but also a major demographic, humanitarian and development crisis. As of end-2002, 42 million people were infected with the HIV and 22 million had already lost their life to the disease. More than 13 million AIDS orphans are currently living in sub-Saharan Africa. The HIV/AIDS epidemic is leading to a reversal of hard-won gains in life expectancy of the previous decades. Moreover, the HIV/AIDS epidemic has been threatening the social fabric of societies in the most affected countries and eroding the social and economic safety net.

This paper reviews the state of knowledge on the socio-economic impact of AIDS. The first section discusses the demographic impact of the epidemic. Life expectancy at birth is estimated to have dropped by more than 20 years for some countries while a few are expected to experience a decline in their population in the near future. The second section examines the impact of AIDS on households, the first units affected by the epidemic. The third section presents the impact of AIDS on the private sector (firms and companies). The fourth section investigates the impact on the agricultural sector. The fifth and sixth sections give an assessment of the impact of the AIDS epidemic on elements of human capital, that is, health and education. Lastly, the impact on macro-economy is examined before a summary of the lessons learned and the proposition of new avenues of research to further investigate the impact of the HIV/AIDS epidemic.

A. THE DEMOGRAPHIC I0.98 483.e.637655 559.8016 Tmv.6I0.98 483.e.637655 5311.0

B. The Impact of HIV/AIDS on Households

The impact on households and families begins as soon as a member of a household starts suffering from HIV-related diseases. In this regard, three kinds of impacts can be distinguished. The first one is the loss of the income and household production of the family member, in particular if he/she is the breadwinner. The second impact is the increase in household expenditures to cover the medical costs. The third impact is the indirect cost resulting from the absenteeism of members of the family from school or work to take care of the patient. When the person dies, the temporary loss of income becomes a permanent loss; funeral and mourning costs are incurred; and the family may compensate by reducing investments in productive activities (e.g. removing children from school to save on expenses and increase household labour). Households may lose most of their savings in order to pay for the high costs of HIV/AIDS-related health care and funeral expenses. Furthermore, community attitudes towards helping needy households may

Outside of sub-Saharan Africa, the AIDS epidemic is also taking its toll on affected households. In a study carried out in Thailand, Pitayanon and others (1997) compared the direct and indirect costs of an adult HIV-related death with those of an adult death from other causes. The impact of an AIDS-related death on the household was substantial and greater than the impact of a death from other causes (table 1). While the direct costs of an adult non AIDS-related death are slightly higher than those of an AIDS-related adult death, the indirect costs associated with an AIDS-related adult death are on average 30 per cent higher than those of a non-AIDS adult death. This is because AIDS deaths occur mainly at the prime working-age years, resulting in a higher number of years lost than deaths due to other causes. Other socio-economic impacts of a HIV/AIDS-related death included the loss of the family labour production. The production loss in the households was almost 50 per cent leading to about a 47 per loss in the household income.

Orphans are paying a heavy toll from the AIDS epidemic. Until recently, the impact of AIDS on orphans had been studied only peripherally. But, a few studies are now trying to fill the gap. For example, in a recent study, Monasch and Snoad (2003) showed that the death of parents affected orphans' living arrangeme

The absence of workers in the company may also have an impact on the morale of the remaining workers, which could lead to declining productivity. HIV-infected workers also are likely to become less productive as infection progresses to AIDS. 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 due to HIV-related deaths, increasing absenteeism and a general loss of productive hours. A study in Kenya (Fox and others, 2003) showed that tea pluckers who died of AIDS-related causes produced a quantity of tea roughly one-third less in their last two years of life than other healthy workers. The AIDS patients who died had also suffered an earning loss of 18 per cent in the last year before their death.

Firms that have a health programme to help workers who become sick 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 as a resp

D. The Impact of HIV/AIDS on Agriculture

HIV/AIDS is also having a dramatic impact on the agricultural sector, partly because the great majority of the infected population in the most affected countries lives in rural areas. In many African countries, farming and other rural occupations provide a livelihood for more than 70 per cent of the population. A number of studies have been conducted to assess the impact of HIV/AIDS on agriculture.

E. THE IMPACT OF HIV/AIDS ON HEALTH CARE SYSTEMS

The HIV/AIDS epidemic is posing tremendous challenges to the healthcare systems of the developing countries, especially the most severely affected countries. HIV/AIDS increases the overall health expenditures at the same time it is claiming the lives of doctors and nurses in the developing countries.

The impact of HIV/AIDS on the health sector may operate in many ways. First, there may be an increase in the numbere 98 0 0 10.98 404.0699 63j10.98 404.0699 63j10.orke.98 0 10.9 w8 71.999 4Tm(operate in)T

In most countries affected by the HIV/AIDS epidemic, the school-age population is projected to continue to grow in spite of HIV/AIDS. But in a few countries, some projections show that the population aged 15 years old and under in 2010 will be smaller than it was in 2000. For example, recent projections of the United Nations Population Division suggest that some of the countries most severely affected by HIV/AIDS will show a reduction in the school-age population. In Zambia, projections yield a population under age 15 and below at 5.8 million by 2010, 1.4 million less than it would have been in the absence of AIDS (Hunter and Fall, 1998).

Despite the limitations in the availability of reliable data, the currently available evidence points nonetheless to a tremendous impact of the HIV/AIDS epidemic on the demand for education, on the education supply and, to a lesser extent, on the quality of education. Many questions remain unanswered, though. For example, is there any difference in the school attendance of children whose parents have AIDS but are still alive and children who are AIDS orphans? Does the situation of AIDS orphans regarding schooling change over time? What are the mitigating factors?

Follow-up studies need to be conducted to document these changes over time. Because most of the studies conducted so far have used small samples, their results may be hard to generalize. It is therefore important to

H. CONCLUSIONS

Households are the first units affected by the HIV/AIDS epidemic. The death of a breadwinner may lead to the impoverishment of the household. Children are being taken out of school to care for ill parents

REFERENCES

AIDSCAP (1996). Comparative Experience with Worksite Prevention Programmes in Africa: Zimbabwe, Tanzania and Kenya. XI International Conference on AIDS, abstract Th.D. 373. Vancouver, Canada, 7-12 July.

Ainsworth, M., and D. Filmer. (2002). Poverty and children's schooling: a targeting dilemma. Working Paper No. 2885. Washington, D.C.: World Bank.

Angula, C. (2000). NamWater Joins AIDS Fight. *The Namibian*, (July 2000).

Béchu, N. (1997). The impact of AIDS on economy of families in Côte d'Ivoire: changes in consumption among AIDS-affected households. In *Confronting AIDS: Public Priorities in a Global Epidemic*. Ainsworth, M.; Fransen, L.; Over, M. eds. New York: Oxford University Press.

Bell, Clive, Shantayanan Devarajan and Hans Gersbach (2003). The long-run economic costs of AIDS: theory and application to South Africa. Washington, D.C.: World Bank. (June), http://www1.worldbank.org/hiv_aids/docs/BeDeGe_BP_total2.pdf, accessed 18 July 2003.

Bloom, D.E., and Ajay S. Mahal (1995). Does the AIDS epidemic threaten economic growth? *Journal of*

Dixon, Simon, Scott McDonald and Jennifer Roberts (2001). AIDS and economic growth in Africa: a panel data analysis. *Journal of International Development*. vol. 13, pp. 411-426.

_____ (2002). The impact of HIV and AIDS on Africa's economic development. *BMJ*, vol. 324 (26 January), pp. 232-234.

Engh, I.D., L. Stloukal and J. de Guerny (2000). HIV/AIDS in Namibia: the impact on the livestock sector. Rome: FAO.

ESCAP (2003). HIV/AIDS in the Asian and Pacific Region, Integrating economic and social concerns especially HIV/AIDS. In *Meeting the Needs of the Region*. United Nations publication. Sales No. E.03.II.F.24.

FAO (1997). The rural population of Africa confronted with AIDS: a challenge to development, sum694 648.56tion.61a1c

Jamison, T.D., J.D. Sachs and J. Wang (2001). The effects of the AIDS epidemic on economic welfare in sub-Saharan Africa. CMH working paper series, paper No. WG1: 13.

Kambou, Gerard, Shantayanan Devarajan and Mead Over (1992). The economic impact of AIDS in an African country: simulations with a general equilibrium model of Cameroon. *Journal of African Economies*, vol. 1, No. 1, pp. 103-30.

Katahoire, A. (1993). The impact of AIDS on education in Uganda: a case study of Lyantonde community. Kampala: International Development Research Centre. Unpublished.

Knodel, John, and Wassana Im-em (2002). The economic consequences for parents of losing an adult child to AIDS: evidence from Thailand. PSC Research Report, 02-504. May.

Kwaramba, P. (1997). The socio-economic impact of HIV/AIDS on communal agricultural production systems in Zimbabwe. Harare, Zimbabwe: Farmers Union and Friederich Ebert Stiftung.

McPherson, Malcolm F. (2003). Macroeconomic Models of the Impact of HIV/AIDS. Harvard University. Draft.
http://www.ksg.harvard.edu/cbg/hiv-aids/ksg/McPherson_ng.

Pitayanon, S., Sukontha Kongsin and Wattana S. Janjareon (1997). The economic impact of HIV/AIDS mortality on households on Thailand. In *The Economics of HIV and AIDS, The Case of South Africa and South East Asia*. David Bloom, ed. Oxford University Press.

Robalino, D., C. Jenkins and El Maroufi Karim (2002). The risks and macroeconomic impact of HIV/AIDS in the Middle East and North Africa: why waiting to intervene can be costly? World Bank. Working Paper No. 26. Washington, D.C.: World Bank.

Rugalema, G. (1999). HIV/AIDS and the commercial agricultural sector of Kenya: impact, vulnerability, susceptibility and coping strategies. Rome: FAO/UNDP.

Ruhl, C., V. Pokrovsk and V. Vinogradov (2002). The economic consequences of HIV in Russia. Washington, D.C.: World Bank.

Shep9s:5ws. Ro

UNICEF (2000). The Progress of Nations 2000. Background paper. New York.

_____ (2002). Children on the brink 2002. A joint report on orphan estimates and program strategies. New York.

U. S. Bureau of the Census (1996). *HIV Surveillance Data Base*. Washington, D.C.: Population Division. International Programme Center.

Whiteside, A. (1996). Economic impact in selected countries and the sectoral impact. In *AIDS in the World II*. J. Mann and D. Tarantola, eds. New York: Oxford University Press.

World Bank (1998). Malawi Assessment study 10, Washington, D.C.: World Bank.

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

World Health Organization, Global Programme on AIDS (1995). The curr0.98 323.10345IB3DCB.

TABLE 1. DIRECT AND INDIRECT COSTS OF AN ADULT HIV/AIDS-RELATED DEATH AND AN ADULT DEATH FROM OTHER CAUSES (US DOLLARS), THAILAND

Costs	*HIV/AIDS-related death*	*Non HIV/AIDS-related death*
Direct costs		
Medical treatment	973	883
Travel expenses	63	53
Funeral expenses	1 537	1 874
Total direct costs	2 574	2 810
Indirect costs		
Income loss of care provider	102	78
Income loss of the deceased (regular job per annum)	1 880	1 768
Income loss of the deceased (regular job + supplementary job per annum)	2 902	2 234
Lifetime income foregone by deceased (regular job)[a]	28 592	22 020
Lifetime income foregone by deceased (regular + supplementary job)[a]	47 550	28 241
Total indirect costs		
Without supplementary job	29 694	2

TABLE 3. NUMBER OF PRIMARY SCHOOLCHILDR

Figure I. Life expectancy at birth in selected most affected countries, 1980-1985 to 2020-2025

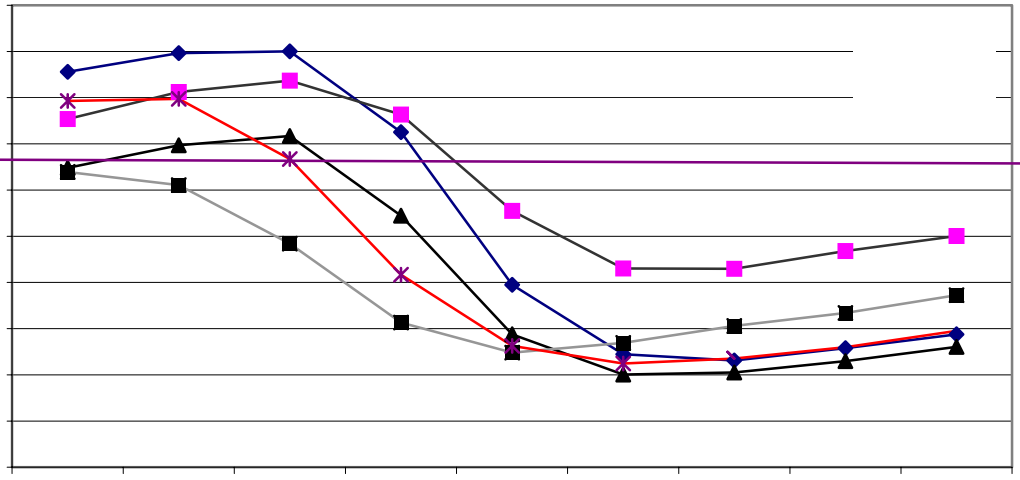


Figure II. Population size with and without AIDS, Botswana

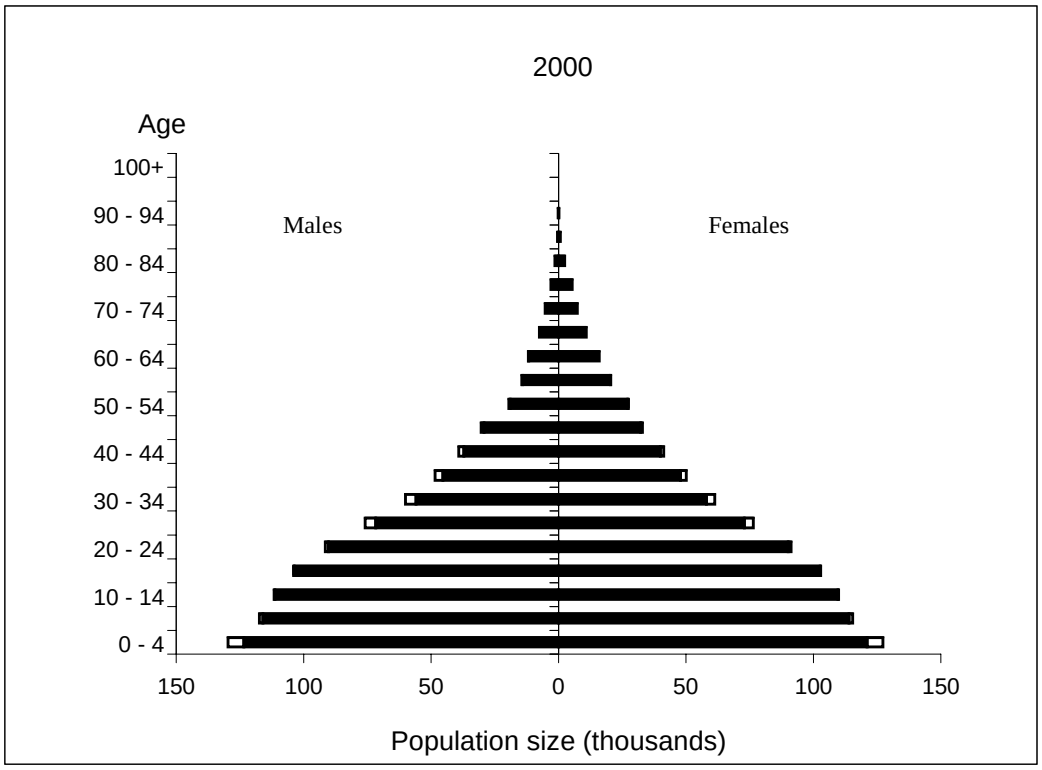
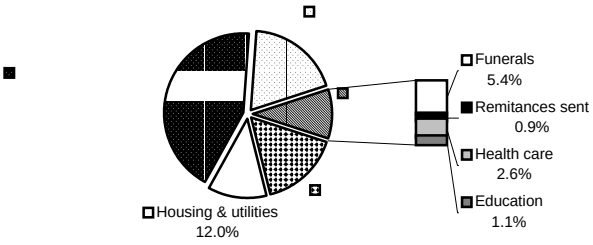


Figure III. Distribution of expenditure in Kagera, United Republic of Tanzania, 1991-1993

(a) Households which experienced an adult death in the past year



(b) Households which did not experience an adult death in the past year