

# Africa: The Socio-Economic Impact of HIV/AIDS



Economic Commission for Africa



## Africa: The Socio-Economic Impact of HIV/AIDS

Index No. CHGA-B-I1-0003

For this and other publications, please visit the CHGA web site at the following address:

<http://www.uneca.org/CHGA>

Or contact

CHGA

Economic Commission for Africa

P.O.Box 3001

Addis Ababa, Ethiopia

Tel.:251-1-44 54 08

E-mail: [chga@uneca.org](mailto:chga@uneca.org)

Material in this publication may be freely quoted or reprinted. Acknowledgment is requested, together with a copy of the publication.

# Contents

Introduction	1
Context	1
Demographic trends	3
Populations Changes	3
Macroeconomic Implications	5
Household Impacts and Implications	6
Structural Implications	7
The next generation thinking and the Challenge for CHGA	9
References	11

## List of Figures

Figure 1: Trends in HIV prevalence in selected African countries 1990-2000	2
Figure 2: Number of people living with HIV/AIDS in sub-Saharan Africa, 1980-2001	3
Figure 3: Projected population structure with and without the AIDS epidemic, Botswana, 2020	4
Figure 4: Epidemic Curves, HIV and AIDS	5
Figure 5: Public Sector costs	7

# About CHGA

Under the Chairmanship of the Executive Secretary of the Economic Commission for Africa (ECA), K. Y. Amoako, the Commission on HIV/AIDS and Governance in Africa represents the first occasion on which the continent most affected by HIV/AIDS will lead an effort to examine the epidemic in all its aspects and likely future implications. The challenge for CHGA is to provide the data, clarify the nature of the choices facing African governments today, and help consolidate the design and implementation of policies and programmes that can help contain the pandemic in order to support development and foster good governance.

## Patrons:

HE MR. KENNETH KAUNDA

HE PRIME MINISTER PASCOAL MOCUMBI

## List of Commissioners:

SEYYID	ABDULAI
K.Y.	AMOAKO
ABDOULAYE	BATHILY
MARY	CHINERY-HESSE
AWA	COLL-SECK
HAILE	DEBAS
RICHARD G.A.	FEACHEM
MARC	GENTILINI
EVELINE	HERFKENS
OMAR	KABBAJ
MILLY	KATANA
MADELEINE	MUKAMABANO
BENJAMIN	NZIMBI
JOY	PHUMAPHI
PETER	PIOT
MAMPHELE	RAMPHELE
ISMAIL	SERAGELDIN
BASSARY	TOURE
PAULO	TEIXEIRA
ALAN	WHITESIDE

## Introduction

In less than two decades, more than 65 million people have contracted the HIV virus - globally. Of this, 22 million people have died from HIV related illnesses, mostly from AIDS, and 17 million of them have been from Africa. Africa remains the hardest hit continent: with less than eleven percent of the total global population, the continent has more than 70 percent of all HIV/AIDS related cases in the world. As well as a harrowing catalogue of lives lost, the implications of this human tragedy reach into the structure of economies, the capacity of institutions, the integrity of communities and the viability of families. In the extreme, the survival of some states may even be called into question. Already, communities across large parts of the continent are facing a day-to-day reality of declining standards of living, reduced capacities for personal and social achievement, and an increasingly uncertain future. This in turn profoundly constrains what can be achieved today. Meanwhile, HIV/AIDS is also diminishing the capacity of African states to maintain what has been secured over past decades in terms of social and economic development.

In what follows, this paper explores the development impacts of HIV/AIDS on African societies as well as their likely future ramifications. The paper concludes with a brief outline of the anticipated contribution of the Commission on HIV/AIDS and governance in Africa (CHGA), to the continents' struggle to mitigate the impacts of the pandemic.

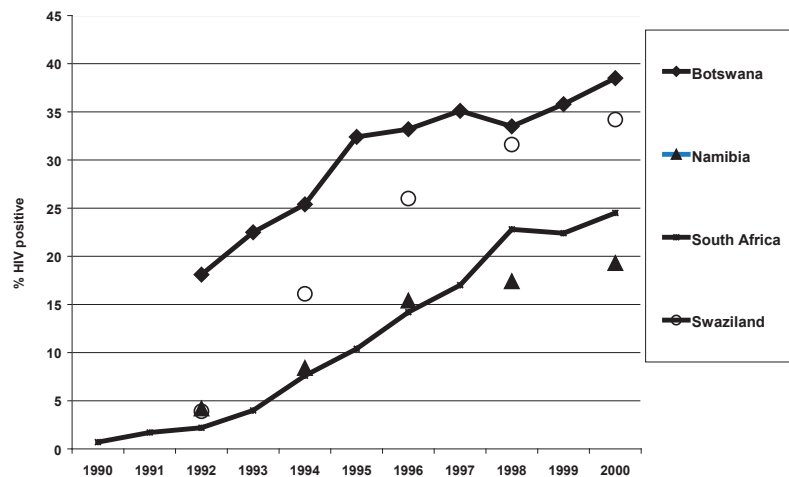
## Context

There are two very important characteristics of the HIV epidemic in Africa, which needs to be acknowledged and understood, for they have either affected the current response strategies or will affect and determine the next generation of intervention strategies on the continent.

Across Africa, HIV/AIDS manifests itself both as an immediate crisis – in need of an urgent response - and a systemic condition – that requires strategic planning.

1. It is a crisis because the speed with which the virus has spread has proved to be quite overwhelming. In some African countries, infection rates have increased from four to 20 per cent or more in adult populations in less than a decade (see Table 1). In Cameroon, for example, the level of infections has risen roughly ten-fold in just the last six years. It is also the case that several other countries in southern Africa have joined Botswana with HIV prevalence rates in excess of 30 percent among the general population. Thus, before societies are even aware that the virus is a real threat, their communities have been deeply penetrated.
2. HIV/AIDS is also a systemic condition because it impacts most heavily on the most productive sectors of African economies, namely prime-aged adults. Thus, HIV/AIDS deprives these economies of scarce skills, children of their parents, and a continent of a generation in the prime of their working lives.

**Figure 1:** Trends in HIV prevalence in selected African countries 1990-2000

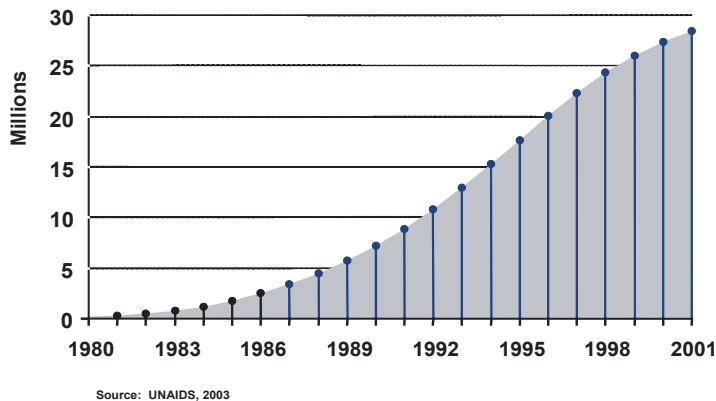


The general response to the epidemic over the past two decades has concentrated on its first characteristic. That is, the need to decrease the level of HIV prevalence within African societies. This has imposed the imperative of targeting interventions aimed at changing individual behavior. With HIV seropositivity levels reaching 35 percent or more in several southern African states, e.g., Botswana, Zimbabwe and Swaziland, and with the spread of the epidemic showing scant signs of slowing down anywhere on the continent, it has become impossible for even the most detached governments to deny that the next generation of strategic response, should also focus on the second characteristic of the epidemic.

## Demographic trends

It is sadly the case that across our continent, HIV prevalence continues to rise. Last year, some 2.3 million Africans died of AIDS, while an estimated 3.4 million people contracted the HIV virus. According to UNAIDS, this brought the total number of people living with the virus on the continent to nearly 30 million. Southern and eastern Africa have been the most severely affected regions. Seven countries have an estimated adult (15-49) HIV prevalence of 20 percent or greater: Botswana, Lesotho, Namibia, South Africa, Swaziland, Zambia, and Zimbabwe. In these countries, all in southern Africa, at least one adult in five is living with HIV. An additional six countries, Burkina Faso, Cameroon, Central African Republic, Kenya, Malawi and Mozambique, have adult HIV prevalence levels higher than ten percent.

**Figure 2:** Number of people living with HIV/AIDS in sub-Saharan Africa, 1980-2001



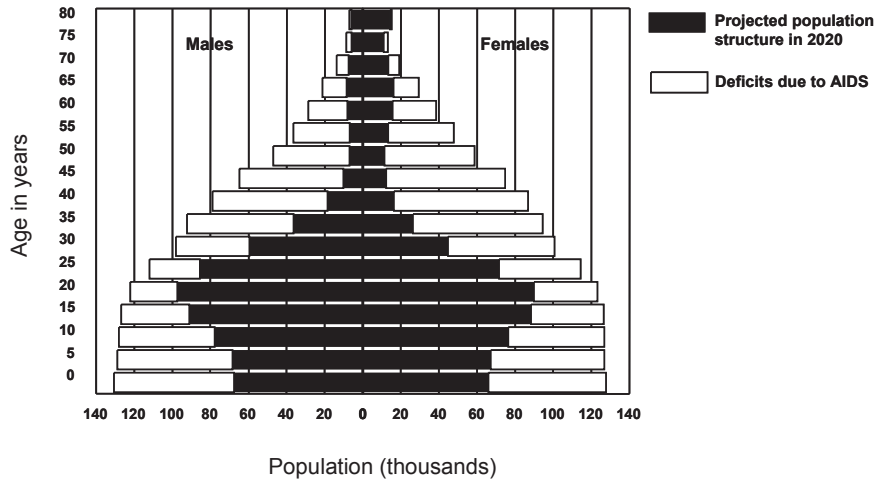
## Populations Changes

More worrying still, the death toll from AIDS is expected to continue rising before peaking around the end of the decade. This means that the worst of the epidemic's impact on our societies and economies is yet to come. The most chilling aspect of this prediction is that HIV/AIDS is already having a devastating impact on African communities. Already, life expectancy is dropping to levels not seen since the 1960s and hard won gains in child survival are being reversed. In Zimbabwe, for example, life expectancy is 40 instead of 69. In fact, seven countries in Sub-Saharan Africa: Angola, Botswana, Lesotho, Malawi, Mozambique, Rwanda, and Zambia have life expectancies below 40 years of age. Each of the countries, except for Angola, would have had an estimated life expectancy



of 50 years or greater without AIDS. AIDS mortality is producing population pyramids that have never been seen before. Particularly in those countries with projected negative population growth, Botswana, Lesotho, Mozambique, South Africa, and Swaziland, population pyramids will have a new shape—"the population chimney." The implications of this new population structure are not clear. In Botswana, by 2020, among those aged fifteen to 44, there will be more men than women in each of the five-year age cohorts. This may push men to seek partners in younger and younger age cohorts. This factor in turn may increase HIV infection rates among younger women. Current evidence indicates that older men are infecting younger women, who then go on to infect their partners, particularly through marriage.

**Figure 3:** Projected population structure with and without the AIDS epidemic, Botswana, 2020



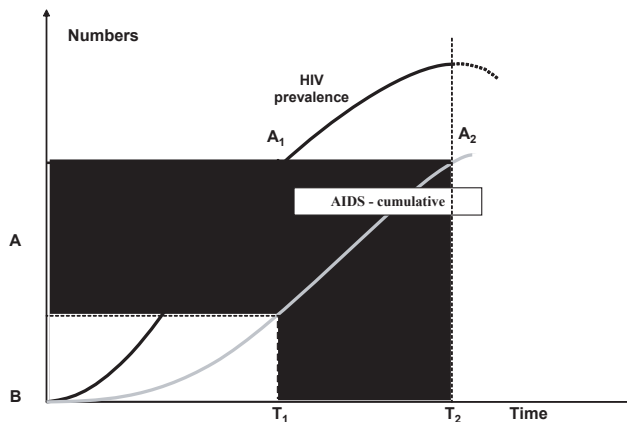
**Source:** US Census Bureau, World Population Profile 2000

Moreover, our people are facing a day-to-day experience of declining standards of living, reduced capacities for personal and social achievement, an increasingly uncertain future (with important consequences for what can be achieved today), and a diminished capacity to maintain what has been secured over past decades in terms of social and economic development. As a result, HIV/AIDS is distorting the very fabric of everyday life on the continent, with profound implications for both social and economic development for succeeding generations.

## Macroeconomic Implications

Despite the demographic impacts and anticipated population implications, it has been very difficult to fully capture the magnitude of the pandemic for economic growth or development. Using classical economic models, a number of studies in the 1990s showed that HIV/AIDS would have only a minor effect on macroeconomic performance. In ten countries, the projected impact in terms of decline in annual average decline in GDP per capita as far as 2025 was expected to be in the order of 0.3 and 1.0. In other words, despite the pace and intensity of HIV infections and related death, the anticipated impact was thought to be very slight. A new generation of models have attempted to capture the multiple dynamics of the pandemic, incorporating a number of new variables. But even with these, the models suggest that the aggregate impacts will remain very modest. There are a number of reasons why reductions in growth rates continues to be so low. First, the evidence support the view that the heaviest loss of labour in Africa, up until this point, has indeed been amongst the least productive workers. Second, the lead-time between HIV infection and the onset of AIDS means that no African country has yet experienced the full implications of the pandemic. This diagram illustrates the relationship between HIV and AIDS and its implications for development. The vertical axis represents number of infections and the horizontal time. At T<sub>1</sub> when the level of HIV is at A<sub>1</sub>, the number of AIDS cases will be much lower, at B<sub>1</sub>. AIDS cases will only reach A<sub>2</sub> at time T<sub>2</sub>. By then years will have passed and the numbers of people who are infected with HIV will have risen even higher. Third, no model has yet fully captured the true nature of immiseration due to HIV/AIDS taking place at the household level.

**Figure 4:** Epidemic Curves, HIV and AIDS



## Household Impacts and Implications

It is at the level of the family and community that the fullest impacts of the HIV pandemic is unraveling. One such ramification is AIDS related poverty among households. Across the African continent, the most vulnerable people are the most economically active. As these active people die, families are struggling to cope not just emotionally, but also economically. Poverty is increasing as bread-winners die and scarce savings are utilized in the period of ill health. As savings dwindle, families begin to fragment economically. One implication of this fragmentation of families is the rising numbers of orphan children on our continent. Recent estimates put the figure of orphans in Africa in the range of thirteen to fifteen million children. For the future, three factors are particularly important:

**First**, AIDS selectively destroys human capital, that is, peoples' accumulated life experiences, their human and job skills, and their knowledge and insights built up over a period of years.

**Second**, AIDS weakens or even wrecks the mechanisms that generate human capital formation.

**Third**, the chance that the children themselves will contract the disease in adulthood makes investment in their education less attractive, even when both parents themselves remain uninfected.

The process is insidious, since the effects are felt only over the long-term, as the poor education of children today translates into low adult productivity a generation later. This raises important social and fiscal implications for economic policy. The first is the threat of worsening inequality. If the children left orphaned are not given the care and education enjoyed by those whose parents remain uninfected, there will be increasing inequality among the next generation of adults and the families they form. Social customs of adoption and fostering, however well established, may not be able to cope with the scale of the problem generated by a sharp increase in adult mortality, thereby shifting the onus onto the government. The government itself, however, is likely to experience increasing fiscal problems and so be unable to fully finance this additional task.

Second, by killing mainly young adults, AIDS seriously weakens a country's tax base, and reduces its ability to finance public expenditures, including those aimed at accumulating human capital, such as education and health services not related to AIDS. In this way, the damaging impact of HIV/AIDS on economic growth in the longer run is intensified. As a result, national finances will come under increasing pressure. Slower economic growth means slower growth of the tax base, at the same time as governments face growing demands to treat the sick and

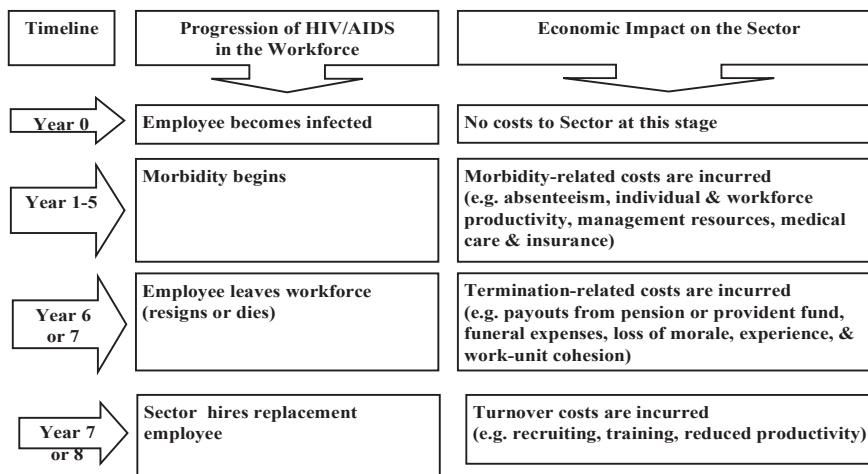
care for orphans. Consequently, it is reasonable to hypothesise that HIV/AIDS may pose the greatest current challenge to sustained economic development in Africa.

### Structural Implications

The structural implications of HIV related mortality on public services is projected to be quite severe. Staff mortality resulting from the disease could take the issue beyond absenteeism – requiring the need to replace lost staff or operate with fewer staff. Death from HIV related opportunistic infections usually occurs after a long period of illness. During this period, while the infected person is still considered as a staff of the sector, his/her work may either be left undone or may have to be done by other personnel in addition to their own work. This is because, apart from the physical loss of the personnel who die, work output can seriously degenerate due to low morale as other personnel go through emotional struggles to cope with the death of a colleague. Mortality could result in the loss of experienced labour and low quality of work as inexperienced personnel step in earlier than normal in their careers to do the work of experienced staff.

Figure 3 below gives a stylised illustration of the progressive impact of HIV/AIDS on costs in a sector. Suppose, for example, the time a staff member is infected is considered as year zero, there is no cost to the sector at this stage as the effects on the individual are not evident to the activities of the sector. From one to five years as the infection begins to affect the health of the staff, absenteeism to seek

**Figure 5: Public Sector costs**



medical care sets in, resulting in the reduction in productivity or increase in work load of other workers. The cost to the sector at this point could include medical care, insurance and hiring of extra labour to avoid reduced productivity. By the sixth and seventh years, when the infected employee decides to resign or dies, the cost to the sector could include termination costs such as pension, provident funds, funeral expenses and any other retirement and/or termination benefits. Other costs which cannot be quantified include loss of morale, experience and work cohesion. From the seventh year onwards, the sector may have to meet the turnover costs such as recruitment, training and other costs incurred to avoid decreased productivity (e.g. the use of consultants).

Looking at the long term implications, the scenario described above could be worse as a result of interactive systemic effects when, for example, the private sector begins to hire labour from the public sector. There is no doubt that the epidemic has created a new job market as the UN, bilateral donors and NGOs have realised the need to recruit staff specifically for HIV related interventions. Because HIV/AIDS is still a phenomenon that lacks several years of experience, employers are prepared to recruit staff who can learn on the job. Undocumented reports indicate that the public sector, particularly the education sector is the “poaching ground” for such recruitments. An example is the KwaZulu-Natal province in South Africa where the private sector has started hiring teachers to replace staff lost to the AIDS epidemic.

Another long-term impact on the public sector arises from the fact that the death of personnel, particularly at their prime age could create a pool of orphans who are denied the quality education they would have received if their parents were alive. This could combine with the declining educational systems to reduce the number of qualified entrants to the public sector.

A number of studies have been carried out using HIV prevalence rates and other demographic and epidemiological data to project the future impact of the epidemic. Possibly the first ever public sector assessment was commissioned by the Government of the Kingdom of Swaziland with funding from USAID to assess the impact of the epidemic on the education sector (Government of Swaziland, 1999). One of the conclusions of the study was that during the projection period of 2003 to 2011, with AIDS, there would be the need to train 13,000 teachers instead of 5,093 if there were no AIDS.

In 2001, the Government of the Kingdom of Swaziland commissioned an assessment on three of its smallest Central Agencies, namely the Ministry of Finance, The Ministry of Economic Planning and Development and the Ministry of Public Service and Information (Government of Swaziland, 1999). This study showed

that the three agencies will lose 32% of the work force to HIV/AIDS over the next twenty years and that the agencies will need to replace an additional 1.6% of the staff complement each year over the same period to maintain staffing levels.

The immediate challenge for the public sector is that of remaining functional despite the human hours lost due to absenteeism and death and the ability to deliver services within its mandate. For example, a study on the impact of the epidemic on the public sector in Malawi showed that vacancy levels in government ministries had risen to as high as 58% in the Ministry of Education. The conclusions of the Malawi study states that there is “sufficient evidence of a high magnitude of human resource capacity erosion in the public service between 1990 and 2000” and that “HIV/AIDS has contributed significantly to this capacity erosion in the five organisations” (Malawi Institute of Management/UNDP, 2002).

This poses the challenge of how the ministry can remain functional despite this human resource gap and its ability to perform its role of training the future human resource of the country. This challenge takes on an even more pressing form when it is considered alongside the impact of HIV/AIDS on the educational sector. What effects are the losses of human resources generally throughout the economy and society having on the demands facing the educational sector? In Zambia, 30 percent of teachers are infected with the HIV virus. For the education system, HIV-related deaths in 2001 were equivalent to the loss of two-third of the annual output of newly trained teachers from all training institutions combined.

The question arises as to what the educational sector can do both to fulfill its own demands for replacement teachers, administrators and so on, as well as meet the specific needs of the others sectors – both public and private. As such, understanding its implications for future development, economic policy and strategic planning demands our immediate attention. Specifically, we need to understand the deeper implications of the pandemic for the continual survival of African economies.

## The next generation thinking and the Challenge for CHGA

Unfortunately, there are major gaps in both the present knowledge and understanding of what is actually happening. Across the African continent, there is very little facts or understanding in all countries about the distribution of the epidemic in terms of its impact and the likely ramifications on skills and experience across all major sectors. Not surprisingly, no country has begun to address com-

prehensively the human resource planning issues raised by the HIV epidemic, and whether or not there is a capacity domestically or externally to meet the needs for critical skills and training in the years to come.

The ability of African governments to begin this sort of strategic thinking will most likely be dependent on three crucially interrelated factors:

1. their understanding of the long-term development challenges posed by HIV/AIDS;
2. their capacity to devise appropriate policies and programmes for effective mitigation; and,
3. their ability to marshal adequate and sustained resources to support these policies and programmes.

The challenge for CHGA is to provide the data, clarify the nature of the choices facing African governments today, and help consolidate the design and implementation of policies and programmes that can help contain the pandemic in order to support development and foster good governance. The Commission will identify gaps in effective planning and responses to HIV/AIDS and provide information on its wider impacts. The Commission's report will focus on the challenges of governing a country – including maintaining essential public services, keeping economic development on track, maintaining rural livelihoods, mitigating the gender dimension of the epidemic, and ensuring national security – despite the fact that a large number of the population is living with HIV/AIDS.

## REFERENCES

- Abt Associates (2000). "The Impending Catastrophe: A Resource Book on the Emerging HIV/AIDS Epidemic in South Africa." Published by LoveLife, Parklands (May).
- Armington, Paul (1969). "A Theory of Demand for Products Distinguished by Place of Production." IMF Staff Papers. Vol. 16, no. 1 (July), pp. 159-178.
- Bureau for Economic Research (2000). "HIV/AIDS and the South African Economy." Economic Research Note No. 8, Stellenbosch (June).
- Cuddington, John T. (1993). "Modeling the Macroeconomic Effects of AIDS with an Application to Tanzania." World Bank Economic Review. Vol. 7, no. 2, pp. 173-89.
- Dervis, Kemal, Jaime de Melo, and Sherman Robinson (1982). *General Equilibrium Models for Development Policy*. Cambridge: Cambridge University Press.
- Devarajan, Shantayanan, Jeffrey D. Lewis and Sherman Robinson (1990). "Policy Lessons from Trade-Focused, Two-Sector Models." *Journal of Policy Modeling*. Vol. 12, pp. 625-657.
- Government of Swaziland. 2002. *Assessment of the Impact of HIV/AIDS on the Central Agencies of the Government of the Kingdom of Swaziland: Executive Summary*. Mbabane.
- Government of Swaziland, Ministry of Education. 1999. *Assessment of the impact of HIV/AIDS on the Education Sector*. Mbabane.
- ING Barings (1999). "The Demographic Impact of AIDS on the South African Economy." Johannesburg (December).
- ING Barings (2000). "Economic Impact of AIDS in South Africa: A Dark Cloud on the Horizon." Johannesburg (May).
- 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.
- Robinson, Sherman (1989). "Multisectoral Models." In H.B. Chenery and T.N. Srinivasan, eds. *Handbook of Development Economics*. Amsterdam: North-Holland.
- World Bank (1997). *Confronting AIDS: Public Priorities in a Global Epidemic*. New York: Oxford University Press.