

## Chapter 2

### Literature Review

Many studies have been carried out on the economics of AIDS/HIV, most of which had been carried out by the UNDP and by others on high AIDS/HIV prevalence countries like the Sub-Saharan Africa and SEA countries like Thailand, Philippines, Korea. According to a study done by Bloom and Mahal, (1995) to understand the economic consequences of AIDS/HIV, a useful starting point is to examine the cost associated with this disease. The study aims to classify the costs of AIDS into 4 categories as follows:

#### 2.1 Personal Medical Care Cost

- i) cost of detecting
- ii) treatment cost
- iii) caring for PWAH

An estimation of these costs will be from Ministry of Health (MOH) sources

#### 2.2 Impersonal Cost

- i) cost of blood screening

- ii) cost of information
- iii) cost of education
- iv) cost of communication
- v) basic research on AIDS

2.3 Cost of lost output/income due to mortality and morbidity – indirect cost or opportunity cost which is the lost opportunity to work and produce goods and services to satisfy the needs and wants of a society.

2.4 Psychological costs associated with the epidemic (pain and suffering caused by AIDS, cost imposed upon people who must behave differently to avoid contracting or transmitting HIV). This cost cannot be quantified or rarely discussed.

The first generation of economic research on AIDS epidemic has involved measuring the direct cost of HIV/AIDS and the income foregone because of AIDS morbidity and mortality in many countries throughout the world. These studies collectively conclude that AIDS is an unusually costly illness on a per case basis for 2 reasons:

1. Firstly, many of the opportunistic infections with which AIDS is definitionally associated such as tuberculosis, pneumonia and cryptococcal meningitis are costly to treat compared to cost of treating other common illness.
2. AIDS disproportionately afflicts individuals in their prime productive years, which causes a considerable loss of income to them and their families.

Economic research also indicates that the per case medical cost of AIDS is high relative to cost of treating other serious illnesses (Bloom and Cartliner, 1988; Bloom and Lyons 1993; Hellinger 1993). In addition to this, there is the private income and social output losses associated with AIDS related morbidity and mortality, which tends to be large because prime-age individuals are disproportionately represented among AIDS cases (Bloom and Mahal 1995; WHO 1995). The costs are further magnified by the need to maintain sterile medical practices, blood testing, and education for prevention campaigns and basic research on AIDS (Bloom and Carliner 1988; Bloom and others 1995).

Many influential AIDS experts contend that the epidemic will have a substantial negative impact on national economic well being.

These economists fall into 2 groups:

1. The first group infer this result from the combination of large projected number of prime-age seropositive individuals and the relatively high cost of medical care for persons with AIDS.

Philipson and Posner (1993) assert that because of the epidemic's size, its distinctive indicators of macroeconomic performance as economic growth, GNP and GDP per capita. This view is also shared by various UN agencies working on economic and development implications of the epidemic. (WB, 1993a: 100) which states "AIDS affecting as it does mainly people in the economically productive adult years, had powerful negative economic effects on countries".

Similarly, UNDP claims, “the extent of illnesses and death caused by the epidemic could deplete critical sectors example labor intensive sectors of the labor force, and adversely affect every sector of the economy. The consequences of the spread of the virus will be inexorable and awesome (UNDP 1992:1). UNDP also argues that the AIDS epidemic imposes large costs on individuals and families that will be translated into aggregate costs that could become large enough to create national economic crisis (Lyons 1993:5)

Michael Mersons, the former head of WHO’s Global Programme on AIDS, says that the “deaths of millions of able-bodied adults will rob society of their education, skills, and experience. The resulting productivity losses will threaten the very process of development (Merson 1992:2). As another example, Mann, Tarantola and Netter (1992:195) write, “the adverse impacts of the AIDS epidemic will reduce the potential for economic growth as AIDS is distinct and its impact can be expected to be quite severe”.

Similarly, Cohen (1993:32) concludes, “The economic and social costs of HIV are truly colossal. The epidemic, if unchecked, could transform the developmental performance of many countries”. Elsewhere, in the Panos Institute (1992:116) the authors claim “HIV/AIDS has the capacity to seriously undermine the development prospect of many nations”.

2. The second group of experts derives conclusions from data analyses guided by well-established economic models. For example, Kambau, Devarajan and Over (1992) simulate the impact of AIDS epidemic using an eleven-sector computable general equilibrium model of Cameroon.

They assume that the AIDS epidemic claimed the lives of 30,000 workers (or 0.8 percent of the labor force) each year from 1987 to 1990 with deaths occurring disproportionately among the more skilled segments of the work force.

For example, they assume that 6 percent of the skilled urban work force died of AIDS each year compared to 0.4 percent of unskilled workers. In this simulation, the AIDS epidemic lowers the rate of growth of GDP by nearly 2 percent points per year.

Cuddington (1993) and Cuddington and Hancock (1994) used a standard neo-classical growth model to explore the effect of AIDS on economic growth. In this model, AIDS related morbidity and mortality decreases the size of the labor force. In addition, AIDS related medical expenditures lower public and private savings, leading in turn to reduced investment in physical capital and lower productivity. These studies focus on the epidemic's impact in Tanzania and Malawi, countries whose AIDS epidemics are among the most severe in the world. These studies indicate that AIDS will depress annual growth rate of GDP per capita by an average of 0.25 percent (the mid-point of their low and high scenarios) through the year 2010, assuming that the World Bank projections of the number of AIDS cases are realized.

Applying a related framework to data of Sub-Saharan Africa, Over (1992) assumes that AIDS cases are more disproportionately concentrated among the more educated classes and also that 50 percent of AIDS medical care cost will be financed by reducing savings (which translates into lower investments and slower rate of

expansion of economic capacity). He estimates that the epidemic will reduce growth rates of GDP per capita by roughly 0.15 percent points per year. A study done on the economic impact of HIV/AIDS on households in Thailand (Sumalee Pitayanan, Kongsin, and Janjareon) asserts that due to high incidence of the disease among adults in their most productive years, the socio-economic implications of HIV/AIDS for development is immense. It claims that at the family level, the death of an adult in his productive years means the loss of a family member of prime working age whose foregone income can adversely affect the welfare of surviving family members, especially if he is a sole breadwinner. This impact is worse if the family is a low-income family because such a family generally possess few resources, thus will be unable to cope with additional medical expenses.

Hence, HIV/AIDS not only increases mortality but immiserates the poor and widens the gap between the rich and the poor. The main objective of this study was to measure and analyze the economic impact of an adult HIV/AIDS-related death on a rural Thai household in Chiangmai province where the number of reported cases was the highest. The study specifically measures the size and significance of the economic impact of an adult AIDS-related death on household after all the coping strategies have been employed. In addition, it investigates whether the economic impact of an adult AIDS death is different from the impact of an adult death resulting from another cause. Besides that, the study also examines whether there is a link between adult AIDS mortality and low income and poverty in Thailand's rural area. Finally, the study attempts to analyze the ability of households with different

socio-economic characteristics to cope with to identify those who are most in need for government assistance.

The methodology used in this study is similar to the World Bank studies in Africa by Ainsworth and Rwegarulira, and Ainsworth and Over which are reviewed and presented in Gertler (1993).

The results of the previous studies can be summarized as follows: -

- Rural households experiencing an HIV/AIDS related death are mainly in the lowest income and are least educated group engaged in agriculture work and labor
- The economic impact of an HIV/AIDS on a rural household in terms of direct and indirect costs per death was substantial, and was greater than the impact of a death from other causes in the community during the same time.
- A substantial effect on productivity loss of about 50 percent was estimated, leading to about 47 percent loss in household income. This substantial effect would have been due to the fact that most who died of HIV/AIDS was men of prime working age. Because the size of household was small, the death of such a household member had a substantial effect on family production.
- Lost income and lost labor supply was found to be higher for the HIV/AIDS related death than death caused by other causes.
- Forty seven percent of the household that experienced an HIV/AIDS related death had a problem in caring for the elderly family members after the death. 43

percent of such elderly people were left to fend for themselves, extended family cared for 53 percent and the community and temples cared for 2 percent whereas the remaining 3 percent was unknown.

- The study also shows that despite attempts to keep the cause of death a family secret; almost half the household felt the impact of social discrimination. The discriminatory practices included social pressures to leave a job, customers rejecting or turning down orders for goods from family business, no new customer and employees quitting the household business.
- Social discrimination in the form of villages not associating with people from infected families and disallowing their children from associating with children from infected households was more prevalent.
- About 60 percent of the household that experience an HIV/AIDS related death had savings to finance their additional costs. 19 percent resorted to sale of possessions such as land, livestock, jewellery etc. Those without savings or assets had to cut back on consumption expenditure. Most other resorted to borrowings from informal sources at high interest rates. Other forms of coping strategies were in the form of government subsidies on medical services and employment benefits.

A study on the economic impact of AIDS on Malaysia by David Lim (1992) paid particular attention to the industrial sector due to its major role in Malaysia's economic development. This study points out that both the absolute number of HIV/AIDS cases and their distribution by occupation and skill suggest that the progress of the Malaysian Industrialization have not been directly hindered so far.



Using reliable sources from the Ministry of Health, it points out that Malaysia is a low prevalence country and the biggest group of cases comprise of unemployed, followed by fisherman, laborers, casual workers, estate workers truck and bus drivers – in short those of the lower end of the occupational and skill structure.

The cost imposed on Malaysia by the HIV/AIDS according to this study is also not high which is estimated around US\$2000 per patient per year.

Total cost of having 46 AIDS cases, 33 AIDS deaths and 2,900 HIV infection cases gives a total of US\$10.4 million which constitutes between 15-16 percent of annual health expenditure under the fifth Malaysia Plan (Malaysian Government 1991a,p259).

These figures are relatively significant, but when assessed in terms of their impact on manufacturing sector, they do not amount to much (less than 1 percent net value of manufactured output for 1989).

The study concludes that Malaysia being a low-prevalence country has not felt the impact of the epidemic on economic growth. However, it goes on to point out that its close proximity to Thailand could make the consequences become significant unless the government implements control and prevention measures immediately. The study also points out that the cost of delaying the implementation of an effective HIV program increases the incidence of the disease more than proportionately with the stage of the disease.

(Becker 1990) asserts this claim with reference to experiences of African countries that while cost of AIDS for a low-prevalence country is currently negligible, it will not be so in the very near future. Hence, the role of the government to grapple now

with sensitive issues of sexuality and gender relationship and act to change attitudes and policies so that the level of HIV infection is reduced drastically (Cohen1994, p.20)