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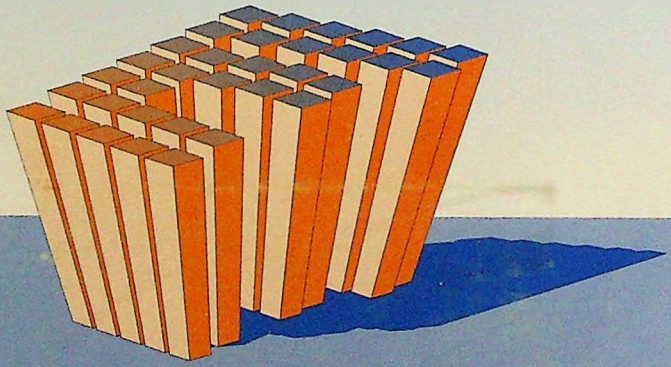
TECHNICAL BRIEFING NOTE

POVERTY AND HEALTH

an overview of the basic linkages and public policy measures



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WHO TASK FORCE ON HEALTH ECONOMICS

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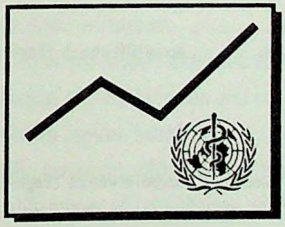
an overview of the basic linkages and public policy measures

by

Guy Carrin and Claudio Politi
Health Systems Development Programme



WHO TASK FORCE ON HEALTH ECONOMICS

January 1997

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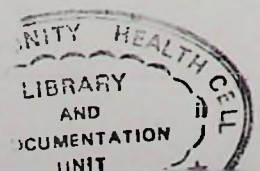

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Foreword

Building upon activities already undertaken in the area of health economics, the Director-General created the Task Force on Health Economics (TFHE) in November 1993 in order to enhance WHO's support to Member States[1]. Its goal is to further the use of health economics in the formulation and implementation of health policies, giving priority to countries in greatest need.

The Task Force aims not only to strengthen the technical content of WHO programmes so that they can better adapt the tools of health economics to country needs, but also to foster cooperation among development agencies in applying health economics at country level.

A series of documents in English and French is now available (a list of which can be on page ii) to help meet the information needs of both those involved in the organization, planning and financing of the health sector and health professionals whose expertise may lie in other areas.

This paper is the second in a new series of ***Technical briefing notes.*** These notes tackle subjects of concern to health policy decision-makers, particularly in developing countries. They are intended to provide readers who are not necessarily familiar with the health economics aspects of a subject, with information designed for non-specialists. Nonetheless, the notes are comprehensive and reflect the entire scope of a given topic.

[1] Members of the Task Force are : F. S. Antezana (Chairman), M. Jancloes (Vice-Chairman), G. Carrin (Secretary), O. B. R. Adams, S. Bertozzi, A.L. Creese, D.B. Evans, K. Janovsky, J.M. Kasonde, C. Kinnon, E. Lambo, C.L. Lissner, P. Lowry, M. Miller, J.H. Perrot, B. Sabri, Than Sein, G. Velasquez, C. Vieira, A.E. Wasunna, H. Zöllner.

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Introduction

As advanced in the World Health Report 1995, poverty will continue to be a major obstacle to health development. Low income levels are associated with debilitating disease patterns and, as well as being connected to lack of access to health services, are also associated with substandard nutrition, illiteracy, inadequate housing, lack of hygiene and lack of access to safe water. The latter are important health determinants, and thus perpetuate the low health status among the poor.

This briefing note is an attempt to identify common features of poor households, to better understand the major linkages between poverty and health, and to review the roles that public policy can play in alleviating poverty and improving health. These linkages, as well as public policy, will be studied from a micro-economic point of view. Impacts of the macro-economic environment on poverty and health are not addressed explicitly. The latter is surely important and demands additional inquiry. In fact, we understand the current analysis to be essential to any further macro-economic analysis.

In section 1, we discuss the extent of poverty in the developing world, and the role of poverty reduction in enhancing health status. A simple framework to describe the household economy is presented in section 2 which is used in order to better understand why people are poor. In section 3, the most crucial policy responses in and outside the health sector are discussed. We conclude in section 4.

1. The extent of poverty in the developing world

1.1 The income aspect of poverty

A frequently used tool to study the extent of destitution of a population is the **absolute poverty index**[1]. This index is defined as the percentage of the population that has an income below the **absolute poverty line,** *i.e.* that income level that is just sufficient to acquire both the food that is nutritionally adequate and the essential non-food requirements. The absolute poverty index can apply to a country's *total* population, its rural or urban population, or even the population of specific regions.

The number of people living in absolute poverty was estimated to be 1.3 billion in 1993 or more than one-fifth of the world population[2]. Chen *et al.* (1993) have estimated **changes** in the incidence of absolute poverty between 1985 and 1990 in 40 selected countries[3]. An absolute poverty line of 1 US $[4] is used to obtain these estimates. The incidence of absolute poverty, as an aggregate for the selected sample of countries, is relatively stable: 33.28% of the population of these countries was considered poor in 1985, and 33.13% in 1990. During this period, however, the total population of this group of countries grew by about 2% per year, and it follows that the **total number of the poor** or **headcount** has sustained a similar growth pattern. There are regional differences, however: the incidence of absolute poverty drops in East Asia, the Middle East and North Africa, and South Asia, ***and*** rises in Latin America and Sub-Saharan Africa. However, the highest incidence of poverty, namely 59%, remains in South Asia.

1.2 The health aspect of poverty

When looking at global indicators of health such as life expectancy at birth or infant mortality, the developing countries as a group have definitely made some progress since 1960. Whereas average life expectancy was 46 in 1960, it rose to 61.5 in 1993, while infant mortality decreased from 150 per 1,000 in 1960 to 70 per 1,000 in 1993[5].

[1] Also referred to as the "headcount ratio".

[2] WHO (1996), UNDP (1996).

[3] These are developing countries belonging to East Asia, Latin America, the Middle East and North Africa, South Asia and Sub-Saharan Africa, and countries belonging to Eastern Europe.

[4] A purchasing power parity (PPP) exchange rate for 1985 is used; a PPP exchange rate reflects a country's true purchasing power, expressed in dollar terms. These exchange rates therefore allow one to compare countries consumption baskets.

[5] UNDP (1996).

However, when focusing on the least developed countries (LDCs)[6], it is clear that a special effort is needed to enhance the health status of their populations, and to reduce the gap with respect to the industrialized world and even other developing countries. In the early 1990s, the average life expectancy at birth of these countries was only 51 years and the average mortality rate for children under the age of five was 171 per 1,000 live births. Average maternal mortality was 1,015 per 100,000 live births in 1993. These figures confirm a marked inequality to the rest of the world. In fact, the average life expectancy in LDCs is about 69 % of that in industrialized countries, and an excessively large gap is noted with regard to the health of women and children. Average mortality rates for mothers and children under five are respectively 30 and 10 times the average rate in industrialized countries. When comparing with other developing countries, we find that life expectancy in LDCs is about 78% of that in other developing countries, and average mortality rates of mothers and children under five are 2.7 and 2.4 times as high[7].

Within the LDCs it also appears that specific population groups are at special risk: it is estimated that, of the present total population of 540 million in the LDCs, 350 million live in poverty, particularly those in rural areas (UNDP, 1994). In addition, children suffer in particular: 30 million are reported to be dying from malnutrition each year (WHO, 1993). The average population growth in LDCs is also quite high, about 2.6% per year, and this, accompanied by migration to cities, intensifies the poverty and health problems in urban slums.

1.3 The role of income in health improvement

To what extent can progress in health be triggered by income growth? For simplicity's sake, we have measured health exclusively by life expectancy at birth. We now illustrate the relationship between life expectancy at birth and gross domestic product (GDP) per capita in 1993, using data from the 53 developing countries for which poverty data were also available[8].

Figure 1 (page 5) shows that, on the whole, economic development enhances health status: the higher the level of GDP per capita, the higher the life expectancy.

[6] Least developed countries are part of "A group of developing countries that was established by the United Nations General Assembly. Most of these countries suffer from one or more of the following constraints: a GNP per capita of around $300 or less, land-locked location, remote insularity, desertification and exposure to natural disasters" (UNDP, 1994).

[7] UNDP (1996).

[8] The data are from UNDP (1996).

However, several important derivations or outliers are noted, vis-B-vis the 'predicted' indicators[9]. In the figure, 'predicted' life expectancy is indicated by the points marked in bold. Countries such as Sri Lanka and Viet Nam perform much better than would be expected for countries in their income group, while Mauritius, Nigeria and Zambia perform less well than expected.

These findings confirm that there is more to health improvement than the level or growth of economic resources alone: the way in which countries **allocate** these resources also matters. Improving performance in the areas of education, nutrition and family planning may also improve health status, although time lags may be noted before any positive effects on health are obtained. In addition, Anand and Ravallion (1993) and UNDP (1996) demonstrated that income distribution is also an important contributory factor to health status: a more equal income distribution means better health for the whole population.

1.4 Poverty as a determinant of changes in health status

Improvement in health is the result of several factors: education, health care, environment, sanitation, nutrition, and income are some of the components cited most often as affecting the health status of individuals. Economic growth can enhance health status because it increases opportunities for better education, health care, and better living standards in general.

However, economic growth does not always mean more equity, in the sense that the living standards of traditionally disadvantaged population groups do not improve. The spreading of wealth among the socio-economic groups, or, more specifically, a reduction in poverty, plays an important role in translating economic growth into health benefits.

A simple analysis can be performed in order to examine the effect of poverty reduction on health. Using the data portrayed in Figure 1, countries can be ranked according to the size and sign (positive or negative) of the deviation from estimated life expectancy. First, the 10 countries with the highest positive deviation (the "high" performers), and the 10 countries with the highest negative deviation (the "low" performers) are selected. Table 1 (page 7) is used to compare the high and low performers. Next, for each of the selected countries, the percentage of the population living in absolute poverty for the whole of the country and that for rural areas is examined[10].

[9] The predicted values are based upon the results of a simple regression analysis: for the methodology, see Carrin and Politi (1996).

[10] The poverty data are from UNDP (1994) and refer to the period 1980-90.

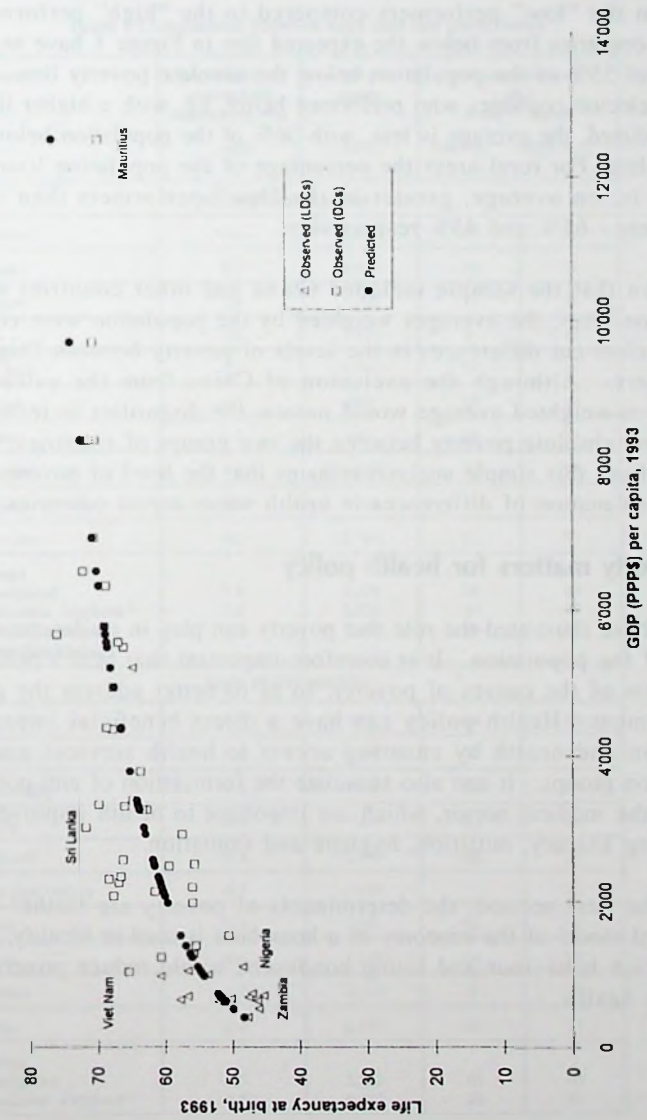


Figure 1 Relationship between Life Expectancy and GDP per capita

It is clear that levels of both **total and rural absolute poverty** are substantially higher in the "low" performers compared to the "high" performers. The 10 selected countries from below the expected line in Figure 1 have an (unweighted) average of 55% of the population below the absolute poverty line. However, for the 10 selected countries who performed better, i.e. with a higher life expectancy than predicted, the average is less, with 36% of the population below the absolute poverty line. For rural areas the percentage of the population living in absolute poverty is, on average, greater in the "low" performers than in the "high" performers - 61% and 45% respectively.

Given that the sample included China and other countries with different population sizes, the averages weighted by the population were computed. This showed clear-cut differences in the levels of poverty between "high" and "low" performers. Although the exclusion of China from the calculation of the population-weighted average would narrow the disparities in terms of GDP per capita and absolute poverty between the two groups of countries, the indication derived from this simple analysis remains that the level of poverty is significant in the explanation of differences in health status across countries.

1.5 Poverty matters for health policy

We have illustrated the role that poverty can play in co-determining the health status of the population. It is therefore important that health policy reflects an awareness of the causes of poverty, so as to better address the goal of health development. Health policy can have a direct beneficial impact on poverty reduction and health by ensuring access to health services among the poor population groups. It can also stimulate the formulation of anti-poverty measures outside the medical sector, which are important to health improvement, such as improving literacy, nutrition, hygiene and sanitation.

In the next section, the determinants of poverty are further discussed. A simplified model of the economy of a household is used to identify, in a structured way, which behaviour and living conditions would reduce poverty and, hence, improve health.

Table 1 Comparison between high and low performers

Countries	Deviation from expected life expectancy (%)	GDP per capita	Absolute Poverty (%)	
			Total	Rural
	1993	1993	1980-90	1980-90
HIGH PERFORMERS				
Viet Nam	10.8	1,040	54	60
Sri Lanka	8.5	3,030	39	46
Honduras	7.6	2,100	37	55
China	7.4	2,330	9	13
Costa Rica	7.2	5,680	29	34
Myanmar	6.6	650	35	40
Lesotho	6.5	980	54	55
Nicaragua	6.1	2,280	20	19
Paraguay	5.8	3,340	35	50
El Salvador	5.5	2,360	51	75
Average				
- unweighted	**7.2**	**2,379**	**36**	**45**
- population weighted *	**7.6**	**2,236**	**13**	**17**
- population weigthed (excluding China)*	**9.0**	**1,488**	**46**	**53**
LOW PERFORMERS				
Chad	-4.0	690	54	56
Cameroon	-4.5	2,200	37	40
Mozambique	-4.8	640	59	65
Rwanda	-5.0	740	85	90
Swaziland	-5.4	2,940	48	50
Papua New Guinea	-5.9	2,530	73	75
Malawi	-6.4	710	82	90
Zambia	-6.6	1,110	64	80
Mauritius	-6.8	12,510	8	12
Nigeria	-7.2	1,540	40	51
Average				
- unweighted	**-5.7**	**2,561**	**55**	**61**
- population weighted *	**-6.5**	**1,477**	**48**	**57**

* The population data are for 1990; the source is UNDP (1992).

2. The household economy of the poor

2.1 Basic features of a household economy

Figure 2 (page 10) shows the most important linkages (shown by arrows) between income generation, consumption and health status in a family. In this note, the family is considered the basic unit of analysis, and it is defined as a group of people living together or closely connected, sharing their food and/or working formally or informally in a family enterprise. In section 2.2, we will analyse how this basic framework can allow for the specific influence of poverty.

In Figure 2, the main inputs into the household production process are listed as **capital, other inputs and labour** (arrows 1). Firstly, capital can be of a private nature, namely land, equipment or livestock; it can be in the form of public infrastructure, such as roads or water supply, which also supports household production; or it can be common to whole villages or communities, such as river banks or forests (referred to as "common property resources").

Secondly, labour can be measured by the amount of time allocated by a household to income generation. Thirdly, "other inputs" could be, for example, the amount of fertilizer used in the event of agricultural production. Farmers are associated with all three types of inputs, while industrial workers tend to be limited to labour, although they may possess land from which they can derive additional income.

It is important to note that income earned can be in kind (such as self-consumption of vegetables), in cash, or in both[11], and may be taxed. In addition, the government may extend transfers to households. Net household income is then equal to income earned minus taxes plus transfers. It can be used to finance private consumption, or to realize savings (arrows 2). In turn, capital can be built up using savings or by borrowing (arrows 3).

Components of private consumption, especially those related to basic needs, such as food, health services, education and housing, will have a positive influence on health status (arrow 4). Health can be taken as one of the most important indicators of the family's well-being. However, the same consumption related to basic needs also influences other indicators such as the nutrition and education status of the family's members.

[11] Note here that a subsistence economy is associated with income in kind and devoid of subsequent trading activities.

The structure of private consumption will be influenced substantially, not only by income, but also by relative prices and fees (arrow 5). For example, food prices will co-determine the types and quantities of food bought, while user fees for health services are more likely to have an impact on the demand for health care.

It is not only private consumption patterns that affect health status in a family: environmental factors, such as parasitic diseases or pollution, and health behaviour[12] (e.g. with respect to sex and alcohol) are also important influences (arrows 6 and 7). It is also obvious that various public policy instruments can affect the different components of the household economy, such as the inputs, the net household income and the consumption pattern, as well as health behaviour and environmental factors. We return to these policies in section 3.

The health status of the family will have a further effect on labour, the use of capital, and other inputs (arrow 8). The quantity as well as the quality of labour (e.g. measured by productivity) can be influenced positively by a better health status of working family members[13]. In addition, better nutrition and education contribute to the quality of labour, and therefore strengthen the economic position of the family. In this sense, one can also refer to labour as "human capital" which is at least as important for economic growth as physical capital.

2.2 The household economy of the poor[14]

Poverty in households can be defined as the lack of a means to achieve minimum acceptable standards of living, in terms of food intake, housing and hygiene, education and health. The simple framework above is used to identify those factors which make households poor or even poorer.

2.2.1 Insufficient capital assets

Private capital

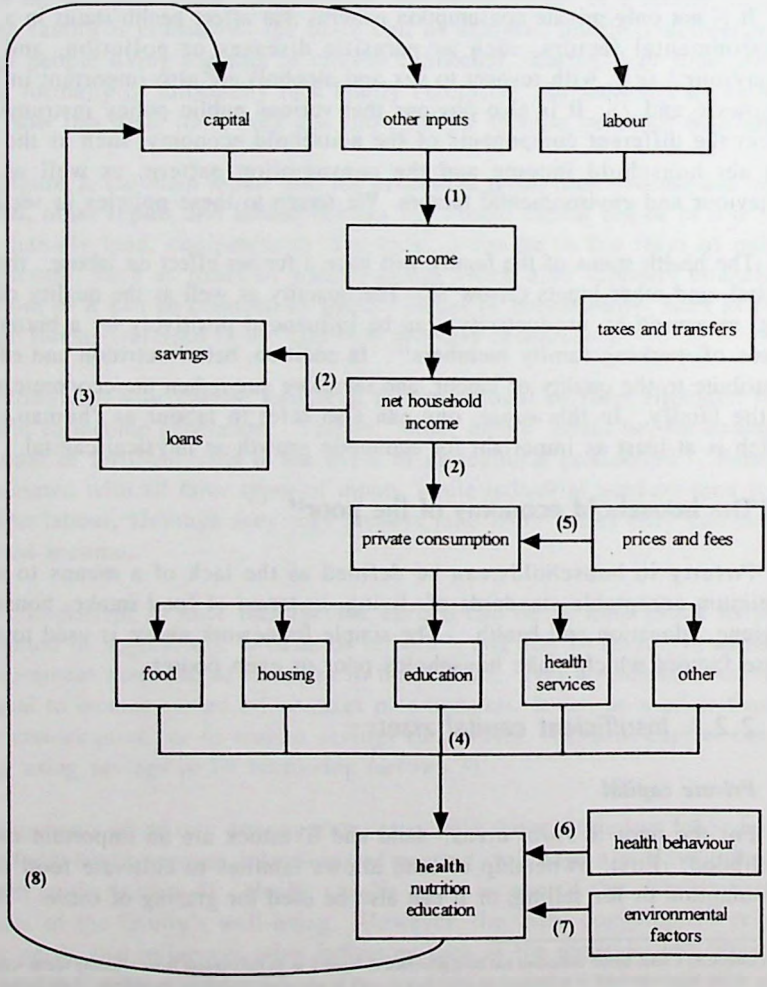
For the poor in *rural areas*, land and livestock are an important means of livelihood. First, ownership of land allows families to cultivate food for self-consumption or for selling, or it can also be used for grazing of cattle. The poor

[12] For simplicity's sake, health behaviour has been presented in figure 2 as an independent factor affecting health status. In reality, health behaviour itself is influenced by other factors, such as education campaigns. In addition, health behaviour also affects private consumption patterns, such as allocations towards food, beverages (e.g. alcohol) and housing.

[13] In this note, we make abstraction of differences in health status between individual family members.

[14] Many empirical findings reported in this section are from Dasgupta (1993).

Figure 2 The household economy



may have too little land to sustain their livelihood or they may simply be landless. In the majority of countries, the poorest 20% of the population holds a very small proportion of land: less than 5% of the total is quite common. For instance, in Bangladesh, the Gambia and Haiti, the poorest 20% of the population holds 2.3%, 3.0% and 0.8% of the total land, respectively. This type of unequal land distribution is an important factor in explaining the *extent* of poverty as a general rule.

Secondly, the ownership of **livestock** affects the income-generating process of the rural household: either by breeding and selling, or by consumption by the household itself. Livestock can also be used as collateral for loans, or it can be sold in order to sustain livelihoods during economically depressed periods. The average number of large livestock (cattle, camels and buffalo) is less than three per smallholder farmer household in 38 of the 49 developing countries for which data are available (Jazairy et al., 1992), while the average number of small livestock (sheep, goats, pigs, etc) is less than three in 25 of these countries. In addition, these averages may conceal the fact that many rural households are without animals altogether. For example, 38% of rural households in rural Ethiopia were without work oxen; 45% of small holders in Botswana do not own any cattle.

Among the *urban poor* in developing countries, one of the most important capital assets is **housing**, and so-called illegal settlements have developed in cities with their inhabitants being subject to eviction. An important contribution to poverty alleviation could be to grant legal tenure to squatters, which would provide security and increase the value of housing, and, in addition, would stimulate investment towards housing improvements.

For the poor *in general*, **inheritance** and **access to credit** are two additional factors related to difficulties in securing an adequate capital stock, with **inheritance** playing a crucial role in ensuring the availability of capital among the survivors in poor households. However, in many poor countries widows may be at risk, especially if they have no surviving sons. Despite the 1956 legislation on succession, Hindu widows in India often do not inherit their husband's property (Dasgupta, 1993). If there are surviving sons, a widow has a role as trustee of the estate, but if not, the family of the deceased husband can seize the property, leaving the widow in a vulnerable position. In this context, there also seems to be an inverse relationship between widowhood and health; it was found in India that age-specific survival probabilities among widows are lower than those for non-widows.

Another factor that contributes to economic difficulties in a poor household is **lack of access to credit**. Although credit would provide an opportunity for the poor to embark on some productive activities or to invest in land, livestock or equipment, most official credit institutions, such as state banks consider it too risky to extend loans to the poor, because of the lack of collateral. As a result, informal credit markets have arisen in many countries, often with money-lenders operating at village level. However, the rates of interest charged are usually high, making it difficult for the poorest to borrow.

Public infrastructure

Public infrastructure, such as transport systems, is evidently important for development, and is necessary to stimulate the trading of goods and services, whether in rural or urban areas. Rural areas are frequently isolated and the construction of new rural roads can enhance agricultural production; either new land can be brought into cultivation, or the use of existing land can be intensified to exploit fresh market opportunities. In urban areas, good transport infrastructure can benefit the poor through greater access to trading possibilities and job markets, and also facilitates the access to basic services such as education or health care. In addition, appropriate **telecommunications** could reduce the isolation of rural populations - easier contact facilitates trading opportunities. Access to health care can also be improved, for instance by enabling better and faster treatment of emergency cases.

Public sector involvement in **water supply** systems, both for drinking and irrigation purposes, also enhances living conditions. The availability of water can increase and stabilize agricultural production and income, while access to safe water has a direct impact on health status. Easy access to safe water also reduces collection time; in the Central African Republic, Pakistan and Papua New Guinea it has been reported that women spent an average of four hours in collecting drinking water (Jazairy *et al.*, 1992). If the collection time could be reduced, the time saved could be used for income-generating activities. Public sector involvement in **energy development**, such as in automatization and utilization of power for water pumps, irrigation and other basic activities also have positive effects on the household economy.

Common property resources

Although individual people often have rights to land and livestock, a whole group (such as a village) would benefit from common property resources such as village ponds and river banks, sources of fuel (such as wood) for cooking and heating, and forest products such as gum and bamboo. Equality of income also

appears to increase when common property resources are more prevalent. A survey conducted in 80 villages in 21 dry districts in 7 states in India found that 15-25% of the income of poor families originated in the use of common property resources (Jodha, 1986)

Such common resources also help poor families to cope when their economic situation deteriorates; for many of them, it is the only non-human asset they are able to use freely. Hecht *et al.* (1988), for example, state how important the extraction of palm oil is for the landless in the Maranhoa state of Brazil. Between harvests, this extraction is an important source of cash income.

Common property, however, might come under the authority of the government. As such, it may be subject to privatization and subsequent changes in land use, which may indirectly cause a deterioration in the health of the poor. Feder (1979) showed that privatization of land in the Amazon Basin, associated with private cattle production, affected the health of the rural poor because of a decline in their protein intake.

2.2.2 Inadequate use of labour

Labour and the rural poor

In rural areas, the institutional mechanisms governing agricultural work can be very complex, so that it is difficult to suggest clear-cut causes of poverty. For instance, tenancy is an important agricultural institution in many developing countries, and it is often tempting to associate tenancy with poverty. However, tenants are not necessarily small farmers, and are therefore not always poor.

What can we say then about poverty related to labour? First, the poor may have only small plots of land and little purchasing power to buy agricultural inputs such as seeds, fertilizer and pesticide. Since labour productivity on such plots is low, a poor farmer may seek work on the labour market, becoming a labourer-cultivator. However, it is not certain that he will find regular work and so may have to rely on casual labour. Secondly, the poor without land can only hire out their own labour, as this is their only asset. This "potential" labour has to be converted into "actual" effective labour, and this is possible only when the person is adequately nourished and when he has access to basic health care. Those poor that lack food and proper health care are therefore often unable to find a job, as potential employers judge their productivity as excessively low. The end result is that the landless poor are often not able even to hire out their own labour, and their economic situation declines even further.

The informal sector in urban areas

The informal sector in urban areas is made up of informal small-scale activities such as petty trade, small repair (bicycles, knife sharpening), hawking and pedi-cab services. These activities are unregulated by government, and, in addition, informal workers do not generally have access to any form of social security.

A significant number of the informal workers are underemployed and unemployed people from rural poor areas who move to cities or villages in the hope of finding economic opportunities that exceed those at home. If they do not find a job in the formal sector, they tend to move quickly to the informal sector. Official statistics often fail to capture the magnitude of the informal sector - in developing countries in the early 1980s, 20-70% of the urban labour force was engaged in informal sector activities, the average being around 50%[15].

In many developing countries, the informal sector is also quite important economically because of its linkages with the rural economy and the urban formal economy. The rural areas "send" labour at low cost to the informal sector. The urban formal sector provides consumers for low-priced products and services from the informal sector. These low prices partly explain why informal workers may be quite poor, even though they may have a full-time activity. They may live in shacks in slums where public services - electricity, water, drainage, transportation, and educational and health services - do not exist. They may even be homeless, working only as day-labourers and hawkers, and therefore be the poorest of the poor.

Migration is another result of poverty in countries or in specific regions of countries. This can have advantages, such as the migrant transferring money home to help sustain the livelihood of his family. However, migrants may abandon the elderly and dependants at home, thus leaving them poorer and possibly at greater risk of illness. In addition, migrants may be required to take on dangerous or insecure jobs refused by the residents of the area. Mining is a clear example of occupations involving high health risks, such as lung diseases, other disabilities and accidents. Poverty may thus induce people to accept the risk of illness because no alternatives are available.

2.2.3 *Allocation of income*

It was explained in the previous section that insufficient income is caused primarily by a deficient level in the production factors. In theory, this income

[15] Todaro (1989, pp.268-269).

could be complemented by the government, for example, via transfers. It is rare, however, that governments in developing countries, especially the least developed, have the financial capacity to allocate important transfers of funds. Rather, they attempt to improve the well-being of the poor using pricing or subsidy policies that have an impact upon the current income of the poor by improving their purchasing power. For instance, exempting the poor from paying fees for education or health services is an important form of social protection. Targeting the poor with low-priced food (or from food stamps) or housing subsidies can also be part of the Government's anti-poverty policy. It is also recommended that migrants be integrated as rapidly as possible into the local economy, and be granted the same health and education benefits as the local residents.

Clearly a basic needs policy[16] would help to minimize expenditure for basic necessities. This could help poor households to start saving, which is only possible when there is a surplus of income after financing necessities. Savings are important to build up capital which will increase future production. Savings, which could be in the form of money or land and animals, may also be used to maintain levels of consumption in times of economic stress. Households without savings may have to cut consumption of food, needed health care may no longer be accessible, and children's attendance at school may suffer. They could borrow money to sustain their consumption level, but then part of future earnings would have to be allocated to pay back these loans.

2.3 The health determinants

Private expenditure patterns are clearly linked to health status. The first basic commodity bought or produced by most households is **food**. Poor households spend most of their income on food - the estimated average is 70% in Sierra Leone - but higher figures are probable in the poorest segments of this population group. When such a high proportion of income is allocated to food, even small negative income variations may suddenly reduce food availability unless savings are tapped or money is borrowed. It is also evident that malnutrition affects the health status at all ages. Inadequate food intake in particular is the main cause of high rates of infant and child mortality in poor countries. Poor nutrition and associated diarrhoeal diseases are reported to be responsible for around 3 million child deaths in developing countries in 1995[17].

[16] A basic needs policy, as emerged at the World Employment Conference in 1976 (ILO, 1976) should include achievement of certain minimum requirements for private consumption at the household level: adequate food, shelter, clothing, household equipment and furniture. It also should include essential services provided by and for the community, such as safe drinking water, sanitation, public transport and health, educational and cultural facilities. Closely connected to the concept of basic needs is the notion of "entitlements" introduced by Amartya Sen (1983).

[17] WHO (1996).

Poor **housing** usually implies crowded housing, lack of water supply, sanitation, proper storage or collection of refuse, which are a root cause of several kinds of disease, both communicable and non-communicable. In fact, housing could represent a partial protection from diseases and infections related to the surrounding **environmental conditions** if minimum housing standards were achieved, but this is often not the case with poor households. Poor people often live in regions where there is a high prevalence of vector-borne diseases such as malaria and sleeping sickness. The use of impregnated bednets or fly traps, which could help to alleviate the situation, is constrained by the availability of cash income, and the absence of an adequate supply of safe drinking water and sanitation facilitates the diffusion of schistosomiasis and other intestinal parasitic infections.

Efforts in the area of **education** can help to alleviate the burden of illness by preventing hazardous behaviour and stimulating proper actions for avoiding or curing disease. Education contributes to hygiene and safe living conditions, and also has a role in the adoption of birth control methods and therefore in achieving a desirable family size. In most societies, women's literacy and education play a crucial role in enhancing the health status of the household, because as key family figures, women can promote healthy behaviour and so improve household living conditions.

Finally, it is evident that both curative and preventive health care are important determinants of health status. **Curative health care** is increasingly on a fee-for-service basis in many developing countries, which, although helping to finance and improve the quality of health services, must be carefully implemented to avoid the exclusion of the poor. In fact, poor households could have to allocate too great a share of income to health care. In Bangladesh the poorest population (belonging to the first income quintile) spends about 7-10% of its income to cover health expenses compared with 2-4% of the income of the better-off groups. In addition, sudden health-related shocks could cause a further deterioration in economic status and lead to indebtedness and erosion of savings. For example, between 1990 and 1994, 21%[18] of previously non-poor households in Bangladesh slipped into poverty as a result of health-related causes.

Preventive **health care**, such as immunization, prenatal care, information campaigns (e.g. about AIDS, and smoking), is crucial in restricting the spread of disease. But these are areas where the intervention of the public sector is warranted because the benefits of prevention typically extend beyond the benefits that an

[18] From an analysis of panel data carried out by Sen (1996).

individual would experience from this type of intervention. In fact, groups of people, or even whole communities, can benefit from vaccinations that are given to individuals, or from changed health behaviour by individuals as a result of an information campaign. Such activities are said to produce "externalities" and therefore merit public intervention. In other words, for the sake of the benefits to society as a whole, the government can ensure that preventive activities are undertaken via co-financing or via direct provision.

2.4 Human capital and income generation

When looking for explanations for poverty, it is important to look beyond the **quantity** of labour alone. The quality of that labour is also important. Investment in education, nutrition and health-related activities in general improve the quality of the population (measured, for instance, by better skills and knowledge, and health status), which in turn enhances the economic prospects of the poor[19]. These investments are therefore said to contribute to "human capital" as was already referred to in section 2.1.

In the area of **education**, literacy opens up job opportunities otherwise denied. Better utilization of land or access to credit can improve the level of income. A common problem related to poverty is that children begin working at a very young age. Poor families are confronted with a trade-off between an immediate income gain, albeit modest, and a long-term investment in education that results in greater future gain. Economic necessity often forces poor families to choose the former solution.

Nutrition and health are also critical variables within the household economy as malnourishment and sickness are translated into poor working performances and/or difficulties on the job market. It stands to reason, therefore, that the health of working family members, certainly in the absence of a formal social protection system, determines the survival of the family. In addition, the low health status of non-working members, such as the elderly or children, can increase poverty if their access to health care is obstructed. Time and money are necessary to look after sick relatives, and given a low income, poor families either cannot look after their relatives properly. Or they spend money on health care, but at the expense of other necessary expenditure such as for children's food or education.

[19] Schultz (1981, p.7)

2.5 Summary

The linkage between poverty and health was discussed using a simple household economy framework. Although real life is obviously more complex, the household economy model helps us understand the negative spiralling process towards further deterioration of poverty and health, when unfavourable "starting" conditions apply. If people initially have inadequate capital (for example, the landless or street hawkers), their potential to generate income and therefore to sustain good health, is low. The underemployed and unemployed will face similar risks if they remain outside the labour market. Other population groups, including widows, displaced people and refugees, may unexpectedly find themselves without necessary capital and labour. Families may also find themselves trapped in the vicious cycle of illness and poverty, when working members of household fall ill. Missed income may reduce the purchasing power and living conditions of the entire household, in turn making its members more vulnerable. Furthermore, expenditure on necessary health care may preclude expenditure on other basic commodities, such as education, food, clothing and housing. This "disequilibrium" in the household expenditure pattern may reduce households to a state of poverty, or may worsen poverty in those households that are already poor.

A "general" public policy instrument is a process whereby public sector funds are distributed throughout the regions of a country, guided by the needs of the poorest regions. "Specific" public policy instruments are used both within the health sector (e.g. exemptions from user fees) and outside it (e.g. credit to the poor). These leading public policy instruments are discussed below.

3. Public policy instruments for poverty reduction

3.1 Allocation of public sector funds across a country´s regions

In many countries, although regions or provinces may have powers to allocate and spend funds, they still receive most of their budgets from the central government which decides how its funds are allocated across these regions.

In a first scenario, regions would establish regional socio-economic plans with associated budgets for recurrent and capital expenditure. If a country has adopted a poverty alleviation focus for its policies, it would be expected that the

different regions would reflect the needs of the poor in their plans. As a result, public sector funds would be allocated to these regions. It could be argued that this is an example of the transfer of **conditional public budget funds**, whereby central government is able to keep direct control over the allocation of regional funds. Insufficient concern for poverty alleviation within regions may prompt the central government to ***request*** a revision of the original socio-economic plan. However, although poverty alleviation may be an officially declared policy objective, funding allocations favouring the poorer regions is not always easily accepted, and it should be anticipated that substantial political discussion may precede the actual allocation.

A second alternative is for the central government to allocate **unconditional public budget funds** to regions without intervening in the establishment and execution of regional socio-economic plans. However, it is likely that the government would want funds to be distributed so that the poorer regions receive extra support, and in this case, the regions themselves would have to adopt a poverty-conscious policy. Central government funds are allocated according to criteria such as population size, regional income per capita, and social indicators, e.g. infant mortality and literacy rates.

It is to be emphasized that allocation of funds based on population size alone is inadequate because it assumes a similar socio-economic status for population groups. This would mean that a region would receive the same amount of public funds per capita, whether it was rich or poor. In order to favour the poorer regions, it is better to combine the above mentioned criteria. For instance, the larger the population size of a particular region, the lower its income per capita and its literacy rate and the higher its infant mortality rate, the greater the share of government funds that should be allocated to that region.

Countries may also have a more federal structure, with important provincial or regional fiscal autonomy. In this case, transfers from central to regional authorities become less important, but these more autonomous provinces or regions then have the responsibility of deciding how much funding to channel to the poor districts or localities. Again, conditional and unconditional grants can be used to improve socio-economic status, particularly of the poorer districts or localities.

3.2 Specific poverty reduction instruments

3.2.1 *Making factors of production available to the poor*

As shown by the household economy framework, the initial distribution of inputs such as capital and labour is crucial in avoiding poverty. Policies that improve an inadequate initial distribution of factors of production are therefore more likely to alleviate and/or eradicate poverty. Three such policies are discussed here, namely land reform, credit to the poor and public works [20]. Land reform aims to improve the availability and use of land to improve income from agricultural activities among the otherwise poor population groups; the allocation of credit to the poor can help to build up both capital and labour; public works ***initially*** result in more capital, but can also directly improve income due to the employment generated.

Land reform

Land reform is often quoted as a significant method of reducing poverty. There are three types of land reform measures: land redistribution, tenancy reform and land titling. **Land redistribution** can be said to be equitable as the landless and small landowners are usually poorer than large landowners. In addition, a claim for efficiency can be argued in that redistribution of land increases farm output. To support this efficiency argument, the inverse relationship between farm size and output per hectare is often quoted. Lipton (1991) points out that families can improve land quality on small farms by taking better care of the land (e.g. levelling, irrigation), especially in slack periods. A special reference should be made to the benefits generated by land reform in Japan, South-Korea and Taiwan (China) in their initial stage of development. A higher farm output led to both higher income and savings, which in turn financed a growing capital stock. In addition, the higher incomes enhanced the demand for domestic products. It is also recognized that the redistribution of income in those countries contributed to stability and provided an attractive environment for both domestic and foreign investment[21] .

Tenancy reform comprises measures to regulate property rights, land sales and rentals. Sharecropping contracts[22] have been favoured for mainly two reasons: (i) any payments to be made by the tenant are scheduled at the period

[20] This section relies heavily on chapters 5 to 9 of Gaiha (1993).

[21] Stiglitz (1996, p. 167).

[22] This is a contract whereby a landowner leases out land to a tenant for a fixed share of the output.

of the harvest when cash is available; and (ii) such contracts give tenants easier access to complementary capital inputs. In 1979, the household responsibility system was initiated in China. As a result of this major tenancy reform, families received land tenancy and were permitted to make their own choice as to cropping and use of new technologies. They were also allowed to sell any crop surpluses[23] on the market. This has resulted in a strong growth in agriculture over the period 1979-1984, and has also contributed to a distinct reduction in rural poverty.

The concept of **land titling** is often associated with a greater tenure security that in turn increases investment in land improvement. In addition, it is argued that it can help families in obtaining credit by being used as collateral. However, the importance of land titling seems to be uncertain. The connection between land titling and long-term investment is slight, especially in Africa, because other forms of tenure such as long-term leases or communal land ownership may be as efficient in generating investment as formal ownership. Also, the link between land titling and access to credit is also open to debate; in Africa, the link is weak, but in Asia, especially in Thailand, land is used as collateral for formal sector loans.

Credit

Credit is important to the poor as it helps to sustain their level of consumption during difficult times, and also enables them to finance both physical and human capital investments. Yet, credit is often limited or non-existent for the poor because lenders may judge them to be too risky: they probably do not have collateral, they may not be able to repay their debt, and, furthermore, legal enforcement of contractual obligations may be weak. From the other side of the coin, the poor may consider transaction costs related to borrowing as too high, geographical access to banks may be difficult, procedures may be difficult and disbursement of loans may take time.

The government may play a useful role in addressing these problems by contributing financially to the establishment of financial institutions which aim to give access to credit to the poor. Transaction costs can also be lowered by bringing credit institutions closer to the population and by simplifying the processing of credit applications and disbursements. In order to improve the operation of the credit markets, the government can improve the property rights system, thereby enhancing contract enforcement. The government can also

[23] This is the surplus above the amount they were obliged to sell to the State.

promote the use of other types of assets as collateral, such as jewellery. This is particularly important for women, who rarely have land or other assets registered in their names.

Lessons learned by country experiences in banking for development and health were described during a joint WHO-IBRD workshop[24] and the major components of successful credit models were identified. These include: i) quick and convenient access to small, short-term loans, which may be increased, depending on steady repayments and the growth of economic activities; ii) decentralization and focus on sectors where poor people work; iii) reduced transaction costs, both for lenders and borrowers; iv) loans offered at unsubsidized rates - recognizing that low income people are able and willing to pay what it costs an efficient lender to provide sustainable financial services; v) achievement of adequate repayment rates to engender confidence and mutual accountability; vi) promotion of small deposits and ready access to funds; vii) building a solid and growing financial base. An example of a well-functioning credit scheme is that of the Grameen Bank in Bangladesh[25] [26]. This scheme was established in 1983 to supply credit to groups of landless and poor women in order to stimulate self-employment. By the end of 1994, 1,044 branches were established in more than half of the country´s villages, indicating Grameen Bank´s success. It is also interesting to note that the repayment rate was 98%, and that there were less poor among the members of the scheme than there were in villages which had not yet established a branch.

Public works

In rural areas, public works, such as road construction, flood protection and construction of water tanks, have always been a response to emergency situations such as droughts and famine. They have also been used as instruments of poverty reduction in periods of large-scale unemployment and underemployment in the rural sector. However, more recently, they have also been used by many developing countries as a regular component of poverty reduction strategies. One example in Africa is the Labour Based Relief Programme (LBRP) in Botswana, which was introduced in the 1980s to provide drought relief and employment opportunities to the rural poor in village improvement schemes.

[24] Mancuso (1994, ch.2).

[25] Khan (1996).

[26] Mancuso, op.cit., pp.42-48.

In India, the Employment Guarantee Scheme (EGS) of Maharashtra State has contributed to rural employment for many years now, employing between one-sixth and one-third of the unemployed and underunemployed in Maharashtra. The Food For Work Programme (FFWP) in Bangladesh helped to avert impoverishment and starvation in 1988. Also, in Latin American countries such as Bolivia, Chile and Peru, public works have been used to compensate reductions in private sector labour demand in periods of structural adjustment and shock, such as during the heavy recession in Chile in 1983, when the public employment programme employed 13 percent of the labour force.

In urban areas, public works in sanitation are particularly important in poverty-reduction schemes, and these are not organized and financed solely by governments, but also by communities and NGOs. An example is the NGO-initiated Orangi Pilot Project (OPP) in Karachi (Pakistan), whereby low-income households in an unplanned settlement participated in the financing and management of a low-cost sanitation programme, involving the construction and maintenance of pour-flush latrines in homes and underground sewerage pipelines in lanes[27]. It is important to be as flexible and unbureaucratic as possible in establishing development projects in close collaboration with informal sector population groups (de Soto, 1987).

3.2.2 *Improving human capital: nutrition and education*

In the previous section, we argued that nutrition, education and health constitute important elements of human capital. In this section we show that enhanced human capital is likely to improve people's welfare. First, food policy is discussed as a way of improving nutrition. Investment in education is then reviewed, including the synergy between nutrition, education and health. Typical anti-poverty instruments in the health sector are discussed in the next section.

Food policy

The poorer sections of the population can benefit significantly from food subsidies, in view of the major part played in the household budget by expenditure on food. A meaningful food subsidy scheme is one which extends a general food price subsidy to the whole population, such as the scheme carried out by Egypt in the early 1980s which confirms that there is a positive impact on the welfare of the poor. Under this scheme, the food subsidies amounted to 10.8%

[27] Orangi Pilot Project (1995).

and 8.7% of expenditure of the poorest rural and urban households respectively. However, one drawback was that the richest population categories also benefited; in fact, the total amount of food subsidy transfers to them was larger than that for the poor.

Alternative schemes include support targeted specifically at the poor, such as subsidies instituted exclusively for those food products that are predominately consumed by the poor. A second option is geographic targeting, which directs subsidies towards poor regions or villages. Rationed food subsidies is a third alternative: quotas or rations of subsidized food are calculated, to ensure access to basic food at a fair price. This type of food ration scheme has had a significant positive impact on the welfare of the low-income population in Sri Lanka and Kerala. Food stamps are another alternative, constituting a parallel currency. The government must ensure that these are accepted by shopkeepers, who then must be able to cash them in. The food stamp programme in Jamaica has efficiently protected vulnerable groups, such as pregnant and breast-feeding women, and children under 5 who are registered at primary health care centres.

Another option is the establishment of supplementary feeding programmes, whose objective is to reduce undernutrition through the distribution of subsidized or free food in nutrition and health centres, or through schools. In India, the Tamil Nadu Integrated Nutrition Project (TINP) has been quite effective in the rural areas of the six districts with the lowest caloric consumption in the state. This project applied age-targeting, by focusing on children aged between 6 to 36 months.

Investments in education

Public investment in education constitutes an important element of an anti-poverty strategy. Illiteracy and substandard education help to maintain existing poverty because poor people do not have sufficient skills to increase their income. For financial reasons, a government might abolish a system of free education and introduce user fees. In this case, it is crucial that poor families do not opt out of the eduction system, so exempting them from paying user fees may become necessary. In terms of education, perhaps primary education should be the priority for developing countries, for reasons of simple economic efficiency alone: the net returns to primary education (measured in terms of income) exceed those of secondary or higher education.

Special attention should be paid to the primary education of girls. Evidence in many developing countries shows that gender disparity in education is

prevalent among most population groups. Apart from cultural reasons, there are also economic reasons for this disparity. In many countries girls are involved much earlier in household activities than boys, so the opportunity cost for parents of enrolling girls in school is high. In addition, the livelihood of the poorest families may depend on delegating a substantial amount of household activities (care for siblings, collecting water and wood, caring for animals, cooking, pounding grain etc.) to children, especially girls. An anti-poverty strategy would thus have to include policies to reduce the opportunity cost related to girls, such as the provision of community water and wood supply, or the introduction of flexible school hours.

Synergy between nutrition, education and health

It is obvious that better availability and consumption of food leads to better health for the poor. In the case of children, better health may result in improved school attendance and higher educational achievements, in turn enhancing job opportunities and leading to improved income. This additional income could then be used to finance higher investments in nutrition, eduction and health. This process can only be reinforced by better education and information about nutrition and health. In other words, there are strong linkages between nutrition, education and health, and combined efforts in these three areas are generally better than an isolated effort in one area alone.

3.2.3 Improving human capital: health

3.2.3.1 Public resources allocation for health services

With regard to poverty-conscious allocation of public sector funds, the same reasoning as that employed in section 3.1 can be used here. Government can ensure that adequate funds for health are channelled to the poorest regions through conditional funds, and it may also transfer unconditional funds to the poorer regions. In turn, the regions are expected to address the inadequate health status and health care problems of the poor.

Whatever the method used to channel funds for health to poor areas, it is necessary to ensure that the **health needs** in the regions, and its districts and localities, are properly reflected in its health budgets. In this "prospective" budgeting, the needs of the poor must be explicitly included. It is clear that any enumeration of health service needs should take into account the essential curative services needed by a population, based on epidemiological patterns. However, it should also allow for specific health interventions such as immunization, infectious disease and vector control, and environmental health and health education projects.

While budgeting the needs for services and interventions, the basic rule of technical efficiency (minimizing costs for planned activities) should be applied. This rule implies that pharmaceuticals, for instance, should be budgeted (and later purchased) at the lowest cost possible, while respecting certain standards of quality.

In the area of human resources, increasing the number of paramedics and/or village health workers (who require shorter and less expensive training than doctors) can increase technical efficiency, provided that they can adequately maintain basic health services. If the government is technically efficient, it can save funds which can be used for further productive activities in the health sector. In the event of cost-sharing, it could contribute to financing exemptions for the poor, for instance.

3.2.3.2 *Establishment of cost-sharing while safeguarding the interests of the poor*

The government has a role in the establishment of cost-sharing methods, for instance with enterprises and households, while safeguarding the interests of the poor. Increasingly, governments are turning to new forms of health care financing, often when they can no longer assume the financial charge of all recurrent and capital costs related to health care.

User fee arrangements

A great deal of caution has been expressed concerning cost-sharing systems based on user fees, which is justified, in view of the empirical evidence[28]. For example, Gertler and van der Gaag (1988) showed that while all patients in Côte d'Ivoire reduced their demand when prices increased, the poor reduced their demand more strongly, and a similar study by Gertler et. al (1988) for Peru showed comparable results. There is an important caveat, however; when user fees are used to improve the quality of health services, the reduction in demand may be lower than expected, or demand may even increase. This was shown by the findings of Litvack and Bodart in Cameroon (1993), which indicated that when essential drugs are offered at competitive prices in rural areas (*vis-B-vis* those charged in private pharmacies or by drug sellers), and if the drug supply is guaranteed, then there is an increase in demand for health services at public health centres by the poor.

[28] See Creese (1991) and Carrin, Perrot and Sergent (1994) for reviews of the impact of user fees on the demand for health services.

However, even if revenues from user fees are ploughed back into the health system, access by the poor still remains a significant concern. Abel-Smith and Rawal (1992) refer to a situation in Tanzania whereby hospital drug supplies and food are insufficient, so that patients have to pay more elsewhere, in addition to their travel costs. They conclude that modest fees would be better than the existing situation, if fee revenues contributed to adequate supplies at government health services. Abel-Smith and Rawal (1992) clearly recommend that an attempt should be made to exempt the poor from paying any user fees established for government health services.

Several methods can be used to ensure access by the poor. One method would be to ensure that traditionally expensive treatments, even at primary care level, become affordable, for example, by applying a system of cross-subsidization. For example, subsidization of treatment with antibiotics, thus ensuring an affordable user fee, could be financed by levying small surcharges on other (traditionally less expensive) treatments. If this method proves insufficient to guarantee access to health care by the poor, an alternative would be complete exemption from payment for all health services provided, or for a selected number of important health services (e.g. vaccinations, children's health care and maternal care).

Exemptions can be established on an informal basis, such as health centre personnel making a selection on a case-by-case basis (in view of their general knowledge of the population served). More formal mechanisms may also be established, such as explicit identification of the status of poverty, using simple criteria, such as landlessness, abandonment by spouse, family size, and, of course, level of cash income.

Whichever method is chosen, it is clear that any effective system of exemption implies a minimum of solidarity between population groups. Either the non-poor will need to pay surcharges which should be sufficient to finance the health care cost of the poor, or the government (perhaps assisted by donors) could contribute via a special fund. In practice, however, several constraints make the implementation of user fee and exemption policies rather difficult [29]. For example, if user fee schemes cover large population groups, difficulties may be experienced in collecting and using information about the true socio-economic status of families. Also, if fee revenues are not retained locally, the incentive to collect them and use them for quality

[29] For an analysis of cost-recovery implementation issues drawn from recent experiences in low income countries, see Creese and Kutzin (1995) and Gilson (1996).

improvements in health services may be undermined. Finally, a user fee scheme may not be easily accepted by a population which is not used to paying for health services. Careful publicity and information campaigns will be needed in this case to facilitate the acceptance of cost-sharing.

Health insurance

Recently, several developing countries have begun implementing simple health insurance or prepayment schemes[30]. One of the main features of these is that the cash income position of an insured person is no longer necessarily an obstacle to health services access. In addition, health insurance is based on the principle that contributions from all those insured are pooled, which (in principle) permits solidarity between the sick and the healthy, but also between the well off and those that are less well off. However, this solidarity is only guaranteed if health insurance is compulsory. If it is voluntary, then individuals with average or lower-than average risks of illness will be less likely to join, while the number of individuals with higher-than-average risks of illness remains the same or similar, and the pooling, or spreading, of risks between the healthy and the sick does not materialize. This "adverse selection" also tends to increase the average health care cost of the insured, and therefore has an impact on the level of insurance premiums which may become excessively high and deter the poorest from signing up as members.

Another possibility is the introduction of a voluntary and uniform flat-rate premium system, which may mean, however, that premiums exceed the capacity to pay of the poorer sections of the population. However, the experience of the Bwamanda Prepayment Scheme, which charges a flat premium per insured individual, is worth noting. Membership in this scheme expanded from 27.5% of the population in the Bwamanda Zone (in 1986) to 62.3% of the population in 1988. It has been found, though, that poverty deters people from buying the (voluntary) health insurance card[31].

It is important, especially in the early stages, that health insurance schemes bear in mind that their final purpose is the improvement of health of the entire population, and that special consideration should therefore be given to the situation of the poor. Many "young" schemes start with compulsory insurance for workers of the modern sector, and then expand to include the

[30] For an overview of recent experiences, see Ron (1994).

[31] See Moens and Carrin (1992).

establishment of voluntary insurance for the other population categories, such as (i) the families of workers; (ii) agricultural workers and the self-employed and their workers. Inclusion of these groups can be done in stages, of course, but it is important to realize that all risks need to be pooled in order to achieve true health insurance.

In addition, the government should consider the adoption of differential health insurance premiums, i.e. premiums according to the economic status of the population, the purpose of which is to attract as many people as possible from the low-income categories. This brings us back again to the question of access of the poorest. A possible solution is the subsidization of health insurance premiums. Those that have standard insurance could pay an extra surcharge on their premiums, or the government could establish a special health insurance provident fund in order to finance the premiums of the poor. This fund could also be supported by donor contributions.

A further caution

Cost-sharing in health care, whether user fee or health insurance schemes, are not simply mechanisms to generate revenues, but rather instruments of public health.

Cost-sharing mechanisms should improve the health status of the population by improving the access to health care by the poor. They should do so by improving quality while minimizing the costs of health care: e.g. cost-sharing schemes could guarantee the availability of essential drugs and provide them to users at the lowest cost possible. Cost-sharing should also be consistent with health needs in the various regions, some of which will be poorer than others, with a lower capacity for cost-sharing and development of the health system. It is expected, therefore, that cost-sharing initiatives allow for some redistribution of resources between areas.

3.2.3.3 Further improvement of access to health care

Health policies should also take into account the specific living conditions of many of the poor in developing countries. There may be several barriers to the utilization of health care, such as living in isolated areas, illiteracy or simply shortage of time, and policies are required which address more than the financial aspects alone of lack of access and care.

The amount of time involved in travelling from the home to a health centre may seriously delay or obstruct access to care. Furthermore, farm labour during harvest time or household activities by women may be so precious to

families that they cannot afford to give up, say, a day's work in order to seek care. In other words, the opportunity cost of seeking care may become too high. The health system should allow for this type of factor, by organizing e.g. outreach activities which ensure that isolated families have access to treatment.

Time-saving could be improved by the establishment of multipurpose integrated facilities providing primary health care services, such as vaccinations, family planning and health education[32]. That the access of poor households to health care is often made difficult because of distance is demonstrated by Baker et al. (1993) with reference to C^te d'Ivoire, Ghana, Jamaica, Peru and Bolivia. They found that the percentage of the urban population seeking care is substantially higher than that of the rural population, largely because of shorter travel distances and greater numbers of medical facilities in urban areas. In some instances, the likelihood of an individual seeking medical care is twice as high in urban areas[33].

Lack of education and cultural factors can also represent barriers to modern health care. Ignorance about certain illness symptoms may account for families "doing nothing" in the face of illness. Cultural beliefs may also explain why family planning and prenatal care are not perceived as essential for family health. Health systems should therefore facilitate the spreading of health information and stimulate the application of newly obtained knowledge in close collaboration with communities.

3.3 Summary

Figure 3 summarizes the influences on the household economy of the specific poverty reduction instruments discussed above. This figure can also be used as a quick guide to an initial assessment of the poverty situation, and its links to health at country level.

First, upon inspecting the core of figure 3, which represents the household economy, one can investigate where the main causes of poverty lie. In other words, among the causes "lack of inputs and income", "lack of basic needs", "health behaviour" or "environmental factors", which are the most relevant?

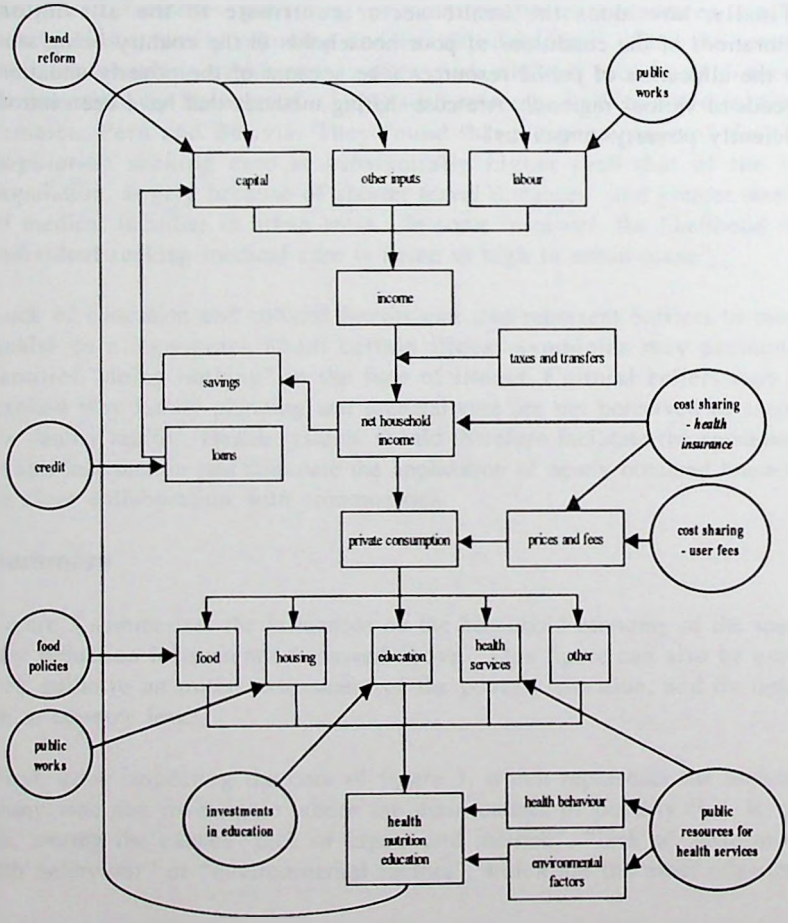
[32] Kutzin (1993).

[33] It is true, of course, that differences in income partly explain differences in effective access to care.

Secondly, one could investigate what are the major public policy instruments used in the country and how they have been effective in reducing poverty and enhancing health status? In addition, when scanning the public policies depicted in figure 3, is there any area of policy intervention that has not yet been explored? If indeed some policy interventions have not been applied, what would be the conditions to be met before they could be applied effectively?

Finally, how does the health sector contribute to the alleviation (or deterioration) of the conditions of poor households in the country being studied? Does the allocation of public resources take account of the poverty situation and the needs of various regions? Are cost-sharing methods that have been introduced sufficiently poverty-conscious?

Figure 3 Influences of public policy instruments on the household economy



4. Conclusion

First, it has been shown that poverty in developing countries is an important indicator of health status. In a sample of countries with a similar level of GNP per capita, those countries with a lower absolute poverty incidence are achieving a better health status. Overall development policy should therefore incorporate significant poverty eradication strategies for the sake of realizing health improvements.

Secondly, a simple framework was established for the explanation of poverty at household level: the level of traditional inputs, capital and labour, into the household production process may be inadequate; capital may be constrained by lack of land or by rationing of credit; the quantity and quality of labour may be insufficient due to low health status and sheer poverty in general. Poverty can therefore start a vicious circle of "poverty - lack of inputs - poverty". Land reform and investment in human capital were shown to be important policy instruments to break this cycle.

Thirdly, we analysed how government intervention could benefit the poor. Government health policy can arrange for an allocation of public resources in favour of the poor, and the government can regulate and monitor health financing schemes in such a way as to safeguard or increase access of the poor to health services.

Fourthly, attention was drawn to a number of government policies outside the health sector that have a poverty-reducing effect, and thus indirectly benefit health improvement. The government health sector should be aware of the nature of these interventions, in order to develop appropriate intersectoral policies.

Finally, it is hoped that a better understanding of the broad approach to poverty reduction presented here will stimulate country analysis and policy formulation. Application of the framework in a specific country context will help in designing a policy package that takes into account the various synergies between interventions. In addition, it will enhance knowledge of the specific lags involved in policies and related health outcomes. In other words, it is only through a country-focussed empirical analysis that concrete and reliable indications for policy-making can be obtained.

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