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## Debt relief and health care in Kenya

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**WIDER**

World Institute for Development Economics Research

Discussion Paper No. 2002/65

## **Debt Relief and Health Care in Kenya**

Paul Kieti Kimalu \*

July 2002

### **Abstract**

Kenya's external debt has continued to swell over the years, and despite the country meeting its debt commitment through regular servicing, this has been done at the expense of key social services such as health, education, water and sanitation. Although good health is a pre-requisite to socioeconomic development, public budget allocation to the health sector has been dwindling over the years in per capita terms. Furthermore, development of health infrastructure has not kept pace with the population growth rate. In particular, many health facilities lack the necessary equipment and medical supplies.

Medical personnel, trained by the government at public expense, are leaving the public service in large numbers for better opportunities in the private sector and in other countries. The HIV/AIDS pandemic and other emerging diseases are taking toll on the country's population, as resources available to the health sector are not adequate for effective treatment and prevention of these diseases or for the mitigation of their consequences.

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Keywords: debt relief, health care provision

JEL classification: I10, I11, I13

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The Kenyan health system needs additional resources for recovery. The paper explores, in a general way, how additional money from debt relief might be used to improve the health conditions of the population. The paper proposes that possible debt relief proceeds be invested in general preventive health care, human development, health equipment, medical supplies, health infrastructure and in programmes for preventing and treating HIV/AIDS-related diseases.

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## **1 Introduction**

The achievement of good health is critical to enhancing human development. Good health is both a basic right and a prerequisite for rapid socioeconomic development, and a healthy population is a basic requirement for successful industrialization. A sound health care delivery system, good nutritional status, food security and the absence of epidemic diseases are the conditions that produce healthy people capable of participating in the economic, social and political development of a country.

Human health has a major role to play in economic development. There is a direct relationship between the health of a population and its productivity, as demonstrated by the industrial countries, that are now benefiting from years of investment in health services. According to Owino and Korrir (1997), the provision of good health satisfies one of the basic human needs and contributes significantly towards maintaining and enhancing the productive potential of the nation. Improved health reduces production losses caused by worker illness, permits the use of national resources that had been totally or nearly inaccessible because of disease and increases the enrolment of children in school and improves their ability to learn.

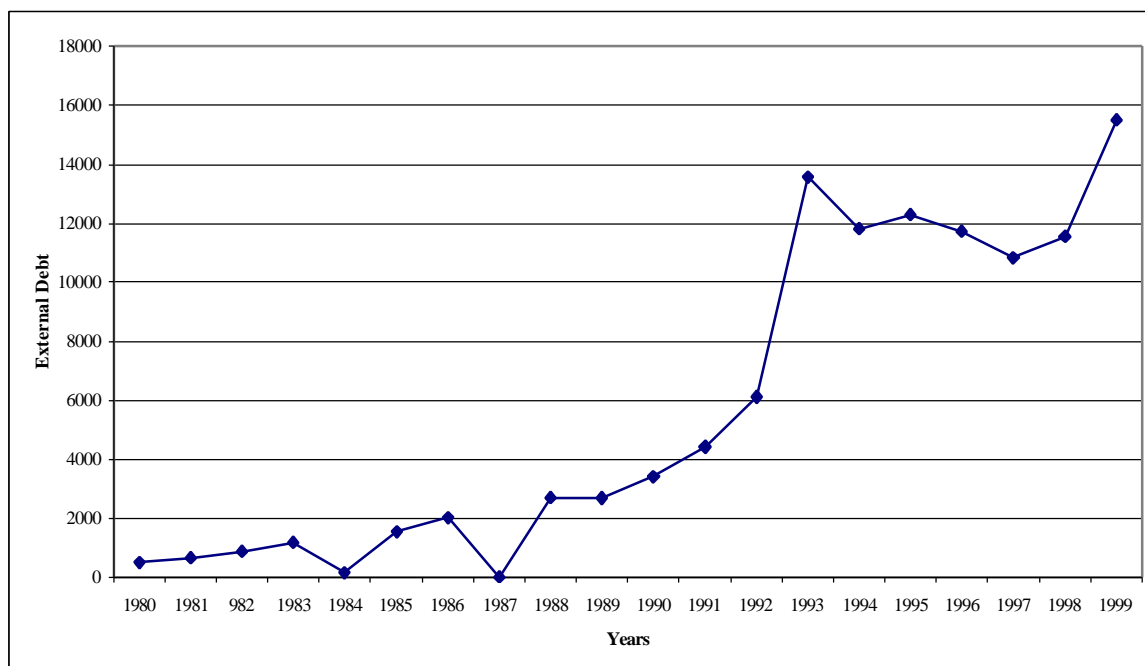
Health care is both a consumption good as well as an investment good. As a consumption good, health care improves welfare, while as an investment commodity, health care enhances the quality of human capital by improving productivity and increasing the number of days available for productive activities. However, improvements in health care in developing countries are threatened by the increasing indebtedness of these countries due to previous external borrowing and structural adjustment programmes.

In 1994, the stock of debt of the developing countries stood at US\$ 1,945 billion, representing more than 40 per cent of their GNP and more than 180 per cent of their export receipts. At the same time, the stock of debt of Sub-Saharan Africa's debt service stands at more than 50 per cent of its export earnings. Furthermore, it is more than 100 per cent for several individual countries of the region—contrasting sharply with the tolerable level of 25 per cent. The principal debt indicators—external debt/export ratio, debt/GNP ratio and debt service ratio—have seriously deteriorated over the past ten years, reflecting the limited ability of the developing countries to service the debt they have contracted.

Kenya's external debt increased from Kshs 30.6 billion in 1984 to Kshs 310.2 billion (approximately US\$ 4.0 billion) by 1999. Throughout the 1980s and 1990s, external debt service charges as a percentage of export earnings of goods and services have remained over 15 per cent (including debt redemption; interest payments on IMF loans are, however, excluded). The external debt-increasing trend, especially in the 1990s, is worrying, given the fact that health indicators over the same period have been worsening.

In Sub-Saharan Africa, the efforts of more than a decade to deal with external debt problems appear to have been in vain. External debt stocks have increased; scheduled debt service payments remain well beyond payment capacity; debt rescheduling continues to be a necessary component of balance-of-payments financing, and the restoration of external debt viability with growth appears a distant prospect for many.

Figure 1  
Kenya's external public debt (million pounds)



At the Millennium Summit (2000), world leaders set 2015 as the target year to cut by half the proportion of the world's people living in extreme poverty, and to halt and to bring about a reversal in the spread of HIV/AIDS. Targets, among others, include universal primary education; reduction of infant and child mortality by two-thirds; reduction of maternal mortality by three-fourths; access to reproductive services for all, and, the reversal of current trends in the loss of environmental resources and the accumulation of hazardous substances. But unsustainable debt has undermined human development in many of the world's poorest countries for the almost two decades. According to Oxfam (1999), the highly indebted poor countries (HIPC) suffer some of the deepest levels of deprivation in the developing world. Almost 3.4 million children die annually before the age of five, mostly from poverty-related infectious diseases. In 1995, over nine million children under five in developing countries died avoidable deaths, a figure more than the entire population of Sweden or of Zambia. Life expectancy in Kenya is 51 years, 26 years less than in the industrialized countries. The HIV/AIDS pandemic is contributing to the erosion of hard-won human development gains. Malaria claims a million lives every year in the HIPC, most of them children. Projections by UNICEF indicate that at current trends, child mortality rate in the HIPC will be 134 deaths per 1,000 live births, considerably off the target of 25 per 1,000 set at the World Summit for Social Development.

Turning to Africa, the two greatest blocks to human development today are the burden of external debt and the pandemic of HIV/AIDS. Sub-Saharan Africa, the region most affected by debt and AIDS, is the region faring the worst versus the 2015 target of cutting poverty by half. Although infant mortality decreased from 101 per 1,000 in 1990 to 92 in 1999, some indicators have not improved at all or have worsened in the same period. Under-five mortality has increased from 155 per 1,000 to 161, largely because

of HIV-related diseases. Between 1990 and 1998, the proportion of Africans living in extreme poverty has been increased instead of decreasing.

According to the *Jubilee 2000* declaration, Niger, the poorest country in the world, spends three times more money paying off the international debt than on health and education. In Uganda, where US\$ 9 per person is spent annually on debt service, only US\$ 3 is spent per capita on health. Zambia's commitment to regular debt servicing exceeds expenditures for health, education, and other welfare services. Kenya deals with its external debt with regular servicing at the expense of such vital life programmes as health care, education, and other social services. Poor countries, some with the world's worst indicators on health and education, are spending more on debt servicing than on the basic needs of their own citizens.

Unsustainable debt has not only slowed economic growth, but also restricted the 'fiscal space' available for investment in basic services, with excessive debt servicing undermining access to health and education. Sufficient money is not available in the national budget for basic social needs, but is available for servicing national debts. The burden of paying debt service leaves governments with inadequate sources for salaries for doctors and nurses, or for purchasing drugs. The burden of debt payments and the impact of structural adjustment programmes (SAPs) increase the poverty of a country. Poverty and malnutrition are recognized as the major cause of high infant and child mortality, and shortened life expectancy. No nation can develop without educated and healthy citizens, no matter how faithfully it may meet its debt-servicing requirements.

There is an enormous gap between the apparent potential of public spending to improve health status and actual performance. Reviews of the cost effectiveness of preventive and primary curative interventions suggest that a significant fraction of the under-five deaths could be avoided for as little as US\$ 10 and, in many cases, for less than US\$ 1,000 per averted death (Jamison *et al.* 1993). The impact of public spending on health is quite small and for a developing country at average income levels, the actual public spending per averted child-death is between US\$ 50,000 and US\$ 100,000. Doubling the share of public sector health spending to GDP from the mean of 2.96 to 5.93 per cent would improve mortality by only 9. This is a striking discrepancy between the apparent potential as is in Jamison and actual performance.

Given the ever increasing and unsustainable debt, excessive debt servicing, deteriorating health status and dwindling health resource allocation in HIPC, particularly in Kenya, the study evaluates the health system in Kenya and makes suggestions on possible areas of investment for resources released by debt relief. Converting debt liabilities into investments in primary health care, basic education, water and sanitation may act as a catalyst for accelerated progress toward the 2015 targets.

Understanding the impact of public spending on health is crucial in designing public policy to reduce excess mortality and morbidity in the country, i.e. the impact of spending an additional public shilling/dollar on health. The aim of this paper is to demonstrate how resources released from debt relief may have an impact on health, if invested in the sector. The question is: how to ensure these potential funds are invested in cost-effective areas with high returns?

## 2 Health financing

Public expenditure in the health sector may achieve the important social goals of improving health outcomes, promoting non-health aspects of well-being and financing the redistribution to the poor. Health services and programmes in Kenya are financed from three main sources: (i) the government through the exchequer both directly to the Ministry of Health (MOH) and indirectly to other sectors with health-related functions (National Council of Population and Development, Ministry of Water Development, Ministry of Home Affairs, Culture and Social Services); (ii) donors who fund MOH programmes, and (iii) the private sector and NGOs. According to UNDP's (1999) *Kenya Human Development Report*, government financing for health expenditures covers about 60 per cent of what is required to provide minimum health services. This implies that health care delivery in Kenya is under-funded, a fact that is compounded by the inefficiency of the system, including the lack of cost-effectiveness in service delivery. Of the recurrent health care costs, the government finances 50 per cent, private payments (insurance and out-of-pocket) 42 per cent and, donors, NGOs missions and other institutions 6 per cent.

The government has several avenues to raising health care funds, but some methods have not borne fruit. Generating more resources through the National Hospital Insurance Fund (NHIF) is limited and uncertain due to the weak administrative system, poor investment portfolio, and low claims settlement, which have characterized the fund. Cost-sharing has little impact on revenue generation, as less than 3 per cent of the total government recurrent health budget is realized through this method.

Figure 2  
Ministry of Health per capita expenditures  
(US dollars)

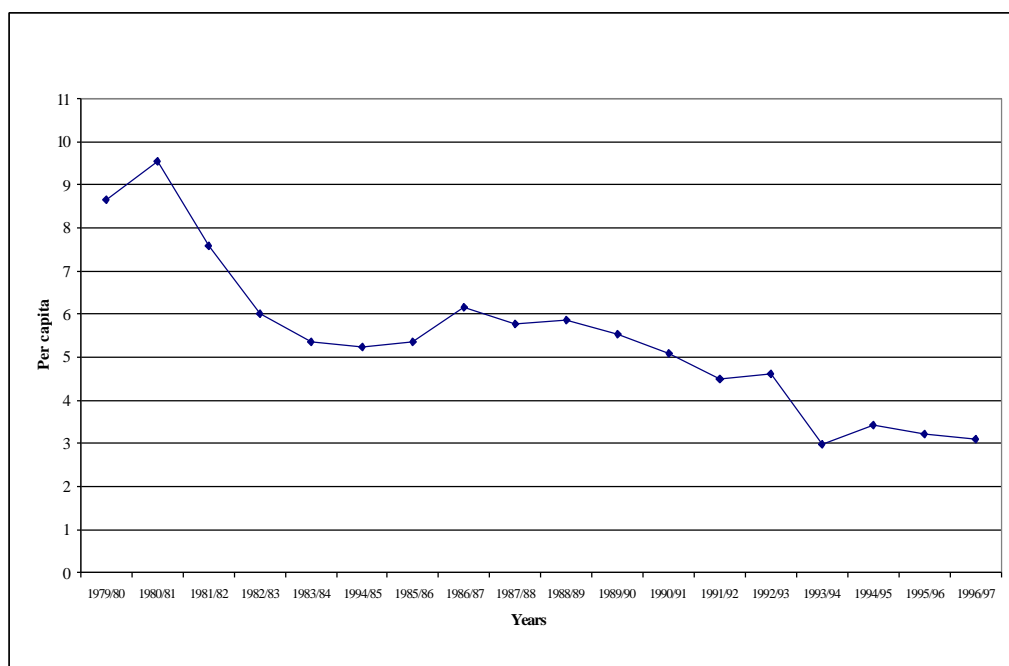


Figure 2 shows that public health per capita expenditure has been declining over the years, dropping from US\$ 9.55 in 1980 to US\$ 3.09 in 1996. Over the same period Kenya's external debt has been increasing. The decline in public health per capita expenditure may have contributed to the country's deteriorating health status. The under-financing of the health sector has caused the sector to lag behind the population expansion, and is thus unable to ensure adequate coverage, accessibility and acceptable quality of health services.

It was estimated that in 1994, 3.8 per cent of GNP was spent on the production of health services while the government spent roughly 7.59 percent of its revenue for that purpose. Analysis of the recurrent health budget indicates that in 1990/1 about 70 per cent of resources are allocated to curative services (mainly hospitals) and only about 11 per cent to promotive and preventive health care (P/PHC), including rural health centres. Personnel costs account for about 80 per cent of the P/PHC budget. The government spends a larger share of the Health Ministry's recurrent expenditure on curative care, despite the fact that major causes of morbidity and mortality are conditions which could be prevented through aggressive primary and preventive health care programmes. This funding pattern translates into poor quality service and frequent shortages of essential inputs (including drugs) to health delivery. Failure to adequately and sustainably fund preventive and promotive services means that existing facilities continue to be burdened with diseases which could be averted. These include, among others, malaria, and diseases of the respiratory tract and skin. Thus the Ministry of Health should be more health-oriented, not disease-oriented, as is the case at present.

It should be noted that the growth in fixed capital and facilities in the country since independence was not matched by a growth in recurrent budget allocations. This has resulted in chronic and sometimes acute shortages of essential and critical inputs for health care delivery. According to the *First Report on Poverty in Kenya* (GoK 1998), reasons given for not visiting a government health facility include excessive cost (8.9 per cent of the entire population), inaccessibility due to distance (12.7 per cent), and the non-availability of drugs (54.2 per cent). The report also shows that 76.2 per cent of the population has not visited a private health facility because these are too expensive while a church-affiliated facility is considered either too costly or too far.

In order to improve the allocative efficiency of health sector resources, the Kenya Health Policy Framework advocates a shift towards increasing resources to community programmes and preventive measures that are more cost-effective in reducing disease incidence and related expenditures. Donor funding under the development vote has been shifted to promotive and preventive health services.

### **3 Health indicators**

The health status of a nation can be assessed by a number of indicators, including infant, child and maternal mortality and morbidity rates, crude death rates, life expectancy at birth and the number of medical staff and facilities available per capita. These are the basic indicators of a country's health and socioeconomic situation and quality of life.

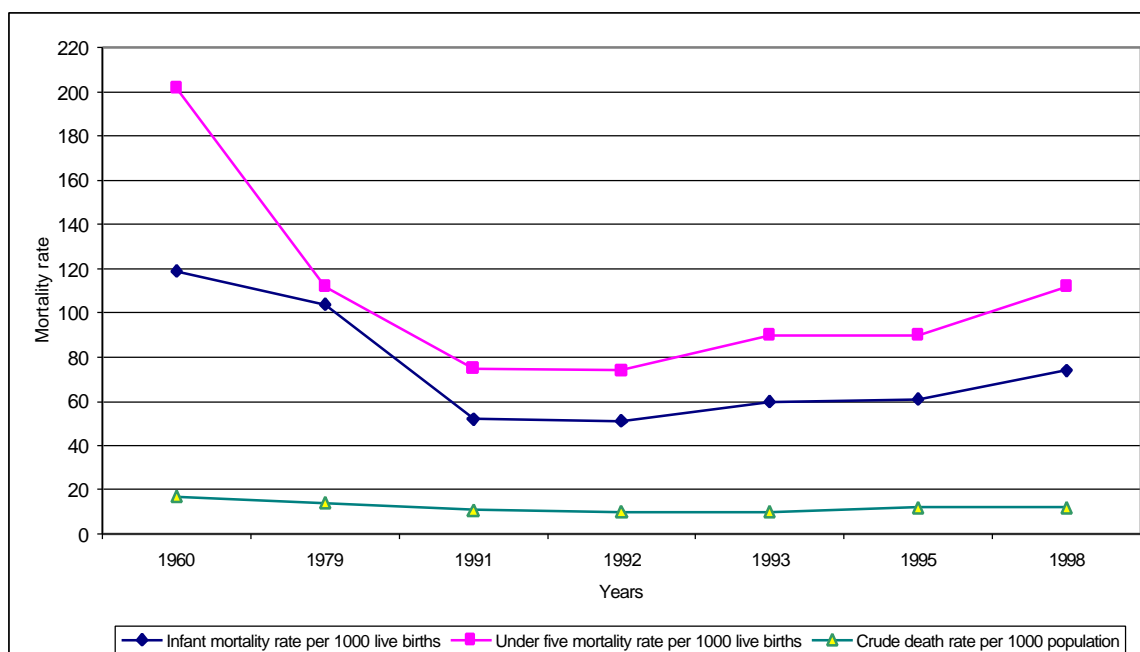
Health achievements in Kenya between 1963 and 1991 were encouraging. Infant mortality rate dropped from 126 to 52 per 1,000 live births and the under-five mortality



rates dropped from 211 to 75 per 1,000 live births. During the same period, life expectancy at birth<sup>1</sup> rose from 40 to 60 years. The crude death rate dropped from 20 per 1,000 prevalent at independence to 12 per 1,000 in 1993 and the crude birth rate from 50 per 1,000 to 46 per 1,000 over the same period. By 1993 immunization coverage had risen to 76 per cent from less than 30 per cent in 1963.

Even though the health situation in Kenya has improved progressively between 1963 and 1992, there appears to be a reversal in the health status of the population in the 1990s, as reflected by the increase in morbidity and mortality indicators. According to UNDP (1999), the positive gains made in reducing mortality rates between 1960 and 1992 appear to have been reversed. This is confirmed by the 1998 Kenya Demographic Health Survey (KDHS) report. Infant mortality rate has gone up from 51 in 1992 to 74 in 1998 per 1,000 live births, while the under five-mortality rate has shot up from 74 in 1992 to 90 in 1995 and 112 in 1998. This is alarming, as a significant portion of the gains achieved during the first 25 years of independence has rapidly eroded in few years. The underlying factors include a deterioration in the quality and quantity of health services and reduced access by the poor after the introduction of user fees, the overall decline in food availability and nutrition, decreased immunization coverage, increased incidence of HIV/AIDS and growing poverty. Immunization coverage has declined from 79 per cent in 1993 to 65 per cent in 1998. These issues require urgent attention and concerted efforts. One way to reverse the worsening trend may be an increase in resource allocation to the health sector, which could translate into improved quality and quantity of health services.

Figure 3  
Mortality indicators in Kenya for selected years



<sup>1</sup> This implies the number of years a new born infant would live if prevailing factors of mortality at the time of birth were to stay the same through out the child's life.

Despite a massive expansion of health infrastructure in the post-independence era, the growing population and increasing demand for health care override the ability of the government to provide effective service. The sector has not been able to keep pace with the rapidly growing population to ensure adequate coverage, accessibility and acceptable quality of health services. Low levels of incremental financial resources, the emergence of new diseases and growing appreciation of modern health care have exacerbated this situation. An overwhelming majority of the poor cannot afford private health care (70 per cent of the rural poor and 81 per cent of the urban poor) and must rely on public health facilities. Furthermore, 20 per cent of the urban poor and 8 per cent of rural poor find that even public health charges are unaffordable. Only 37 per cent of poor mothers give birth in hospital compared to 58 per cent of the non-poor (GoK 2000).

AIDS (acquired immuno deficiency syndrome) was first reported in Kenya in 1984. Since then, the disease has grown into a pandemic of devastating magnitude. The disease has profoundly negative effects on the health of the population, eroding the social and economic gains that had been achieved over the years, and tremendously increasing the cost of health provision. According to UNDP (1999), the total number of HIV-infected people in Kenya increased from 629,319 in 1992 to 1,506,000 in 1997. During the same period, the national prevalence rate rose from 7.4 per cent to 11.8 per cent, with AIDS incidence being higher in the urban than rural areas.

Kenya's progress in the health sector has been quite favourable as compared to other countries in Sub-Saharan Africa. Mortality differentials among African countries are less striking. The mortality of children under-five ranges from more than 200 deaths per 1,000 live births in Mali, Angola and Mozambique to less than 100 per 1,000 in Botswana and Zimbabwe in 1997 (UNDP 1999).

Figure 4  
Adult HIV/AIDS prevalence

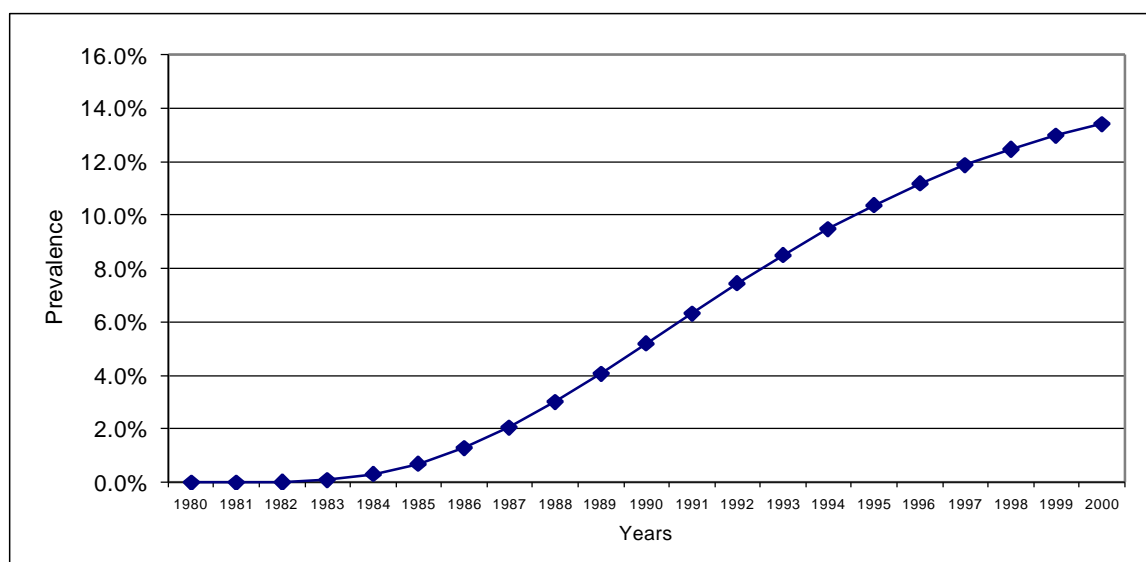


Table 1  
Health and development indicators in some selected African countries

Country	Life expectancy (1997)	Infant mortality	Under-five	Maternal mortality rate per 100,000 live births (1990)
		rate	mortality rate	
		per 1,000 live births (1997)		
Angola	46.5	170	292	1,500
Botswana	47.4	39	49	250
Burundi	42.4	106	176	1,300
Ethiopia	43.3	111	175	1,400
<i>Kenya</i>	52	57	87	650
Tanzania	47.9	92	143	770
Mozambique	45.2	130	208	1,500
Mali	53.3	145	239	1,200
Uganda	39.6	86	137	1,200
Zimbabwe	44.1	53	80	570
Zambia	40.1	112	202	940
South Africa	54.7	49	65	230
Sub-Saharan Africa countries	48.9	105	169	979
All developing countries	64.4	64	94	491
World	66.7	58	85	437

Source: UNDP (1999).

#### 4 Kenya's health care system

Kenya recognizes that good health is a prerequisite for the socioeconomic development of the country. According to the National Development Plan, 1994-1996 (GoK 1994b) health policy in Kenya revolves around two critical issues, namely: (i) how to deliver a basic package of quality health services to the growing workforce and their dependants, and (ii) how to finance and manage these services so as to guarantee their availability, accessibility and affordability to the most needy. Thus, health policies and strategies are aimed at reducing the incidence of disease and improving the health status of Kenyans, as indicated by increases between 1993 and 1992 in life expectancy, reduction in mortality rates and improvement in the nutritional wellbeing of the general population and children in particular. The overall goal of the government is to promote and improve the health status of all Kenyans by making all health services more effective, accessible and affordable.

At independence, Kenya inherited a three-tier health system in which services were provided by the central government at the district, provincial and national levels; by the missionaries at sub-district levels; and by the local government in the urban areas. This arrangement was in operation until 1970 when the government established a comprehensive rural health service system in which health centres became the crucial points for preventive, promotive and limited curative services. Today, in addition to the government, missionaries and NGOs provide health services at various delivery points, ranging from dispensaries to hospitals. The government's health care delivery system is pyramidal. The national referral facilities at Kenyatta National Hospital and Eldoret

Teaching Hospital form the peak, followed by provincial, district and sub-district hospitals with health centres and dispensaries at the base.

#### **4.1 Health facilities**

There are three types of health facilities, namely, hospitals, health centres and health sub-centres, and dispensaries and mobile clinics. The number of health institutions has increased from 861 in 1967 to 2,131 in 1990 and to 4,235 in 1999. The public sector has the dominant representation in health centres (79 per cent), sub-health centres (92 per cent) and dispensaries (60 per cent). The NGO sector, however, dominates in the provision of health clinics, maternity and nursing homes (94 per cent) and medical centres (86 per cent) (Owino and Korrir 1997). There are regional variations in the distribution of health facilities, with Rift Valley Province having the best coverage, followed by Eastern Province, and the North Eastern Province, partly due to its low population, having the lowest concentration of health facilities during 1990-99.

The number of beds in health facilities has increased fourfold from 11,344 in 1963 to 52,186 in 1998. Most are in hospitals (65 per cent); 16 per cent in health centres and 17 per cent in nursing and maternity homes. Although an increasing trend in health facilities is apparent since independence, the increase has not been at par with population growth. In addition, most health facilities face problems of inadequate personnel, and lack of health equipment and drugs, reflecting in partly the inadequate resources available to the sector. The situation is exacerbated by the AIDS pandemic, causing health facilities and equipment, especially beds, to be over-stretched. Over 50 per cent of available beds are occupied by AIDS patients, crowding-out the other ever-increasing patients. It is common for hospital beds to be shared or patients having to sleep on the floor due to scarcity of beds.

#### **4.2 Health personnel**

The government has continued to train and staff health institutions with appropriate medical personnel. In 1965, Kenya had 710 doctors, 26 dentists and 148 pharmacists. By 1996, medical personnel had increased to 3,971 doctors, 685 dentists and 1,447 pharmacists. This reflects an improvement in the ratio of medical personnel to population from 7.8 doctors, 0.3 dentists, and 1.6 pharmacists per 100,000 in 1964 to 14.7, 2.6 and 5.2 per 100,000, respectively, in 1995.

The government's manpower policy is to increase in the personnel at the periphery level to reduce hospital workload and there has, indeed, been a tremendous increase in medical personnel in absolute terms since independence, but their distribution is very uneven. The heavy concentration of government medical staff in Nairobi is particularly noticeable and underlies the very low doctor/population ratios in many parts of the country. About 80 per cent of the doctors and dentists work in the urban areas, where only 20 per cent of the population resides (1997). The rural areas have been most severely affected by the imbalance. This has had an adverse effect on health care provision, as health personnel constitutes an important input in the delivery of health services.

Staffing problems at government health institutions include overstaffing at the lower cadres and deficits at the professional level, overconcentration of key personnel in urban areas, and a mushrooming of private clinics that have resulted in many experienced staff member leaving the public service for the private sector. Poor remuneration and low morale in the civil service are other problems, which force doctors to seek better opportunities elsewhere. Only eight applications were received in response to a recent government advertisement for doctors. The situation is of particular concern, as most government facilities in rural areas are faced with an acute shortage of doctors and middle-level personnel.

### **4.3 Health reforms**

Since independence in 1963, Kenya has carried out various reforms aimed at promoting coverage of and access to modern health care in an attempt to attain its long-term objective of universal health care. These include, among others, decentralizing the health delivery system, endorsing the principles of primary health care established in the Alma Ata Declaration of 1978, and introducing a cost-sharing programme.

Decentralization of the health system aims to improve management, efficiency, accountability, and responsiveness of health services, and thereby to increase the population's exposure to, and control of modern health care. Kenya has decentralized its health system by restructuring and strengthening the district-level management capacity of the Ministry under the 'district focus for rural development strategy programme' started in 1983; by creating health management teams and boards (DHMTs and DHMBs) in 1992 to represent community interests in health planning and to coordinate and monitor the implementation of projects at the district level, and by granting autonomy to the Kenyatta National Hospital in 1987.

The cost-sharing programme was mooted in the country's 1984-88 development plan and its implementation started in December 1989 with the August Government Cabinet Paper. The government policy on cost sharing aimed to establish and sustain high-quality health services. Specifically, it aimed at improving the effectiveness and efficiency of health programmes, generating more revenue for the health sector, improving the quality of health care, promoting equity in the delivery of health care and controlling public sector expenditure on curative care. The main objective was to encourage increased cost recovery from users of public health facilities as one of the ways of introducing additional resources. But the programme has not performed as expected. During the fiscal years of 1993/4, 1994/5 and 1995/6, only 31.4, 26.1 and 18.1 per cent of the projected revenue from user fees were collected, respectively. The collected revenue represented only 2 per cent of the recurrent total budget of the Ministry of Health. The poor performance may reflect institutional and implementation weaknesses which need to be resolved in order to make cost sharing a more effective means of generating additional health resources.

## **5 Using debt relief funds to improve health status**

The overall goal of the health sector policy is to promote and improve the health status of all Kenyans through deliberate sector restructuring to make health services more

effective, accessible and affordable. But to achieve this objective, more resources are required and this is an expenditure where debt relief funds could be used.

Access to health care has long been considered pivotal in helping people acquire the basic capabilities which would enable them to escape poverty. Public health institutions in Kenya are characterized by long patient queues. The time needed to reach a health facility is considered an important indicator of health accessibility. According to the 1997 Welfare Monitoring Survey III, most poor rural households need over 60 minutes to reach the nearest health facility, while in urban areas, it is 10-30 minutes. In rural areas, for the sick and poor the first destination is a public dispensary (26.7 per cent), a drug store or pharmacy (23.2 per cent) and a private doctor (20.8 per cent). The majority of the non-poor (51.4 per cent) use private medical care. Despite efforts to expand health coverage since independence, distribution is uneven and there are under-served areas, particularly in the countryside. Debt relief funds could, therefore, be used for the expansion of health service coverage, particularly to rural areas where accessibility is limited.

The demand for public health sector services increases with the population and a chronic under-funding of activities exists, as funding has not kept pace with population growth. Under such circumstances, preventive and promotive programmes are poorly financed compared to recurrent expenditure. Although Kenya signed the 1978 Alma Ata Declaration and the Bamako Initiative, thus endorsing the principles of primary health care, less than 20 per cent of the recurrent budget goes to preventive/promotive and rural health care. Salaries take up more than 90 per cent of the allocations. This is a reflection of the fact that the government is faced with an inelastic revenue base and a growing demand for health services. To devote relatively more resources to health would compromise overall growth and employment goals of the government. To compound the worsening situation, donor support has been dwindling and is at times focused on specific programmes, or given on humanitarian grounds. Investment in primary health care could avert the incidence of many diseases in the country. According to experience in Kenya and elsewhere in the world, preventive health services are more cost-effective than curative care. The investment of debt relief funds in preventive health care would have a positive impact on Kenya's health status.

Another area in the health sector requiring resources is the treatment and prevention of HIV/AIDS-related diseases. AIDS has impact not only on health but also on economic and social development, but these can be mitigated by public policy. Now, the epidemic is not just a health problem; it is also a development issue. According to UNAIDS (1999), Kenya, with an adult HIV prevalence of 11.6 per cent, spends US\$ 0.76 per capita on AIDS. As the country's potential debt relief is US\$ 12.92 per capita, it would be able to tap considerable resources to fight the epidemic if debt relief resources were released and allocated to this sector. Emergency of the AIDS scourge has affected budget allocations, as it means that more funds are needed to control the disease. Currently, over 50 per cent of the beds in public hospitals are occupied by AIDS patients, leaving fewer beds for other patients. Overwhelmed by the large number of AIDS patients, public hospitals discharge many prematurely to be 'taken care of at home'. This has implications on the quality of health care. According to the *Daily Nation* (31 July 2001), it has been estimated that when more than 20 per cent of a country's population is effected with HIV/AIDS, growth decreases by as much as 2 per cent per annum. In addition, some diseases, including tuberculosis, which had been

declining steadily over some years, are increasing. This means that more resources need to be allocated to fight these diseases.

Table 2  
Can debt relief help with AIDS in Africa?

Country	Adult HIV prevalence (%)	AIDS spending (US\$ per capita)	Potential debt relief (US\$/capita)	Ratio of debt relief to spending
Ghana	4.6	0.12	15.98	133
Kenya	11.6	0.76	12.92	17
Malawi	14.9	0.63	4.46	7
Mozambique	14.2	0.16	2.79	17
Nigeria	4.1	0.03	6.46	215
Tanzania	9.4	0.07	0.70	10
Uganda	9.5	1.81	5.00	3
Zambia	19.1	0.73	16.18	22

Source: UNAIDS (1999).

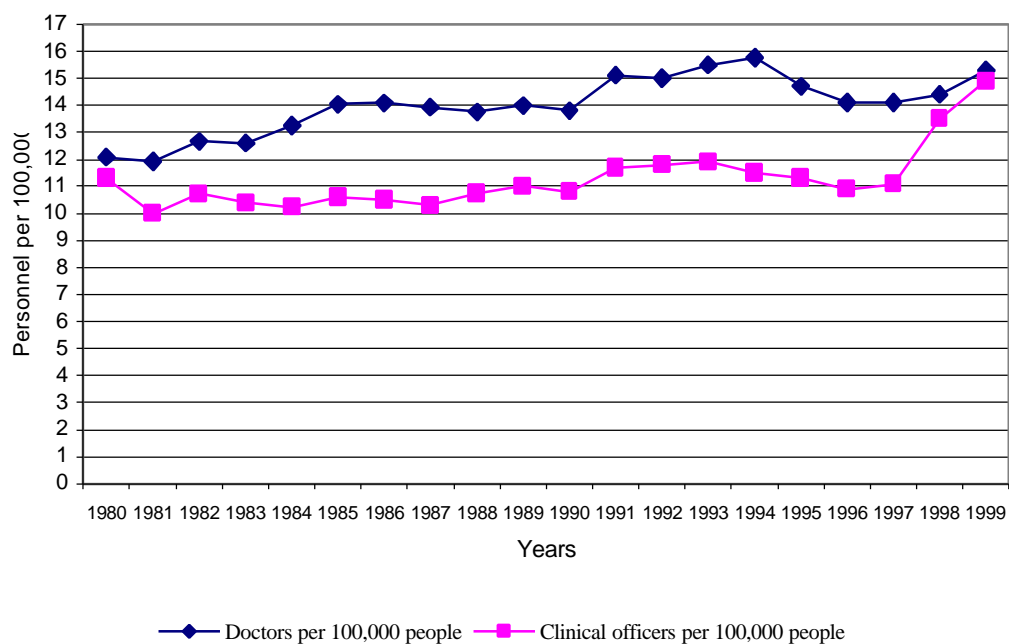
The poor's access to health services—interpreted to mean availability, affordability and physical accessibility to drugs and consultations—has been restricted by problems ranging from cost sharing to long distances to health facilities. In many government health facilities, essential medicines and drugs are generally not available and patients are given prescriptions to private pharmacies. Non-availability of medication or its erratic supply at government health facilities has forced many patients to rely on private pharmacies, local shops, and vendors who sometimes sell expired, unlabelled and dangerous drugs. According to Mwabu and Wang'ombe (1995), many patients have no knowledge of the therapeutic value of drugs and thus end up buying high priced products of little potency. The non-availability or irregular supply of drugs and dressings reduces efficiency in the utilization of public health facilities and the operation of health care delivery system. This has also adversely affected attendance at the health facilities. Given the high poverty levels in the country, many patients who cannot afford the cost of drugs resort to traditional herbs or quacks for treatment. According to the *First Report on Poverty in Kenya* (GoK 1998), 8.9 per cent of Kenyans do not visit government health facilities because they are costly, 12.7 per cent because of excess distances, and 54.2 per cent because of non-availability of drugs. The attempts to sell low-cost drugs through community pharmacies (the Bamako Initiative) to the poor was unsuccessful because of the inability to sustain drug funds. Findings of the Second Participatory Poverty Assessment study in Kenya indicate that patients, although paying user fees, end up receiving prescriptions without the actual drugs. It was reported that long queues are common in Kisumu and patients are asked to provide exercise books for writing prescriptions. This highlights the limited access to health services by the poor. Released debt money earmarked for drugs and medical supplies could avert avoidable deaths caused by quacks or dangerous drugs.

Figure 5 shows that the number of registered doctors and clinical officers per 100,000 people has increased marginally between 1980 and 1999. Registered doctors per 100,000 people increased from 12.09 in 1980 to 15.3 in 1999. But most doctors are outside public services. According to the *Daily Nation* (2 August 2001), only 600

doctors out of the 5,000 registered in the country are working in the public health sector. This is alarming, given the trend of decreasing health status in the country. Due to inadequate personnel, complicated cases are referred to distant medical facilities, thus increasing costs. Also, trained health personnel has not kept pace with the population growth. For example, from 1994 to 1996 the population-to-doctor ratio increased from 5,600:1 to 6,800:1, eroding the quality of health care, as one doctor will need to cater to more patients. Motivation and incentive also play a crucial role in delivery of quality health care. The inefficiency of the public health sector is partly attributed to low morale among health staff. This is an issue that needs to be addressed. Motivation and decent incentives can partly deter the movement of professionals to the private sector or to other African countries such as South Africa and Botswana. Resources released by debt relief could be invested in manpower development.

After independence the government established many health facilities to support its policy of 'free health for all'. But the necessary equipment was not installed, or if it were, maintenance was poor. There is a lack of spare parts, servicing of the machines and equipment and also lack of necessary inputs. Some equipment have become obsolete. Certain projects/programmes, such as the Nyayo Ward of 1980s, had the same problem: structures were established without provision for the necessary machines and equipment. This has resulted in inefficient and poor quality health care services, as evidenced by factors such as the paucity of curative care items (x-ray films, theatre drugs and equipment), the necessity to share beds, long waiting lists at referral hospitals, and poor or inappropriate diagnosis accompanied by ineffective treatment. For the health facilities to function properly, it is imperative that they are equipped with standardized required inputs, and debt relief resources could be used for this purpose.

Figure 5  
Development of health personnel per 100,000 people, 1980-99





Another area in the health sector that needs resources is transport, which is grossly inadequate. In many district hospitals, only one vehicle is available on average and this introduces problems of poor supervision, inefficient transportation of medical supplies, and delays in transferring patients to referral hospitals.

Due to unavailability of data, we ran a simple regression. The results are presented in Annex Table 6. The simple regression uses annual time series data from 1980 to 1999, a span of twenty years. We estimate a multivariate regression to explain health outcomes. Empirical studies tend to focus on infant/child mortality or life expectancy as proxies for health status. In our analysis, we take child mortality rate (a proxy of health status) as the dependent variable. Trends in infant and child mortality rates may be explained by economic and social factors. Child (under-five) mortality is the widest and best-measured indicator of health status. Life expectancy is not reliably measured. Infant mortality is reliably measured but fails to capture mortality from many of the health conditions of concern that are responsive to health care, such as diarrhoea and respiratory infections. We estimated our model using ordinary least square estimation technique.

Our results show that health status of the population is positively related to health expenditure, female literacy rate and medical personnel. Our estimation results show that an increase in public health expenditure results in a decline in child mortality. Female literacy plays a crucial role in child mortality rate and an increase in female literacy rate results in an improved health status. This can be attributed to the fact that female are the ones who in most cases take care of the children. The results are also in the line with other empirical studies, which have found that increased literacy leads to improved nutrition, child health and decline in fertility. On the other hand, health status is negatively related to income inequality and indebtedness. An increase in income inequality takes away income from the majority poor, leaving them with little income to spend on health care and this reduces their health status. An increase in income inequality leads to an increase in child mortality and vice versa. Debt—our main focus in this paper—is negatively related to health status. An increase in debt translates into more commitment in debt servicing, thus committing more resources, which would have been used for health care provision. Empirical studies carried out in other areas have shown that health expenditure is positively related to health status. Filmer and Pritchett (1997) used cross-national data to examine the impact of both non-health factors (economic, educational, and cultural) and public spending on health in determining child (under five) and infant mortality. He found that 95 percent of cross-national variation in mortality can be explained by a country per capita income, the distribution of income, extent of female education, level of ethnic fragmentation and predominant religion.

A review of public spending in the Philippines using panel data from 1983 to 1990 for 13 regions, found that public spending on health improved infant mortality in regions with lower incomes but had virtually no effect in rich regions (Filmer and Pritchett 1997).

It should be noted that additional resource allocation does not necessary translate to high quality health care. This will occur only if the additional resources are channelled into quality provision. The impact of an increase in total public spending on health will depend on how that increase is allocated across health inputs. It also needs to be recognized that numerous factors other than government expenditures will have an

impact on health indicators. These include the level of private spending in the sector, per capita income, demographic trends, and the effectiveness of the expenditures themselves. Also, the issues of targeting to the poor and efficient allocations need to be addressed.

## **6 Conclusion**

Health has a major role to play in economic development and there is a direct relationship between the health of a nation and its productivity. The provision of good health satisfies one of the basic human needs and contributes significantly towards maintaining and enhancing the productive potential of the people.

Kenya handles its external debt and its regular servicing at the expense of such vital life programmes as health care, education, and other social services. The country's debt has been increasing over the years and external debt service charges as percentage of export earnings of goods and services have remained over 15 per cent over the 1980s and 1990s (including debt redemption, but interest payments on drawing on IMF excluded). The increasing trend of external debt, especially in the 1990s, is worrying given the fact that over the same period, health indicators have been worsening. The burden of external debt is one of the greatest stumbling blocks to human development today.

Kenya recognizes that good health is a prerequisite to the socioeconomic development of the country and has heavily invested on health infrastructure. Yet, despite a massive expansion of the health infrastructure since independence, increasing population and growing demand for health care outstrip the ability of the government to provide effective service. Kenya has also conducted several health reforms since independence in 1963, including decentralization and cost-sharing programmes. But performance of some of the reform programmes such as cost sharing has not met expectations. The government has continued to train and staff health institutions with appropriate medical personnel, but their distribution across the regions is uneven. Due to poor remuneration, most qualified medical personnel have left the civil service for better opportunities elsewhere.

Although the health situation in Kenya improved progressively between 1963 and 1992, health status of the population has declined in the 1990s, as reflected by the increase in morbidity and mortality indicators. Infant mortality rate has gone up from 51 in 1992 to 74 in 1998 per 1,000 live births whilst the under-five mortality rate shot up from 74 in 1992 to 112 in 1998. This developing is alarming, as a significant portion of the gains made during the first 25 years of independence have eroded in few years. The AIDS pandemic has had profoundly negative effect on the health of the population, cancelling the social and economic gains thus far achieved, and tremendously increasing the cost of health provision. Health care delivery in Kenya is under-funded, as the public health expenditure as a percentage of GDP is less than 5 per cent and health per capita expenditure has declined from 5.54 per cent in 1989 to 3.09 percent in 1996. Also government allocations to preventive health care, which could avert avoidable disease incidences, has remained below 20 per cent of total recurrent expenditure.

Debt relief resources should be ploughed back into policies and programmes designed to meet the needs of the poor. Debt relief resources could be invested in preventive

health care, human development, health equipment, medical supplies, health infrastructure without forgetting HIV/AIDS treatment, prevention and mitigation programmes. This could lead to improved health status of the population and thus improved wellbeing as good health is associated with increased production.

## ANNEX

Annex Table 1  
Hospital beds and cots

Province	1990	1991	1992	1993	1994	1995	1996	1997	1998
Nairobi	5,886	6,021	6,162	6,314	5,879	6,225	6,373	6,487	6,691
Coast	3,366	3,491	3,613	3,491	2,781	3,818	3,991	4,136	4,227
Eastern	4,769	4,769	4,803	4,849	4,881	5,724	6,168	6,361	6,516
N/Eastern	4,14	429	491	1,245	1,224	1,447	1,451	1,498	1,501
Central	5,060	5,170	5,170	5,280	5,324	6,400	6,606	7,009	7,218
R/Valley	6,474	6,729	6,729	7,587	7,751	9,818	9,928	10,158	10,401
Nyanza	4,283	4,373	4,403	4,618	5,058	8,947	9,480	9,625	9,879
Western	2,834	2,944	2,989	4,747	4,373	4,775	5,334	5,567	5,753
Total	33,086	33,926	3,4360	3,8131	3,7271	4,7154	4,9331	50,909	52,186

Source: Statistical Abstract (various issues).

Annex Table 2  
Registered medical personnel

	Doctors	Dentists	Pharmacists	Reg. nurses	Enr. nurses	Clinical officers	PH officers	PH technicians	Pharm. technologists
1977	1,477	112	197	–	6,173	7,426	1,002	–	–
1980	1,691	162	60	299	6,692	9,190	1,723	–	–
1986	2,980	441	333	493	9,627	12,452	2,224	–	–
1990	3,357	596	443	604	5,441	17,734	2,630	585	2,528
1991	3,457	631	472	644	5,664	18,674	2,665	620	2,628
1992	3,554	664	542	680	5,879	19,604	2,786	686	3,452
1993	3,794	604	605	720	6,210	20,933	2,913	732	4,203
1994	4,558	630	1,260	660	6,719	21,147	1,644	465	3,567
1995	3,855	655	1,357	885	6,920	22,347	2,950	480	3,815
1996	3,971	685	1,447	957	7,115	23,512	3,085	573	4,216
1997	4,078	927	1,537	1,047	8,006	24,602	3,232	668	4,586
1998	4,282	715	1,629	1,137	8,336	25,803	4,007	728	4,728
1999	4,411	734	1,650	1,167	8,671	27,073	4,277	780	4,849

Source: Statistical Abstract (various issues).

Annex Table 3  
Health institutions by province, 1990-99

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Nairobi	188	186	247	304	357	359	373	380	390	402
Coast	220	280	299	357	453	426	441	448	453	462
Eastern	308	388	417	499	679	683	771	783	793	804
N/Eastern	40	45	52	52	64	59	65	66	68	71
Central	324	318	341	405	429	441	450	462	470	481
R/Valley	583	698	814	976	1,103	1,140	1,163	1,179	1,195	1,207
Nyanza	345	282	304	359	432	446	463	473	484	498
Western	123	149	163	192	237	248	267	278	292	310
Total	2,131	2,346	2,637	3,144	3,754	3,802	3,993	4,069	4,145	4,235

Source: Statistical Abstract (various issues).

Annex Table 4  
Mortality indicators in Kenya, 1960-98

Indicator	1960	1979	1990	1991	1992	1993	1995	1998
Infant mortality rate per 1000 live births	119	104		52	51	60	61	74
Under five mortality rate per 1000 live births	202	112		75	74	90	90	112
Maternal mortality rate per 100,000 births	–	–		–	150-300	150-300	365-498	–
Crude death rate per 1,000 population	17	14		11	10	10	12	12

Source: GoK (1998).

Annex Table 5  
 Recurrent budget expenditures for the Ministry of Health  
 (internal allocations as a percentage of government total and in US\$)

Year	Curative	Rural and P/PHC	ADM and Training	Non-drug supplies and research	Recurrent as % of GoK	US\$ per capita
1989/0	69.39	18.92	10.58	1.11	7.87	5.54
1990/1	69.76	19.87	9.17	1.19	7.82	5.08
1991/2	67.77	21.62	9.28	1.32	8.51	4.50
1992/3	68.72	22.02	8.65	0.61	8.46	4.60
1993/4	62.74	25.49	9.17	2.60	7.65	2.99
1994/5	67.23	20.95	9.65	2.16	7.59	3.44
1995/6	67.11	21.38	9.28	2.22	7.60	3.22
1996/7	66.86	21.39	9.58	2.17	7.61	3.09

Source: Government of Kenya 1994.

Annex Table 6  
 Regression results

Variable	Coefficient	T – statistics
Constant	21.2345	3.026
Log female literacy	-7.8837	-1.991
Log No. of clinical officers per 100,000 people	-0.7296	-0.1464
Income inequality	1.0924	2.887
Log percentage of urban population	5.6740	1.784
Log share of public health expenditure to GDP	-0.2558	-0.872
Log debt per capita	0.0128	0.309
No. of observations		20
R-squared		0.8476
Adjusted R- squared		0.7772
F-Statistics		12.05

Source: Own estimation.

Table Annex 7  
Descriptive statistics

Variable	Mean	Standard deviation
Under-five mortality rate	103.65	17.4364
Income inequality (Gini coefficient)	0.5258	0.0448
Female literacy rate	59.605	10.0632
Clinical officers per 100,000 population	11.259	1.1599
Share of public health expenditure to GDP	2.176	0.3220
Debt per capita	4452.96	3686.983
Percentage of urban population	23.837	5.0847

Annex Table 8  
Summary of variables used in a regression

Year	Share of public health expenditure to GDP	Share of external debt to GDP	Clinical officers per 100,000 people	Female literacy rate	Percentage of urban population
1980	2.94	21.29	11.3	42.7	16.1
1981	2.7	24.82	10	44.7	16.84
1982	2.36	29.52	10.73	46.6	17.38
1983	2.2	35.27	10.38	48.5	18.32
1984	1.93	39.77	10.24	50.3	19.06
1985	2.21	35.29	10.59	52	19.8
1986	2.08	39.91	10.51	53.9	20.6
1987	1.99	40.37	10.29	55.6	21.52
1988	1.99	42.10	10.74	57.4	22.38
1989	2.2	35.92	11	59.1	23.24
1990	1.92	40.03	10.8	60.8	24.1
1991	1.99	46.31	11.7	62.6	25
1992	2.32	55.74	11.8	64.4	25.9
1993	2.13	100.51	11.9	66	26.8
1994	2.3	69.85	11.5	67.6	27.7
1995	2.3	62.42	11.3	68.9	28.6
1996	2.54	52.28	10.9	70.6	29.5
1997	1.68	40.65	11.1	72.1	30.4
1998	1.68	38.89	13.5	73.5	31.3
1999	1.54	49.86	14.9	74.8	32.2

Source: Own computations.

## References

- Ching, A., and T. G. Mcquire (1997). 'Optimal Health Insurance and Provider Payment'. *The American Economic Review*, 87 (4): 685-704.
- Cuddington, J. T. (1993). 'Modeling the Macroeconomic Effects of AIDS, with an Application to Tanzania'. *The World Bank Economic Review*, 7 (2): 173-90.
- Daily Mail and Guardian* (2000). 'The Myth of HIPC and Debt Relief'. 12 December.
- Filmer, D., and L. Pritchett (1997). *Child Mortality and Public Spending on Health: How Much Money Matter?* Washington, DC: World Bank.
- Fuschs, V. R (1996). 'Economics, Values and Health Care Reforms'. *The American Economic Review*, 86 (1).
- GoK (Government of Kenya) (1986). *Economic Survey*. Nairobi: Government Printer.
- GoK (Government of Kenya) (1994). *Kenya's Health Policy Framework*. Nairobi: Government Printer.
- GoK (Government of Kenya) (1997). *Sessional Paper No. 4 on AIDS in Kenya*. Nairobi: Government Printer.
- GoK (Government of Kenya) (1998). *First Report on Poverty in Kenya. Poverty and Social Indicators*. Nairobi: Government Printer.
- GoK (Government of Kenya) (2000a). *Economic Survey*. Nairobi: Government Printer.
- GoK (Government of Kenya) (2000b). *Interim Poverty Reduction Strategy Paper for the Period 2000- 2003*. Nairobi: Government Printer.
- GoK (Government of Kenya) (various years). *National Development Plan for 1974-78; for 1979-83; for 1984-88; for 1989-93; for 1994-96; for 1997-2001*. Nairobi: Government Printer.
- GoK (Government of Kenya) (various years). *Statistical Abstract*. Nairobi: Government Printer.
- Henrot, P. S. J. (1998). 'Debt Relief and HIV/AIDS Programmes: Possibilities and Hopes'. JCTR Article. Lusaka, Zambia: Jesuit Centre for Theological Reflection.
- International Monetary Fund (1999). 'African Views on Heavily Indebted Poor Countries, Enhanced Structural adjustment Facility and Poverty Alleviation'. Paper presented at the African Finance Ministers Conference. Washington, DC: IMF.
- Jamison, D. T. W., H. Mosley, A. R. Measham, J-L. Bobadilla (eds) (1993). *Disease Control Priorities in Developing Countries*. Oxford: Oxford Medical Publication.
- Lutheran Office for Governmental Affairs (2000). 'The Problem Heavily Indebted Poor Countries Face'. LOGA Legislative Update. Washington, DC.
- Morris, K. (1999). 'Understanding Debt Relief'. ODC Issue Brief. Washington, DC: Overseas Development Council.



- Mwabu, G., and J. Wang'ombe (1995). 'User Charges in Kenya. Health Services Pricing Reforms in Kenya: 1989-93'. Washington, DC: International Health Policy and Planning Program.
- National Health Research and Development Centre (1994). *Proceedings of the Convention on National Health Research Plan*. Kenya: Nairobi.
- Ngugi, R. (1999). 'Health Seeking Behaviour in the Reform Process for Rural Households: The Case of Mwea Division, Kirinyaga District'. AERC Research Paper No. 95. Nairobi: African Research Consortium from African Research Consortium.
- Obonyo, B., and W. Owino (1997). 'Promoting Access to Health Care through Efficiency Improvements: Priorities and Policy Options'. IPAR Working Report No. 08/97. Nairobi: Institute of Policy Analysis and Research.
- Odwee, J. A. Okuruf, F. N., and A. Adebua (2000). 'The Determinants of Health Care Demand in Uganda'. AERC Report. Nairobi: African Research Consortium from African Research Consortium.
- Odwee, J., F. N. Okurut, and A. Adebua (2000). 'The Determinants of Health Care Demand in Uganda: A Case of Lira District, Northern Uganda'. Final Report Submitted to AERC.
- Owino, W., and J. Korrir (1997). 'Public Health Sector Efficiency in Kenya: Estimation and Policy Implications'. IPAR Discussion Paper No. 007/97. Nairobi: Institute of Policy Analysis and Research.
- Owino, W., and M. Were (1997). 'Delivery and Financing of Health Care Services in Kenya: Critical issues and Research Gaps'. IPAR Discussion Paper No. 002/97. Nairobi: Institute of Policy Analysis and Research.
- Owino, W., and M. Were (1998). 'Enhancing Health Care Among the Vulnerable Groups. The Questions of Waivers and Exemptions'. IPAR Discussion Paper No. 014/98. Nairobi: Institute of Policy Analysis and Research.
- Owino, W., J. Korrir, P. Ocholla, and K. Oloo (2000). 'Decentralization and Health Systems Development. The Question of Planning, Budgeting and Financial Structures'. IPAR Discussion Paper No. 025/2000. Nairobi: Institute of Policy Analysis and Research.
- Task Force on National Essential Health Research (1991). *Proceedings on the Convention on Essential Health Research in Kenya*. Kenya: Nairobi.
- UNAIDS (1999). *A Review of Household and Community Responses to the HIV/AIDS Epidemic in Rural Areas of Sub-Saharan Africa*. Geneva: UNAIDS.
- UNAIDS (2000). *Mobilising Resources for AIDS; New Opportunities*. Geneva: UNAIDS.
- UNDP (1999). *Kenya Human Development Report, 1999*. Kenya: UNDP Nairobi.
- US Network for Global Economic Justice (1999). '50 Years is Enough'. Network Statement on the Highly Indebted Poor Countries Debt Initiative.
- USAID (1995). *Setting Priorities for Research, Analysis and Information Dissemination on Health Sector Financing and Sustainability in Sub-Saharan Africa: Health and Human Resources Analysis in Africa Project*. Washington, DC: USAID.

- Vogel, L. C., A. S. Muller, R. S. Odingo, Z. Onyango and Geus (1974). *Health and Diseases in Kenya*. Nairobi: Kenya Literature Bureau.
- Wagstaff, A. (2001). 'Measuring Equity in Health Care Financing: Reflections on (and Alternatives to) the World Health Organization's Nairobi Fairness of Financing Index.' Policy Research Working Paper 2550. Washington, DC: World Bank.
- Walle, D. V. (1994). 'The Distribution of Subsidies through Public Health Services in Indonesia, 1978-87'. *The World Bank Economic Review*, 8 (2).
- World Bank (1994). *Better Health in Africa; Experience and Lessons Learned*. Washington, DC: World Bank.