



Delivering social services to the poor

Efforts to reduce poverty are unlikely to succeed in the long run unless there is greater investment in the human capital of the poor. Improvements in education, health, and nutrition directly address the worst consequences of being poor. But there is ample evidence that investing in human capital, especially in education, also attacks some of the most important causes of poverty. Social services are therefore an essential part of any long-term strategy for reducing poverty.

Social sector policies

In the developing world as a whole, the past three decades have seen tremendous progress in social indicators. But the advances have been uneven among regions and among socioeconomic groups within countries. Progress in the social sectors requires a long-term commitment to making education, health care, and other social services accessible to all levels of society. Where that commitment is lacking and where government policies have failed to reach the poor, social needs remain staggeringly high.

Progress in health

In the past few decades the developing countries have made great strides in health. In China over the past twenty-five to thirty years, for instance, the total fertility rate fell from 6.4 to 2.4 children per woman, and the infant mortality rate dropped from 90 to 32 per thousand live births; life expectancy increased from 52.7 to 69.5 years. Here, as in other countries, no single factor accounts for the improvement. China's remarkable performance

owes as much to safe drinking water, improved sewage disposal, and other sanitation measures as to broad immunization coverage and mass campaigns against parasitic diseases. It has much to do with the provision of basic health care and affordable drugs to even the most remote parts of the country. It reflects the successful drive to reduce fertility and to increase, through legislation, the age of first delivery, as well as great efforts to provide education on health and nutrition. And it would probably have been impossible without a safety net that, among other things, guaranteed minimum food rations to even the poorest rural people.

China's performance is exceptional. But it teaches an important general lesson: large improvements in the health of the population can be achieved if there is a broad and lasting political commitment, with a consistent emphasis on preventive measures and basic curative care. In other words, *social progress is not merely a by-product of economic development. Policies matter.* Where progress has been better than average, strong interventions based on a long-term commitment to social progress lay behind it.

Costa Rica provides another example. Its mortality rate for children under 5 fell from 112 per thousand in 1960–65 to 24 in 1980–85. Since the 1960s the proportion of underweight children under 6 has dropped from 14 to 2 percent. Life expectancy is comparable to that in the industrial world. In the 1970s the country embarked on several far-reaching health and nutrition initiatives, including the first National Health Plan (1971), the Universal Social Security Law (1971), and rural and commu-

nity health programs (1973 and 1976). A family planning program was introduced in 1968; by using the available rural health infrastructure, it has succeeded in reaching people in the countryside as well as the urban poor. The total marital fertility rate declined from 7.6 in 1960 to 3.4 in 1980. These achievements did not come cheaply; by 1985 Costa Rica was spending 23 percent of its government budget on health. Such high spending was sustainable only because the country devoted just 3.2 percent of its budget to military outlays between 1975 and 1985.

Other countries, too, have been able to raise health standards to well above the level that might be expected on the basis of their per capita GNP. In Cuba, for instance, life expectancy is high, and Sri Lanka reduced its under 5 mortality rate from 101 per thousand in 1960 to 35 in 1985. In all these cases the government has taken the leading role.

Government spending on health usually rises with economic development. Through training medical personnel, investing in clinics and hospitals, licensing practitioners, testing drugs, and running subsidy and insurance schemes, in addition to directly providing medical care, the public sector is the dominant player in health. Government efforts have helped bring about an increase in the number of doctors, nurses, and hospital beds per thousand population throughout the developing world. Such summary health measures as life expectancy and under 5 mortality have improved dramatically (Figure 5.1). It is widely believed that many of the economic problems in the developing world (as well as in the industrial world) can be attributed to excessive or inappropriate government intervention. Yet much of the social progress observed during the past two decades is clearly a direct result of government action.

Another factor behind the improvement in world health has been the effort of the international health community to focus on affordable, low-technology child survival techniques such as immunization and the use of oral rehydration therapy (ORT) for diarrheal dehydration. In this field it is no exaggeration to talk of a public health revolution. This progress has been possible because of a unique coalition of bilateral development agencies and United Nations agencies, notably the World Health Organization (WHO) and the United Nations Children's Fund (UNICEF). When in 1974 the World Health Assembly announced a new immunization drive, immunization services were reaching less than 5 percent of the children in the

developing world. Just fifteen years later, the Expanded Programme on Immunization (EPI) had extended its polio and DPT coverage to about 60 percent (as measured by the number of children receiving a third dose of vaccine before age 1). Many countries—for example, Egypt, Mexico, Peru, Thailand, and Zaire—have made good progress in training workers to use ORT. Much remains to be done, but after less than a decade one-third of all families in the developing world now have access to this treatment.

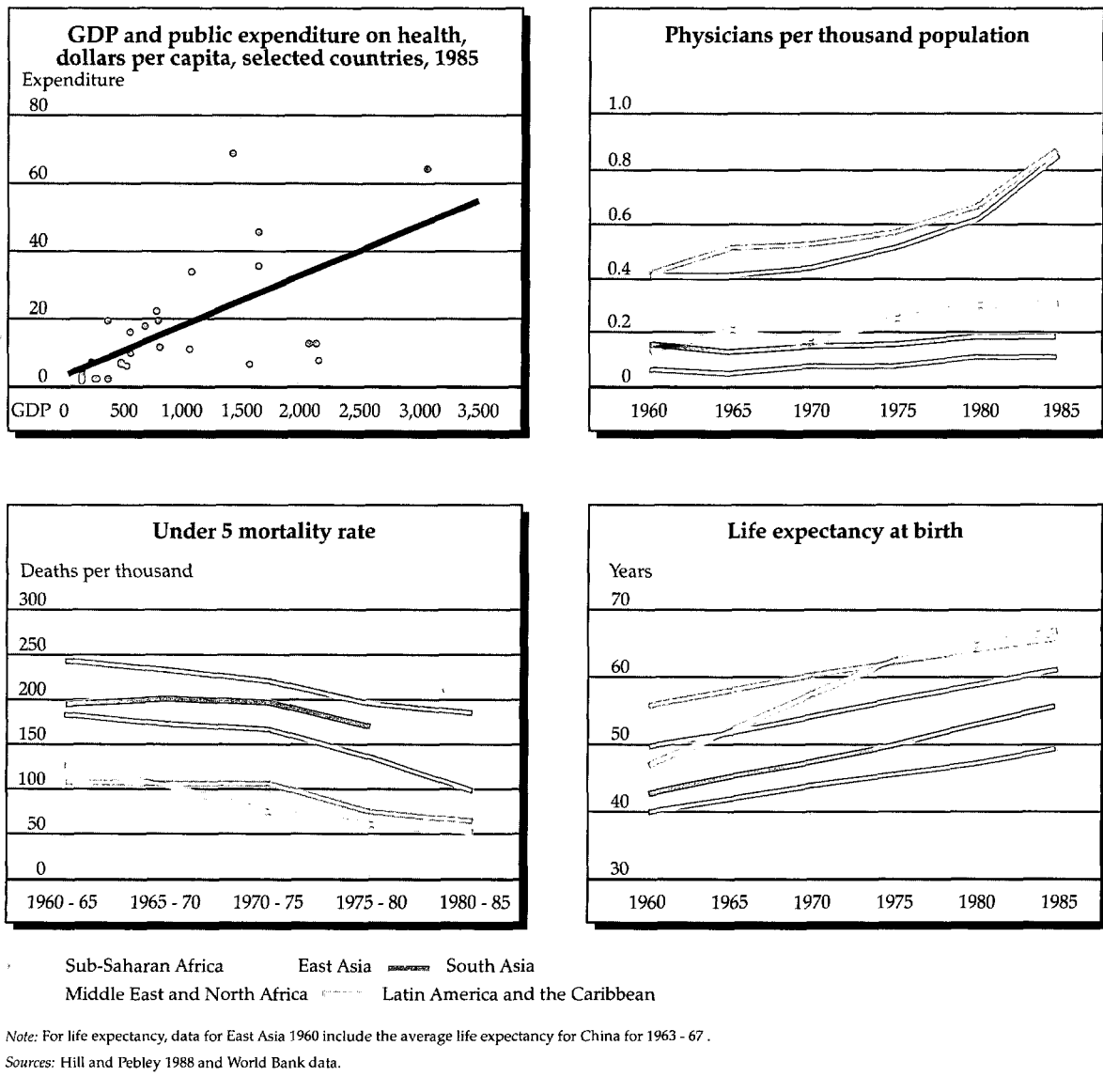
Progress in education

As in health, the developing countries have made great advances in education over the past two decades. Between 1965 and 1985 the number of primary schools in low-income countries (excluding China) increased by almost 60 percent, to more than 775,000. In middle-income countries the number more than quadrupled, to nearly 950,000. (During the same period the number of school-age children grew 69 percent in low-income countries and 48 percent in middle-income countries.) Between 1965 and 1985 the number of teachers went up 55 percent in low-income countries, 175 percent in lower-middle-income countries, and 120 percent in upper-middle-income countries.

Most of the schools in developing countries are public schools that are built, financed, and staffed by the government. The share of education spending allocated to capital expenditures—essentially, school construction—reflects the big push of the 1960s to improve access to schooling. In 1965 low- and middle-income countries spent 21 and 14 percent, respectively, of their total education budgets on building schools; twenty years later the share had fallen to 12 percent in both cases. Most teacher training programs, both for primary and for secondary school teachers, are run by governments. As in health care, spending on education rises with the level of development, and so do standards of attainment (Figure 5.2).

As a result of this commitment to education, and especially primary education, net enrollment rates grew, on average, 5.7 percent a year between 1965 and 1975 in low-income countries, 5 percent in lower-middle-income countries, and 2.3 percent in upper-middle-income countries. During the late 1970s enrollment continued to grow faster than population. By 1985 there was enough primary school capacity in most middle-income countries to enroll virtually all children; in the low-income countries capacity still fell short of that goal.

Figure 5.1 Trends in health expenditure, number of physicians, and health outcome



Continuing needs

Despite great progress in both health and education, an immense task remains. About 30 million children under 5 die every year from causes that would not usually be fatal in developed countries. About 110 million children worldwide (almost 20 percent of the relevant age group) receive no primary education. More than 90 percent of them live in low- and lower-middle-income countries.

Governments deserve credit for the achievements to date. But their justifiably heavy outlays on health and education would do more good—and would go a long way toward meeting the problems that remain—if they were better spent. Government spending on social services is inefficient in many ways. Above all, it tends to be skewed away from the people who need it most—the poor.

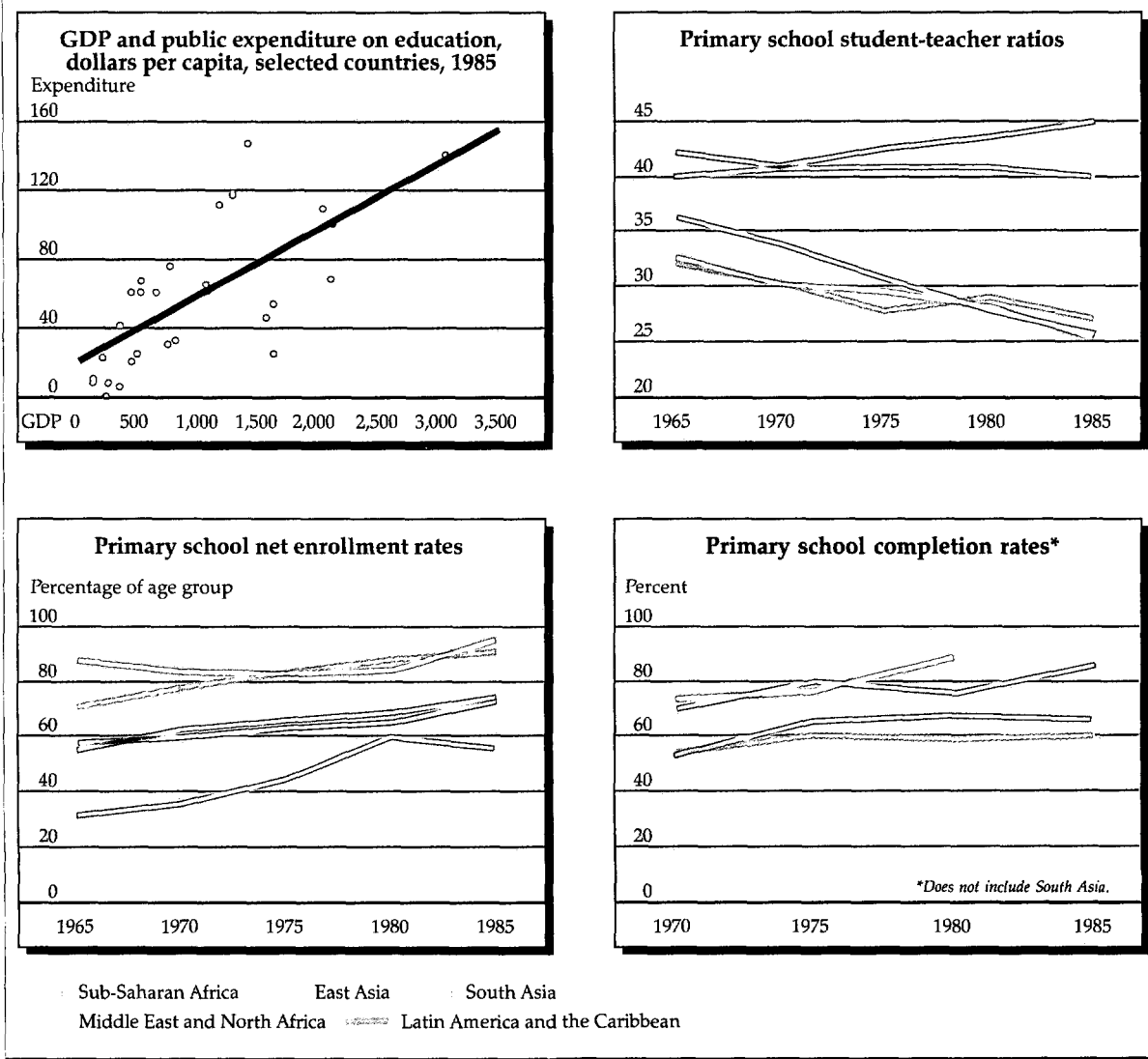
On average, an estimated 70 to 85 percent of the

developing world's total health spending, both public and private, goes for curative care. Between 10 and 20 percent is spent on preventive care and the remaining 5 to 10 percent on community services such as mosquito control and health education. Within the curative sector, hospitals often account for more than 80 percent of the cost. Yet it is well known that preventive and community services are far more effective in reducing morbidity and mortality. If public resources tied up in hospitals were redirected to the lower levels of the health care system, many diseases could be pre-

vented altogether or treated earlier at less cost. The heavy financial demands of the curative sector also lead to internal inefficiencies—hospitals without equipment and clinics without drugs—because salaries crowd out other spending.

The result is that the poor often lack access to even the most basic services. The proclaimed goal of free health care for all often means low-quality care in the cities and none at all for the rural poor. Even in China in 1981 government spending per capita on health care was more than three times higher for urban dwellers than for rural people.

Figure 5.2 Trends in education expenditure, student-teacher ratios, net enrollment rates, and completion rates



Seventy percent of Senegal's physicians and pharmacists, 60 percent of its midwives, and 40 percent of its nurses are concentrated in the Dakar-Cap Vert region, where less than 30 percent of the population lives. In Peru two-thirds of all doctors live in the capital, serving just 27 percent of the population; in most rural areas, where the majority of the poor live, there is only one doctor for every 10,000 or more inhabitants.

In short, the overall expansion of the health care system has shortchanged the most important services: preventive care and basic curative care. The poor have not benefited proportionately from the larger numbers of doctors, nurses, and health care facilities, from the increased availability of affordable drugs, or from public health services such as water and sanitation. As a result, the link between poverty and illness remains strong both for chil-

Box 5.1 Adult health: a neglected issue of growing importance

Adult health is a relatively new issue in public health policy in developing countries. Most public health efforts in developing countries have emphasized child and infant health. Yet half the population in the developing world is between ages 15 and 60. Children depend on these adults, and so does the economy. More than anybody else, the poor depend on good health to maintain the productivity of their only asset—labor. The loss of the family breadwinner to death or debilitating disease may force a whole household into poverty.

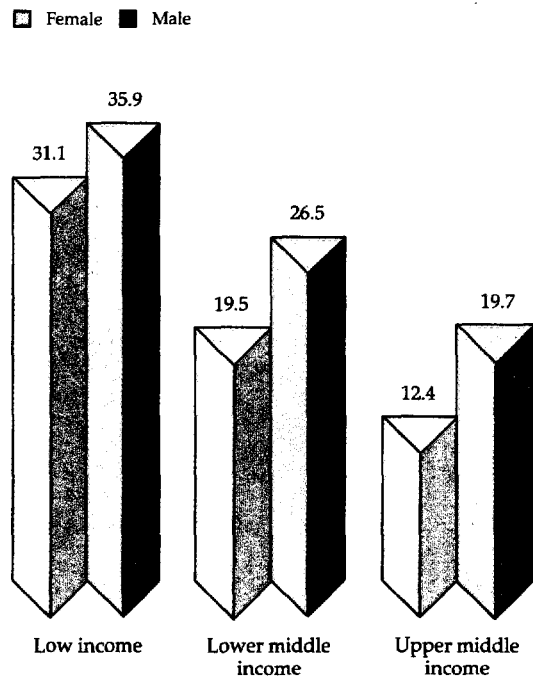
Each year in developing countries ten million young adults die. Respiratory diseases, malaria, diarrhea, cardiovascular diseases, cancers, chronic obstructive lung diseases, sexually transmitted diseases (including acquired immune deficiency syndrome—AIDS), diabetes, tuberculosis, and injuries are widespread. In Guinea-Bissau and Sierra Leone, for example, the chance at age 15 of surviving to 60 is less than 50 percent; in most developing countries it is between 50 and 75 percent (as against 85 percent in developed countries). Diseases such as onchocerciasis, epilepsy, and leprosy—which raise morbidity rather than mortality—are not captured in those figures.

As Box figure 5.1 indicates, adult mortality is highest in low-income countries. Life expectancy at 15 in the developing world is seven years less than in industrial countries. Fertility and mortality rates are falling in most developing countries, but the adult population is still growing. This demographic transition is happening alongside a health transition: chronic diseases are becoming more important.

In Colombia high rates of parasitic infections in adults are associated with less education and lower income. In Peru and Côte d'Ivoire poor rural households lose half as many more working days because of illness as households in poor urban areas. In Bahrain disability and low economic status go together; according to a 1981 census people with disabilities were three-and-a-half times more likely to be illiterate, twelve times less likely to have a college degree, and three-and-a-half times less likely to be employed. In Kenya bad health among adults is strongly linked to low economic status, poor household sanitation, and inadequate nutrition.

Policies that succeed in reducing poverty in developing countries will usually improve adult health too. Improvements in drinking water, sanitation, housing, and nutrition check the spread of tropical diseases. Less crowding and better housing prevent the transmission of tuberculosis and other viral respiratory diseases. Specific preventive measures are needed for a range of other illnesses: vaccination for tetanus, education and taxation for diseases linked to alcohol and cigarettes, and, especially in Africa, sex information campaigns for AIDS.

Box figure 5.1 Adult mortality in the developing world



Note: Adult mortality is the probability at age 15 of dying before age 60, expressed as a percentage.

dren (as stressed in Chapter 2) and for adults (Box 5.1).

In education, too, government policy has favored higher-level training over services that would benefit the poor. It is well known that tertiary education yields the lowest social rate of return, but many countries nonetheless spend a disproportionate share of their education budgets on that level.

In West Africa, in addition to free tuition and regular government subsidies to the colleges, students in higher education often receive living allowances. It is estimated that these living allowances account for nearly half of the total spent on higher education. Only 2 percent of the relevant age group in Sub-Saharan Africa goes on to higher education, but that level accounts for 22 percent of the region's public education budget. Brazil spends 9 percent of its public education budget on secondary education and 23 percent on higher education. In Chile, Costa Rica, the Dominican Republic, and Uruguay people in the top one-fifth of the income distribution receive more than 50 percent of the subsidies for higher education; the poorest one-fifth receives less than 10 percent.

In India education is heavily biased in favor of urban dwellers and males. Urban literacy rates are twice as high as rural rates, and females in both rural and urban India have lower literacy rates than males. In Pakistan 63 percent of the boys in the relevant age group are enrolled in elementary school, but only 32 percent of the girls are. In rural areas enrollment rates for girls are as low as 20 percent.

But the problems in education go well beyond enrollment rates. Low enrollment figures are often accompanied by high dropout rates. In low-income countries more than 40 percent of those who enter primary school fail to finish, and even in upper-middle-income countries completion rates are only 85 percent. As a result, illiteracy remains widespread in the developing world.

The low quality of education goes a long way toward explaining the weak performance of children in developing countries. Governments have stressed quantity over quality. Many countries spend less each year on textbooks and other materials; in low-income countries teaching materials account for less than 3 percent of recurrent expenditures.

Until the 1980s textbooks were often not provided to students at all. In the Central African Republic the national student-to-textbook ratio was between ten and twenty to one. In Brazil only 23 percent of all schools had received first-grade text-

books by the early 1980s, in the Dominican Republic fewer than 20 percent of eighth-grade students in public schools had mathematics textbooks, and in Botswana fewer than 20 percent of primary school students had access to science or social studies textbooks. A 1983 study in the Philippines reported that only 32 percent of fifth-grade science teachers used textbooks frequently; another in Botswana showed that teachers used textbooks only 12 percent of the time. Teachers' guides are seldom available.

So it is hardly surprising that repetition rates are high and that many of those who complete primary school have learned very little. In various tests conducted in about forty countries students in low- and lower-middle-income countries answered only 40 percent of the questions correctly. In particular, reading comprehension appeared to be weak.

To make matters worse, there is a recent trend, mainly in low-income countries, toward lower primary enrollment rates. In the face of tight budgetary constraints, many African countries are failing to expand their education systems to keep up with population growth. (Ghana, Liberia, Mali, and Tanzania are but a few examples.) The sharpest declines in enrollment are observed in low-income countries that have suffered from war or internal strife. Afghanistan's enrollment rate fell 40 percent between 1980 and 1985; during the same period Somalia's also fell 40 percent. In Ethiopia and Mozambique, after considerable progress in earlier years, growth in enrollment has ceased.

Extra spending on social services in general will not automatically help the poor. The existing pattern of provision needs to be tilted in their favor in terms of both the quantity and the quality of services. The most important measures in the social sectors for improving the living conditions of the poor are also the most basic: expand and improve primary education and primary health care.

Investing in people

There is overwhelming evidence that human capital is one of the keys to reducing poverty. Moreover, improvements in health, education, and nutrition reinforce each other. But the poor generally lack access to basic social services. There is too little investment in their human capital, and this increases the probability that they and their children will remain poor. To break this vicious circle, governments must make reaching the poor a priority in its own right.

Box 5.2 Education and economic growth

Many studies of farm productivity, family enterprises, and wage earners have demonstrated the effects of education on output and productivity. As Box table 5.2 shows, the returns to education are substantial. Although the impact of education on aggregate real output has been less well documented, a recent study of the determinants of real GDP covering fifty-eight coun-

benefiting fully from their greater skills. The results suggest that there may be thresholds in the returns to education. For example, about four years of education seem to be needed to attain functional literacy. Investments may yield substantial returns only when they are big enough to push the economy over such a threshold.

Box table 5.2 Average social returns to education
(percent)

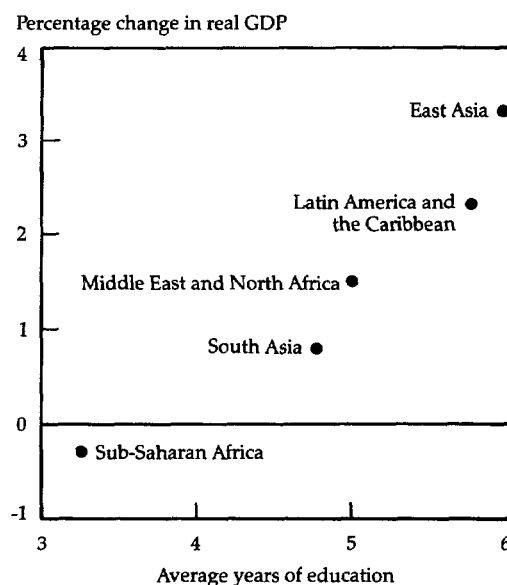
Region	Primary education	Secondary education	Higher education
Sub-Saharan Africa	26	17	13
Asia	27	15	13
Latin America and the Caribbean	26	18	16

Source: Psacharopoulos 1985.

tries during 1960–85 strongly suggests that education can contribute significantly to aggregate output. An increase of one year in average years of education may lead to a 3 percent rise in GDP.

The results of this research differ from region to region (Box figure 5.2). For most groups of developing countries the effect of education on GDP is clearly positive, and (within the range examined) the higher the initial level of education, the greater the benefits of increasing it. This underscores the importance of investing in education. Sub-Saharan Africa is an exception; there, increasing average years of education by one year, from 3.25 (in 1985) to 4.25, is expected to have a negligible effect on output. This reflects many factors: unfavorable local conditions, the lack of complementary inputs, inadequate institutional capability, and other economic obstacles that prevent people from

Box figure 5.2 The effect on real GDP of one additional year of education per person



Education and productivity

The principal asset of the poor is labor time. Education increases the productivity of this asset. The result at the individual level, as many studies show, is higher income. More recent research also points to a strong link between education and economic growth (Box 5.2).

In the wage sector the individual returns to education are consistently above returns to conventional investments. It is true that most people in the developing world do not work for wages and that many of the poor are self-employed in agriculture or in small family enterprises. But this does not weaken the case for investing in education. Educated farmers are more likely to adopt new

technologies, and virtually all studies on agricultural productivity show that better-educated farmers get a higher return on their land. One study on Africa found that farmers who have completed four years of education—the minimum for achieving literacy—produce, on average, about 8 percent more than farmers who have not gone to school. Numeracy and literacy were identified as the essential skills. Studies in Korea, Malaysia, and Thailand confirm that schooling substantially raises farm productivity.

A growing number of the poor in the developing world find employment in the nonagricultural nonwage sector—mostly in the informal economy. Not all these workers are poor, but many of the self-employed do belong to the poorest segments

of society, and employment in the informal sector makes up the main part of their family income.

Studies on how education influences informal sector productivity are scarce, but the few that do exist point to benefits. More education gives the worker a wider range of self-employment options and allows him or her to choose more profitable alternatives (for example, modern trade rather than traditional handicrafts). Within most subsectors earnings per hour rise with years of education, just as in the wage sector. The precise effects vary by type of activity and sometimes differ between men and women. In Peru returns to an extra year of primary education are estimated to be as high as 33 percent for women self-employed in the retail textile sector. Postprimary education appears to have a relatively high payoff—14 percent—for men in the service sector. A study of small and medium-size enterprises in Colombia showed that the entrepreneur's background—skills, education, and experience in previous jobs—strongly influences both the technical efficiency and the profitability of the enterprise.

There can be little doubt that educating the children of the poor greatly improves their chances of escaping poverty. Since labor is the one scarce resource on which all able-bodied poor can rely, increasing the productivity of this labor is clearly the most effective way to combat poverty.

Other benefits of education

The effectiveness of education as a weapon in the fight against poverty goes well beyond productivity in the labor market. One year of mother's education has been associated with a 9 percent decrease in under 5 mortality. The children of better-educated mothers, other things being equal, tend to be healthier. The effects of education on fertility appear to be more complicated. At low levels of education a few extra years of schooling may actually lead to increased fertility, but after that there is a strong negative effect. In what *World Development Report 1980* called the "seamless web of interrelations" among social services, education plays the central role.

Health, nutrition, and productivity

The effect of better health and nutrition on productivity is less well documented than the effect of education. An increasing number of studies, however, show a positive effect on agricultural productivity, especially for the activities in which most of

the poor are engaged. Among sugarcane workers in Guatemala productivity increased with better nutrition. The productivity of workers in Indonesia who received iron supplements for two months rose by between 15 and 25 percent. Increased calorie intake in Sierra Leone substantially raised farmers' productivity. A study for India shows a significant link between wages and weight-for-height (a measure of short-term nutritional status) among casual agricultural laborers. Another study found that the effect was especially marked in the peak agricultural season, when more energy is required for harvesting. Estimates for Sri Lanka show a significant positive effect of energy intake on real wages.

Nutrition and learning

Just as the education of parents has a positive effect on child nutrition, better nutrition improves the child's capacity to learn. Studies in many developing countries (China, India, and Kenya, among others) consistently show that protein-energy malnutrition is related to lower cognitive test scores and worse school performance. Micronutrient deficiencies are also linked to school performance. A study of Indonesia found that iodine deficiency reduced cognitive performance among nine-to-twelve-year-old children. Iron deficiency decreases the child's alertness, which in turn affects learning. In Thailand providing iron supplements to schoolchildren has improved test scores. Vitamin A deficiency has long been associated with blindness and the severity of measles; a milder deficiency affects growth, including brain development.

The health benefits of adequate energy, protein, and micronutrients are important by themselves. Because of the positive effect of better health and nutrition on productivity, investment in these areas also contributes to reducing poverty. And if the full benefits of education are to be realized, pupils must be adequately nourished. There are many inexpensive things that governments can do. Providing vitamin A capsules twice a year and giving doses of iodine once every three years would go a long way toward eliminating nutritional disorders among school-age children.

Poverty and population growth

Poverty and rapid population growth reinforce each other in a number of ways. Low wages (especially for women), inadequate education, and high

infant mortality—all linked to poverty—contribute to high fertility rates and thus to rapid population growth. Increased education for girls and women is one of the most powerful ways of reducing fertility. Greater opportunities for women in the wage sector have an independent negative effect on fertility and offer other benefits as well. When women work, parents may decide they need fewer boys to support them in old age, and if mothers work for reasonable wages, the opportunity cost of bearing an additional child is relatively high.

High infant mortality is consistently associated with high fertility. Studies from places as diverse as Colombia, Egypt, and India show that parents who have lost a child expect to have more children than do similar parents who have not. Reducing mortality among children is a necessary step toward reducing fertility.

Thus, the link leading from poverty (low wages, low income, and high mortality) to high fertility is well established. How does high fertility or, more generally, rapid population growth affect poverty? At the national level, the relationship is not simple. In the short run an increase in population will result, almost by definition, in lower per capita income growth, but in the longer run the larger number of productive workers may accelerate growth. It can even be argued that some countries—particularly in the West—need faster population growth even to sustain their current economic performance.

On the negative side, in many high-fertility countries about 45 percent of the population is under 15. This puts enormous pressure on the schools. Spending on education in the developing world is much lower than in the industrial countries to begin with, and the scarce resources have to be spread over a much larger proportion of the population. As a rule, the poor are last in line. The same holds for other sectors, such as health care and water supply. So, if investing in human capital is necessary for reducing poverty, rapid population growth will make the task much more difficult in many poor countries.

Population growth also affects the labor market. Rapid growth of the labor force does not necessarily lead to unemployment and poverty: if investment in capital is adequate, an expanding economy could absorb the additional labor and may indeed depend on it. But most countries invest too little to absorb a population that is growing at 3 to 4 percent a year. Low wages and growing poverty are the likely results.

At the household level, high fertility can damage the health of both mother and child. The mother's

health suffers from closely spaced pregnancies, and her health in turn affects the child's health at birth and in the critical early years. Providing family planning services is one of the most effective policies for better health.

Family planning

Having too many children puts mothers at risk and compounds the problems of poverty (Box 5.3). Most developing countries recognize the importance of reducing population growth. Lower fertility is not an end in itself, but it makes other interventions more effective in improving overall welfare. Providing family planning services is the most direct way to reduce fertility, although lowering infant and child mortality and creating better education and work opportunities for women also help. Again, appropriate policies reinforce each other: better-educated women make more use of modern contraceptives (when they are available) than do the uneducated.

In many countries family planning services are virtually nonexistent, despite the apparent demand. In Ghana, for example, 20 percent of women in rural areas and 28 percent in the cities say they want no more children, yet modern family planning services reach less than 7 percent of the women. Ghana's fertility rate is 6.4. In Indonesia, where about half of the women want no more children, family planning services reach 44 percent of all women. Indonesia's fertility rate is 3.3.

Family planning programs, where they have been implemented, have brought birthrates down. In Costa Rica, Korea, and Singapore, for instance, birthrates fell by 35 to 48 percent between 1965 and 1985. Other factors in reducing birthrates, however, should not be overlooked. Rapidly developing economies can bring about some modest declines, even with weak family planning programs. But in the poorest countries (such as India and Indonesia) strong family planning programs are necessary to slow population growth.

Providing access for the poor

Providing the poor with access to social services requires a clear commitment. This must be reflected in the infrastructure and organization of the social sectors and in the way they are financed. Much can be learned from decades of experience in countries at different levels of development and with varying needs.

Infrastructure and organization

The biggest obstacle for the poor in gaining access to health and education services is the lack of

Box 5.3 Safe motherhood

In many developing countries pregnancy and childbirth account for more than a quarter of all deaths of women of childbearing age. About half a million women, 99 percent of them in the developing world, die in childbirth each year (see Box figure 5.3). Of every 100,000 women who give birth in Africa, from 200 to 1,500 may die, compared with fewer than 10 in most developed countries. By contrast, of every 100,000 African women who take the contraceptive pill for a year, perhaps one will die. About three-quarters of maternal deaths are from one of five causes: hemorrhage, infection, toxemia, obstructed labor, and abortion (particularly unsafe abortions, performed by untrained personnel in unhygienic conditions). Because women in many developing countries, and especially in the poorer areas, tend to have many pregnancies, the cumulative lifetime risk of dying in pregnancy may reach one in twenty. Most of these maternal deaths could be prevented by relatively cheap and simple measures.

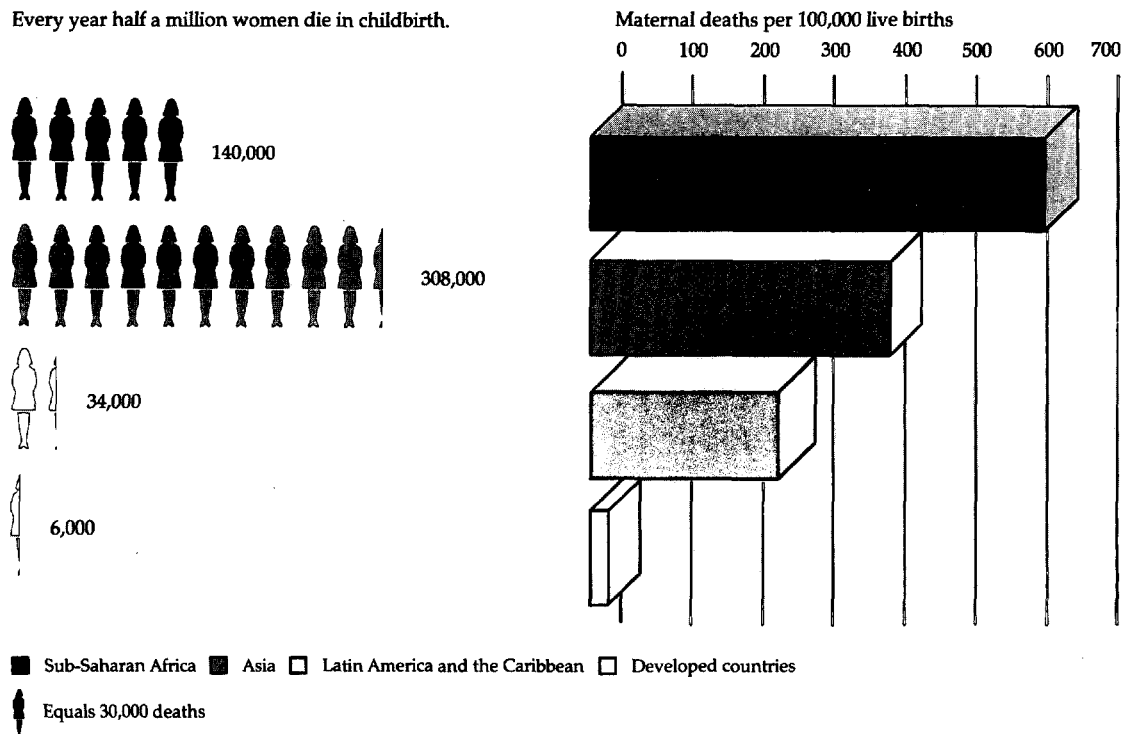
A woman's health and nutritional status substantially affect her capacity to withstand difficulties during pregnancy, childbirth, and the postpartum period, to produce a strong, healthy baby, and to nurse and care for her baby. Most pregnant women in developing countries are anemic, and many teenage mothers are

not yet fully grown. Women could help themselves if they had basic information about nutrition and health. Improving women's income, education, health, and nutrition could greatly reduce maternal mortality and morbidity.

Family planning information and services can also improve maternal health by enabling women to time and space pregnancies. In many countries 25 to 40 percent of maternal deaths could be averted by avoiding unwanted pregnancies. The three essential elements are prevention of complications, routine care, and backup for high-risk emergency cases. Existing programs could be modified to stress:

- *Stronger community-based health care*, relying on nonphysician health workers, to screen pregnant women, identify those at high risk, and refer them for help; to provide good prenatal care and ensure safe delivery for women at less risk; to provide family life education and family planning services; and, in general, to promote better family health and nutrition
- *Stronger referral facilities*—hospitals and health centers with beds—to act as a backup network, to take care of complicated deliveries and obstetrical emergencies, and to provide clinical and surgical methods of family planning
- *An "alarm" and transport system* to transfer women with high-risk pregnancies and emergencies from the community to the referral facilities.

Box figure 5.3 Estimated number of annual maternal deaths, by region



physical infrastructure, especially in rural areas. The urban bias in the provision of services affects both quantity and quality. The sheer lack of facilities makes necessary a continued expansion of appropriate services, especially rural health clinics and primary schools. This will almost certainly benefit the poor. Improving quality will require more funds, better use of the available resources, and greater accountability in administration.

EDUCATION. Governments in middle-income countries have by and large been able to build enough schools and train enough teachers to make universal primary education possible. Low-income countries, however, still have a long way to go. For example, in Bhutan and Mali net primary school capacity is only about 20 percent, approximately the same as net enrollment rates. Since these countries are faced with the prospect of sluggish economic growth and rapid population growth, it will take an extraordinary effort to provide the necessary infrastructure for achieving universal primary education in the foreseeable future. Given the extremely low incomes of most households in these countries, public provision of education will be needed.

In some countries the private sector can help to make schooling more widely available. Pakistan in 1979 reversed its nationalization decision of 1970 and again allowed private schools to provide education. The education system has expanded quickly, especially at the lower levels. In the Karachi region, for instance, private institutions in 1985 accounted for 25 percent of primary enrollment. Because of the relatively large fees charged, these private institutions are unlikely to serve the poor. But where demand exceeds supply and budget constraints are tight, greater reliance on the private sector will allow the government to direct more of its scarce resources toward education for the poor.

In general, the public sector will remain the dominant supplier of primary education in middle-income countries as well, although here there is more scope for private provision. In 1980–81 Chile reformed its education system and embarked on a policy of developing private education, partly supported by public finance, with the aim of improving quality and increasing enrollment. The government encouraged the private sector to provide education through a per student payment system that forced the public schools to compete for students. It transferred responsibility for primary and secondary public schools to the municipalities and placed vocational schools under nonprofit private

sector organizations in the hope of making the schools more responsive to labor market demands. The Ministry of Education allocates resources to the public schools on the basis of enrollment and dropout rates. Private schools that provide tuition-free education receive the same subsidies. Implementing the reforms was difficult—the monetary transfers had to be suspended during the economic crisis of 1982–83—but enrollment in subsidized private elementary schools doubled between 1980 and 1987, and the proportion of all education subsidies received by the poorest 30 percent of students rose from 29 percent in 1974 to 38 percent in 1986.

Simply expanding the education system is not enough. In many countries the curriculum needs to be improved, the schools need more textbooks, and the teachers need better training, more time for teaching basic skills, and better pay and working conditions. School managers need more authority to control resources, and they must be made more accountable to the local community.

Narrower interventions can sometimes be successful in reaching disadvantaged groups. In Bangladesh, for instance, a scholarship project for secondary school girls in the Sharasti Upazila region, funded by the U.S. Agency for International Development (USAID), has been in place since 1982. Before the project started, 27 percent of the secondary school students in the area were girls. By 1987 the percentage had risen to 44 percent. The project has also greatly reduced the dropout level for female students, from 15 percent before the program started to 4 percent in 1987. In Nepal in the 1970s the United Nations Educational, Scientific, and Cultural Organization (Unesco) sponsored a project that included a teacher training component designed to increase the number of women teachers. During the project period the number of girls enrolled in school rose from 13 to 29 percent of the age group.

HEALTH. Although the government is usually the dominant provider of health care, in many countries the private sector also provides some (mostly curative) services. The case for the state's being sole provider of curative care is weak. There is undoubtedly a need for heavy intervention, but this need not mean putting every doctor and nurse on the government payroll. Although different countries have different needs, several broad principles hold. First, the state should take responsibility for health interventions that have a public-good character (for example, clean air and traffic safety)

or that generate benefits to the community in addition to private benefits (for example, immunization against communicable diseases). Second, in curative care the main role of the state as a provider of services should be to supply basic services in those regions that the private sector is unlikely to serve. Third, if a private delivery system is in place, the state should make sure that the poor have access to basic care. In many countries, in other words, the government should continue to expand basic services but with a greater emphasis on access for the poor.

Chile again offers an example. Expansion of primary health care services, with an emphasis on vulnerable groups such as mothers and young children, was part of the reforms implemented after 1974–75. New financing mechanisms were used to promote increased coverage. The government encouraged the private sector to offer prepaid health insurance plans that were to be financed through payroll deductions. User fees were introduced on the basis of ability to pay.

Perhaps the most important aspect of the reforms was the decision to decentralize responsibility for delivering primary health care and public health care services. In many countries primary health care programs are designed and implemented by highly centralized administrations. Building health centers and training health workers can be managed from the center, but supplying services calls for decentralized management. In

1980 a USAID project in Nicaragua used surveys to establish local needs and involved village health committees in building wells, latrines, and health posts. A preschool child care program in Colombia is managed by parents' associations (Box 5.4). In Thailand villagers have helped to build wells and health and nutrition centers. Women in a Bangladesh village maintain new latrines and sewage systems (Box 5.5). With UNICEF's assistance, women's NGOs in Indonesia have produced training booklets about child survival for twelve different religious groups. By January 1988 these booklets had reached about 7 million women at a cost of 10 cents a woman.

Chile has transferred responsibility for many public health services from the central government to municipalities. The reforms are incomplete, but coverage has already been broadened substantially. The capacity of municipal health posts, for instance, has gone up 45 percent since the reforms, and the number of service hours offered has increased by more than 80 percent in rural areas. Chile's long-term commitment to improving its basic health services is having results. Infant mortality declined from 103 per thousand in 1965 to 21 per thousand in 1985, and maternal mortality was reduced from 131 to 47 maternal deaths per 100,000 live births during the same period.

China also illustrates the importance of local involvement in the provision of basic health care. After the introduction of the economic responsibil-

Box 5.4 A community child care and nutrition program in Colombia

An estimated 25 percent of Colombia's population lives below the poverty line. In the towns the worst poverty is borne disproportionately by children, who are at risk from malnutrition, illness, neglect, isolation, and violence. To address these problems, the Colombian government and local NGOs developed a system of preschool child care that includes a feeding program and health monitoring.

The target group—children age 2 to 6 and their parents—is drawn mainly from the poorest 20 percent of the population. A group of parents selects a "community mother" to provide day care and other services for fifteen children in her home. With help from the National Family Welfare Institute, the community mother receives training, a small monthly stipend, and a credit to upgrade the home to minimum standards of hygiene and safety. The institute also provides food, including a domestically produced nutritional supple-

ment, to meet 80 percent of the daily requirements of each child. The service is much in demand. It started on a broad scale in 1987 and by late 1989 had served half a million children. Its goal is to reach all children at risk—more than a million of them—by 1994.

Participating children receive improved nutrition and care as well as exposure to preschool learning activities. Community mothers are benefiting from additional income, and parents—often single female heads of household—gain an opportunity to seek remunerative employment outside the home. The cost of the program, at about \$11 a month per child, compares well with \$33 a month for day care provided through the institute's centers. In addition, the program's subsidies are better targeted to the poor; day care centers largely serve a middle- and lower-middle-income clientele.

Box 5.5 Mirzapur, Bangladesh: water supply, sanitation, and hygiene education

Bangladesh, heavily populated and one of the poorest countries in the world, suffers from endemic health problems. The mortality rate for children under 5 was 204 per thousand in 1980–85—the highest in Asia and one of the highest in the world. Diarrheal diseases account for 29 percent of all deaths of children under age 5 and for roughly one in five deaths in all older age groups. Sixty percent of children under 5 experience moderate to severe malnutrition. These problems stem, at least in part, from the poor quality and management of Bangladesh's water, which in turn are linked to frequent floods.

More than 82 percent of rural villagers say they use tubewell water for drinking, but only 12 percent use it for all their domestic needs. This means that the vast majority still uses fecally contaminated surface water for other purposes, such as bathing and washing utensils and clothes.

In 1984 the Interregional Handpump Project, sponsored by the United Nations Development Programme and the World Bank, initiated a study on the health impact of handpump water supplies, pit latrines, and hygiene education in the Mirzapur region of Bangladesh. The project sought to encourage people to use well water instead of surface water for domestic purposes by supplying new and more efficient Tara handpumps. It also introduced hygienic water-sealed la-

trines. An important element of the project was an education program designed to persuade villages to use handpumps for all domestic purposes, to consume more water, to store it hygienically, and to use and maintain the water-sealed latrines.

One hundred and forty-eight Tara handpumps and 754 latrines—one for every household—were provided. Villages made a financial contribution for the equipment. Classes in hygiene were complemented by further training and household visits over several months. Twelve local women were trained to empty the latrine pits. They were paid about \$1.30 each per pit—much less than the price quoted by professional sweepers.

The project achieved high rates of handpump water consumption. The villagers used and stored water more hygienically than before, and 90 percent of the latrines were in regular use.

The effect of the project on health was evaluated through a series of surveys. In the baseline year the incidence of diarrheal diseases in the project area was similar to that in a control area. After the intervention the incidence of persistent diarrhea was 40 percent lower in the project villages than in the control area, and child dysentery was 30 percent lower. In the last two years of the project, children in the project area suffered from diarrhea for, on average, thirty-five days, compared with sixty-three days in the control area.

ity system, village-based rural health insurance programs collapsed. Local communities responded with a variety of schemes to secure adequate financing for basic care—from health maintenance organizations with prepaid insurance in some of the larger cities to arrangements that finance village health posts out of charges for sales of medicine and for curative treatment.

Financing health and education

Public funds provide most of the resources for the social sectors. The demand is increasing: basic services need to be expanded so as to reach the poor, and rapid population growth in some regions and aging populations in others add to the burden on all the social services. But the supply of funds is being squeezed. Slow economic growth, tight budget constraints, and competing calls on the government purse from outside the social sectors mean that priorities must be examined carefully.

A shift in the allocation of funds from higher-level services to basic health and primary educa-

tion will serve both efficiency and equity objectives. Recommending such a shift does not mean denying the importance of higher-level services. Any country that wants to compete in the world economy needs a comprehensive education policy that includes spending on higher education, science and technology, and professional training. Hospitals are an essential part of a balanced health care system, and they are the educational and research institutions that train new staff and generate new knowledge. These considerations, however, do not justify using higher-level services as a means of transferring government money to privileged students and urban patients from middle- and upper-class backgrounds. Financial reform, including greater reliance on alternative financing mechanisms such as student loans and health insurance plans, can free up resources that can be used to expand and improve basic services and provide better access to the poor.

In many cases more government spending on the social services (especially at the cost of military expenditures) would be fully justified. In some

Table 5.1 Expenditures on primary education as a percentage of GDP, 1985 and 2000

Region	1985	2000	
		(at current enrollment rates)	(universal enrollment)
Sub-Saharan Africa	1.41	1.35	2.53
East Asia	1.42	0.60	0.60
South Asia	0.95	0.63	1.08
Eastern Europe	1.17	0.71	0.71
Middle East and North Africa	2.05	1.47	1.76
Latin America and the Caribbean	1.06	0.83	0.92

cases it is likely to be necessary. This is illustrated by Table 5.1, which shows the estimated cost of achieving universal primary education by 2000. Projections for population and economic growth suggest that many regions will be able to achieve that goal by allocating to primary schooling a similar percentage of GDP as in 1985, or even a smaller share. In Sub-Saharan Africa, however, although enrollment levels can be raised significantly, reaching universal primary enrollment will take an extraordinary effort, including a generous increase in foreign aid. Growth in GDP of 3.7 percent a year, combined with an expected increase of 3.4 percent a year in the population age 6 to 11, will require an 85 percent increase in the share of GDP allocated to primary schooling, from 1.4 to 2.5 percent. In some countries outside Africa, too, more spending on education and other social services will be necessary.

But much can also be gained in two other ways: (1) by shifting current outlays to more efficient uses (for example, by emphasizing primary education over higher education and village health posts over city hospitals) and (2) by trying harder to recover the costs of certain services.

How much scope is there for charging for services? Recent evidence shows that the demand for medical care is sensitive to its price—more so for the poor than for the rich. This implies that if fees are collected (or increased), the poor will be the first to drop out and that health services for poor areas will have to be heavily subsidized. This need not mean that service is entirely free; nominal fees could be charged in poor areas. Charging higher fees in better-off regions or in the richer parts of cities makes good sense and can generate substantial revenues. In addition, fees should be considered for those types of care (especially hospital care) that yield mostly private benefits; this would allow more resources to be devoted to public health measures and preventive care.

There is also ample evidence that people are willing to pay for higher education. Higher fees for secondary and higher education would garner resources for improving the quality of education in general and, where necessary, for expanding primary education. The effect of fees on the demand for primary education is less clear. If there are few public schools, private schools can charge substantial fees by catering to the rich. But if the aim is to increase the enrollment rates of the poor, fees are counterproductive.

Both approaches—shifting resources from higher levels of care to basic services and introducing fees for those who can afford them—transfer resources from the rich to the poor. If reducing poverty is a primary objective, this policy is fully justified.

Creating demand

Even when cheap or free social services are available, the poor may not take advantage of them. There are two reasons: they may not understand the benefits being offered, or they may be deterred by the private costs—such as working time forgone in visiting a health center or loss of household income when a child goes to school.

Family planning is a good example of why poor people may not use social services. Health education campaigns are needed to explain the benefits of lower fertility and to describe the various birth control techniques. But even when family planning services are available and understood, it may not be in the household's private interest to have fewer children. For instance, having fewer children may make it possible to give each child a better education, but the benefits may not be felt for years. Where national policies have produced a population growth rate that is faster than socially desirable, governments need to encourage family planning by strengthening the private incentives. Singapore, for instance, uses tax incentives and housing policies to make having smaller families more attractive. China has used bonuses, access to education, and housing privileges in the same way. Thailand combines community involvement, extensive public education, mass sterilization campaigns, rural development programs, and direct benefits for households with fewer children (Box 5.6).

Girls' education is another case in point. The private and social returns to women's education at the primary and secondary levels are at least equal to the returns to education for men. Still, parents often prefer to invest only in their sons' education.

Box 5.6 Family planning buffaloes and vasectomy festivals in Thailand

Thailand is the home of one of the most successful and effective family planning programs in the world. The program relies on the use of media, economic incentives, and community involvement to increase the use of contraception.

Thailand's striking approach stresses the immediate practical benefits from lowered fertility and uses methods that mix humor and audacity. The program is run by an NGO, the Population and Community Development Association (PDA), with the support of the Ministry of Public Health.

The Community Based Family Planning Services (CBFPS), a PDA program, was initiated in 1974 and now reaches more than 16,000 villages and 17 million people—one-third of the nation's population. The key message links population growth to low standards of living and family planning to economic gains. To convey this message, taboos surrounding birth control had to be broken down. Birth control carnivals, games, condom-blowing balloon contests, raffles, village fairs, and weddings have served as occasions for promoting family planning joyfully.

Vasectomy marathons are held on Labor Day and on the king's birthday. In 1983 a team of forty doctors and eighty nurses performed a record-breaking 1,190 vasectomies during the one-day festival. The PDA also delivers free, convenient, and efficient vasectomy services in clinics and mobile units. Between July 1980 and June 1984 it performed 25,412 vasectomies.

Registered family planners may also rent cattle for plowing their fields—family planning buffaloes—at half the regular price. They are encouraged to market some of their products through the CBFPS at prices about 30 percent higher than regular middlemen offer and to buy fertilizer and seeds at 30 percent below local market prices. Under a similar program villagers who practice contraception may have their goods transported to the marketplace at a discount or may receive free piglets.

In 1985 about 60 percent of all Thai couples practiced some form of birth control. The total fertility rate fell from 6.1 in 1965-70 to 2.8 in 1985, as against an average 4.1 for lower-middle-income countries.

Measures such as increasing the number of female teachers or paying parents to send their girls to school (as in Bangladesh) may help to reduce the present inequalities. But longer-term policies to increase women's participation in the labor market will be needed if the bias against girls' education in some parts of the world is to be eliminated.

Lessons for the next decade

The past three decades have seen tremendous progress in improving health, nutrition, and education in the developing world. In many cases progress has been considerably faster than that of the industrial world when it was at a comparable stage of development. But it has been uneven. The poor of the developing countries continue to suffer from illiteracy, sickness, malnutrition, and early death.

If the trends prevailing since the 1960s were to continue, universal primary enrollment would be a fact by the end of the century in East Asia and Latin America. The countries of the Middle East and North Africa would approach that goal, and in South Asia and Sub-Saharan Africa enrollment rates would rise from the current 74 and 56 percent to 88 and 86 percent, respectively. Unfortunately, in Sub-Saharan Africa this long-term trend stalled,

and indeed went into reverse, in the 1980s. If recent trends prevailed, Sub-Saharan Africa's enrollment rate would be a paltry 46 percent in 2000. The pace of progress has increased recently in South Asia, and universal enrollment might be reached there by 2000 (Table 5.2).

A similar picture emerges for mortality among children. If long-term trends continued, all regions would make progress, but under 5 mortality in Sub-Saharan Africa will remain high if the slowdown in the 1980s is not reversed. The experience of the 1980s indicates that accelerated progress can be expected in South Asia, the Middle East and North Africa, and Latin America. The total fertility rate is likely to come down in every region but will still be a high 5.4 in Sub-Saharan Africa by 2000.

Thus, the picture is mixed. Although the outlook is for steady progress in the long run, more recent experience shows that in some cases progress has accelerated and in others has slowed or reversed. Even if the long-term trends prevail, in thirty-six countries of Sub-Saharan Africa, South Asia, and Latin America, under 5 mortality rates will still be at least ten times higher than in the industrial world. That is, in 2000 almost ten million children under 5 will die in the developing world, for broadly the same reasons that children were dying there in 1900.

Table 5.2 Projections of social indicators to 2000

Region	Net enrollment rates (percent)			Under 5 mortality (per thousand)			Total fertility rate ^e	
	1985	Long-term trend ^a	Short-term trend ^b	1985	Long-term trend ^c	Short-term trend ^d	1985	2000
Sub-Saharan								
Africa	56	86	46	185	136	153	6.1	5.4
East Asia	96	100	100	54	31	33	2.7	2.2
South Asia	74	88	100	150	98	83	4.7	3.4
Middle East and								
North Africa	75	94	95	119	71	65	5.1	3.9
Latin America and the Caribbean	92	100	100	75	55	32	3.6	2.5

Note: All data are weighted except that for under 5 mortality, short-term trend. All mortality data are projected to 2000-05.

a. Based on the 1965-85 trend.

b. Based on the 1980-85 trend.

c. Based on the trend used by the United Nations.

d. Based on 1975-80 to 1980-85 except for South Asia, 1970-75 to 1975-80.

e. The total fertility rate is the average number of children that would be born alive to a woman during her lifetime if she were to bear children in accordance with the prevailing age-specific fertility rates. It is based on 1985-90 and 2000-05.

Source: United Nations and World Bank data, except for under 5 mortality, short-term trend, from Hill and Pebley 1988, and fertility, from Bulatao 1989.

To avert that shameful prospect, governments, in cooperation with the international community, must make a long-term commitment to improving the social infrastructure that serves the poor. The key elements of such a commitment are clear. First, provide the basic services that the poor need most.

Second, make the existing services more effective. With these principles as the guide, equity and efficiency can go hand in hand. Improving the quality of life of the poor will then become an achievable goal—and the progress made in the past will stand as a sign of what can be done in the future.