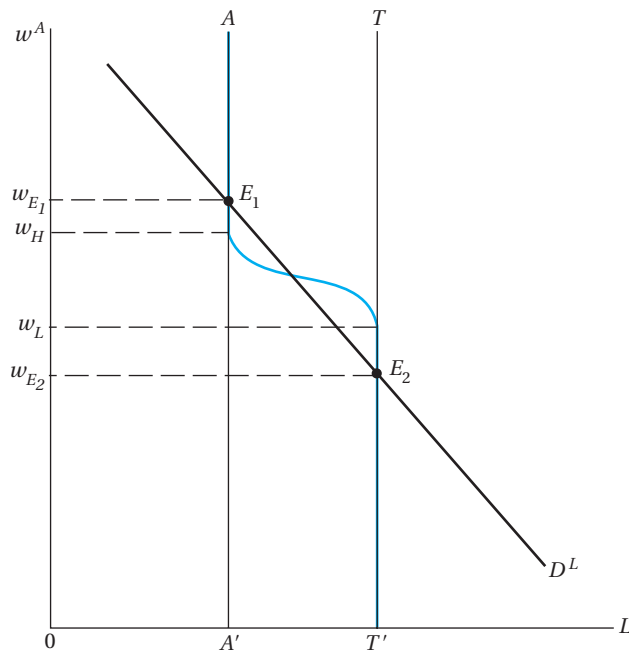


FIGURE 8.3 Child Labor as a Bad Equilibrium



Source: From Kaushik Basu, "Child labor: Cause, consequence, and cure, with remarks on international labor standards," *Journal of Economic Literature* 37 (1999): 1101. Reprinted with the permission of the author and the American Economic Association.

would work. At this point, we are on the vertical line labeled TT' , which is the aggregate labor supply of all the adults and all the children together. This sum is the number of adults plus the number of children, multiplied by their lower productivity, $\gamma < 1$. (An S shape in the middle portion is likely, but the analysis holds even if this is a straight line.) The resulting supply curve for children and adults together is very different from the standard ones that we usually consider in basic microeconomics, such as the upward-sloping supply curve seen in Figure 5.5 (in Chapter 5), but it is highly relevant for the developing-country child labor context. To summarize, as long as the wage is above w_H , the supply curve is along AA' ; if the wage is below w_L , the supply curve is along TT' , and in between, it follows the S-shaped curve between the two vertical lines.

Now consider the labor demand curve, D^L ; if demand is inelastic enough to cut the AA' line above w_H and also cut the TT' line below w_L , there will be two stable equilibria, labeled E_1 and E_2 , in the diagram.²² When there are two equilibria, if we start out at the bad equilibrium E_2 , an effective ban on child labor will move the region to the good equilibrium E_1 . Moreover, once the economy has moved to the new equilibrium, the child labor ban will be self-enforcing, because by assumption, the new wage is high enough for no family to have to send its children to work. If poor families coordinate with each other and refuse to send their children to work, each will be better off; but in general, with a large number of families, they will be unable to achieve this.²³

Banning child labor when there is an alternative equilibrium in which all children go to school might seem like an irresistible policy, but note that while all the families of child laborers are better off, employers may now be worse off, because they have to pay a higher wage. Thus, employers may use political pressure to prevent enactment of child labor laws. In this sense, child labor, even its worst forms, could actually be Pareto-optimal—a discovery that should remind us that Pareto optimality is sometimes a very weak condition on which to base development policy! In the same sense, many other problems of underdevelopment, including extreme poverty itself, may at times also be Pareto-optimal, in that solving these problems may make the rich worse off.

While these child labor models are probably reasonable depictions of many developing areas, we do not know enough about conditions in unskilled labor markets to say how significant these types of multiple equilibria and severe credit constraints really are as explanations for child labor. Thus, it would be potentially counterproductive, if even enforceable, to seek an immediate ban on all child labor in all parts of the world today. As a result, an intermediate approach is currently dominant in international policy circles.²⁴

There are four main approaches to child labor policy current in development policy. The first recognizes child labor as an expression of poverty and recommends an emphasis on eliminating poverty rather than directly addressing child labor; this position is generally associated with the World Bank (poverty policy is discussed further in Chapters 5, 9, and 15).

The second approach emphasizes strategies to get more children into school, including expanded school places, such as new village schools, and **conditional cash transfer (CCT)** incentives to induce parents to send their children to school, such as the Progres/Oportunidades Program in Mexico, discussed in this chapter's case study, or the experimental Malawi program discussed in Box 8.5. This strategy has widespread support from many international agencies and development bodies. It is probably a more effective approach than making basic education compulsory, because without complementary policies, the incentives to send children to work would still remain strong and enforcement is likely to be weak, for the same reasons that regulation of the informal sector has proved almost impossible in many other cases. Compulsory schooling is a good idea, but it is not by itself a sufficient solution to the problem of child labor. Improving the quality of basic schooling and increasing accessibility are also very important; the fraction of national income spent on basic education in a majority of low-income countries remains problematic. As the ILO points out,

Conditional cash transfer (CCT) programs Welfare benefits provided conditionally based on family behavior such as children's regular school attendance and health clinic visitations.

In sub-Saharan Africa, about half of all low-income countries spend less than 4 per-cent of their national income on education. In South Asia, Bangladesh devotes only 2.6 per-cent of its national income to education and Pakistan, 2.7 per-cent. India invests a smaller proportion of GNP (around 3.3 per-cent) than the median for sub-Saharan Africa, even though average incomes are around one third higher. Even more worrying is that the share of national income devoted to education is stagnating or decreasing in key countries, including Bangladesh, India and Pakistan, which account for over 15 million out-of-school children.²⁵

The third approach considers child labor inevitable, at least in the short run, and stresses palliative measures such as regulating it to prevent abuse and to provide support services for working children. This approach is most commonly associated with UNICEF, which has prepared a checklist of regulatory and



BOX 8.5 FINDINGS Cash or Condition? Evidence from Malawi

What programs are effective at addressing the nexus of poverty and unmet health and education needs, especially for girls growing up in extreme poverty? As Sarah Baird, Craig McIntosh, and Berk Ozler note, school enrollment and effective learning, and marriage and fertility outcomes are of “central importance to the long-term prospects of school-age girls” living in poverty. What programs would be most cost-effective?

Findings from a randomized control trial study of a cash transfer program targeted to adolescent girls in Malawi offer important insights. Baird, McIntosh, and Ozler compared families who were randomly assigned to one of three groups: no cash transfer, unconditional cash transfers (UCTs), and cash transfers that were made conditional on the girls’ continued school attendance (CCTs). Given this structure, the researchers examined education achievements and marriage and childbearing outcomes. They found both transfer programs led to higher rates of continued enrollment (avoiding dropouts); but CCTs had well over double (about 2.3 times) the impact as UCTs. On the other hand, some earlier studies (primarily in Latin America) had implied little or no effect of UCTs; perhaps the difference reflects conditions prevailing in low-income Africa. The research found that girls in the CCT program outperformed those in the UCT program on English reading comprehension (a “modest but significant” difference).

At the same time, the authors found that the CCTs were far more *cost-effective* in raising enrollment and attendance than the UCTs, even taking into account the extra expenses of running the more administratively complex CCT program. The authors examined different transfers and found that even the smallest

amount studied—\$4 per month to the parents and \$1 per month to the school-age girl—“were sufficient to attain the average schooling impacts observed under the CCT arm.”

On the other hand, the UCT program was found to have a strong impact on “delaying marriage and childbearing—by 44% and 27%, respectively, after 2 years.” And while the CCTs worked better at keeping girls in school and learning effectively, they still “had no effect on reducing the likelihood of teenage pregnancies or marriages.” The authors found this was “entirely due to the impact of UCTs on these outcomes among girls who dropped out of school” but whose families continued to receive the transfer benefits (because, after all, the transfer is unconditional). The authors concluded that the “offer of a CCT appears to have been ineffective in dissuading those with a high propensity to drop out of school from getting married and starting childbearing, especially among girls sixteen or older.” Meanwhile, families living in poverty whose daughters did drop out of school ended up receiving nothing, precluding other poverty-reduction benefits.

These findings reflect the difficulties in identifying a single program design to effectively achieve poverty reduction, health, education, and social progress goals. As the authors conclude, “This study makes clear that while CCT programs may be more effective than UCTs in obtaining the desired behavior change, they can also undermine the social protection dimension of cash transfer programs.”

Source: Based on Sarah Baird, Craig McIntosh, and Berk Ozler, “Cash or condition? Evidence from a cash transfer experiment,” *Quarterly Journal of Economics* 126, No. 4 (2011): 1709–1753.

social approaches that could meet the “best interest of the child.” The regulations included on UNICEF’s checklist include expanding educational opportunities through “time off” for standard or workplace schooling, encouraging stricter law enforcement against illegal child labor trafficking, providing

Educational gender gap

Male-female differences in school access and completion.

support services for parents and for children working on the streets, and working to develop social norms against the economic exploitation of children.

The fourth approach, most often associated with the ILO, favors banning child labor. If this is not possible, however, and recognizing that child labor may not always result from multiple equilibria problems, this approach favors banning child labor *in its most abusive forms*. The latter approach has received much attention in recent years; the ILO's "Worst Forms of Child Labor Convention" was adopted in 1999. The worst forms covered under the convention include "all forms of slavery or practices similar to slavery, such as the sale and trafficking of children, debt bondage and serfdom and forced or compulsory labor"; child prostitution and pornography; other illicit activities, such as drug trafficking; and work that "by its nature or the circumstances...is likely to harm the health, safety or morals of children." The ILO set a working target to completely eliminate the worst forms of child labor by 2016; significant progress has been made, but as of 2011, the ILO reported that progress was not fast enough to meet this goal.

A 2003 study by the ILO estimated that eliminating child labor and extending quality schooling for all children up to age 14 over a 20-year period would result in the baseline case of \$5 trillion of economic gains (in present discounted value), after accounting for opportunity costs. Even when changing the assumptions of the study to be very conservative about the likely income gains, the result is an enormously productive economic investment with a 44% internal rate of return in the baseline case and 23% in a conservative case.²⁶

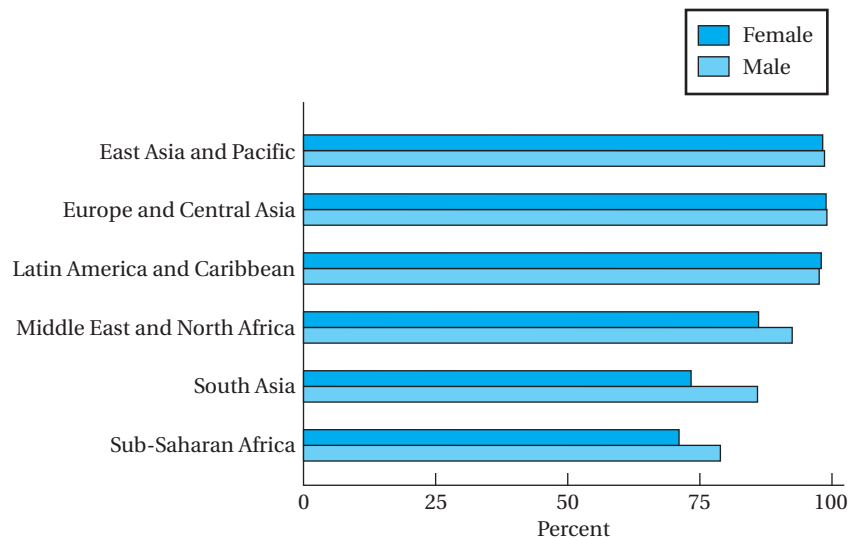
Finally, many activists in developed countries have proposed the imposition of trade sanctions against countries that permit child labor or at least banning the goods on which children work. This approach is well intentioned, but if the objective is the welfare of children, it needs to be considered carefully, because if children cannot work in the export sector, they will almost certainly be forced to work in the informal sector, where wages and other working conditions are generally worse. Export restrictions may also make it more difficult for poor countries to grow their way out of poverty. Of course, the worst forms of child labor can never be tolerated. It seems clear that if efforts at banning imports from developing countries were channeled instead into working to secure more public and private development assistance for nongovernmental organizations that work with child laborers, much more would be accomplished to help these children.

8.4 The Gender Gap: Discrimination in Education and Health

Education and Gender

Young females receive less education than young males in most low-income developing countries. While youth literacy is now much higher than it was as recently as 1990, Figure 8.4 shows that in most regions, girls still lag behind boys. Large majorities of illiterate people and those who have been unable to attend school around the developing world are female. The **educational gender gap** is especially great in the least developed countries in Africa, where female literacy rates can be less than half that of men in countries such as Niger, Mali,

FIGURE 8.4 Youth Literacy Rate, 2008



Source: International Bank for Reconstruction and Development/The World Bank, *World Development Indicators*, 2010. Reprinted with permission.

Guinea, and Benin. The gap is also relatively large in South Asia; in India, the adult female literacy rate is just 47.8%, which is just 65% of the male rate (the female youth literacy rate is 67.7%, 80% of the male youth literacy rate). In Pakistan, the adult female literacy rate is just 36%, only 57% of the male rate (in this case, the female youth literacy rate is 54.7%, some 72% of the male rate). While globally, 123 million youth (aged 15 to 24) lack basic reading and writing skills; 61 per cent of them are young women.²⁷ Recall that the target for Millennium Development Goal 3 (“promote gender equality and empower women”) is to “eliminate gender disparity in primary and secondary education preferably by 2005, and at all levels by 2015.” Although the 2005 date was missed in many countries, progress has been dramatic in many others. In most low-income countries and many middle-income countries, women make up a minority—sometimes a small minority—of college students. But the long-term trend in higher-income countries for a significantly higher and growing share of female than male enrollment in tertiary (university) education has been extending recently to many upper-middle-income countries in the Middle East, Latin America, and elsewhere.

School completion is also subject to gender inequalities, and the gap is often particularly large in rural areas. For example, in rural Pakistan, 42% of males complete their primary education, while only 17% of females do. In the cities, the gender gap is smaller though still substantial, as 64% of males complete primary education versus 50% of females in urban areas.²⁸

Empirical evidence shows that educational discrimination against women hinders economic development in addition to reinforcing social inequality.

Closing the educational gender gap by expanding educational opportunities for women, a key plank of the Millennium Development Goals, is economically desirable for at least three reasons:²⁹

1. The rate of return on women's education is higher than that on men's in most developing countries. [This may partly reflect that, with fewer girls enrolled, the next (marginal) girl to enroll is likely to be more talented on average than the marginal boy.]
2. Increasing women's education not only increases their productivity (and hence also earnings) in the workplace but also results in greater labor force participation, later marriage, lower fertility, and greatly improved child health and nutrition, thus benefiting the next generation as well. The latter is because a mother's education directly increases knowledge that can help child survival, nutrition, education, and indirectly by making possible higher earnings for the family—noting in particular that mothers generally spend a somewhat larger fraction of an additional dollar on their children than do fathers.
3. Because women carry a disproportionate burden of poverty, any significant improvements in their role and status via education can have an important impact on breaking the vicious circles of poverty and inadequate schooling.

Health and Gender

Girls also face discrimination in health care in many developing countries, as discussed in Chapter 6. In South Asia, for example, studies show that families are far more likely to take an ill boy than an ill girl to a health center. Women are often denied reproductive rights, whether legally or illegally. Broadly, health spending on men is often substantially higher than that on women. And in many countries such as Nigeria, health care decisions affecting wives are often made by their husbands.

Female genital mutilation/cutting (FGM/C) is a health and gender tragedy, explained in an influential 2005 UNICEF report, *Changing a Harmful Social Convention: Female Genital Mutilation/Cutting*. FGM/C is most widely practiced in sub-Saharan Africa and the Middle East and is believed to have affected about 130 million women. This practice, which is dangerous and a violation of the most basic rights, does not only result from decisions made by men; many mothers who have undergone FGM/C also require their daughters to do so. If most other families practice FGM/C, it becomes difficult for any one family to refuse to take part, to avoid the perceived resulting "dishonor" to the daughter and her family and lost "marriageability." The general problem fits the model of multiple equilibria associated with social norms or conventions, such as foot binding, an interpretation suggested by Gerry Mackie drawing on work of Nobel laureate Thomas Schelling. This general framework was also applied earlier in the text in the analysis of whether women have high or low fertility (using Figure 4.1 on page 169, applied in a way similar to the discussion in Chapter 6 on pages 299–300). In an encouraging sign of progress, there are a growing number of experiences of "mass abandonment" of the practice of

FGM/C, sometimes started with an organized pledge of families in an intermarrying group that they will no longer follow the practice with their daughters. Thus, such coordination failures can be overcome, often with facilitation of locally based NGOs and similar organizations.³⁰

Consequences of Gender Bias in Health and Education

Studies from around the developing world consistently show that expansion of basic education of girls earns among the very highest rates of return of any investment—much higher, for example, than most public infrastructure projects. One estimate is that the global cost of *failing* to educate girls is about \$92 billion a year.³¹ This is one reason why discrimination against girls in education is not just inequitable but also very costly from the standpoint of achieving development goals.

Education of girls has also been shown to be one of the most cost-effective means of improving local health standards. Studies by the United Nations, the World Bank, and other agencies have concluded that the social benefits alone of increased education of girls is more than sufficient to cover its costs—even before considering the added earning power this education would bring. However, evidence from Pakistan, Bangladesh, and other countries shows that we cannot assume that education of girls will increase automatically with increases in family income.

Inferior education and health care access for girls shows the interlinked nature of economic incentives and the cultural setting. In many parts of Asia, a boy provides future economic benefits, such as support of parents in their old age and possible receipt of a dowry upon marriage, and often continues to work on the farm into adulthood. A girl, in contrast, may require a dowry upon marriage, often at a young age, and will then move to the village of her husband's family, becoming responsible for the welfare of her husband's parents rather than her own. A girl from a poor rural family in South Asia will in many cases perceive no suitable alternatives in life than serving a husband and his family; indeed, a more educated girl may be considered "less marriageable." For the parents, treatment of disease may be expensive and may require several days lost from work to go into town for medical attention. Empirical studies demonstrate what we might guess from these perverse incentives: Often more strenuous efforts are made to save the life of a son than a daughter, and girls generally receive less schooling than boys.

The bias toward boys helps explain the "missing women" mystery. In Asia, the United Nations has found that there are far fewer females as a share of the population than would be predicted by demographic norms (see Chapter 6). Estimating from developed-country gender ratios, Nobel laureate Amartya Sen concludes that worldwide "many more than" 100 million women are "missing."³² Evidence shows that these conditions are continuing to worsen in China and India, implying that tens of millions of young males will be unable to marry, increasing the chances of future social instability. As Sen notes, that dearth of women is not just a matter of poverty per se because in Africa, where poverty is most severe, there are actually about 2% more women than men. Although this number is not as high as in western Europe and North America,

it is still much higher than in Asia, which has higher income on average. A large part of the explanation is poorer treatment of girls. As of 2010, the estimated ratio of males to females in China and India was 1.06 and 1.08, respectively, compared with 0.98 in the United States, United Kingdom, and Canada. The problem may be worsening in several countries, including China, where the Chinese Academy of Sciences estimated in a 2010 report that 119.5 boys were born for every 100 girls in 2009; sex-selective abortion is an important cause.³³ In India, this ratio is also a very high 112. These averages obscure much higher ratios in some regions. The evidence on gender bias in Africa is mixed, with some studies finding a small pro-female bias and others a small and possibly rising pro-male bias.³⁴

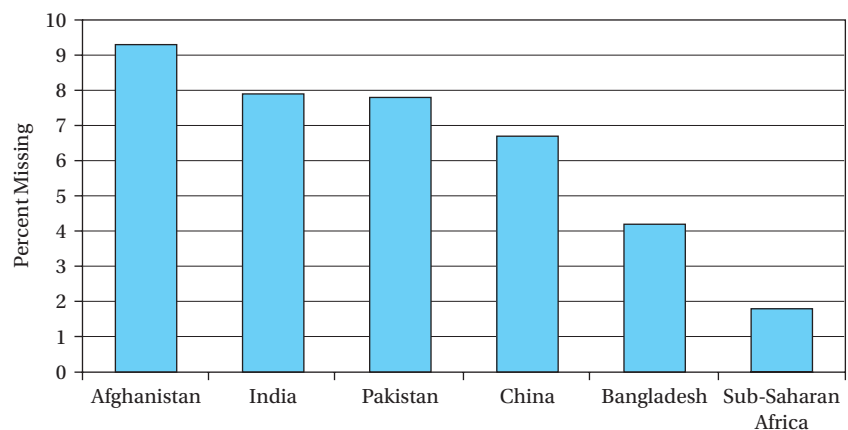
Figure 8.5 shows the estimated percent of females missing in the populations of five Asian countries, along with the overall average for sub-Saharan Africa, drawing from the highly regarded research of Stephan Klasen and Claudia Wink.

Greater mothers' education, however, generally improves prospects for both their sons' and daughters' health and education, but apparently even more so for girls.³⁵

Taken together, the evidence shows that increases in family income do not automatically result in improved health status or educational attainment. If higher income cannot be expected to necessarily lead to higher health and education, as we will show in subsequent sections, there are no guarantees that higher health or education will lead to higher productivities and incomes. Much depends on the context, on whether gains from income growth and also the benefits of public investments in health and education and other infrastructure are shared equitably.

In the remainder of this chapter, we will examine issues of education and health systems in turn. Even though the two topics will be examined separately, it is important to keep their mutually reinforcing roles in mind.

FIGURE 8.5 Estimated Percent of Women "Missing"



Source: Stephan Klasen and Claudia Wink, "Missing Women: Revisiting the Debate," *Feminist Economics* 9, 2-3 (2003): 263-299.

8.5 Educational Systems and Development

Much of the literature and public discussion about education and economic development, in general, and education and employment, in particular, revolves around two fundamental economic processes: (1) the interaction between economically motivated demands and politically responsive supplies in determining how many quality school places are provided, who gets access to these places, and what kind of instruction they receive, and (2) the important distinction between social and private benefits and costs of different levels of education, and the implications of these differentials for educational investment strategy.

The Political Economy of Educational Supply and Demand: The Relationship between Employment Opportunities and Educational Demands

The amount of schooling received by an individual, although affected by many nonmarket factors, can be regarded as largely determined by demand and supply, like any other commodity or service.³⁶ On the demand side, the two principal influences on the amount of schooling desired are (1) a more educated student's prospects of earning considerably more income through future modern-sector employment (the family's **private benefits** of education) and (2) the educational costs, both direct and indirect, that a student or family must bear. The amount of education demanded is thus in reality a **derived demand** for high-wage employment opportunities in the modern sector. This is because access to such jobs is largely determined by an individual's education.

On the supply side, the quantity of school places at the primary, secondary, and university levels is determined largely by political processes, often unrelated to economic criteria. Given mounting political pressure throughout the developing world for greater numbers of school places at higher levels, we can for convenience assume that the public supply of these places is fixed by the level of government educational expenditures. These are in turn influenced by the level of aggregate private demand for education.

Because the amount of education demanded largely determines the supply (within the limits of government financial feasibility), let us look more closely at the economic (employment-oriented) determinants of this derived demand.

The amount of schooling demanded that is sufficient to qualify an individual for modern-sector jobs appears to be related to or determined by the combined influence of four variables: the wage or income differential, the probability of success in finding modern-sector employment, the direct private costs of education, and the indirect or opportunity costs of education.

For example, suppose that we have a situation in a developing country where the following conditions prevail:

1. The modern-traditional or urban-rural wage gap is of the magnitude of, say, 100% for secondary versus primary school graduates.

Private benefits The benefits that accrue directly to an individual economic unit. For example, private benefits of education are those that directly accrue to a student and his or her family.

Derived demand Demand for a good that emerges indirectly from demand for another good.

2. The rate of increase in modern-sector employment opportunities for primary school dropouts is slower than the rate at which such individuals enter the labor force. The same may be true at the secondary level and even the university level in countries such as India, Mexico, Egypt, Pakistan, Ghana, Nigeria, and Kenya.
3. Employers, facing an excess of applicants, tend to select by level of education. They will choose candidates with secondary rather than primary education even though satisfactory job performance may require no more than a primary education.
4. Governments, supported by the political pressure of the educated, tend to bind the going wage to the level of educational attainment of jobholders rather than to the minimum educational qualification required for the job.
5. School fees decline at the university level, as the state bears a larger proportion of the college student's costs.

Under these conditions, which conform closely to the realities of the employment and education situation in many developing nations, we would expect the quantity of higher education demanded for the formal sector to be substantial. This is because the anticipated private benefits of more schooling would be high compared to the alternative of little schooling, while the direct and indirect private educational costs are relatively low. And the demand spirals upward over time. As job opportunities for the uneducated are limited, individuals must safeguard their position by acquiring increasingly more education.

The upshot is the chronic tendency for some developing nations to expand their higher-level educational facilities at a rate that is extremely difficult to justify either socially or financially in terms of optimal resource allocations. Supply and amount demanded are equated not by a price-adjusting market mechanism but rather institutionally, largely by the state. The **social benefits of education** (the payoff to society as a whole) for all levels of schooling fall short of the private benefits (see Table 8.1).

Governments and formal-sector private employers in many developing countries tend to reinforce this trend by **educational certification**—continuously upgraded formal educational entry requirements for jobs previously filled by less educated workers. Excess educational qualification becomes formalized and may resist downward adjustment. Moreover, to the extent that trade unions succeed in binding going wages to the educational attainments of jobholders, the going wage for each job will tend to rise (even though worker productivity in that job does not significantly increase). Existing distortions in wage differentials will be magnified, thus stimulating the amount of education demanded even further. Egypt presents a classic case of this phenomenon with its government-guaranteed and budget-busting employment in the public sector and its massive civil service overstaffing of overcredentialed school graduates.³⁷

Note that this political economy process pulls scarce public resources away from the limited and often low-quality **basic education** available for the many and toward more advanced education for the few. This is both inequitable and economically inefficient.

Social benefits of education

Benefits of the schooling of individuals, including those that accrue to others or even to the entire society, such as the benefits of a more literate workforce and citizenry.

Educational certification

The phenomenon by which particular jobs require specified levels of education.

Basic education The attainment of literacy, arithmetic competence, and elementary vocational skills.

Social versus Private Benefits and Costs

Typically in developing countries, the **social costs of education** (the opportunity cost to society as a whole resulting from the need to finance costly educational expansion at higher levels when these limited funds might be more productively used in other sectors of the economy) increase rapidly as students climb the educational ladder. The **private costs** of education (those borne by students themselves) increase more slowly or may even decline.

This widening gap between social and private costs provides an even greater stimulus to the demand for higher education than it does for education at lower levels. But educational opportunities can be accommodated to these distorted demands only at full social cost.

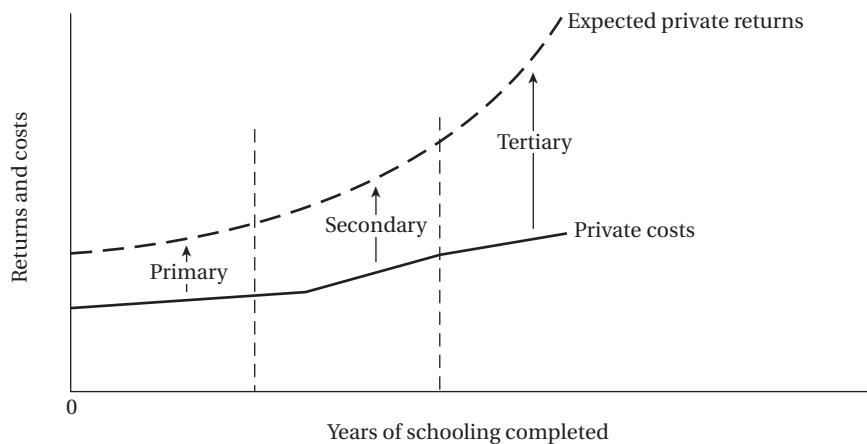
Figure 8.6 provides an illustration of this divergence between private and social benefits and costs. It also demonstrates how this divergence can lead

Social costs of education

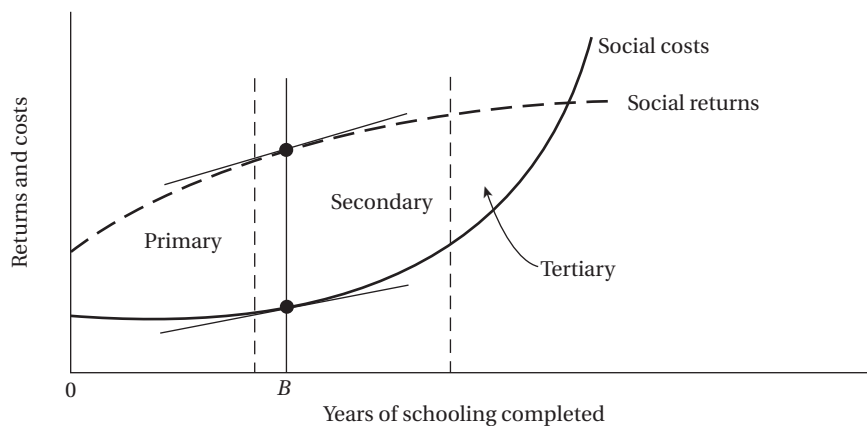
Costs borne by both the individual and society from private education decisions, including government education subsidies.

Private costs The costs that accrue to an individual economic unit.

FIGURE 8.6 Private versus Social Benefits and Costs of Education: An Illustration



(a) Private returns and costs



(b) Social returns and costs

to a misallocation of resources when private interests supersede social investment criteria. In Figure 8.6a, expected private returns and actual private costs are plotted against years of completed schooling. As a student completes more and more years of schooling, expected private returns grow at a much faster rate than private costs, for reasons explained earlier. To maximize the difference between expected benefits and costs (and thereby the private rate of return to investment in education), the optimal strategy for a student would be to secure as much schooling as possible.

Now consider Figure 8.6b, where social returns and social costs are plotted against years of schooling. The social benefits curve rises sharply at first, reflecting the improved levels of productivity of, say, small farmers and the self-employed that result from receipt of a basic education and the attainment of literacy, arithmetic skills, and elementary vocational skills. Thereafter, the marginal social benefit of additional years of schooling rises more slowly, and the social returns curve begins to level off. By contrast, the social cost curve shows a slow rate of growth for early years of schooling (basic education) and then a much more rapid growth for higher levels of education. This rapid increase in the marginal social costs of postprimary education is the result both of the much more expensive capital and recurrent costs of higher education (buildings and equipment) and the fact that much postprimary education in developing countries is heavily subsidized.³⁸

It follows from Figure 8.6b that the optimal strategy from a social viewpoint, the one that maximizes the net social rate of return to educational investment, would be one that focuses on providing all students with at least B years of schooling. Beyond B years, *marginal* social costs exceed *marginal* social benefits, so additional public educational investment in new, higher-level school places will yield a *negative* net social rate of return. The value of B , such as nine years of school, would vary according to economic conditions and would be controversial both because of difficulties in calculating earnings gains and debate over which types of social benefits should be considered.

Figure 8.6 also illustrates the inherent conflict between optimal private and social investment strategies—a conflict that will continue to exist as long as private and social valuations of investment in education continue to diverge as students climb the educational ladder, with the highest subsidies at the highest levels of education, commonly availed of by elites. This is one of the reasons why we must also consider the structure and pattern of that economic growth and its distribution implications—who benefits.

Distribution of Education

The forgoing analysis of forces operating for overeducation in developing countries should not lead us to despair over the possibility of fostering development through greater education. Countries that have developed successfully have generally ensured that educational benefits are more broadly available in the economy—to the poor as well as the rich, in the rural areas as well as the urban. And so we turn to examining the distribution of educational benefits in developing countries.

Just as we can derive Lorenz curves for distribution of income (see Chapter 5), we can also develop Lorenz curves for the distribution of education. Figure 8.7