A powerful case can be made for the expansion of secondary education in developing countries on the grounds of growth, poverty reduction, equity, and social cohesion. The argument is particularly germane for countries that have achieved high levels of primary education coverage but still have low enrollments at the secondary level. This chapter examines the evidence for the growing importance of secondary education by describing its direct benefits and externalities and documenting the increasing demand for this level of schooling.

**Direct Benefits and Externalities**

Investment in education is beneficial in a multiplicity of ways, both for individuals and for society as a whole. Secondary education, the focus of this report, has been shown to contribute to individual earnings and economic growth. It is associated with improved health, equity, and social conditions. It buttresses democratic institutions and civic engagement. And the quality of secondary education affects the levels above and below it—primary and tertiary education. This section looks at each of these interactions in detail.

**Contribution to Growth and Poverty Reduction**

*Secondary education and growth.* Education increases individual productivity, as measured by the well-documented link between educational attainment and personal earnings. At the national level education plays an important role in fostering economic growth. Today’s rapidly growing economies depend on the creation, acquisition, distribution, and use of knowledge, and this requires an educated and skilled population. In addition, there is growing evidence that perhaps half or even more of aggregate economic growth is driven by increases in factor productivity rather than by factor accumulation in either capital or labor (Easterly and Levine 2002).
Secondary education plays a particularly important role in this regard. In many countries the increased demand for workers with secondary schooling (discussed more fully later in this chapter) has been associated with skill-biased technological change. Barro (1999), analyzing a panel of about 100 countries observed between 1960 and 1995, finds that economic growth is positively related to the (1960) starting level of average years of adult male school attainment at secondary and higher levels but is insignificantly related to years of primary attainment. His interpretation is that there is a strong effect of secondary and higher schooling on the diffusion of technology.

In an increasingly globalized economy, developing countries may be able to achieve increases in factor productivity through technology transfer from global “leaders.” Such technology transfer may take place through trade, foreign direct investment, and learning across international supplier-producer chains. Much of the technology developed in the leader countries, however, is very skills-intensive and therefore “inappropriate” for developing countries without a minimum threshold level of skills (Acemoglu and Zilibotti 2001).

Secondary education is a vital part of a virtuous circle of economic growth within the context of a globalized knowledge economy. Many studies have documented that a large pool of workers with secondary education is indispensable for knowledge spillover to take place and for attracting imports of technologically advanced goods and foreign direct investment (Borensztein, de Gregorio, and Lee 1998; Caselli and Coleman 2001; Xu 2000). In a study on education and technology gaps in Latin America, de Ferranti et al. (2003) found that the bulk of the difference in computer penetration between Latin America and the East Asian “tigers,” with their significantly wider computer coverage, can be explained not only by differences in the share of trade with countries of the Organisation for Economic Co-operation and Development (OECD) but also, and most important, by the proportion of the workforce with secondary schooling. The authors further speculate that this explains why the demand for skilled workers has not increased in Brazil, which has much lower schooling levels than other countries in Latin America.

The importance of balanced development of education.1 A case for expanding secondary education can also be made on the grounds of economic growth, even where the rate of return to secondary education is low in comparison with that to tertiary education (as is the case in many Latin American countries; see de Ferranti et al. 2003) and where expansion of secondary education might have a smaller short-term effect than would expansion of the coverage of the university system. Historically, the countries that have experienced the most rapid and sustainable increases in educational attainment, as well as outstanding economic performance, have pursued balanced upgrading of the primary, secondary, and tertiary levels of education.
Goldin (1999) demonstrates the importance of the extension of secondary schools in the United States between 1910 and 1940—a transformation that gave the United States a half-century lead over European countries. De Ferranti et al. (2003) stress the importance of balanced upgrading of an education system after analyzing the examples of Korea, Singapore, Taiwan (China), and other East Asian “tigers,” which make a stark contrast with the “unbalanced” transitions observed in many Latin American countries.

**Secondary education and inequality.** Although a central goal of education is to allow all individuals to develop to their full potential, the realization of this goal does not imply the elimination of individual differences in educational achievement and the associated benefits, nor does it necessarily mean access for all to the same educational experiences. It does, however, imply full access to intellectual and skill development opportunities that will enable each individual to develop his or her full potential. Thus, consideration of equity in education must address issues related to outcomes, as well as to access. The question is not whether outcomes vary but whether they vary to an unreasonable extent and whether the distribution of outcomes is equivalent in groups among which it is not reasonable to expect differences—for example, between the genders (Blondal, Field, and Girouard 2002).

A significant challenge for public policy is to provide learning opportunities for all students irrespective of their home backgrounds. International evidence from the Programme for International Student Assessment (PISA) provides encouraging evidence in this regard (OECD 2001b). While the results for all participating countries show a clear positive relationship between home background and educational outcomes, experience in some countries demonstrates that high average quality and equity in educational outcomes can go together. One of the most important findings of PISA is that students’ home background explains only part of the story of socioeconomic disparities in education, and in most countries it is the smaller part. The combined impact of the school’s socioeconomic intake can have an appreciable effect on the student’s performance, and it generally has a greater effect on predicted student scores than do the characteristics of students’ families. Thus, the message from PISA findings is that national education policy and practice can mitigate the influence of social and economic privilege on educational achievement without sacrificing the overall level of achievement.

Public policy affects the distribution of the costs and benefits of secondary education most directly through the arrangements for public funding. Analysis of the shares of public resources allocated to various social sector interventions going to poor and nonpoor households (the average incidence of public expenditures) often finds investments in secondary schooling to be of intermediate incidence. These expenditures are not as regressive as spending on university (which is often captured by rich elites) but are not
as progressive as spending on primary schools (because of the greater coverage of primary education and because poor families tend to have more children). It is obvious, however, that such analyses of average incidence could be misleading as a guide for government policy, as the average and marginal incidence of expenditures can be quite different. A simple example will illustrate this point. If all children from rich families are already in secondary school and no children from poor families are, the average incidence of expenditures on secondary school would be highly regressive, but the marginal incidence (a measure of who benefits from one additional unit of funding spent) may be highly progressive. This kind of analysis may show that the poor stand to benefit a great deal from expansion of the coverage of secondary education in some countries.

Investments in secondary school can also be justified on the basis of distributional arguments, although the case here is somewhat speculative. Further research is needed to better establish the likely distributional implications of secondary school expansion. Children who receive more education now may have higher earnings in the future, and investments in schooling can therefore influence the future distribution of per capita income or of consumption. “Simple” simulations of the effect of educational expansion on the Gini coefficient are feasible; an example is the work done by Bourguignon, Ferreira, and Leite (2003). Such simulations essentially compare the current distribution of earnings with the distribution of earnings if an additional number of workers in the future have more education and therefore earn higher wages, where these wages are imputed on the basis of the present-day rate of return to schooling. Unfortunately, these simulations yield only very rough measures of the impact of school expansion on distributional parameters because the rate of return to education is itself endogenous, a function of the supply of and demand for workers with different amounts of schooling.

Expanding the coverage of secondary school, other things being equal, will depress the earnings of workers with secondary education relative to those with only primary education, as well as relative to those with university education. The extent to which changes in supply would change the returns to a particular level of education depends on the degree to which workers with secondary education are substitutes in production for those with primary or university education. This is intimately related to the elasticity of substitution among different kinds of worker. The exact value of these elasticities of secondary-to-primary and secondary-to-tertiary workers in developing countries is largely unknown, and there is therefore little agreement on the likely effect of expansion of secondary coverage on the future distribution of earnings. A simulation exercise with “reasonable” elasticity values (perhaps between 1 and 3) and “reasonable” assumptions on changes in relative demand (perhaps an extrapolation from current trends) would provide policy makers with upper- and lower-bound estimates of
the effects of secondary school expansion on aggregate measures of inequality in individual countries.

**Millennium Development Goals (MDGs).** Investing in secondary education can have a direct impact on the effort to reach Millennium Development Goal 2—achieving universal primary education. Increasing the provision and coverage of secondary education can boost completion rates in primary education. If a student has a realistic opportunity to continue with studies in (lower) secondary school, this can increase motivation (and the family’s perceived incentives) for graduation from primary school. An analysis of global education trends by the United Nations Educational, Scientific, and Cultural Organization (UNESCO) shows that developing countries need “some critical mass of secondary participation” (UNESCO 2004b, 9) in order to meet the goal of universal primary education. Clemens (2004, 19) observes that “no country today has achieved over 90% primary net enrollment without having at least roughly 35% secondary net enrollment.”

In Ghana, Lavy (1996) found that improving access to secondary education facilities not only improved enrollment at the secondary level but also served as an incentive for primary school completion. If transition rates from primary to secondary education fall, it is likely that primary completion will decline as well and that dropout rates in the final years of primary education might not be easily reduced. In addition, gender equality cannot be achieved without expanded and balanced access to secondary education.

Education for All (EFA) policies tend to position lower secondary education within the realm of basic (and compulsory) education. Lower secondary education is therefore being increasingly identified with primary or basic education, and the emphasis is more on a general than on a specialized curriculum. For example, in many African countries junior (that is, lower) secondary education is now being incorporated as the last stage of basic education, which many governments are defining, when possible, as free and compulsory (Bregman and Bryner 2003). Curriculum, teacher training and recruitment, and even school organizational arrangements are increasingly converging at the primary and lower secondary levels. In addition to appropriate basic (and compulsory) education policies, the achievement of the MDGs and of the EFA goals set in the Dakar Framework for Action in 2000 call for a systematic policy for postbasic or postcompulsory education in developing countries.

**Contribution to Improvements in Health, Gender Equality, and Living Conditions**

**Health.** An important private benefit of increased education is its positive impact on personal health. In both developed and developing countries, a strong correlation exists between schooling and good health, whether
measured by mortality rates, morbidity rates, or self-reported health status (Cave 2001; Mahy 2003). Indeed, education has an effect on health independent of income, race, or social background (OECD 2001a).

Education has been proven to provide protection against HIV infection (World Bank 1999a). There is now convincing evidence that young people in Africa who complete basic education are at reduced risk of HIV/AIDS, and this effect is even stronger for those who complete secondary education. A longitudinal study in Uganda found a marked decline in HIV prevalence rates in males and females age 18–29 with secondary to higher-level education but a much smaller decrease among those with lower educational levels (figure 2.1). Secondary education has a general preventive impact: by providing children and youths with skills to critically process information, it equips them to make decisions concerning their own lives and to bring about long-term behavioral change (de Walque 2004).

A similar association between educational level and health benefit is seen for smoking and education in the United States. These effects are thought to be a function of greater general ability to process information—a competence enhanced during the secondary school years—rather than a consequence of greater exposure to prevention messages alone.

Paradoxically, the secondary education system, which is the source of this “social vaccine,” is itself being destroyed by HIV/AIDS in many African

Figure 2.1 HIV Prevalence by Educational Attainment, Age 18–29, Rural Uganda, 1990–2000


Note: The data are from a longitudinal study conducted over a 12-year period. Each round represents one year of data collection.
countries, through increased mortality and absenteeism of teachers. Ensuring the supply of education therefore implies a need for special efforts to protect both today’s teachers and the young people now in secondary school who will be the teachers of the future.

Female education results in a number of beneficial health impacts for children. Better-educated women are more likely than their peers to delay marriage and childbearing and to have fewer and healthier babies. According to one estimate, a 10 percentage point increase in female primary enrollment lowers the infant mortality rate by 4.1 deaths per 1,000 live births, and a similar rise in female secondary enrollment is associated with another 5.6 fewer deaths per 1,000 live births (World Bank 2001a). Recent demographic and health surveys in 49 developing countries show that the mortality rate of children under five is highest in households where mothers have no schooling and lowest where mothers have some secondary schooling or higher (see figure 2.2).

*Gender equality.* In addition to the well-understood benefits to societies and to families of educating girls and women, there is evidence that women’s education is a catalyst for reducing gender inequality and so benefits women themselves. The empirical literature on this topic begins with the assumption that education enhances women’s well-being and gives

---

**Figure 2.2 Under-Five Mortality Rates, by Mother’s Educational Level, Selected Areas, circa 1998**

![Bar chart showing under-five mortality rates by mother’s educational level in selected areas, circa 1998.](chart.png)

**Source:** Mahy 2003.

**Note:** Regional averages are population-weighted.
them a greater voice in household decisions, more autonomy in determining the conditions of their lives, and improved opportunities to participate in community affairs and the labor market. The literature spans a variety of social science and health disciplines, including economics, demography, sociology, and anthropology. The findings are that investments in female education do have a positive impact on gender equality, women’s empowerment, and women’s well-being (see Malhotra, Pande, and Grown 2003). In addition, the evidence indicates that relatively high levels of education (secondary or above) are consistently positively related to most aspects of gender equality, regardless of other conditions. The literature suggests a threshold effect of secondary schooling whereby women themselves are much more likely to be agents of normative and structural change when they have more education.

For example, higher levels of education (at least six years, or secondary schooling) always have a positive effect on a woman’s use of a variety of prenatal and delivery services, as well as postnatal care, and the effect is larger than the effect of lower levels of schooling (Bhatia and Cleland 1995a, on India; Elo 1992, on Peru; Govindasamy 2000, on the Arab Republic of Egypt). Studies also find a protective effect of education on women’s sexual and reproductive health, and the specific level of education matters. Some studies show that any education has a beneficial impact compared with no education but that the effects are stronger at higher than at lower levels of schooling (Bhatia and Cleland 1995b, on India; Yount 2002, on Egypt). Others find a threshold effect, suggesting that only at secondary or higher levels of schooling does education have a significant beneficial effect on women’s own health outcomes for risks of disease (El-Gibaly et al. 2002, on Egypt; Fylkesnes et al. 2001, on Zambia).

**Contribution to Realization of Democracy**

Secondary education makes important contributions to the intergenerational maintenance and accumulation of human and social capital. As the society becomes increasingly complex and less traditional, secondary education tends to become a central builder of networks of civic engagement that form the core of the collective capabilities of communities to work for the common good (Welsh 2003).

Education contributes to the development of social capital by increasing individual propensity to trust and be tolerant. Research by Balatti and Falk (2002) and Schuller et al. (2002) shows that learning as a social activity not only has a strong influence on the development of shared norms and the value placed on tolerance and understanding within a community but is also an important determinant of the three key building blocks of social capital—building trust, extending and reconstructing social networks, and reinforcing behaviors and attitudes that influence community participation.
Research conducted by Dee (2003) on civic returns to education shows that in the United States additional secondary education “significantly increased the frequency of newspaper readership as well as the amount of support for allowing most forms of possibly controversial free speech” (page 3).

Secondary education also helps build social capital by raising the likelihood that citizens will participate in democratic institutions and will join community organizations and engage in politics. Findings of studies conducted in the United States and the United Kingdom (Dee 2003; Milligan, Moretti, and Oreopoulos 2003) show strong evidence that secondary education contributes to changes in attitudes and behaviors that enhance interest in politics, voter participation, and civic activity, thus helping promote active citizenship.

In addition to contributing to civic participation, secondary education can help reduce criminal activities and imprisonment, which in turn can yield important monetary benefits for society. In the United States Lockner and Moretti (2001) found that high rates of dropout from secondary school increase the probability of incarceration for both white and black males and that a 10 percent increase in the high school graduation rate reduces the arrest rate by 14 to 27 percent. According to the study, the social benefits of a 1 percent increase in the U.S. high school graduation rate could generate savings of about $0.9 billion to $1.9 billion per year. A similar study conducted by Feinstein (2002) in the United Kingdom found a comparable trend in crime reduction, which the author attributes to the positive impact of secondary school graduation on wages. According to Feinstein, in the United Kingdom the “benefit in terms of reduced crime through the effect on wages of a 1 point increase in the proportion of the working age area population with O Level or equivalent qualifications, is predicted to lie between £10 million and £320 million” (page 5).

**Contribution to Primary and Tertiary Education**

In addition to its effect on economic growth and the development of social capital, secondary education also makes a crucial contribution to both primary and tertiary education. The type of articulation between primary and secondary education, and between secondary and tertiary education, defines and depicts in an unequivocal way the overall features of a country’s education system. Within an education system, secondary education is the bridge between primary schools and tertiary education institutions and serves as a bond between them. Secondary education can be a set of pathways for students’ progress and advancement—or it can be the main bottleneck, preventing the equitable expansion of educational opportunities. In developing countries, despite all the efforts in recent decades, secondary education often acts as a bottleneck within the overall education system, inhibiting participation rates. The bottleneck is mostly manifested in the
Secondary education in Cambodia can be described as a bottleneck. Education reforms enabled net primary enrollment to increase from 85 percent in 1996 to a reported 93 percent in 2002, but net enrollment at the secondary level declined from 23 to 20 percent during the same period and was reported to have plunged as low as 14 percent in the 1999/2000 academic year. As the primary education sector begins to exhibit greater efficiency in flow rates to grade 6, particularly with respect to declines in student repetition, the government anticipates that potential demand for places in lower secondary schools will double by 2006. This might cause transition rates to lower secondary school to drop from the current 83 percent to only 40 percent as base enrollment figures rise significantly.

Not surprisingly, such projections have led to calls for interventions in the country’s secondary education sector to accommodate accelerating flow rates through the primary schools. For Cambodia there is a normative dimension to the dilemma of the static flow rates that characterize the transition to lower secondary school and the high incidence of dropout for the lucky few who actually get to lower secondary school. In 1996 the government introduced a major reform in the education sector that extended the basic education cycle from six to nine years, through the end of the lower secondary school cycle. Although Cambodia’s constitution guarantees the right of every child to basic education, participation rates in lower secondary schools hover around 20 percent, in stark contrast to the desired social and political goals. This contrast has given the government a compelling reason to translate legal rights into real rights—an effort that underpins many of the ongoing efforts to introduce targeted pro-poor education reforms.


Box 2.1 Mounting Pressures on Secondary Education in Cambodia

form of too few lower secondary education places, or too rigid tracking at the secondary education level, or both. (See box 2.1 for an example.)

Primary education and secondary education complement each other in many ways and so act as a two-way street. Increased primary education completion rates can boost demand for secondary education, and expansion of secondary education can be a powerful incentive for students to complete and graduate from primary school. Furthermore, in many developing countries primary school teachers are trained at the secondary level,
so that the expansion and quality enhancement of secondary education has the benefit of providing more and better teachers for primary schools.

The two-way street analogy could be extended to secondary and tertiary education. Secondary education curricula; pedagogical practices; legal frameworks; the recruitment, selection, and status of teachers; student background; and so on mirror those in higher education. Given the right policies, well-trained secondary school graduates continue to university, and universities in turn prepare college graduates to be secondary school teachers. Appropriate policies to promote student retention through upper secondary education can help increase the number of qualified secondary graduates entering tertiary education.

The very structure of secondary education (the academic and vocational shares, for a start) and the corresponding curriculum choices and alternative student tracking have a strong impact on patterns of student demand and enrollment in tertiary education, notably on the distribution of higher education entrants by knowledge area. Put in a different way, the knowledge and skills acquired and accredited in upper secondary education may be the main determinant of student prospects and choices with regard to tertiary education. This is of critical importance when a country wants to increase the share of university enrollment in traditionally male-dominated studies such as engineering. In many cases reform of higher education should start by looking at the secondary school curriculum and the tracking structure of secondary schools. For instance, enabling vocational education students at the secondary level to enter tertiary education institutions at various points and levels would not only increase the flexibility and inclusiveness of the system but would also improve the balance between the professional and academic dimensions of higher education.

One outcome of the reforms of past decades has been a shift in partnership. Secondary education used to be linked only with higher education. Nowadays, secondary schools also create externalities for primary schools in their catchment areas by pressuring—or not pressuring—for quality of primary school graduates and simply by providing incentives for continuation, even if there is no quality pressure (Bregman and Bryner 2003).

The evidence presented thus far, based on economic, human, and social capital arguments, argues for appropriate secondary education policies. Demand-side evidence and arguments—the subject of the next section—confirm the need for appropriate policies for expansion of secondary education.

The Soaring Demand for Quality Secondary Education

The growing demand for secondary education can be directly attributed to (a) the success of efforts to achieve universal primary education and of equity-driven programs for females and minorities; (b) the increasing
Demand for new types of knowledge, skills, attitudes, values, and experiences originating from more pluralistic communities and the use of more sophisticated technologies in the workplace; (c) the decreasing role of the government and the rural sector as employers, together with the importance of the service sector, whose employment structure is dominated by “knowledge workers”; (d) the increase in elected representative governments and the concomitant need for better-educated citizens; and (e) the increasing private returns to secondary education as the labor market demands graduates with a more sophisticated set of skills, knowledge, and competence that can be acquired starting at the secondary education level.

**Demand for More Educated Workers**

To assess the demand for educated workers, trends over the past 20 years in the wages and supply of workers with secondary education relative to those with primary and tertiary education were analyzed, using household and labor force survey data. The countries selected were Argentina, Bolivia, Brazil, Chile, Colombia, and Mexico in Latin America (de Ferranti et al. 2003), Indonesia, Malaysia, and Thailand in East Asia (Abu-Ghaida and Connolly 2003), and Côte d’Ivoire, Ghana, South Africa, and Zambia in Sub-Saharan Africa (Abu-Ghaida and Connolly 2003). The research showed that several possible patterns can emerge when the interplay among relative wages, supply, and demand is taken into account. For example, while a rise in relative wages combined with an increase in relative supply is strongly indicative of increased relative demand, a drop in relative wages combined with an increase in relative supply may imply either increased or decreased relative demand.

The analyses reveal that the supply of workers with secondary education relative to those with primary education has undergone unmistakable increases in Latin America, East Asia, and Africa over the past 20 years and that relative wages dropped in the Latin American and East Asian countries but rose in the African countries. The resulting implications for trends in the demand for workers with secondary education relative to those with primary education were as follows: in Latin America, abstracting from crisis periods in Argentina and Brazil, relative demand for workers with secondary education increased; in East Asia relative demand increased in Indonesia and Malaysia but decreased in Thailand; and in Africa rising relative wages and supply led to a relative increase in demand for workers with secondary education.

The supply of workers with secondary education relative to those with tertiary education dropped in Latin America (except in Brazil), East Asia (excluding Thailand), and Sub-Saharan Africa. The findings on relative wages of workers with secondary education show a decrease in the Latin America countries and in Ghana, South Africa, and Thailand but an increase for
Indonesia, Malaysia, and Zambia, with Côte d’Ivoire showing much variability. The implications for trends in the demand for workers with secondary education relative to those with tertiary education were as follows: in Latin America the relative demand for workers with secondary education dropped (except perhaps in the case of Brazil); in East Asia relative demand fell in both Indonesia and Thailand but appeared to rise in Malaysia; and in Africa, despite the mixed evidence on relative wages, it decreased across the board.

The overall evolution of relative wages and labor supply shows that demand for workers with more education increased over time. In addition, there is some evidence from the sudden shifts in demand in favor of those with tertiary education. This trend was observed in Malaysia at the time of the 1997 economic crisis, when demand for more skilled workers increased. Finally, the evidence for Latin America is most consistent with the explanation that demand shifts confirm the complementarities between technology and skill—that is, the effect of skill-biased technological change on the relative demand for workers with different amounts of skill (de Ferranti et al. 2003).

Demand for Enhanced Relevance and Quality

A fundamental role of secondary education in the 21st century is to equip students and graduates to become active, contributing partners in their communities. According to Delors (1996), this active role encompasses the domains of political, economic, cultural, social, and religious life. The agenda is multidimensional and should not be confined to any one domain. Secondary education plays a crucial role in equipping adolescents and young adults to become active citizens, to exploit economic opportunities, to be capable of exercising their rights and duties, and to resist attempts to vitiate and abuse these rights and duties. The demand for enhanced relevance and quality of secondary education is discussed next from the perspectives of youths, civic life and socialization, and the workplace.

Youths. The transition from primary to lower secondary school comes at a difficult time for many adolescents. Just as the physical, emotional, and social changes of early adolescence begin to set in and young people begin to experience intense growth with new notions about identity and individualism, they find themselves in a school environment radically different from what they were used to (University of Pittsburgh 1996). The move from the protective setting of primary school to the more unstructured environment of secondary institutions can be smooth for some, but for many this is a period of intense conflict that could lead to academic failure, school dropout, and other serious problems. In many developed countries, for instance, between 15 and 30 percent of adolescents drop out before completing high school. In Sub-Saharan Africa the secondary completion
rate has been estimated at 10 to 20 percent (Bregman and Bryner 2003). In
general, in African countries the dropout rates are higher in the early grades
of secondary education and decrease dramatically toward the end, indic-
ating that students who stay long enough to begin the last year of secondary
school are likely to finish their education. Unfortunately, the percentage
that do so is, overall, very low (Liang 2002). A common phenomenon
observed in Latin America is high levels of repetition in the initial grades of
secondary education, making secondary education very inefficient (Cabrol
2002). The spin-off effects are that adolescents have the highest arrest rate
of any age group and that an increasing number of them report regular use
of alcohol or other drugs.

Hargreaves and Earl (1990) summarize well the main traits and needs
of early adolescence. Young people in this stage of life have to (a) adjust to
profound physical, intellectual, social, and emotional changes; (b) develop
a positive self-concept; (c) experience and grow toward independence;
(d) develop a sense of identity and of personal and social values; (e) expe-
rience social acceptance, affiliation, and affection among peers of the same
sex and the opposite sex; (f) increase their awareness of, ability to cope with,
and capacity to respond constructively to the social and political world
around them; and (g) establish relationships with particular adults around
whom the growth processes can take place.

To fully understand the secondary education needs of young people today,
it is important to add to the above-mentioned considerations the current
social context surrounding adolescents, which is characterized by constant
changes in technology and lifestyle and by the presence of a strong world-
wide adolescent subculture resulting from the global influence of commu-
nications, information technology, and multimedia. The information-rich
environment surrounding adolescents’ social and work lives makes addi-
tional demands on them, requiring them to think in progressively abstract,
critical, and reflective ways, to gain experience in decision making and in
accepting responsibility for decisions, and to develop self-confidence by
achieving success in significant events and areas. Secondary schools, in turn,
face an important challenge, as they are called on to provide relevant expe-
riences to help youngsters develop their competencies.

Several typical characteristics of lower secondary education across the
world appear to be at odds with the needs of contemporary adolescents
and youngsters. They include the following:

1. Increased control exerted by teachers in lower secondary school classrooms, as
   compared with elementary school. In secondary school classrooms there is
   more teacher control and discipline and there are fewer opportunities
   for student decision making, choice, and self-management. Yet this is
   the stage when students increasingly desire autonomy and avenues for
   self-determination.
2. **Less-personal student-teacher relationships.** Students in secondary school encounter teachers who are less friendly, less supportive, and less caring than their teachers in primary school. Their relationships are less personal and positive. For their part, teachers report that they trust students in this age group less.

3. **Less small-group and individual attention and mounting evaluation pressure.** Beginning in lower secondary school, there tends to be increased organization of activities for the entire class regardless of the varying abilities of students, rather than small-group work. In addition, secondary students have to deal with public evaluation of their academic achievement, sometimes in the form of high-stakes public examinations. This can alienate students, resulting in significant negative impacts on the motivation and self-perception of adolescents and youngsters.

**Student disaffection and implications for civic life.** Changes in the nature of the learning environment associated with transition to lower secondary school and eventually to upper secondary school seem to be a plausible explanation for the decline in students’ engagement in school-related activities. But it can also be argued that such changes, seen from the students’ perspective and in a context of quasi-universal secondary education, are tantamount to a de facto democratic deficit of contemporary secondary schooling. There is substantial research evidence (Cothran and Ennis 2000) that the current characteristics of secondary schools favor the creation of antischool student subcultures, school violence and antisocial behavior, increased dropout, and generalized student disengagement.

Schools also impart an image of ideal students, in terms of personal characteristics and behaviors. Those who do not fit that image and have very little chance or no real chance to ever meet the standard search for alternative ways, places, and institutions to construct and develop personal identity. Many educators view the growing problems of discipline in schools, and school violence in particular, as a sort of transnational epidemic that moves and extends from country to country, changing entirely the landscape of school systems and the self-perception of the teaching profession. Secondary school teachers’ meetings are rife with significant and consistent worries about students’ lack of motivation, widespread lack of discipline, and unwillingness to sacrifice part of their present in order to have a better future. In short, there appears to be a growing civic deficit among secondary school students.

International and national studies indicate that student absenteeism and disaffection (as manifested in lack of a sense of belonging or participation) are key challenges in secondary education. An OECD (2001b) report based on PISA results, which draw on data from 42 mostly developed countries, reveals a poor sense of belonging at school among, on average, one in four 15-year-old students, with one in five admitting to being regularly absent.
Disaffection rates vary widely across countries. In Denmark and Spain a third of students, and in Canada, Greece, Iceland, New Zealand, and Poland, over a quarter, appear to miss school or skip classes regularly. In Japan and Korea, by contrast, the low-attendance category accounts for fewer than 1 in 10.

Even in countries with high secondary school attendance, students are not necessarily happy in school. A poor sense of belonging is greatest in Japan, Korea, and Poland, with over a third of students feeling they do not belong in at least one respect. Least affected are Hungary, Ireland, Sweden, and the United Kingdom, where the proportion is fewer than one in five. The prevalence of both types of disaffection is higher among non-OECD countries. Contrary to what might be expected, the findings reveal that disaffected students are not principally those with the lowest literacy levels; they are drawn from the full range of abilities. Students who feel the least sense of belonging at school have, on average, literacy skills somewhat above the norm. Students who are most frequently absent are often lower achievers, but they are not at the bottom; they perform, on average, at level 2 on a five-level literacy scale, showing at least a basic skill level. A youth survey conducted in Argentina (San Juan 2001) found that early adolescents (ages 13 to 15) have low levels of motivation and of engagement with school activities, resulting in a higher tendency to leave school early. In Canada a four-year national survey on student engagement in learning and school life (Smith et al. 2001) revealed that as students move through the grade levels from elementary to secondary, they become increasingly bored and alienated from school.

These findings raise important issues for policy makers. They indicate that disaffection from school (and as a possible outcome, antischool subcultures) is not limited to a small minority of students. These disaffected students do not achieve their full potential at school, may become disruptive in class, and may have a negative influence on other students, all of which could lead to early exit and permanent dropping out of school.

It has yet to be assessed whether disengagement from school during the adolescent years has longer-term effects. It can be expected, however, that students’ attitudes toward school and their participation strongly affect their decision as to whether to pursue postsecondary studies. It is at the secondary level that a student’s academic identity is defined and consolidated. Academic identity influences and shapes choices and opportunities as graduates face the labor market or seek to pursue further education.

Since secondary education coincides with a critical phase in students’ lives, their engagement in the learning process and their overall well-being are vital components of academic achievement. These affective outcomes of schooling also need to be taken into account when dealing with curriculum, pedagogy, monitoring, and evaluation. There is an evident need to
balance the current emphasis on academic and cognitive achievement with the affective dimension of achievement.

If secondary schools remain central agencies in the socialization of young citizens and workers, more emphasis needs to be placed on the role of the individual student and on his or her autonomy in steering the learning process. Teachers and principals must actively seek students’ participation in areas such as curriculum choice, preferred methodological approaches, and quality-enhancing assessment practices. When drafting curriculum, pedagogy, monitoring, and evaluation, policy makers must take these aspects into consideration, since they affect schooling outcomes. Students are obviously the largest and most important asset in secondary schools, and they should become more actively involved in their fellow students’ learning process. Participatory structures, mutual support, tutorial systems, and conflict mediation are good examples of measures that can foster direct involvement of students and so change the culture of a school, reduce dropout, and contribute to improving student achievement.

The workplace. Changes in the workplace resulting from technological improvements and the introduction of new technologies are creating pressures worldwide for upskilling the labor force, in terms of average educational attainment and of competencies obtained outside the formal education system (OECD 2001a; Stasz 1999). Core and foundational skills such as higher-order numeracy and literacy competencies are assuming importance equal to that of work-related skills and technical knowledge. In developed countries, having secondary education is making it easier for young adults to find employment or to shorten the period of unemployment. A comparative study of youth employment in eight OECD countries (Australia, Canada, Finland, Japan, Norway, Portugal, Sweden and the United States) found that youth-adult unemployment ratios fell from an average of 3.6 in 1977 to 2.6 in 1987 and to 2.4 in 1996 (OECD 1998). The authors of the study observe that “this relative improvement in young people’s position in the labor market can in large part be ascribed to rising educational levels among new labor market entrants, whose knowledge, skills and qualifications are better adapted to the needs of a knowledge society” (p. 54). What really makes the difference is not so much the number of years of schooling achieved but the quality of the schooling, since the same average number of schooling years may mask very different distribution patterns of qualifications across countries. Several studies have highlighted the importance of the quality of education for economic growth (Barro 1999; Dessus 1999; Hanushek and Kimko 2000).

An interesting caveat comes from a study in Latin America which confirms that education accumulation is good for growth but suggests that the degree of inequality in the distribution of education has a strong and robust negative effect on growth (Birdsall and Londono 1997). This implies that the real challenge is to ensure equitable access to good secondary
education. In order to prepare graduates for active participation in the labor market, secondary education must contribute to enhancing their skills and knowledge so they are better equipped to accomplish particular tasks and are able to absorb, use, and adapt new technical knowledge to respond to changing job requirements. In other words, secondary education should provide individuals with knowledge, skills, and attitudes so they can maintain a competitive edge. In a study on competitiveness and skills, Lall (2001) finds that as the industrial sector in a country becomes more complex and sophisticated, the demand for human capital formation accelerates. Good secondary education and technical schooling are prerequisites for staying competitive for countries at an intermediate level of industrial development and with export-oriented activities. In Uganda the findings of a firm demand study show that despite the advocacy for vocationalization, it is generic skills and knowledge, in addition to positive work attitudes, that employers most value (Liang 2002). Another study, on secondary education and employment in Thailand, found that managers rank work habits and attitudes above all other skills, followed by the ability to learn new occupational skills, and that they value people skills over specific occupational skills (World Bank 2000a).

Effects and Side Effects of the Expansion of Secondary Education

The expansion of secondary education has effects and side effects, and some of them can be problematic.

1. Secondary expansion has a direct impact on human capital development and on social equality. Unchecked expansion in countries with low secondary education participation rates has the potential to increase inequality, as measured by the gender and social background of students. Analysis of enrollment rates in secondary education in many developing countries such as Cambodia (ADE-KAPE 2003) shows that nontargeted investment in secondary education might be considered antipoor, since it has generated a situation where fewer than 10 percent of students from the lowest income quintile have access to secondary education (see box 2.2). In countries where access to secondary education is less restricted, further secondary expansion that pays insufficient attention to quality and relevance results in high dropout and low completion rates, turning the “open doors” of the system into “revolving doors” for a sizable proportion of students (UNESCO 2004b).

2. Secondary education has a strong effect on wages and the labor market. In theory, accessibility reduces the exchange value of an institution’s educational credentials. This reduction strongly influences public perception of the value of secondary education, and the potential of the
Box 2.2 Inequities in Educational Attainment in Developing Countries

In a study of educational attainment using household survey data from 35 developing countries, Filmer and Pritchett (1999) show that the difference between the richest and the poorest households in median grade attained by students age 15–19 is as high as 10 years of schooling in India and between 3 and 5 years in many of the developing countries surveyed (see the figure).

In the Republic of Yemen enrollment in lower secondary education (grades 7 to 9) increased by 220 percent between 1998 and 2002, while enrollment in upper secondary education experienced a 46 percent increase in the same period. As a result, the gross enrollment rate (GER) in secondary education is now close to 45 percent. This rate, however, hides extreme disparities by gender, by urban and rural area, and among districts. The government estimates that in 2002/3 the GER was 57 percent for boys and 24 percent for girls. In large cities such as Aden and Sana’a secondary school enrollment rates for both girls and boys were over 70 percent, with girls’ GER at 102 percent, exceeding that of boys. But outside these cities, the picture is entirely different: in half the country’s governorates, the GER for girls was below 15 percent, and girls accounted for fewer than one in five secondary students.

Median Grade Completed, Youths Age 15–19 from the Poorest 40 Percent and Richest 20 Percent of Households, Selected Countries


Note: The numbers on the bars show the size of the richest-poorest gap, in years of schooling.
credentials to provide graduates with a good chance of vertical mobility is severely reduced. By contrast, exclusivity enhances the value of credentials in the market. Goldin (2001) argues that the wage structure is the outcome of a race between technology and education. During most of the 20th century education outran technology, but during the past couple of decades, technology has outpaced education. This has introduced new variables, as well as new challenges to the employability of secondary graduates. Technological developments have demonstrated that expanding secondary education is simply not enough.

3. Expansion of secondary education has side effects within the education system itself. When a country decides to set and implement a goal of universalization of primary or basic education, an immediate and perhaps inevitable effect is that the next level tends to undergo significant internal differentiation and segmentation, reflecting sharply the divide between elite and mass educational opportunities. Ironically, this increased differentiation of, for instance, upper secondary education as a result of universalization of lower secondary schooling is often used in the political arena to question the benefits of expanding and democratizing education.

**Conclusion**

In today’s world, acquisition of the enabling skills and competencies necessary for civic participation and economic success depends on access to good secondary education. Investment in secondary education in developing countries can be justified not only on the grounds of its contribution to productivity increases, which lay the basis for sustained economic growth and poverty reduction, but also for its contribution to human capital development and its associated effects on democracy, crime reduction, and improvement of living conditions.

Secondary education plays a key articulating role between primary schooling, tertiary education, and the labor market. The specific dynamics of this articulation is crucial because it determines future educational and job opportunities for young people. Secondary education can become a bottleneck constraining the expansion of educational attainment and opportunity, or, conversely, it can open a set of pathways and alternative channels for students’ advancement.

Access to good secondary education entails having a system in which students have real opportunities to play meaningful roles in the enterprise of their own education. This ideal is at odds with the way secondary schools are currently organized—as large institutions that give youngsters few opportunities for self-management and participation. The result is disaffection among secondary students. This situation could become the main obstacle to increased participation in and graduation from secondary
education. A policy challenge is to align secondary school curricula, pedagogy, and assessment with the demands and needs of young adolescents.

Unchecked expansion of secondary education, especially in countries with low participation rates at that level, could also give rise to increased inequalities in educational attainment by gender, social class, or region. Countries should consider targeted interventions to address this potential problem. Chapter 3 discusses in greater detail the challenges of expanding access to secondary education and improving its quality and relevance.

Notes

1. A balanced education system is one in which each level of education develops proportionally to prevailing access at lower levels.

2. In Angola, Botswana, Burkina Faso, Comoros, the Democratic Republic of Congo, Ghana, Sudan, and Zanzibar (Tanzania), basic education encompasses primary and junior (lower) secondary education and ranges from 7 to 10 years of schooling. In Benin, Burundi, Cameroon, the Central African Republic, the Democratic Republic of Congo, Eritrea, Guinea, Liberia, Madagascar, Mauritania, Mozambique, Rwanda, Senegal, mainland Tanzania, and Togo, only primary education is compulsory, and ages of children in compulsory education range between 5 and 11 years. In Chad, Kenya, Lesotho, Malawi, and Swaziland, primary education is not compulsory.

3. There is evidence that teachers in lower secondary schools spend more time maintaining order and less time actually teaching than do primary school teachers. In Greece 58 percent of students said that “more than five minutes go by at the start of each class without anything being done”; 46 percent, that there is noise and commotion; and 29 percent, that students do not listen to what the teacher says (OECD 2003d).

4. The report looks at two ways in which students can become disaffected. One is through a poor sense of belonging at school. For example, students may believe that their school experience has little bearing on their future, or they may feel rejected by their classmates or teachers. The other way is through low participation or absenteeism, calculated on the basis of the students’ recent attendance at school.

5. The youth-adult unemployment ratio is defined as the ratio of the unemployment rate among those age 15–24 to the rate among those age 25–54.