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Confronting the Old Challenges: The Continuing Crisis of Tertiary Education in Developing and Transition Countries

Problems of quality and lack of resources are compounded by the new realities faced by higher education, as higher education institutions battle to cope with ever-increasing student numbers. Responding to this demand without further diluting quality is an especially daunting challenge. . . Expansion, public and private, has been unbridled, unplanned, and often chaotic. The results—deterioration in average quality, continued interregional, intercountry, and intracountry inequities, and increased for-profit provision of higher education—could all have serious consequences.


Tertiary education can play a catalytic role in helping developing and transition countries rise to the challenges of the knowledge economy and fulfill the roles and functions outlined in Chapter 2. But this is conditional on these countries’ ability to overcome the serious problems that have plagued tertiary education systems and have pushed some systems into a situation of severe crisis.

Presenting a panoramic assessment of the main issues facing tertiary education systems worldwide is a daunting, if not impossible, task. Unlike primary schools, which share many similarities across countries, tertiary education systems come in all sizes and configurations. Still, notwithstanding the many contrasts among tertiary education systems as to size, degree of diversification, participation of private institutions, financing patterns and unit costs, and modes of governance, there is a set of common challenges that can be looked at in a global perspective. To a
large extent, these problems are generated by the process of shifting from elite to expanded, mass tertiary education under severe resource constraints and with the burden of a legacy of persistent inequalities in access and outcomes, inadequate educational quality, low relevance to economic needs, and rigid governance and management structures. OECD countries have faced similar challenges in the recent past and have addressed them through a variety of approaches and with varying degrees of success.

The Need to Expand Tertiary Education

Despite the rapid growth of tertiary enrollments in most developing and transition countries over the past decades, the enrollment gap between these economies and OECD countries has not diminished. In fact, the opposite has occurred, as is illustrated by Figure 3.1. In 1980 the tertiary enrollment rate in the United States was 55 percent, whereas the average

![Figure 3.1 Gross Enrollment Ratios in Tertiary Education, 1970–97](image)

*By income group*

Note: Least-developed countries are those so classified by the United Nations; in 2002 there were 49 countries in this category.
for developing countries was 5 percent. In 1995 the rates were 81 for the United States and 9 percent for developing countries.

Enrollment rates have even decreased slightly in Eastern Europe and Central Asia, from 36 percent in 1990 to 34 percent in 1997. The regional average masks very different trends. Rapid growth has occurred in Bulgaria, the Czech Republic, Hungary, Poland, and Slovenia, where enrollment rates are now in the 20–30 percent range, but the levels are stagnant or decreasing in such Central Asian countries as Tajikistan (9 percent) and Uzbekistan (5 percent).

Of the other regions of the world, Latin America and the Middle East have the highest averages (1997 data), with 18 and 15 percent, respectively, and South Asia and Africa the lowest (7 and 4 percent, respectively). The East Asian average of 11 percent conceals wide differences, from less than 2 percent in Cambodia to almost 30 percent in the Philippines and 51 percent in Korea, which is on a par with the OECD average. The need to invest in expanding coverage at the tertiary level is
nowhere more visible than in the large countries of Asia, such as China (5 percent in 1997), India (6 percent), and Pakistan (3 percent), and of Latin America, where Brazil and Mexico have enrollment rates of less than 15 percent.

Although population growth is more rapid in the developing world than in OECD countries, transition rates from secondary to tertiary education have been higher in the latter, for several reasons. Among these are significant increases in secondary school completion rates, students’ perception of educational attainment as a means of achieving higher incomes, and the need for highly skilled labor in a rapidly changing global economy.

In the developing world secondary-level enrollment rates have grown most rapidly in East Asia (from 47 to 66 percent between 1990 and 1997), followed by Latin America (from 51 to 62 percent) and the Middle East (from 52 to 57 percent). In Sub-Saharan Africa, by contrast, the growth of secondary school enrollments has slowed as a result of a decline in primary-level enrollment and the dramatic demographic impact of HIV/AIDS. Eastern Europe and Central Asia is the only region in which secondary enrollment rates have actually decreased (from 92 to 87 percent), mainly because of a flight from vocational training courses.

One reason why tertiary enrollment levels are still relatively low in many parts of the developing world is the lack of institutional differentiation to accommodate diverse and growing demands. In Latin America, for instance, although some countries have a significant nonuniversity tertiary sector (79 percent of total tertiary enrollment in Cuba, 43 percent in Peru, 38 percent in Brazil, and 35 percent in Chile), in others—among them, El Salvador, Guatemala, Honduras, Nicaragua, and Panama—the nonuniversity sector accounts for less than 5 percent. Most Sub-Saharan African countries, too, have a small nonuniversity sector, with the exceptions of Kenya and South Africa (54 percent), Ghana (35 percent), and Nigeria (31 percent).

There is strong evidence that nonuniversity institutions such as junior colleges produce graduates with qualifications that correspond to labor market needs. In Taiwan (China) more than 90 percent of exports are produced by junior college graduates in small and medium-size enterprises (SMEs), which employ 78 percent of the working population and have played a pivotal role in overall economic development. The lack of institutional differentiation in many parts of the world is a major concern, not only because nonuniversity institutions can absorb a significant share of the demand for tertiary education but also because they are in general better able to respond rapidly to changing labor market needs, as is illustrated by the positive contribution of two-year junior colleges in Korea.

Within the context of the growing enrollment gap, an equally worrisome issue is the slow expansion of postgraduate education in many
parts of the world. In the Latin America and Caribbean region, students enrolled in postgraduate programs represented, on average, only 2.4 percent of overall tertiary enrollment in 1997, compared with 12.6 percent in the United States. Whereas OECD countries produce, on average, one new Ph.D. graduate per year per 5,000 population, the ratio is 1 graduate per 70,000 population in Brazil, 1 per 140,000 in Chile, and 1 per 700,000 in Colombia. More than two-thirds of all Latin American postgraduate students are concentrated in just two countries, Brazil and Mexico.

In Thailand postgraduate studies represent 3 percent of overall enrollment, compared with 8 percent in Korea. The relative underdevelopment of graduate education in several Asian countries is traceable to a tradition of sending students overseas.

In Africa the growth of postgraduate education has been very slow except in South Africa. A recent study of eight East African countries (Ethiopia, Kenya, Malawi, Mozambique, Rwanda, Tanzania, Uganda, and Zimbabwe) showed that their total annual production of master’s graduates in economics, which was 20 in 1990, increased only to 94 in 2000. During the same period the number of Ph.D.-level graduates, especially in the basic sciences, was very low, and the few degrees that were granted were based on dissertations, with little or no course work (Obwana and Norman 2000). In Nigeria, where 20 percent of Africa’s population lives, only 15 scientists and engineers per million persons are engaged in research and development; the number per million population is 150 in India, 350 in China, and 3,700 in the United States.

In several Eastern European and Central Asian countries brain drain is a major obstacle to the development of postgraduate studies. In Bulgaria, for instance, the number of doctoral students has dropped from 5,000 to 3,400 since 1996. This circumstance seriously constrains the building up of those elements of national innovation systems that are so essential for increasing national productivity—research capacity, university-trained researchers and professionals, graduates with advanced technical and managerial skills, and dynamic university-industry linkages.

In many countries the fiscal constraints experienced in recent years have undermined financial capacity to undertake further expansion of the public tertiary education system while maintaining satisfactory quality. In the past 10 to 15 years expenditures for tertiary education as a percentage of the total public education budget have declined significantly in several countries, including Bangladesh (from 13 to 8 percent), China (from 20 to 16 percent), Ghana (from 15 to 12 percent), Guinea (from 29 to 17 percent), Nepal (from 35 to 19 percent), Oman (from 15 to 7 percent), and the Philippines (from 22 to 18 percent). In Ecuador, Mexico, and Peru per-student expenditures fell by 30, 20, and 30 percent, respectively, between 1980 and 1990.
The demand for high-quality tertiary education can be seen in the large numbers of students from developing countries who choose to study abroad, particularly in the United States. During the 2000–2001 academic year, there were 547,867 foreign students in the United States, making up approximately 3.8 percent of total enrollment in U.S. colleges and universities and bringing almost US$11.04 billion into the U.S. economy. In 2000–2001, the top 10 places of origin of foreign students in the United States were (in descending order) China, India, Japan, Korea, Taiwan (China), Canada, Indonesia, Thailand, Turkey, and Mexico. The United States remains the leading destination for international students, but the United Kingdom, Australia, France, and Germany are also key destinations for students from developing countries.

In several countries public sector tertiary enrollments have failed to grow or, where they have grown, resources have been pinched. In Sri Lanka enrollments in public tertiary institutions have stagnated at 2 percent since 1990 for lack of government funding. In Africa expenditures per student have declined in real terms in 10 of the 15 countries for which data are available. The HIV/AIDS epidemic has exacerbated the problem of dwindling resources and reduced funding. Universities have been forced to spend much more as a result of the epidemic, both in direct costs—for medical services, testing and treatment, premature payment of terminal benefits, funeral expenses, and replacement, recruitment, and training of staff—and in the form of indirect costs stemming from increased absenteeism, generous sick leave provisions, and general loss of productivity.

The fiscal constraints become even more acute in times of economic and financial crisis, sometimes leading to significant decreases in tertiary enrollment. In East Asia, for example, typical responses to the 1997–98 financial crisis in Indonesia, Korea, and Thailand were for low-income students to drop out without completing their studies and for middle- and high-income students to shift from private to public tertiary institutions (Varghese 2001). Similar patterns have been observed in some South American countries, notably Bolivia and Colombia. The Colombian National Association of Universities has calculated that the country’s private universities have lost close to 20 percent of their students since 1999. In Central and Eastern Europe the lingering economic crisis and the introduction of market principles of economic organization in the early 1990s resulted in a sharp (between 30 and 80 percent) decline in public funding for colleges, universities, and scientific academies. Following the collapse of the Soviet Union, investment in research and development in Russia declined drastically, from more than 2 percent in 1990 to barely 1 percent at the end of the decade; the comparable OECD average is 2.2 percent (Cervantes and Malkin 2001).
The problem of insufficient, and sometimes declining, funding is often compounded by the inefficient use of available resources. In many Central and Eastern European countries, for instance, per-student public expenditures are no more than 10 to 25 percent of the OECD average, but in relation to per capita GDP they are significantly higher than in OECD countries, implying a high degree of inefficiency in resource utilization. In the formerly socialist countries the tertiary education sector continues to be fragmented despite attempts (notably in Estonia and Hungary) to encourage mergers. There are too many small institutions operating at high unit costs and offering similar programs.

Management inefficiencies drain scarce resources away from the fundamental objectives of increasing access, quality, and relevance. Examples of such inefficiencies include underutilized facilities, duplicative program offerings, low student-staff ratios, high dropout and repetition rates, uneconomical procurement procedures, and allocation of a large share of the budget to noneducational expenditures. Many public tertiary institutions are overburdened by students, yet facilities often go underused. Because of civil service regulations or agreements with trade unions, many university facilities are closed evenings and weekends.

Low student-staff ratios and high repetition and dropout rates drive up the cost per graduate. In China and Brazil, for example, student-teacher ratios are very low in the public universities—between 5:1 and 9:1 in Chinese universities and 9:1 in the Brazilian federal universities, compared with a range of 15:1 to 20:1 in European universities. In four Nigerian universities the graduation rate is 10 percent or less (Hartnett 2000: 5). In many parts of the world high repetition and dropout rates are among the most important causes of low internal efficiency in public universities. Low internal efficiency is especially prevalent in countries with open access, as is the case in most francophone African countries and in a few Latin American countries (Argentina, the Dominican Republic, Guatemala, and Uruguay). The problem is sometimes compounded by the longer than usual duration of first degrees. In Bolivia, for instance, the first degree is supposed to be earned within five years, but students actually take nine years to graduate, on average. Guatemala’s public universities spend 22 student-years to produce a graduate of a 6-year undergraduate program. In Indonesia the average duration for degree completion in four-year undergraduate programs is seven years.

In many countries a large share of the public tertiary education budget is devoted to noneducational expenditures in support of student scholarships and subsidized student services such as housing, food, transportation, medical services, and loans. Student support represents only 6 percent of recurrent expenditures in Asia, but 14 percent in OECD countries, around 15 percent in Eastern Europe and Central Asia, about
20 percent in North Africa and the Middle East and in Latin America, and close to 50 percent in francophone Sub-Saharan Africa. In Sri Lanka all students receive a maintenance grant regardless of socioeconomic considerations.

Another source of inefficiency in some public institutions is the high proportion of overhead expenditures and of salary expenditures for nonteaching staff. In China nonteaching staff in universities are more numerous than teachers. In Nigeria only 2.7 percent of university budgets goes for teaching support, as against 35 percent for administration (Hartnett 2000: 15). Finally, a number of countries offer very generous salary benefits to staff, and these benefits account for the bulk of expenditures, leaving only limited resources for nonsalary expenditures for educational purposes (educational materials, library resources, laboratory supplies, maintenance, and so on). In Venezuela salaries of active professors and pensions for retired faculty members represent 69 percent of the budget of public universities; in Brazil these items amount to 90 percent of the total budget.

**Persisting Inequalities**

Along with rapid enrollment growth, noteworthy progress has been made in many countries in access to tertiary education for traditionally less-privileged groups, including students from rural areas and women. Yet tertiary education, especially in the university sector, generally remains elitist, with most students coming from wealthier segments of society. Although most countries and institutions do not systematically collect data on the socioeconomic origin of students, where statistics and household survey data are available the pattern is clear. In Latin America the share of students from the lowest third of the income distribution enrolled in tertiary education is only 6 percent in Peru, 11 percent in Chile, and 18 percent in Uruguay (García Guadilla 1998). In francophone Sub-Saharan Africa the children of white-collar employees account for 40 percent of tertiary enrollment even though this group of professionals represents only 6 percent of the total labor force (World Bank 1994: 23).

One of the main determinants of inequity is family income, but, depending on the country, other factors may contribute to unequal access and outcomes. Among these are caste, ethnicity, language, regional origin, gender, and physical disability. In India special efforts have been made to reduce barriers linked to caste, but the representation of students from scheduled castes and tribes in Indian tertiary institutions is still low. In Venezuela the widespread but not much publicized custom of preferential admission for children of university professors and
employees is an example of positive discrimination in favor of the children of the already privileged intellectual elite.

Language can contribute to social inequity in countries where tertiary education is conducted in a language different from that of primary and secondary education. In Sri Lanka and Tanzania, for example, English is the language of tertiary instruction, and in the countries of North Africa French is used in most scientific disciplines. Language can also be an obstacle in multicultural societies such as Guatemala, where 90 percent of the population does not speak Spanish, the language of instruction, at home.

Except in Latin America, gender inequity persists in most regions of the developing world, as illustrated in Table 3.1.

Gender differences in tertiary enrollments are particularly marked in the Arab world, in some countries of Sub-Saharan Africa, and in South Asia. In the Republic of Yemen, for instance, the female enrollment ratio in tertiary education is only 1 percent of the eligible age cohort, as against 7 percent for men. In Bangladesh female students represent 24 percent of the student population in public universities; gender disparities are even stronger in the country’s private universities, where only 17 percent of all students (and less than 1 percent of all teachers) are female. In some countries where male and female enrollment ratios were once relatively equal, as was the case in Russia in the early 1990s, gender inequalities increased slightly. There are gender disparities among countries within the same region. Over the past two decades only a few countries (Argentina, Chile, Jordan, Kuwait, Panama, Uruguay, and Venezuela) have managed to move toward a higher female-to-male ratio while expanding overall tertiary enrollment.

Women are clearly underrepresented in the teaching profession in many countries. Worldwide, female teacher representation is approximately 30 to 50 percent lower at the tertiary than at the secondary level. Women are also less likely to have access to management positions than men. In Indonesia in 1996 women occupied only 2 percent of rector’s positions in tertiary education and 9 percent of dean’s positions, even though their share of tertiary-level enrollment was 35 percent and they accounted for 24 percent of academic positions at public universities (Koswara 1996). In Bangladesh the proportion of female instructors at the tertiary level is estimated at a mere 4 percent of the teaching staff. The proportions of female teaching staff at tertiary institutions in East Asia are also low: China, 20 percent (1980), Indonesia, 18 percent (1985), Japan, 22 percent (1996), Korea, 24 percent (1996), Malaysia, 22 percent (1985), and Singapore, 31 percent (1995) (World Bank 2001b). In the United States only 29 percent of the women teaching in the fields of science, engineering, and technology are tenured full-time professors, as against 58 percent of the male faculty members in the same fields. In Ger-
Table 3.1 Gender Disparity in Enrollment and Teacher Deployment, Selected Countries, 1997

<table>
<thead>
<tr>
<th>Region and country</th>
<th>Combined primary- and secondary-level gross enrollment ratio (percent)</th>
<th>Tertiary-level students per 1,000 population</th>
<th>Proportion of women in tertiary education (percent)</th>
<th>Share of female teachers (percent)</th>
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<td>Female</td>
<td>Male</td>
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<td>Male</td>
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<td><strong>Africa</strong></td>
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<tr>
<td>Botswana</td>
<td>93</td>
<td>90</td>
<td>5.5</td>
<td>6.4</td>
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<tr>
<td>Madagascar</td>
<td>51</td>
<td>51</td>
<td>1.6</td>
<td>1.9</td>
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<tr>
<td>South Africa</td>
<td>40</td>
<td>47</td>
<td>14.6</td>
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<td><strong>Asia</strong></td>
<td></td>
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<tr>
<td>Cambodia</td>
<td>68</td>
<td>86</td>
<td>0.3</td>
<td>1.7</td>
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<tr>
<td>China</td>
<td>95</td>
<td>98</td>
<td>3.3</td>
<td>6.1</td>
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<tr>
<td>India</td>
<td>62</td>
<td>81</td>
<td>4.8</td>
<td>7.9</td>
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<tr>
<td>Indonesia</td>
<td>79</td>
<td>85</td>
<td>8.1</td>
<td>15.2</td>
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<tr>
<td>Kuwait</td>
<td>68</td>
<td>69</td>
<td>25.9</td>
<td>19.3</td>
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<tr>
<td>Yemen, Rep.</td>
<td>34</td>
<td>90</td>
<td>1.1</td>
<td>7.3</td>
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<tr>
<td><strong>Latin America</strong></td>
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<tr>
<td>Brazil</td>
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<td>11.7</td>
<td>10.1</td>
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<tr>
<td>Colombia</td>
<td>89</td>
<td>87</td>
<td>18.2</td>
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<tr>
<td>Guyana</td>
<td>87</td>
<td>85</td>
<td>8.9</td>
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<td><strong>Industrial countries</strong></td>
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<tr>
<td>Austria</td>
<td>102</td>
<td>104</td>
<td>28.2</td>
<td>31.3</td>
</tr>
<tr>
<td>New Zealand</td>
<td>108</td>
<td>105</td>
<td>49.9</td>
<td>40.1</td>
</tr>
<tr>
<td>United States</td>
<td>99</td>
<td>100</td>
<td>58.4</td>
<td>48.2</td>
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—Not available.
a. Proportion of the population age 6–17 attending primary or secondary school.
many only 6 percent of full professors are women. In Brazil women make up 20–29 percent of researchers in the natural sciences; in health sciences women are at parity with men, at about 53 percent.

Caution must be exercised when looking at improved female enrollment rates. Such statistics often conceal the concentrated presence of women in degree programs preparing for low-income professions. In fact, “gender streaming” can be observed in all regions, even in Latin America, where women are overrepresented in the humanities and in vocational and commercial/secretarial schools and underrepresented in science and engineering departments (Subbarao and others 1994). In Japan women make up only 6.8 percent of the Ph.D. students in physics and 7.1 percent of those in engineering. In many countries, moreover, sexual harassment poses a major additional obstacle to the advancement of female education, even though, for obvious reasons, there is little evidence on this topic in the research literature.

Lodging can be a barrier for women. Tertiary education institutions are typically located in urban areas, limiting access for rural students and even more so for female students, since families may be less inclined to permit daughters than sons to live outside the home in mixed-gender environments in urban areas. Many countries have addressed this constraint by providing boarding facilities segregated by gender, with adequate space to accommodate ever greater numbers of women. Tunisia addressed gender equity issues by building smaller campuses in locations around the country and in remote areas to provide higher education within commuting distance, obviating the need for students to live away from their families.

But access is not the only determinant of equity at the tertiary level. Recent household survey data from Argentina illustrate that even open-access tertiary education systems can be deceptive from an equity standpoint. Despite the appearance of democratic access for all secondary education graduates, academic outcomes are strongly influenced by socioeconomic origin. Only a fifth of the students from the poorest two quintiles who enter as first-year students under Argentina’s open-access policy actually graduate from public universities. By contrast, there are relatively few failures among students from the richest quintile (Kisilevsky 1999).

In most countries where public tertiary education is free, public expenditures at that level represent regressive social spending in that the proportion of university students from upper- and middle-income families is higher than their share in the overall population. In Rwanda, for example, 15 percent of the overall public budget for education goes to just 0.2 percent of the students at the tertiary level. In Indonesia and Jordan students from the richest quintile receive, respectively, 50 and 39 percent of total public expenditures on tertiary education (Van de Walle 1992; World
Bank 1999b). Clearly, this is as socially inequitable as it is inefficient. In many nations the regressive character of spending on tertiary education is amplified by substantial subsidies for noneducational expenditures.

These regressive patterns are particularly widespread in countries with a significant proportion of private secondary schools. The children of high- and middle-income families who can afford the cost of high-quality private secondary schools are usually better prepared to pass the public university entrance examination giving them access to free higher education. In Venezuela 95 percent of the students attending the prestigious Simon Bolivar University come from private secondary schools. In several Asian countries such as Bangladesh, Sri Lanka, and Thailand, children from poorer families have limited access to high-quality primary and secondary education in the public sector, which reduces their chances of scoring well on the competitive university entrance examinations.

Countries that have introduced or raised user fees at the tertiary level are at risk of experiencing an increase in access disparities in the absence of effective and well-targeted financial aid mechanisms. In Scotland the concurrent establishment of tuition fees and elimination of maintenance grants in 1998 resulted in a noticeable decline in enrollment among low-income students. Countries where fees are imposed only on certain groups of students can also see an adverse equity effect. For example, in a number of former socialist economies, including Croatia, Lithuania, Poland, Russia, and Vietnam, more academically qualified students receive their education free of charge in public universities. Students who do not gain admission through the regular examination process can be admitted outside the official quota for government-sponsored places if they are able to pay tuition fees. The same pattern can be observed in East African countries such as Kenya, Tanzania, and Uganda. In those countries—as is true almost anywhere else in the world—there is usually a strong correlation between academic achievement and socioeconomic background. In Nepal, where the engineering school at the main public university has been a pioneer in introducing cost sharing, a degree of preferential access has been given to students who can afford the fees, raising the risk of compromising the rigor of academic selection.

Another type of informal fee is private tutoring, which is undertaken to prepare students for the competitive entrance examination and can become a quasi-official requirement. In Russia private classes cost between US$10 and US$40 an hour, the equivalent of a week’s salary for an average worker. Private tutoring, which favors students from richer families, is also widespread in South and Southeast Asia and in East and southern Africa.

In their efforts to achieve equality in tertiary education and correct the legacy of past institutionalized or societal discrimination against specific
subgroups, some countries make use of preferential treatment of minorities and disadvantaged groups ("affirmative action"). Affirmative action schemes can be mandated by law, encouraged in public discourse, or practiced by public sector employers and educational institutions. They cover a wide spectrum of measures that can include, but are not limited to, preferential treatment in university or college admissions, earmarked financial aid, remedial courses, talent searches, and special outreach programs. Affirmative action measures are often most visible in the admissions process and in competition for entry.

Affirmative action is a controversial and complex social intervention with uncertain outcomes. Remarkably little research has been conducted on the effectiveness of these practices or on their precise impact on students, institutions, and society. Some U.S. studies suggest that affirmative action does not work particularly well as a mechanism for equalizing opportunities. Bowen and Bok (1998), however, cite a longitudinal study of academic and employment patterns of U.S. black graduates which suggests that a positive equity effect for black students is associated with certain race-sensitive admissions practices in elite universities in the United States. In India, despite special provisions for free tertiary education and reservation of places for students from scheduled castes and tribes, the actual percentage of enrolled students from these groups is still low because of the proportionally small number of minority students who complete primary and secondary education. In some countries, such as the Philippines, studies have shown that even with supplemental remedial assistance to targeted groups, formal affirmative action programs have not been successful.

After the end of apartheid, universities in South Africa began experimenting with alternative admissions testing programs that sought to identify deserving black applicants who had not been given an "adequate opportunity . . . to demonstrate their ability to succeed" (Nzimande and Sikhosana 1996). The scheme was introduced in conjunction with financial aid, support facilities, and remedial programs to assist students admitted in this way. In 1995 the University of Cape Town admitted 400 out of 1,453 black students under the program. Although the long-term equity effect of the initiative has yet to be fully assessed, it has succeeded in altering the overall racial composition of entrants. The University of Cape Town is noteworthy for its comprehensive approach toward assisting disadvantaged students, which includes a full array of support services in addition to preferential admission.

Various university systems in other countries of Africa have sought to increase female enrollments through affirmative action. In Ghana, Kenya, and Uganda women university candidates have been given bonus points on their admissions examination scores so that more of them pass the cutoff point. Between 1990 and 1999 female participation
increased from 27 to 34 percent in Uganda and from 21 to 27 percent in Ghana. In Tanzania, rather than provide women with a score bonus, an intensive six-week remedial course in science and math has been offered to women who did not pass the matriculation examination. Those who complete the course are given a second chance to take the exam, and university authorities report a high pass rate in the second round. The University of Dar es Salaam recently conducted a performance assessment of female students who had entered the university in this way and found that most of them were performing well; in fact, several were at the top of their classes.

The limited base of research findings, however, does seem to indicate that many affirmative action interventions at the tertiary level come too late to assist the vast majority of disadvantaged students, who have already suffered institutionalized discrimination in access to primary and secondary education. At the tertiary level, therefore, focusing on financial aid such as scholarships, grants, and student loans seems to be a much more effective form of equity intervention for capable aspirants from minority or underprivileged populations. In addition, stronger equity efforts must clearly be made much earlier in a student’s educational career, particularly at the primary and secondary levels, so that all students have an equal opportunity to compete for entry into tertiary education.

Problems of Quality and Relevance

Although there are exceptions, the quality and relevance of research, teaching, and learning have tended to decline in public tertiary education institutions in developing countries. Many universities operate with overcrowded and deteriorating physical facilities, limited and obsolete library resources, insufficient equipment and instructional materials, outdated curricula, unqualified teaching staff, poorly prepared secondary students, and an absence of academic rigor and systematic evaluation of performance. Similar conditions can be found in many of the new private universities and other tertiary institutions that have emerged in many countries, especially in those that lack a formal system for licensing or accrediting new institutions. In the formerly socialist countries of Eastern Europe and Central Asia, drastic reductions in public funding are jeopardizing the quality and sustainability of existing programs and even the survival of entire institutions. In many countries the poor quality of teacher training programs has detrimental effects on the quality of learning in primary and secondary education. Weak secondary education and scientific literacy, in turn, do not arm high school graduates with the necessary skills for successful tertiary-level studies.
Most universities in developing nations function at the periphery of the international scientific community, unable to participate in the production and adaptation of knowledge necessary to confront their countries’ most important economic and social problems. Although few countries have exhaustive data to document the depth of the problem systematically, in countries where information is available the situation is alarming. For example, in 1995 a task force on higher education in the Philippines concluded, after reviewing information on critical education inputs and the results of professional examinations for the 1,316 existing tertiary education institutions, that only 9 universities and 2 colleges in the country were comparable in quality to international institutions. In India highly regarded programs such as those of the Indian Institutes of Technology exist side by side with scientific and technical programs of poor quality and relevance. Even Russia, once a world leader in advanced science and technology fields such as theoretical physics, nuclear technology, and space technologies, has seen a collapse of its R&D sector. As reported in a recent OECD publication, in Russia “financial crises, decaying equipment, unemployment and higher wages in other sectors drove large numbers of researchers . . . away from science and technology” (Cervantes and Malkin 2001).

In both public and private institutions the lack of full-time qualified teachers is an important contributor to poor quality. In Latin America, for example, the share of professors with doctoral degrees teaching in public universities is less than 6 percent, and the share with a master’s degree is less than 26 percent. More than 60 percent of the teachers in the public sector work part-time; in the private universities the proportion is as high as 86 percent (García Guadilla 1998). In the Philippines only 7 percent of the professors teaching in tertiary education institutions hold Ph.D.s; 26 percent have master’s degrees. Expansion and diversification of tertiary education systems has often led to internal brain drain because low-paid professors at public institutions seek second and third jobs in extramural positions such as teaching at better-paying private institutes and colleges.

As colleges, universities, and scientific academies in transition countries struggle to adapt to the new realities of a market economy, they are hampered by a fragmented institutional structure, characterized by a large number of small, specialized institutions and a few big universities that have a near-monopoly on teaching at high academic levels. The small institutions are not able to diversify their programs and compete effectively, and the large, most prestigious universities are often too protected by regulations and have no incentives to engage in innovation. Hungary is unique in Eastern Europe; there, a centrally initiated merger plan has reduced the number of public institutions from more than 70 to fewer than 20.
In spite of the global trend toward market expansion of tertiary education, governmental and institutional responses are not always favorable to the new tendencies. For example when countries expand tertiary education haphazardly to meet increasing social demand, there is a high risk of graduate unemployment. (To mention just two countries in different regions, in Nigeria graduate unemployment is 22 percent, and in Sri Lanka it is 35 percent.) In many countries the mismatch between the profile of graduates and labor market demands is most apparent among graduates in the social sciences and humanities. The Republic of Yemen, for instance, has an oversupply of liberal arts graduates, and their skills do not meet the needs of the economy. On the faculty side, this can lead to an oversupply of teachers of nonscientific subjects. Tertiary education institutions often lack adequate labor market information to guide prospective students, parents, and employers.

In many countries of Africa the toll of HIV/AIDS is changing tertiary education institutions in tragic ways. At the University of Nairobi, an estimated 20 to 30 percent of the 20,000 students are HIV positive (Bollag 2001; Kelly 2001), and in South Africa infection rates for undergraduate students have reportedly reached 33 percent (ACU 2001). Not only have students been directly affected by the pandemic, whether suffering from the disease themselves or caring for someone at home; so too have the faculty and administration. In some instances HIV/AIDS has robbed colleges and universities of their instructors and other personnel, crippling the institutions and further reducing the countries’ development opportunities, let alone their capacity to produce local leaders, civil servants, and trained intellectuals. Zambia’s Copperbelt University is said to have lost approximately 20 staff members in 2001, and Kenyatta University in Nairobi estimates that it lost 1 staff member or student per month during the same period.

Problems of quality and relevance are not confined to traditional universities. Even in countries that have diversified the structure of tertiary education, relevance can become a serious issue in the absence of close linkages between tertiary education institutions and the labor market. Jordan, for instance, has actively encouraged the development of public and private community colleges. Nevertheless, the status, quality, and relevance of these institutions have become so problematic that the country experienced a decline in community college enrollment from 41,000 in 1990–91 to 23,000 in 1995–96.

Lack of access to the global knowledge pool and the international academic environment is a growing issue. In many countries poor command of foreign languages among staff and students complicates access to textbooks and the Internet, especially at the graduate level. In countries such as Malaysia and Sri Lanka that had opted for the use of the national language in tertiary education, officials are now considering
reversing this policy to improve the quality of tertiary education, especially in the basic and applied sciences.

Many countries that experienced a doubling or tripling of tertiary enrollments and increased participation rates for young people in recent decades have seen the negative effects of rapid expansion on quality. Issues of quality assurance and quality enhancement have become a major focus of attention (El-Khawas, DePietro-Jurand, and Holm-Nielsen 1998). Many governments, whatever the size and stage of development of their tertiary education sectors, have decided that traditional academic controls are inadequate for dealing with today’s challenges and that more explicit quality assurance systems are needed.

Countries differ in their approaches to quality promotion. Some have taken steps to strengthen quality by introducing new reporting requirements or other mechanisms of management control. In Argentina the authorities have introduced quality assurance mechanisms that depend on an enhanced information and evaluation system and new rules for funding public universities. About 20 transition and developing countries have developed accreditation systems, while others have established evaluation committees or agencies that carry out external reviews. In many cases independent bodies have been established. While the most common setup is a single national agency, in some countries, such as Colombia and Mexico, separate agencies are responsible for different institutions, regions, purposes, and types of academic program. Such variation in the approaches to quality assurance bodies reflects political and cultural preferences within each country, differences in government leadership, and the varying stages of development of tertiary education sectors.

The scope of responsibilities given to quality assurance systems has varied widely. Scotland and England, for example, have procedures for monitoring teaching effectiveness, while Hong Kong (China) is focusing on high-quality management processes. Some countries, such as Chile, have established systems for licensing new institutions and certifying educational credentials. Others have directed their efforts toward rewarding research productivity, either of individual scholars (as in Mexico) or of entire academic departments (as in the United Kingdom). There is also wide variation in the extent to which quality assurance agencies have managed to address issues related to student transfer and to study abroad. Countries and agencies also differ in their concerns arising from the expansion of new modes of educational delivery, including video-based education, interactive transmission to remote sites, and, most recently, Internet-based learning.
Change-Resistant Governance Structures and Rigid Management Practices

In many countries the governance structure and management traditions of public tertiary institutions are characterized by weak leadership and a total lack of regulatory and management flexibility that inhibits any type of effective reform or innovation. Academic freedom is frequently and mistakenly equated with managerial independence. Thus, in the name of academic freedom, institutions (and their individual constituents, faculty, administrators, and students) are generally not accountable for their use of public resources or for the quality of their outputs. Poor management practices also help to explain some of the inefficiencies mentioned earlier in this chapter.

The ownership of tertiary institutions has often shifted away from those who should be the main clients (students, employers, and society at large) to control by the teaching staff. The raison d'être for some institutions has become to provide staff employment and benefits rather than to serve as educational establishments focused primarily on the needs of the students and the labor market. Such systems are rigorously guarded by cadres of academic leaders represented in academic councils that operate within a framework of institutional autonomy and are accountable almost exclusively to administrative staff and academics. This deviation of purpose could almost be described as a form of privatization of public institutions to the benefit of specific internal stakeholder groups.

Academic leaders such as rectors, deans, and department heads are rarely trained in the management of large, complex institutions. In most public universities in Latin America and Eastern Europe reform-oriented rectors stand little chance of getting elected because they are perceived as threats to established practices. In some countries the election of rectors takes place after a lengthy and costly campaign plagued with all the problems that can affect elections in the larger world—threats, violence, bribes, and clientelism. In many tertiary systems, when there is a change in leadership the entire management team is replaced, sacrificing institutional continuity.

Often, the management and support systems do not provide guidance in the form of monitoring and evaluation of the institutions’ performance. Few institutions have a governance structure allowing for participation by representatives of local employers and civil society. Universities in countries as diverse as Bangladesh, Bolivia, and Russia have no boards of trustees that would constitute an explicit channel for external accountability. Reliance on performance indicators as management and planning tools is not a common practice in most developing countries.

At the national level a stalemate often exists between academically powerful rectors’ conferences (or councils) and governments over line-
item budgets that are seldom linked to institutional performance or national strategies, reflecting, instead, the needs of regional constituencies. This leads to a political rather than a professional system of management and governance. The consequence is a governance system that lacks flexibility and innovative capacity (since programs are developed to serve the needs of existing staff rather than the country’s development goals) and that lacks programmatic accountability because academic autonomy is not paired with financial and legal responsibility. In Nigeria the introduction in 2000 of substantially increased institutional autonomy for universities, following the country’s return to democratic government, is designed to combat such rigidities and encourage local management initiatives.

The unhappy situation of deficient governance is often compounded by cumbersome administrative rules and bureaucratic procedures. In many countries the ministry of education determines staffing policy, budgetary allocations, and the number of students admitted, and universities have little say about the number of positions, the level of salaries, or promotions. Brazil’s Law of Isonomy establishes uniform salaries for all federal jobs, including those in the federal universities. In many countries lengthy procedures at the level of the ministries of finance and education often cause delays in the transfer of funds to tertiary education institutions. Some Bangladeshi public universities, for example, have been forced to borrow from commercial banks in order to meet monthly salary payments, adding to their institutional deficits. In some of the former socialist republics that face fiscal difficulties, payment of salaries is chronically delayed. These inefficiencies affect the purchase of laboratory equipment; by the time equipment arrives, it may already be obsolete, and some institutions receive their equipment after the courses have ended.

Many countries and institutions have rigid administrative procedures that govern changes in academic structures, programs, and modes of operation. Only when confronted in the mid-1990s with competition from emerging private universities did Uruguay’s venerable University of the Republic—which had exercised a monopoly over higher education in the country for 150 years—start a strategic planning process and consider establishing postgraduate programs for the first time. In Venezuela the Instituto de Estudios Superiores de Administración (IESA), a dynamic private business administration institute, had to wait several years to receive official approval from its Council of Rectors for a new MBA program designed and delivered jointly with the top-rated Harvard Business School.

Recently, Nicaragua’s Council of Rectors, concerned to protect the country’s public universities from foreign competition, denied the University of Mobile (located in the U.S. state of Alabama) a license to oper-
ate in Nicaragua. CODECS, Romania’s first distance education institution, created in the early 1990s, had trouble gaining recognition of its degrees by the national higher education authorities. It opted instead for an alliance with the U.K. Open University, whose degrees are recognized by the same Romanian authorities. At an April 2000 meeting of the U.S.-based International Association of Management Education, leaders of business schools expressed alarm at the slow and bureaucratic response of their institutions to technological advances and labor market changes.4

By contrast, the recent institutional management reforms at Makerere University in Uganda and at the University of Dar es-Salaam in Tanzania (described in Box 4.1 in the next chapter) have yielded positive results and are recognized as among the few recent success stories in African tertiary education. Confronted with an acute financing and quality crisis, the leaders of the two universities brought about remarkable changes by introducing new management structures and implementing alternative financing strategies without government interference. But innovations of this type are not encouraged everywhere. In Bangladesh and Sri Lanka, for example, entrepreneurial spirit is punished de facto in that institutional income generated through tuition fees and other remunerated activities cannot be used by the institution but must be transferred to the finance ministry. Such practices discourage innovation and creative fiscal activity.

Eastern Europe and Central Asia suffer from many similar constraints, but with a different historical context and dynamic. Following the collapse of the state socialist regimes, universities and other tertiary education institutions reclaimed their autonomy from state control. In some cases, protection from government intervention has been guaranteed in the newly revised constitutions. This autonomy, however, has rarely been accompanied by corresponding financial authority or improvements in the institutions’ management and strategic planning capabilities. Even university and college leaders have tried to resist the newly gained autonomy for fear that public funding will be reduced. Furthermore, line-item budgeting and limited control over revenues and savings do not provide incentives for adopting medium-term development strategies.

A particular problem of rigidity inherited from the Soviet system is the institutional separation of research and teaching, the former being administered and conducted principally in scientific academies. In countries with this type of binary system, academic doctoral training is assigned to universities, and technical and applied (including teacher training) programs are carried out in colleges, with very limited or no possibilities of partnership or transfer. The separation between education and research and the lack of articulation between different forms of institutions within national systems can seriously compromise the quality and competitiveness of tertiary education.
In some countries students can often muster sufficient political power to block entire systems from functioning over prolonged periods of time. One example occurred in 1999 in Mexico, when the 270,000-student National Autonomous University of Mexico (Universidad Nacional Autónoma de México, UNAM), the country’s largest university, was forced to close down for almost an entire year because of a student strike over a proposed increase in tuition fees (see Box 4.3 in the next chapter). Other countries have seen an alarming increase in campus violence that is sometimes politically motivated, as in Colombia, or even the result of criminal activities, as in Bangladesh. In some African countries, particularly in West Africa (Ghana, Nigeria, and Senegal), strong academic staff unions have regularly gone on strike for a year or more to win higher salaries. Such disruptions can severely damage the functioning of the institutions.

Another element of distortion is cheating, which seems to have become more widespread in many settings throughout the world. For example, according to the rector of the Georgian Institute of Foreign Affairs, “corruption has become practically a total form of existence [in the former republics of the Soviet Union]” (MacWilliams 2001). Recent allegations of corruption in Chinese college admissions have tainted the process of student selection (Xueqin 2001). Kenyan authorities in February 2002 claimed to have broken up a ring within the Ministry of Education that had been producing and selling bogus university diplomas, polytechnic certificates, exam results, academic transcripts, and even counterfeit identification documents such as passports.

Finally, student democracy sometimes works against the academic interests of the very students it is intended to protect. In some systems extended campaigning and election periods for student or rector offices can detract from teaching and learning and lead to inefficiencies rather than to better opportunities and improved education for students. One example of the potential negative effects of student democracy can be seen in Nepal, where classes are regularly suspended for at least a month during student elections. Although the growth in the number of private institutions can often be explained by increased demand for tertiary education, in many instances it is a symptom of disenchantment with public universities, which are perceived to be less attractive because of political agitation and resulting poor academic quality.

The next chapter looks at the new challenges facing tertiary education, in particular the growing importance of the marketplace, shifts in the magnitude and character of state support and intervention, and the altered educational landscape produced by globalization and the ICT revolution. It pays particular attention to the proper responsibilities of the state as it moves away from direct provision and funding of tertiary education and toward an enabling and guiding role.
Notes

1. The tertiary enrollment rate measures the proportion of the population in the 18–24 age group that is actually enrolled in a tertiary education institution.


4. For example, at Haas School of Business (University of California, Berkeley), it took five years to approve a new master’s degree in financial engineering, by which time many competitors had already started to offer similar programs (reported in Mangan 2000).