

Education and Poverty

The Middle East and North Africa Region has a strong record in providing education to its citizens. Chapter 2 of this report has highlighted two notable features of the region's achievements with respect to certain conventional quantitative indicators of educational attainment. First, the region has made gains at a faster rate than its comparators since 1960. Second, during 1980–2000, the region's gains in education have been faster than can be explained by its initial levels of income and education and by its income growth and public spending profile. These findings raise some questions that we attempt to answer in this chapter. The first set of questions applies to the link between education and poverty. Although education attainments have risen on average, has this translated into clear gains in education for poorer income groups? And to what extent has the acquisition of education helped in poverty reduction in the region? A second set of questions pertains to the reasons for the strong performance of the region during the last two decades. Was this because of rising levels of spending on education or because of improvements in the education delivery system? What role did private spending play? A third and final set of questions relates to the quality dimension of education. Gains clearly have been made along conventional quantitative dimensions, but is this true as well of quality? If not, what aspects of the challenge of improving quality have the strongest bearing on poverty reduction in the future?

With regard to the first set of questions, it is clear that, although access to education still may be a problem in some countries, significant gains have accrued to the poor of the region. This is demonstrated by the substantial increases in primary and secondary enrollments that have taken place. What is not easily demonstrable is whether these “access” gains in education have translated into large “income” gains for the poor. Given the high level of unemployment in the region, especially among the educated, it is debatable whether the acquisition of education is an automatic route to employment and higher income. And the limited data that are available on rates of return to education in the region show that these

tend to be on the low side, possibly reflecting both poor quality of education and weak labor demand.

With regard to the role of spending on education attainment, we find that public education spending in the Middle East and North Africa Region actually decreased as a share of GDP and on a per capita basis during the 1990s. So the improved performance must reflect other factors, such as efficiency gains in the delivery of education services and increases in private spending. There are anecdotal data to support this view, although they are not strong enough to sustain a firm conclusion.

Finally, with regard to the quality dimension, the information presently available suggests that, although it is not possible to assert that the quality of education declined during the 1990s, it is true that education quality must be improved to cope with the challenges of a more competitive global environment in the future.

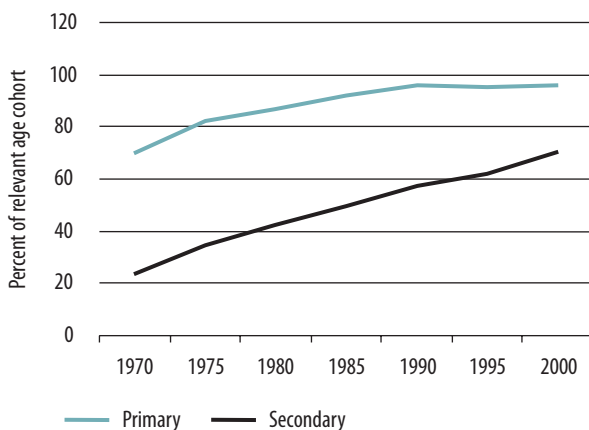
Education–Poverty Links

To assess gains for the poor, it is best to look at primary enrollment data. Because the nonpoor typically have close to 100 percent primary enrollment rates, any increase in the average over time is likely to come from disproportionate gains in enrollment among the poor. So an increasing primary enrollment rate provides strong evidence of improving access to education among the poor. The data for this region are very clear in this regard. As figure 3.1 shows, gross primary enrollment has risen rapidly in all countries of the region since 1970. Indeed, it has been above 95 percent since 1990. Furthermore, enrollment rates have been rising steadily for secondary schooling as well; this is also likely to reflect rising rates of access for the poor.

Evidence of rising education levels among the poor is also available from some country-specific household surveys. Examples from some recent surveys analyzed by World Bank staff include Egypt, where 23 percent of the poor population had basic education and 12 percent had secondary education in 1999/2000, compared with 21 percent and 10 percent, respectively, in 1995–96 (World Bank 2004b); and Jordan, where illiteracy among the poor dropped from 22 percent in 1997 to 13 percent in 2002 (World Bank 2004d). More direct evidence on the improving access of the poor to education was provided in a recent study for Morocco (World Bank 2004e). The correlation between primary enrollment rates and provincial-level poverty was checked at two points in time, 1994 and 2001. It was discovered that provinces with higher poverty rates had higher enrollments per capita in 2004, whereas the reverse had been true in 1994. The percentage change in enrollment rates also was found to be

FIGURE 3.1

Trends in Gross Enrollments in the Middle East and North Africa Region, 1970–2000



Source: World Bank EdStats, www.worldbank.org/education/edstats.

higher in initially poorer provinces. Both these facts point to a catching up of enrollment rates in poorer provinces over time.

Remaining Access Challenges

Despite substantial improvements in access to education over the past four decades, challenges on this front remain in some countries. In particular, the issue of access remains critical in the Republic of Yemen where, despite extraordinary recent progress, less than 60 percent of children complete primary education. In some countries the remaining challenges are more in the nature of geographic pockets of low access. For example, although illiteracy has declined steadily throughout Egypt, 52 percent of the poor in rural Upper Egypt remain illiterate. Groups who are still excluded throughout the region, or who drop out before completing primary education, are typically the poor and girls in remote rural areas, the disabled in all income groups, and working and street children in urban areas.

The constraints to access of the poor and girls in rural areas include distance to school and the direct and indirect user costs of schooling. Dropping out of school is attributed to increasing opportunity costs for the poor as children get older, to lack of acceptable facilities and security for girls, and to perceived poor quality and low value of the education provided. Measures to overcome these constraints to participation of the poor and of girls include focusing resources on school facilities and inputs in poor rural communities; targeting subsidies conditional on school at-

tendance for the very poor and for girls; community participation in school decisions; subsidies and incentives for secondary and tertiary education; adapting curricula to local needs; media/public information campaigns on inclusion of girls and disabled and vulnerable groups; and programs to mainstream disabled people, street children, and orphans.

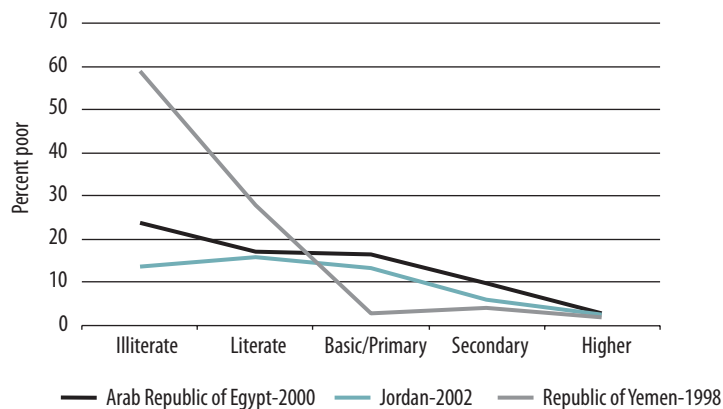
Education and Income Growth among Poor People

Most poverty assessments find a high correlation between education status and income status. The Middle East and North Africa Region is no exception to this general pattern. In all cases where detailed analysis of household data has been carried out, poverty rates are highest for households headed by illiterate people and decline with increased education of the household head. In Egypt, for example, the chance of being poor was found to drop from 24 percent for the illiterate to 2 percent for those with university education (see figure 3.2). In the Republic of Yemen, households whose head had completed primary education were 18 percent less likely to be poor than were those households with illiterate heads.

Clearly, poverty is inversely correlated with education attainment. But are well-off people better educated because they can afford education, or are they better off because they are well educated? Tracing the impact of education in poverty reduction is complex because of the interaction of the factors involved and because of the time lag in realizing many of the benefits. By looking more closely at the channels through which education reduces poverty, however, we can throw some light on the factors

FIGURE 3.2

Poverty and Education Attainment in Selected Countries
(Percent)



Sources: World Bank 2004b, 2004d, and 2002f for the Arab Republic of Egypt, Jordan, and the Republic of Yemen, respectively.

that have been constraining or enhancing its impact in the Middle East and North Africa.

Education can help a family climb out of poverty directly by increasing household income, through increasing the productivity of self-employed workers, or by enabling access to higher-paid jobs. Whereas direct measures of the impact of education on the productivity of self-employed workers are not available, a limited amount of information is available for some countries on an indirect measure—the private rate of return on education. A recent analysis (World Bank 2004b) provided estimates for four countries (Egypt, Jordan, Morocco, and the Republic of Yemen) using a common methodology. The results (shown in table 3.1) reflect generally low rates of return on education. In some cases, as for males in public employment, the rates generally fell in the 1990s. For example, in Egypt the rate of return for males in public employment was 8.2 percent for primary education in 1988, and it fell to 6.4 percent by 1998. For Morocco the equivalent rate was 12.4 percent in 1991 and fell to 6.1 percent in 1999. For Jordan and the Republic of Yemen, rates of return are only available for 1997, and they are even lower than those for Egypt and Morocco. By way of comparison, Psacharopoulos and Patrinos (2002) reported average returns on investment in education of 20 percent for Asia, 27 percent for Latin America and the Caribbean, and 38 percent for Sub-Saharan Africa. The general impression from these statistics is that education was not a high-yielding investment in Middle Eastern and North African countries during the 1990s.

Another perspective on this point is available from information on the other channel linking education to income, namely, employment for

TABLE 3.1

Rates of Return on Schooling for Males in Selected Countries, Selected Years

Education Level	Arab Rep. of Egypt 1988	Arab Rep. of Egypt 1998	Morocco 1991	Morocco 1999	Jordan 1997	Rep. of Yemen 1997
<i>Males in public employment</i>						
Primary	8.2	6.4	12.4	6.1	3.5	2.7
Lower secondary	7.0	4.9	10.7	8.2	2.9	2.7
Upper secondary, general	8.6	8.8	10.6	8.8	2.8	2.2
Upper secondary, vocational	9.6	7.2	8.4	6.8	3.8	3.3
University	10.1	8.8	10.8	8.9	4.6	3.8
<i>Males in private employment</i>						
Primary	2.3	3.6	3.0	3.4	2.0	2.7
Lower secondary	2.5	4.4	6.4	6.3	5.5	2.7
Upper secondary, general	6.3	7.3	10.4	7.7	6.0	2.2
Upper secondary, vocational	5.3	5.0	6.9	5.8	3.2	3.3
University	8.5	7.3	12.5	9.5	10.2	5.2

Source: Adapted from World Bank (2004i), table 4.6.

wages. Here the picture is even clearer. The Middle East and North Africa Region has high unemployment rates. These rates rose during the 1980s and 1990s, and are generally higher among the educated parts of the population. Data on unemployment for 12 Middle Eastern and North African countries show that unemployment rose from an average of just over 8 percent of the labor force in 1980 to around 11 percent in 1990 and close to 15 percent in 2000 (World Bank 2004h, figure 1.9).¹ That these rates are high can be confirmed by comparing them with rates in other middle-income countries, which were around 9 percent in 2000—almost 6 points below the Middle Eastern and North African level. Finally, the fact that most of the unemployed tend to be those with primary and secondary education, as opposed to having no education, is shown in figure 3.3.

Education Spending and Poverty Reduction

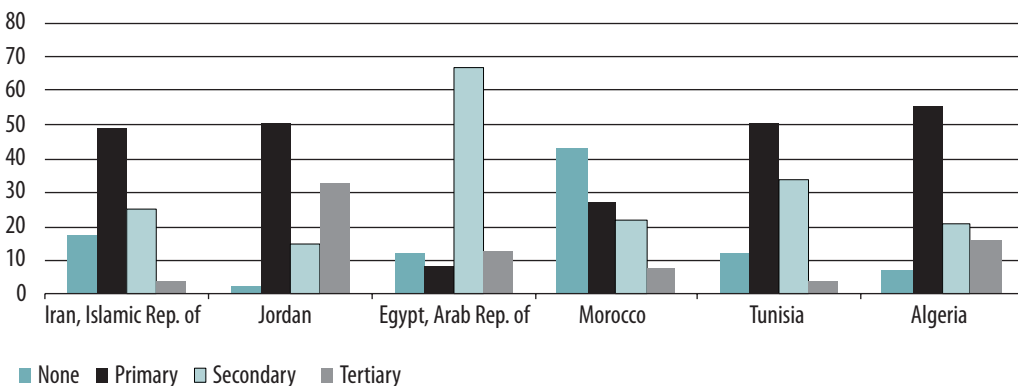
Trends in Education Spending

Education spending (for all three levels—primary, secondary, and tertiary) in MENA10 countries shows a very clear two-part trend since 1965 (see figure 3.4). In the first part, between 1965 and 1980, education spending per capita rose more than fivefold, from less than \$50 to more than \$250 (corresponding roughly to an increase in the ratio of spending to GDP from 4 percent to 6.5 percent). At this level, MENA10 countries not only were spending more on education than their middle-income

FIGURE 3.3

Distribution of Jobseekers by Level of Education

(Percent)



Source: Adapted from World Bank 2004i, figure 4.4.

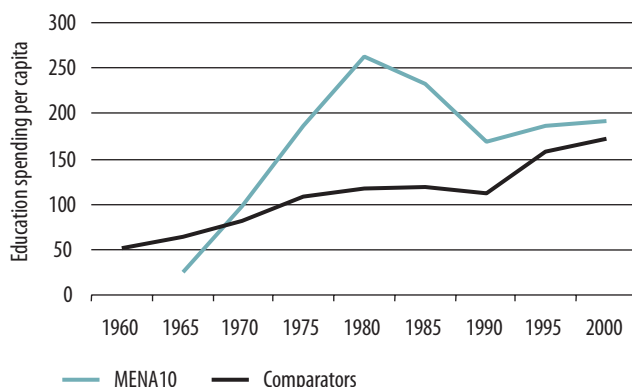
comparators, but also spending more than Organisation for Economic Co-operation and Development countries on average. The second part of the trend, between 1980 and 2000, shows a sharp decline in the 1980s and a slow rise during the 1990s such that the level of spending was just below \$200 per capita by the year 2000. The first phase of the trend helps explain the region's strong performance in raising education attainments prior to 1980. The second phase suggests that the region's continued strong performance in education attainment since 1980 must have been due in part to other sources, including improvements in the efficiency of the education delivery system.

Country-level disaggregation of spending patterns reveals some other notable aspects. For example, in recent years the country that has been spending the most on education is the Republic of Yemen (see table 3.2). Indeed, at 9.9 percent of GDP, that country is spending three times the average for low-income economies. Lebanon, a country with high attainments, spends very little public money on education (around 2 percent in 1999/2000); this is largely because, alone among countries in the region, Lebanon has a well-developed and active private education system and the bulk of spending is done there. Between 60 and 70 percent of primary enrollments are in private schools.

The poverty impact of public spending on education depends in part on its incidence among income groups. *The benefit incidence of expenditure on education in the Middle East and North Africa Region follows the typical pattern of being pro-poor at the basic level, and pro-rich at the tertiary level.* Because the poor tend to drop out of the education system earlier than the

FIGURE 3.4

Trends in Education Spending Per Capita, 1960–2000



Source: World Bank EdStats, www.worldbank.org/education/edstats.

Note: MENA10 includes Algeria, the Arab Republic of Egypt, the Islamic Republic of Iran, Jordan, Lebanon, Libya, Morocco, Syria, Tunisia, and the Republic of Yemen.

TABLE 3.2

Country-Specific Patterns of Public Education Spending, Selected Years, 1970–2000

(Percent of GDP)

Country	1970	1975	1980	1985	1990	1995	1999–2000
Algeria	7.72	6.64	7.60	8.32	5.31	5.43	—
Arab Republic of Egypt	4.74	5.03	—	5.67	3.89	4.67	—
Islamic Republic of Iran	—	—	7.51	3.65	4.08	4.08	4.94
Jordan	3.81	3.83	6.79	6.79	8.06	8.23	4.95
Lebanon	—	—	—	—	—	2.73	2.08
Morocco	3.47	5.21	5.89	5.94	5.27	5.60	6.07
Syria	3.85	3.95	4.58	6.08	4.00	3.18	—
Tunisia	6.81	5.03	5.24	5.54	5.99	6.48	7.54
Republic of Yemen	—	—	—	—	—	4.49	9.90

Source: World Bank EdStats, www.worldbank.org/education/edstats.

Note: — Not available.

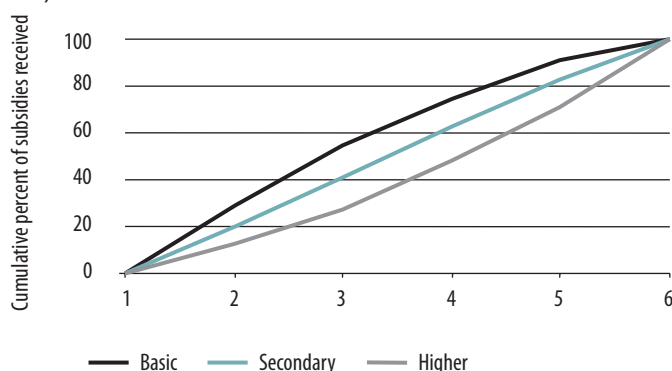
less poor, and are much less likely to continue to the tertiary level of education, expenditure at the tertiary level inevitably favors those who are better off. This is illustrated by figure 3.5, which shows how the distribution of educational subsidies varies among income groups for different levels of education in Jordan: the bottom quintile receives three times the subsidy for basic education (30 percent) that it receives for higher education (only 10 percent), whereas for the top quintile, the ratio is reversed. Similar patterns are found in other countries as well. In Tunisia the poorest 10 percent received more than twice as much of the education subsidy at the primary level as the richest 10 percent in 1990. Conversely, the richest 10 percent of the population received three times as much subsidy as the poorest 10 percent at the secondary level, and 20 times as much in higher education. In Morocco approximately 25 percent of the subsidy for primary education goes to the poorest quintile and 10 percent to the richest quintile; these proportions are reversed for secondary education, and for tertiary education more than 40 percent of the subsidy flows to the richest quintile.

Have education spending biases increased or declined over time in the Middle East and North Africa? We can attempt to answer this question by looking at trends in the budget shares of different levels of education. Unfortunately, the data at hand do not allow for a decisive opinion on this point. The only category for which a satisfactory time series exists is tertiary education. With respect to tertiary education, it would appear that budget shares have been constant or have risen since the mid-1980s (see table 3.3). So it is unlikely that more funds have been found for primary and secondary schooling from the reallocation of existing education budgets away from tertiary spending. Furthermore, in most cases tertiary education shares in Middle Eastern and North African countries contin-

FIGURE 3.5

Benefit Incidence of Public Education Spending: Jordan, 2002

(Percent)



Source: World Bank 2004d.

TABLE 3.3

Expenditure Shares on Tertiary Education, Selected Years, 1980–2000

(Percentage of total spending on education)

Country	1980	1985	1990	1995	2000
Algeria	11.55	—	—	—	—
Arab Republic of Egypt	—	—	31.09	32.6	—
Islamic Republic of Iran	6.23	9.47	11.21	19.01	19.38
Jordan	15.22	24.28	24.83	24.44	—
Lebanon	—	—	—	17.29	—
Morocco	14.79	13.54	14.74	—	—
Syria	26.29	27.98	21.34	—	—
Tunisia	17.91	16.41	16.21	16.36	21.65
Lower-middle-income average	14.55	16.42	15.85	16.34	17.8

Source World Bank EdStats, www.worldbank.org/education/edstats.

Note: — Not available.

ue to be higher than the average (around 18 percent) for lower-middle-income countries.

A complementary perspective can be obtained by looking at the efficiency with which available funds are used at different levels of education. Once again the data on which to base an opinion are effectively limited to the tertiary sector. Expenditures per tertiary student, measured as a percentage of per capita GDP, have declined in the Islamic Republic of Iran, Jordan, Morocco, and Tunisia since 1985 (see table 3.4). These trends may reflect some efficiency gains but also could indicate overcrowding and deteriorating services. If the latter interpretation is more accurate,

TABLE 3.4

Public Expenditure Per Tertiary Student, Selected Years, 1980–2002

(Percent of per capita GDP)

Country	1980	1985	1995	2000	2002
Arab Republic of Egypt	54.08	—	—	—	—
Islamic Republic of Iran	—	88.19	43.6	38.04	33.46
Jordan	61.68	81.08	85.2	32.1	—
Lebanon	—	—	23.14	8.19	—
Morocco	150.34	96.18	—	110.88	94.62
Syria	74.74	98.55	—	—	—
Tunisia	188.09	158.68	84.33	67.99	53.62
Lower middle income	92.84	93.17	44.72	71.99	63.27

Source: World Bank EdStats, www.worldbank.org/education/edstats.

Note: — Not available.

then the nominal efficiencies may have come at a potential cost to future labor productivity.

Private Expenditures on Education

The gains in education attainment in the region may also be caused by increases in private spending. Not enough direct information is available on levels or trends in private expenditures to render a decisive judgment on this point. However, information on private enrollments provides indirect support for the view that private expenditures have taken up some of the slack created by falling public spending on education during the 1990s. Table 3.5 shows that the share of private enrollments has risen in most Middle Eastern and North African countries since 1985.

TABLE 3.5

Share of Private School Enrollments by Level of Education

(Percent)

Country	Primary				Secondary			
	1985	1990	1995	2000	1985	1990	1995	2000
Arab Republic of Egypt	4.8	5.76	6.5	8.06	—	—	4.8	6
Islamic Republic of Iran	—	0.14	—	3.56	—	0.3	—	5
Jordan	—	22.85	24.8	29.43	—	6.13	9.4	16
Lebanon	—	—	70.7	63.63	—	—	60.5	51.06
Morocco	3.4	3.59	3.8	4.62	6.3	2.66	2.7	5
Syria	4.5	3.55	3.9	4.33	6.2	5.58	5.9	4.8
Tunisia	0.4	0.54	0.6	0.77	9.5	11.99	8.6	7.64

Source: World Bank EdStats, www.worldbank.org/education/edstats.

Note: — Not available.

Education Quality Considerations

We have suggested that the significant gains in quantitative education attainments in the region during the last two decades may reflect increases in the efficiency of spending. This could have been brought about by specific measures to target underserved populations, reduce wasteful expenditures, and improve management. Box 3.1 provides an example of a program in Egypt that had these objectives and that has been working successfully since it was launched in 1996.

BOX 3.1

The Education Enhancement Program in Egypt

The Education Enhancement Program (EEP) was launched by the government of Egypt in 1996. The program has three main objectives: (a) increasing access to basic education, particularly for girls; (b) improving the quality of education; and (c) enhancing the efficiency of the education system in Egypt.

The first goal was approached through programs that involved building schools in poor and remote areas, especially those where female enrollment was unusually low, and attempting to increase parental demand for girls' education, through community awareness campaigns and a stipend program for qualifying families. The evidence to date suggests that this program is succeeding in raising girls' enrollment in targeted areas and in narrowing regional and gender disparities. Three results are notable. First, gross enrollment rates for girls have increased at a faster rate than the average. For example, although overall rates increased from 97.5 percent in 1995/96 to 105.8 percent in 2002/03, rates for girls increased from 93.4 percent to 103.2 percent. Second, some of the most dramatic increases have occurred in the poorer governorates of Upper Egypt. For example, between 1996/97 and 2002/03, girls' gross enrollment rose by 21 and 19 percentage points, respectively, in Beni Suef and Fayoum, two of the poorest governorates in Egypt. Third, analysis shows that the increases are statistically attributable to EEP efforts: girls' enrollment rates rose in direct proportion to the amount of new schools built, and they rose faster in program areas where awareness-raising campaigns were conducted than in nonprogram areas.

The objective of improving schooling quality has been approached through programs to reduce overcrowding in classes and multishift teaching; to offer learning-support teachers to children with learning difficulties; to improve the quality of teachers through more pre-service and in-service training, especially in the use of technology; and to reform the educational inspection system to emphasise evaluation processes. Preliminary evidence suggests that dropout rates and grade repetition rates may be falling in targeted areas. However, a thorough evaluation of the quality-improvement objective of the EEP remains to be done.

(Box continues on the following page.)

BOX 3.1 (CONTINUED)

The third objective, that of enhancing the efficiency of the education system, has been approached through programs focused on strategic planning and management, information systems, motivation and accountability, and stakeholder capacity building and involvement.

Factors that have contributed to the success of the EEP to date include (a) the political commitment of the Egyptian government, reflected in adequate budget allocations to education; (b) institutional innovation, involving a break with traditional planning approaches in favor of using data and community participation to target new school location and undertake awareness campaigns; (c) a focus on specific issues that research and experience show matter more for girls than for boys, such as improving physical facilities and in-service teacher training; and (d) good coordination among government, community, and donor efforts to provide the institutional, financial, and operational resources required for the job.

Source: Iqbal and Riad, 2004.

However, it is also possible that some of the gains in quantity may have come at the expense of quality. It is possible that lower spending has resulted in a higher number of students per classroom, a higher ratio of pupils to teachers, and lower pay for teachers—all factors that could lead to lower-quality education being provided. We attempt to determine whether this has indeed been the case by looking at trends in pupil–teacher ratios and student repetition rates. Table 3.6 shows that pupil–teacher ratios have declined in the Middle East and North Africa since 1985 for both primary and secondary education, although not in a uniform manner. The same is true for pupil–teacher ratios among lower-middle-income countries. Repetition rates at the primary level have also declined, and here the trend is more uniform for the Middle East and North Africa. Thus, the argument that quality has declined cannot be sustained on the basis of the available data.

Nor is the region performing below par with respect to more directly observable measures of quality. Data collected under the Trends in International Mathematics and Science Study allow an assessment of comparative education quality in mathematics and sciences for several countries in the region. Table 3.7 shows average scores achieved by eighth-graders in mathematics in 2003. Although the scores are low in absolute terms, they are about what might be expected on an income-adjusted basis for most Middle Eastern and North African countries (Carnoy 2005).

Nevertheless, complacency is not warranted. The educational challenges of the future are going to be different from those of the past. Until recently, providing access to education for a wide group of citizens

TABLE 3.6

Trends in Pupil–Teacher Ratios and Repetition Rates

Country Group	Education Quality Indicator	1985	1990	1995	2000
Lower-middle income	Pupil–teacher ratio, primary	26.02	23.07	24.04	21.65
Middle East and North Africa	Pupil–teacher ratio, primary	26.14	23.38	24.54	23.64
Lower-middle income	Pupil–teacher ratio, secondary	18.54	16.68	16.61	—
Middle East and North Africa	Pupil–teacher ratio, secondary	19.8	20.05	17.19	—
Lower-middle income	Repetition rate (%), primary	—	6.59	3.1	4.73
Middle East and North Africa	Repetition rate (%), primary	10.16	9.8	8.2	7.83

Source: World Bank EdStats, www.worldbank.org/education/edstats.

Note: — Not available.

TABLE 3.7

2003 Trends in International Mathematics and Science Study Math Scores

Country	Score
Malaysia	508
Bulgaria	476
Romania	475
Cyprus	459
Lebanon	433
Jordan	424
Islamic Republic of Iran	411
Indonesia	411
Tunisia	410
Arab Republic of Egypt	406
Chile	387
Morocco	387
Philippines	378

Source: Trends in International Mathematics and Science Study, accessible at <http://nces.ed.gov/timss/>.

was an important challenge and one met successfully in many of the region's countries. In the future it will be necessary to ensure that education serves the needs of entrepreneurs and workers who face greater competition both domestically and abroad. Much greater attention will have to be paid to the quality of education and its relevance to the labor market. In this regard, the level of information and communication technology connectivity may be relevant to the region's preparedness for the future. A recent United Nations Development Programme report noted that Arab countries rank very low in terms of such proxies for access to knowledge as the number of Internet hosts per 1,000 people. Indeed, in relative terms Arab countries are found to have a lower level of access on average than all other regions of the world, including regions with much lower incomes (UNDP 2002, figure 2.9). This may

reflect deficiencies in the science and technology curricula of the Middle Eastern and North African Region's educational systems as well as government policies with respect to facilitating information sharing within and across borders.

Note

1. These are officially reported levels of unemployment. Underemployment is widely thought to be an even more serious problem in the region.