



# 2.9

## Education inputs

	Public expenditure per student <sup>a</sup>						Public expenditure on education		Trained teachers in primary education	Primary pupil-teacher ratio
	Primary		% of GDP per capita Secondary		Tertiary		% of GDP	% of total government expenditure	% of total	pupils per teacher
	1991	2005 <sup>b</sup>	1998	2005 <sup>b</sup>	1998	2005 <sup>b</sup>	2005 <sup>b</sup>	2005 <sup>b</sup>	2005 <sup>b</sup>	2005 <sup>b</sup>
Afghanistan	..	..	..	..	..	..	..	..	36.5	83
Albania	..	7.8	..	12.0	..	36.6	2.9	8.4	..	21
Algeria	26.5	11.3	..	17.1	..	..	..	..	98.5	25
Angola	..	..	..	..	..	..	..	..	..	..
Argentina	..	10.9	13.6	14.3	20.2	10.3	3.5	12.0	..	17
Armenia	..	..	..	..	..	..	..	..	77.5	21
Australia	..	16.4	14.5	14.4	27.0	22.5	4.8	..	..	..
Austria	18.2	23.2	29.9	28.6	51.6	45.7	5.5	10.8	..	13
Azerbaijan	..	6.3	15.4	10.2	19.1	10.4	2.5	19.6	100.0	13
Bangladesh	..	7.0	12.4	14.7	46.3	49.7	2.5	14.2	48.0	51
Belarus	..	14.1	..	25.3	..	28.3	6.0	11.3	99.8	16
Belgium	16.3	20.2	..	23.1	..	37.1	6.2	11.8	..	12
Benin	..	11.5	..	21.2	..	..	3.5	14.1	72.2	47
Bolivia	..	16.2	12.0	13.0	52.2	36.0	6.4	18.1	63.3	24
Bosnia and Herzegovina	..	..	..	..	..	..	..	..	..	..
Botswana	..	17.2	..	44.0	..	479.9	10.7	21.5	92.5	26
Brazil	..	10.8	10.4	11.2	85.7	48.9	4.1	10.9	..	22
Bulgaria	..	19.0	..	20.9	..	28.3	4.2	..	95.1	17
Burkina Faso	..	34.7	..	21.6	..	212.3	4.7	16.6	88.3	47
Burundi	13.4	19.1	..	73.3	1051.9	348.8	5.1	17.7	87.5	49
Cambodia	..	6.1	11.4	..	..	77.5	1.9	..	97.7	53
Cameroon	..	10.3	18.2	16.0	69.7	67.9	1.8	8.6	62.7	48
Canada	..	..	..	..	49.0	44.6	5.2	..	..	..
Central African Republic	11.9	11.8	..	..	..	..	..	..	..	..
Chad	8.0	7.3	27.5	30.1	..	359.9	2.1	10.1	26.8	63
Chile	..	12.8	13.8	14.2	21.0	15.5	3.7	18.5	96.4	27
China	..	..	11.5	..	90.1	..	..	..	84.7	21
Hong Kong, China	..	14.9	..	19.9	..	60.6	4.2	23.0	93.2	18
Colombia	..	19.5	14.9	18.4	35.6	24.6	4.8	11.1	..	29
Congo, Dem. Rep.	..	..	..	..	..	..	..	..	..	34
Congo, Rep.	..	4.0	..	18.3	404.9	245.9	2.2	8.1	62.2	83
Costa Rica	7.8	17.0	23.2	17.1	55.0	36.1	4.9	18.5	96.8	21
Côte d'Ivoire	..	..	54.5	..	212.8	..	..	21.6	100.0	42
Croatia	..	20.2	..	26.0	41.5	31.5	4.7	10.0	100.0	15
Cuba	..	37.6	38.3	41.1	115.9	59.0	9.8	16.6	100.0	10
Czech Republic	..	12.9	22.1	23.4	34.4	33.6	4.5	8.5	..	18
Denmark	..	25.5	38.3	35.0	66.2	67.2	8.4	15.1	..	..
Dominican Republic	..	8.1	..	5.5	..	..	1.8	9.7	88.3	24
Ecuador	..	..	..	..	..	..	..	..	70.9	23
Egypt, Arab Rep.	..	..	..	..	..	..	..	..	..	22
El Salvador	..	9.2	8.2	10.5	10.5	17.2	2.8	20.0	100.0	30
Eritrea	..	11.3	..	15.4	..	1,101.3	5.4	..	83.6	48
Estonia	..	20.1	27.9	27.7	32.6	23.2	5.7	15.4	..	14
Ethiopia	22.1	..	..	..	..	..	5.0	19.4	97.1	72
Finland	21.9	18.7	26.4	28.1	41.3	37.4	6.5	12.8	..	16
France	11.8	17.6	28.6	29.6	29.7	33.9	5.9	11.0	..	19
Gabon	..	..	..	..	..	..	..	..	100.0	36
Gambia, The	13.2	7.4	..	9.1	..	238.0	2.0	8.9	57.8	35
Georgia	..	..	..	..	..	..	2.9	13.1	89.7	14
Germany	..	16.6	20.5	22.3	..	..	4.7	9.7	..	14
Ghana	..	12.8	..	34.5	..	209.8	5.4	..	53.2 <sup>c</sup>	35 <sup>c</sup>
Greece	7.6	16.1	15.5	22.5	30.7	24.3	4.0	8.0	..	11
Guatemala	..	6.5	..	3.5	..	..	..	..	..	31
Guinea	..	..	..	..	..	244.1	2.0	..	68.1	45
Guinea-Bissau	..	..	..	..	..	..	..	..	..	..
Haiti	9.1	..	..	..	..	..	..	..	40.5	..

# Education inputs

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PEOPLE

	Public expenditure per student <sup>a</sup>						Public expenditure on education		Trained teachers in primary education	Primary pupil-teacher ratio
	Primary		% of GDP per capita Secondary		Tertiary		% of GDP	% of total government expenditure	% of total	pupils per teacher
	1991	2005 <sup>b</sup>	1998	2005 <sup>b</sup>	1998	2005 <sup>b</sup>	2005 <sup>b</sup>	2005 <sup>b</sup>	2005 <sup>b</sup>	2005 <sup>b</sup>
Honduras	..	..	..	..	..	..	..	..	87.2	33
Hungary	21.2	21.9	18.6	26.8	36.0	31.9	5.9	10.3	..	10
India	..	11.1	21.2	19.8	74.5	68.6	3.7	10.7	..	40
Indonesia	..	2.6	..	4.9	..	13.3	0.9	9.0	92.9	20
Iran, Islamic Rep.	..	9.7	..	11.0	..	22.8	4.7	22.8	100.0	19
Iraq	..	..	..	..	..	..	..	..	100.0	21
Ireland	11.6	13.9	17.5	20.0	29.4	24.8	4.5	13.1	..	18
Israel	12.6	22.8	23.3	23.4	32.9	30.0	7.3	13.7	..	12
Italy	15.3	25.9	28.6	29.2	28.4	24.1	4.9	9.5	..	11
Jamaica	9.9	11.5	..	20.0	..	40.7	4.5	9.5	100.0	28
Japan	..	22.6	19.9	22.3	13.2	19.6	3.7	10.7	..	19
Jordan	..	14.0	15.7	16.9	..	..	..	..	..	20
Kazakhstan	..	10.0	..	7.9	..	5.7	2.3	..	97.2	17
Kenya	12.9	23.6	..	23.5	..	262.6	6.7	29.2	98.8	40
Korea, Dem. Rep.	..	..	..	..	..	..	..	..	..	..
Korea, Rep.	11.8	18.6	14.9	25.1	7.0	9.3	4.6	15.0	100.0	29
Kuwait	35.4	12.2	..	18.1	..	116.4	5.1	12.7	100.0	12
Kyrgyz Republic	..	7.6	11.9	14.3	27.7	20.8	4.4	..	58.0	24
Lao PDR	..	8.6	4.3	4.0	66.9	22.4	2.3	11.7	83.4	31
Latvia	..	20.6	24.0	24.5	34.3	14.4	5.3	15.4	..	13
Lebanon	..	7.2	..	7.6	12.8	15.9	2.6	11.0	14.4	14
Lesotho	..	24.2	68.4	49.0	1237.4	1104.8	13.4	29.8	63.7	42
Liberia	..	..	..	..	..	..	..	..	..	..
Libya	..	..	..	..	23.8	..	..	..	..	..
Lithuania	..	14.4	..	20.1	..	20.6	5.2	15.7	..	15
Macedonia, FYR	..	23.8	..	7.5	..	22.6	3.4	16.4	100.0	20
Madagascar	..	8.4	39.9	..	180.9	175.0	3.2	25.3	36.5	54
Malawi	7.2	13.5	..	28.6	..	..	5.8	..	85.8	64
Malaysia	10.1	18.6	..	26.3	..	93.7	8.0	28.0	..	18
Mali	..	..	61.6	..	265.0	..	4.3	14.8	..	54
Mauritania	..	9.8	38.7	24.7	85.0	39.9	2.3	8.3	100.0	40
Mauritius	10.1	11.8	..	19.8	..	37.1	4.5	14.3	100.0	22
Mexico	4.8	15.5	14.2	16.8	47.8	44.1	5.8	23.8	84.3	28
Moldova	..	16.6	..	24.1	..	12.9	4.3	21.1	..	18
Mongolia	..	14.3	..	13.2	..	22.8	5.3	..	96.4	34
Morocco	15.3	22.9	49.1	39.6	104.8	93.0	6.7	27.2	100.0	27
Mozambique	..	14.1	..	48.4	..	435.3	3.7	19.5	59.8	66
Myanmar	..	2.7	..	2.9	..	..	..	..	76.0	31
Namibia	..	20.1	36.4	24.1	157.6	106.6	6.9	..	16.7	33
Nepal	..	12.4	13.1	10.5	..	71.1	3.4	14.9	95.8	40 <sup>c</sup>
Netherlands	12.6	18.7	21.8	23.6	44.2	43.0	5.3	10.8	..	..
New Zealand	17.3	19.4	24.5	22.7	42.0	34.1	6.8	20.9	..	16
Nicaragua	..	8.8	..	10.4	..	..	3.1	15.0	76.9	34
Niger	..	19.0	..	64.3	..	..	2.3	..	75.8	44
Nigeria	..	..	..	..	..	..	..	..	49.8	37
Norway	32.7	21.7	30.6	33.0	47.8	50.4	7.7	15.7	..	11
Oman	10.5	16.3	22.2	15.5	..	28.7	3.6	24.2	..	..
Pakistan	..	7.0	..	11.0	..	..	2.3	10.9	85.5	38
Panama	11.3	9.6	19.1	12.3	33.6	26.5	3.8	8.9	89.6	24
Papua New Guinea	..	..	..	..	..	..	..	..	100.0	35
Paraguay	..	12.6	..	14.1	..	30.1	4.3	10.8	67.0	28
Peru	..	6.7	10.8	8.9	..	12.3	2.4	13.7	..	22
Philippines	..	11.7	..	10.1	..	14.1	3.2	17.2	100.0	35
Poland	12.9	22.9	16.5	21.7	36.3	19.7	5.6	12.3	..	13
Portugal	17.2	24.4	29.1	33.0	29.7	27.8	5.9	12.4	..	12
Puerto Rico	..	..	..	..	..	..	..	..	..	..



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## Education inputs

	Public expenditure per student <sup>a</sup>						Public expenditure on education		Trained teachers in primary education	Primary pupil-teacher ratio
	Primary		% of GDP per capita Secondary		Tertiary		% of GDP	% of total government expenditure	% of total	pupils per teacher
	1991	2005 <sup>b</sup>	1998	2005 <sup>b</sup>	1998	2005 <sup>b</sup>	2005 <sup>b</sup>	2005 <sup>b</sup>	2005 <sup>b</sup>	2005 <sup>b</sup>
Romania	..	..	..	..	..	..	3.6	..	25.9	17
Russian Federation	..	..	..	..	..	12.1	3.7	12.3	99.0	17
Rwanda	..	11.3	..	18.6	..	408.8	3.8	12.2	81.7	62
Saudi Arabia	..	..	..	..	..	..	6.8	27.6	..	..
Senegal	18.9	18.7	..	32.2	..	267.6	5.4	18.9	100.0	47
Serbia and Montenegro	..	..	..	..	..	..	..	..	..	..
Sierra Leone	..	..	..	..	..	..	3.8	..	61.5	67
Singapore	..	..	..	..	..	..	..	..	..	..
Slovak Republic	..	13.0	18.5	17.8	33.0	29.3	4.4	11.2	..	18
Slovenia	17.4	30.0	..	25.7	..	26.4	6.0	12.6	..	15
Somalia	..	..	..	..	..	..	..	..	..	..
South Africa	20.2	14.2	21.2	17.6	64.3	49.6	5.4	17.9	78.7	36
Spain	11.2	18.6	24.4	23.8	19.6	22.7	4.3	11.2	..	14
Sri Lanka	..	..	..	..	..	..	..	..	..	22
Sudan	..	..	..	..	..	..	..	..	55.1	28
Swaziland	6.5	12.4	26.1	30.9	388.4	341.5	6.2	..	90.5	32
Sweden	46.2	24.0	26.3	26.8	53.3	46.9	7.5	12.8	..	10
Switzerland	36.1	24.9	27.7	29.2	54.5	64.8	6.1	13.0	..	..
Syrian Arab Republic	..	14.2	22.1	26.3	..	..	..	..	88.4	25
Tajikistan	..	8.7	..	11.3	..	14.1	3.5	18.0	84.1	21
Tanzania	..	..	..	..	..	..	..	..	100.0	56
Thailand	11.6	13.9	..	13.1	..	23.0	4.2	27.5	79.3	21
Togo	..	6.7	30.9	..	317.9	..	2.6	13.6	36.8	34
Trinidad and Tobago	..	15.7	12.2	..	147.6	..	4.2	..	81.0	18
Tunisia	..	24.1	..	24.1	..	80.6	8.1	..	..	21
Turkey	10.7	11.8	..	14.8	..	44.7	4.0	13.6	..	..
Turkmenistan	..	..	..	..	..	..	..	..	..	..
Uganda	..	11.3	..	34.0	..	188.8	5.2	18.3	80.4	50
Ukraine	..	14.8	..	23.9	..	34.1	6.4	18.9	99.7	19
United Arab Emirates	..	7.1	11.5	9.3	..	28.9	1.3	27.4	60.0	15
United Kingdom	15.0	18.4	26.6	28.4	32.8	28.1	5.5	11.9	..	18
United States	..	21.5	22.5	25.8	27.5	26.7	5.9	15.2	..	14
Uruguay	7.8	6.5	..	7.2	..	19.5	2.2	7.9	100.0	21
Uzbekistan	..	..	..	..	..	..	..	..	..	..
Venezuela, RB	..	..	..	..	..	..	..	..	84.0	19
Vietnam	..	..	..	..	..	..	..	..	93.4	22
West Bank and Gaza	..	..	..	..	..	..	..	..	100.0	25
Yemen, Rep.	..	..	..	..	..	..	..	..	..	26
Zambia	..	5.4	..	8.2	..	..	2.0	14.8	100.0	51
Zimbabwe	20.7	..	..	..	..	..	..	..	..	39
<b>World</b>	<b>.. m</b>	<b>15.4 m</b>	<b>.. m</b>	<b>20.3 m</b>	<b>.. m</b>	<b>32.6 m</b>	<b>4.7 m</b>	<b>.. m</b>	<b>.. m</b>	<b>29 m</b>
<b>Low income</b>	..	..	..	..	..	..	..	..	..	42
<b>Middle income</b>	..	14.1	..	17.4	..	32.5	4.5	15.2	..	22
Lower middle income	..	11.7	..	16.5	..	36.6	4.3	..	..	22
Upper middle income	..	14.7	..	20.1	33.6	26.3	4.6	15.4	..	22
<b>Low &amp; middle income</b>	..	..	..	..	..	..	4.3	..	..	31
East Asia & Pacific	..	6.3	..	..	..	..	2.7	..	95.7	22
Europe & Central Asia	..	16.7	..	20.5	..	23.2	4.4	13.9	..	17
Latin America & Carib.	..	12.3	..	14.9	..	31.3	4.3	15.0	..	24
Middle East & N. Africa	..	14.3	..	17.5	..	..	..	..	..	23
South Asia	..	9.7	13.1	12.1	..	68.6	2.9	12.8	..	41
Sub-Saharan Africa	..	..	..	..	..	..	4.3	..	..	48
<b>High income</b>	16.3	18.7	24.4	24.4	29.7	29.4	5.9	12.8	..	16
Europe EMU	15.3	18.7	25.4	24.7	29.7	27.8	5.4	11.1	..	14

a. Because of the change from International Standard Classification of Education (ISCED) 76 to ISCED 97 in 1998, data before 1998 are not fully comparable with data from 1998 onward.  
b. Provisional data. c. Data are for 2006.

**About the data**

Data on education are compiled by the United Nations Educational, Scientific, and Cultural Organization (UNESCO) Institute for Statistics from official responses to surveys and from reports provided by education authorities in each country. Such data are used for monitoring, policymaking, and resource allocation. For a variety of reasons, however, education statistics generally fail to provide a complete and accurate picture of a country's education system. Statistics often lag by one to two years, though an effort is being made to shorten the delay. Moreover, coverage and data collection methods vary across countries and over time within countries, so comparisons should be interpreted with caution.

The data on education spending in the table for the majority of the countries refer to public spending—government spending on public education plus subsidies for private education. The data generally exclude foreign aid for education. They may also exclude spending by religious schools, which play a significant role in many developing countries. Data for some countries and for some years refer to spending by the ministry of education only (excluding education expenditures by other ministries and departments and local authorities).

Many developing countries have sought to supplement public funds for education. Some countries have adopted tuition fees to recover part of the cost of providing education services or to encourage development of private schools. Charging fees raises difficult questions relating to equity, efficiency, access, and taxation, however, and some governments have used scholarships, vouchers, and other methods of public finance to counter criticism. For most countries, the data reflect only public spending. Data for a few countries include private spending, although national practices vary with respect to whether parents or schools pay for books, uniforms, and other supplies. For greater detail, see the country- and indicator-specific notes in the source.

The share of public expenditure devoted to education allows an assessment of the priority a government assigns to education relative to other public investments, as well as a government's commitment to investing in human capital development. It also reflects the development status of a country's education system relative to that of others. However, returns on investment to education, especially primary and lower secondary education, cannot be understood simply by comparing current education indicators with national income. It takes a long time before currently enrolled children can productively

contribute to the national economy (Hanushek 2002).

The share of trained teachers in primary education measures the quality of the teaching staff. It does not take account of competencies acquired by teachers through their professional experience or self-instruction or of such factors as work experience, teaching methods and materials, or classroom conditions, which may affect the quality of teaching. Since the training teachers receive varies greatly (pre-service or in-service), care should be taken in comparing across countries.

The primary pupil-teacher ratio reflects the average numbers of pupils per teacher. It is different from the average class size because of the different practices countries employ, such as part-time teaching, school shifts, and multigrade classes. The comparability of pupil-teacher ratios across countries is affected by the definition of teachers and by differences in class size by grade and in the number of hours taught, as well as the different practices mentioned above. Moreover, the underlying enrollment levels are subject to a variety of reporting errors (for further discussion of enrollment data see *About the data* for table 2.10). While the pupil-teacher ratio is often used to compare the quality of schooling across countries, it is often weakly related to the value added of schooling systems.

In 1998 UNESCO introduced the new International Standard Classification of Education 1997. Thus the time-series data for the years through 1997 are not consistent with those for 1998 and later. Any time-series analysis should therefore be undertaken with extreme caution.

In 2006 the UNESCO Institute for Statistics also changed its convention for citing the reference year of education data and indicators to the calendar year in which the academic or financial year ends. Data that used to be listed for 2004/05, for example, are now listed for 2005. This change was implemented to present the most recent data available and to align the data reporting with that of other international organizations (in particular the Organisation for Economic Co-operation and Development and Eurostat).

**Definitions**

- **Public expenditure per student** is public current spending on education divided by the number of students by level, as a percentage of gross domestic product (GDP) per capita.
- **Public expenditure on education** is current and capital public expenditure on education, as a percentage of GDP and as a percentage of total government expenditure.
- **Trained teachers in primary education** are the percentage of primary school teachers who have received the minimum organized teacher training (pre-service or in-service) required for teaching in their country.
- **Primary pupil-teacher ratio** is the number of pupils enrolled in primary school divided by the number of primary school teachers (regardless of their teaching assignment).

**Data sources**

Data on education inputs are from the UNESCO Institute for Statistics, which compiles international data on education in cooperation with national commissions and national statistical services. Data for latest years are provisional, as of January 2007.