

2.9 Education inputs

	Public expenditure on education			Ex	penditur	e per sti	ıdent	on te	Expenditure on teachers' compensation		Duration of primary education		
		% of GNP 1997	Prin % GNP pe 1980	of	%	ndary of er capita 1997	%	tiary of er capita 1997	current	f total education nditure 1997	pupils per teacher 1997	years 1997	
Albania		3.1		9.4							18	8	
Algeria	7.8	5.1	8.9	26.1ª	23.9				63.6	74.2 b	27	9	
Angola									62.2			8	
Argentina	2.7	3.5	6.5 ^c	8.3			29.3	19.9		84.1	17	10 d	
Armenia		2.0						25.8			19	11	
Australia	5.5	5.4		16.7	44.5	16.8	51.1	29.7		54.2	18	10 d	
Austria	5.5	5.4	15.7	21.7		24.7	37.4	35.3	53.0 ^e	61.7	12	9 d	
Azerbaijan		3.0		17.9			51.4	15.3	33.0		20	11	
Bangladesh	1.1	2.2	3.6 °	11.3	10.4		34.9		33.5 ^f	••		5	
Belarus		5.9		12.8°				18.7		••	20	9 d	
•••••			17.4 ^c		220	121	 E1 0		72 O f	72.6			
Belgium	6.0	3.1	11.4°	110	33.8	13.4	51.0	17.5	73.0 ^f	73.6		12	
Benin		3.2		11.8				249.0	75.7		52	6	
Bolivia	4.4	4.9	13.7 °		15.2		••		75.7	48.5		8	
Bosnia and Herzegovina	••		••					••		••			
Botswana	6.0	8.6	12.5				611.7		54.9		25		
Brazil	3.6	5.1	8.7 ^c		11.0		58.7				23	8	
Bulgaria	4.5	3.2	17.5	30.8			51.3	17.4			17	8 d	
Burkina Faso	2.2	1.5	23.1 ^c	21.2	87.5		2,957.4	590.6	61.0	67.8	50	7	
Burundi	3.4	4.0	24.2	23.0	222.2		1,479.8		74.3		50	6	
Cambodia		2.9									46	6	
Cameroon	3.8		11.0				401.2		65.4			6 ^d	
Canada	6.9	6.9			48.3 ₹	50.1	38.7	39.8	55.4	62.0	16	10 ^d	
Central African Republic			22.1 °				936.1					6	
Chad		1.7		6.3						64.4	67	6	
Chile	4.6	3.6	9.6	11.1	16.8	11.8	112.0	21.1	76.8		30	8	
China	2.5	2.3	3.8	6.6			246.2	66.2			24	9 d	
Hong Kong, China	2.4	2.9	6.7 ^c	7.8	8.2	12.6	4.2		73.0		24	9 d	
Colombia	1.9	4.1	5.3	10.3°		11.7	43.8	35.4	93.4	81.9	25	5	
Congo, Dem. Rep.	2.6						747.9				45		
Congo, Rep.	7.0	6.1	10.1 °	15.4			369.4		70.8		70	10	
Costa Rica	7.8	5.4	13.0	13.6°	25.7	23.2	75.8		50.2		29	10 d	
Côte d'Ivoire	7.2	5.0	22.6 °	16.9°	20.1		375.7	210.1			41	6	
Croatia		5.3		10.5			313.1	210.1	••	••	19	8	
Cuba	7.2	6.7	10.4	16.3	••		28.5	98.1	38.8	••	12	9	
						21.9	20.0	34.9	30.0		19	9	
Czech Republic		5.1		15.2						44.4			
Denmark	6.7	8.1	37.2 °	24.3	11.2	34.5	50.0	49.6	49.3	43.1	10	9	
Dominican Republic	2.2	2.3	3.1 °	3.3	···	4.4		9.7	62.2	••		10	
Ecuador	5.6	3.5	5.6 ^c	7.6°			24.2	••	77.4	••	25	10	
Egypt, Arab Rep.	5.7	4.8				25.9					23	8	
El Salvador	3.9	2.5	12.5 ^c	7.1		5.5	141.6	7.7			33	9	
Eritrea		1.8		9.2		9.9					44	7	
Estonia		7.2				45.4		38.4			17	9	
Ethiopia	3.1	4.0	17.6	26.7			1,119.5	868.9	68.3		43	6	
Finland	5.3	7.5	20.7 °	23.0		27.5	37.3	45.6	52.6	47.7	18	9	
France	5.0	6.0	12.0	15.8	20.2	26.9	29.3	28.2	68.1		19	10	
Gabon	2.7	2.9							56.7		51	10	
Gambia, The	3.2	4.9	18.6	13.7				269.1			30		
Georgia		5.2				25.0		25.5			18	9	
Germany		4.8				30.8		37.8			17	12	
Ghana	3.1	4.2	3.7 °				26.7		60.0			8 d	
Greece	2.0	3.1	7.0	17.5°	9.5	15.1	30.1	22.3	84.8		14	9 d	
Guatemala	1.8	1.7	4.8	6.2	10.4			31.1		62.8 ^f	35	6	
Guinea		1.9		7.9°				444.7			49	6	
Guinea-Bissau			20.9		69.8				73.5			6	
Haiti	1.5		5.9 °				130.0		66.9			6 ^d	
Honduras	3.2	3.6	10.7 °	9.0			77.4	68.7	71.1	67.8	35	6	
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Education inputs 2.9

	Public expenditure on education % of GNP 1980 1997			Ex	penditur	e per stu	ıdent	Expenditure on teachers' compensation		Primary pupil- teacher ratio	Duration of primary education	
			Primary % of GNP per capita 1980 1997		Secondary % of GNP per capita 1980 1997		Tertiary % of GNP per capita 1980 1997		% of total current education expenditure 1980 1997		pupils per teacher 1997	years 1997
Hungary	4.7	4.6	14.0	20.6		20.2	85.3	47.0	45.2		11	10
India	3.0	3.2	10.5 °	11.4			88.2	99.8			64	8
Indonesia	1.7	1.4				6.6		12.9			22	9
Iran, Islamic Rep.	7.5	4.0	16.2	8.2		11.0	67.6	7.6		47.4	31	5
Iraq	3.0		7.0 °		6.5		87.5				20	6
Ireland	6.3	6.0	11.6	14.1	24.3	21.9	60.0	36.3	67.6	73.6	22	9 d
Israel	8.2	7.6	16.0	20.6			75.2	37.1	51.1			11
Italy		4.9		22.4		····		21.2	J1.1	67.3	11	8
Jamaica	7.0	7.4	13.9		22.0	••	202.9		65.6 ^{e,f}	54.5		6
***************************************	7.0 5.8	3.6	14.8	19.3	16.6	19.0	202.9	13.9	49.8		19	9 d
Japan										70.4		
Jordan	6.6	6.8	••	••		112.4	59.9	81.0	70.4	70.4	21	9
Kazakhstan		4.4	45.70					21.9				11
Kenya	6.8	6.5	15.7 °			······································	928.2				30	8
Korea, Dem. Rep.										••		10
Korea, Rep.	3.7	3.7	10.6 ^c	18.8	9.3	12.9	16.1	6.0	69.2		31	9
Kuwait	2.4	5.0	14.8	39.6		5.5	37.5	87.9	46.5		14	8 d
Kyrgyz Republic		5.3						48.8			20	10
Lao PDR		2.1		6.4		13.8		60.6		67.2	30	5
Latvia	3.3	6.3				37.1	19.1	32.9		40.5	13	
Lebanon		2.5		18.5 a				22.3				9
Lesotho	5.1	8.4	8.6	13.8	72.5	53.7	1,003.6	779.3	60.9	57.6	47	7
Libya	3.4						58.2					9
Lithuania		5.4				28.5		42.1			16	9
Macedonia, FYR		5.1		20.2		27.3		69.5			19	8
Madagascar	4.4	1.9	9.1 °				402.5		81.8		37	6
Malawi	3.4	5.4	7.6	8.8			1,839.9	1,593.7	43.4		59	8
Malaysia	6.0	4.9	12.0 °	11.1			148.9	57.3	57.5 ^e	58.6	20	. d
Mali	3.7	2.2	31.7	13.8			3,631.4	382.7	51.0		80	9 d
Mauritania		5.1	30.4	11.1				205.9			50	6
Mauritius	5.3	4.6	15.8 °	9.8			343.6	69.5	31.4		24	7
Mexico	4.7	4.9	4.4	11.8		17.9	26.4	46.8		••	28	6
Moldova	3.4	10.6						63.2			23	11 ^d
Mongolia		5.7		••		46.1 ^h		37.7			31	8
Morocco	6.1	5.0	15.5 °	14.3 ^c	54.9		155.3	69.5	••	78.0	28	6
Mozambique	3.1	3.0	10.0		04.0	····		00.0			58	7 ^d
	1.7	1.2		••		••		19.0	••	••	38	
Myanmar				21.0	••	2/1						10 ^d
Namibia	1.5	9.1	146	21.0		34.1		101.7			••	5
Nepal	1.8	3.2	14.6 i	••			271.9		70.0	••	••	13 ^d
Netherlands	7.7	5.1	13.8		23.3	21.2	73.3	47.3	70.8	••		
New Zealand	5.8	7.3	15.1	17.9	13.7	23.8	59.9	45.7	82.7		18	10 ^d
Nicaragua	3.4	3.9	8.2	11.4	15.5	···	25.8		69.7		38	6
Niger	3.2	2.3	26.2	32.1 °		82.5	1,538.5		68.2		41	8
Nigeria	6.4	0.7	4.7				529.6				37	6
Norway	6.5	7.4	27.2 °	31.2	14.9	18.8	38.2	45.3				9
Oman	2.1	4.5		13.1				26.7	60.3		26	
Pakistan	2.1	2.7	9.2 ^c					••		••		
Panama	4.9	5.1	12.3 °		11.5		29.8	40.2	65.3 ^e	51.2		6
Papua New Guinea											38	d
Paraguay	1.5	4.0		10.9		12.0		90.9			21	6
Peru	3.1	2.9	7.2		11.3	6.8	5.2	15.4	59.4	40.1	28	6
Philippines	1.7	3.4	5.8 ^c	9.2	4.3	7.6	13.8	14.8			35	6
Poland		7.5	8.1	17.1	14.8		47.3	40.7			15	8
Portugal	3.8	5.8	13.5 °			20.2	36.3	24.5				9
Puerto Rico												10
Romania	3.3	3.6		20.1		8.8		31.8			20	8
Russian Federation	3.5	3.5									••	9 d



2.9 Education inputs

	Public expenditure on education % of GNP			Ex	penditur	e per stu	ident	Expenditure on teachers' compensation		Primary pupil- teacher ratio	Duration of primary education	
			Primary % of GNP per capita		Secondary % of GNP per capita		Tertiary % of GNP per capita		% of total current education expenditure		pupils per	
	1980	1997	1980	1997	1980	1997	1980	1997	1980	1997	teacher 1997	years 1997
Rwanda	2.7		11.1				901.7		74.8			6
Saudi Arabia	4.1	7.5	18.9 ^a	33.8 a			109.2	60.0		••	13	
Senegal		3.7	24.9 °		••		447.5		••	••	56	6 ^d
Sierra Leone	3.5				••				••	••		
•••••	2.8	3.0	6.8 ^c	7.8 °	••		40.6	28.0	47.5	••	22	d
Singapore		5.0		23.6	••	••		30.8		37.9	19	9
Slovak Republic Slovenia	••	5.7		20.4	••	••	••	37.5	••	62.2	19	8
			••		••				••		36	9
South Africa		7.9	••	25.1	••			47.0	••	64.5		
Spain	2.3	5.0		17.4	••		 6F.6	17.8			17	10
Sri Lanka	2.7	3.4			••	••	65.6	85.0	••	••	28	9
Sudan	4.3	0.9	24.1 °	4.9			528.1				29	8 8
Sweden	9.0	8.3	43.0	284.6	15.8	34.1	35.0	72.4	46.3		1	9 d
Switzerland	4.7	5.4		19.2	29.9	29.0	58.5	45.4	61.0	59.9		9 d
Syrian Arab Republic	4.6	3.1	8.0 ^c	8.2°	15.1	16.5	74.7		85.9		23	6
Tajikistan		2.2			••	••					24	9
Tanzania											37	7
Thailand	3.4	4.8	8.8	12.5			60.1	26.7	80.3	56.8		6
Togo	5.6	4.5	8.3	7.7			891.5	333.8	68.4	74.2	51	6
Trinidad and Tobago	4.0	3.6	9.2 °	10.8	20.4		59.4	••	73.2		25	7
Tunisia	5.4	7.7	11.8 ^c	15.2 °	37.7		194.6	79.1	81.3	77.0	24	9
Turkey	2.2	2.2	6.4 ^c	13.3		9.2	95.0	51.1			28	8 ^d
Turkmenistan												
Uganda	1.3	2.6	4.3				1,034.8			69.9 ^b	35	
Ukraine	5.6	7.3	21.2				20.2	22.7				9 d
United Arab Emirates	1.3	1.8								32.4	16	6
United Kingdom	5.6	5.3			22.1	20.5	79.8	40.7	52.1			11
United States	6.7	5.4	27.1 °	18.5		23.8	48.2	24.6			16	10 ^d
Uruguay	2.3	3.3	11.1	9.3 ^c			28.1	24.2	56.9 ^e	41.5	20	6
Uzbekistan		7.7									21	
Venezuela, RB	4.4	5.2	5.7	2.1	23.1	4.8	71.1		60.7	21.4	21	10
Vietnam		3.0						87.8		66.0		5
West Bank and Gaza												••
Yemen, Rep.		7.0										9
Yugoslavia, FR (Serb./Mont.)												8
Zambia	4.5	2.2	10.6	5.0			605.4	356.2	52.6 ^e		39	7
Zimbabwe	5.3		19.4	19.4			324.8	340.3	75.2	91.1 b	39	8
Ziiiiddiwe			10.1				021.0	0 10.0	10.2	01.1		
World	3.9 m	<i>4.8</i> m	11.1 n	1 m	1	n i	m 60.0	m m			<i>33</i> w	9 m
Low income	3.2	3.2									39	7
Excl. China & India	3.3	3.2	••					••	••	••		7
Middle income	4.0	4.9	9.4	••	••	••	58.7	••	••	••	••	9
Lower middle income	4.2	4.9			••	••		••	••	••		8
•••••					••	••	 F0.7		••	••		
Upper middle income	4.0	5.0	9.4	••	••	••	58.7	39.8	••	••	24	9
Low & middle income	3.5	4.1								••	36	8
East Asia & Pacific	2.5	2.9			···	••	····	41.7			24	8
Europe & Central Asia	·•	5.1	·•			••		39.8		••	··	9
Latin America & Carib.	3.8	3.6	8.9				51.3				24	9
Middle East & N. Africa	5.0	5.2		15.2	••		81.1			••	26	9
South Asia	2.0	3.1	10.5				88.2	85.0			63	6
Sub-Saharan Africa	3.8	4.1	13.6				790.7				41	7
High income	5.6	5.4	15.1	19.9	22.5	22.2	44.4	37.5		••	17	10

a. Includes expenditure on preprimary and secondary. b. Excludes expenditure on tertiary. c. Includes expenditure on preprimary. d. The education system allows other alternatives. e. Includes administration other than personnel. f. Refers only to ministry of education expenditure. g. Includes expenditure on preprimary and primary. h. Includes expenditure on primary. i. Includes expenditure on secondary.

25.8

37.4

35.8

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Europe EMU

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13.8

21.7

Education inputs 2.9



About the data

Data on education are compiled by the United Nations Educational, Scientific, and Cultural Organization (UNESCO) 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 education statistics generally fail to provide a complete and accurate picture of a country's education system and should be interpreted with caution. Statistics often are out of date by two to three years. The information collected focuses more on inputs than on outcomes. And coverage, definitions, and data collection methods vary across countries and over time within countries. (For further discussion of the reliability of education data see Behrman and Rosenzweig 1994.)

The data on education spending in the table refer solely to public spending—that is, government spending on public education plus subsidies for private education. The data generally exclude foreign aid for education. They also may 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 at the center only (excluding education expenditures by other ministries and departments, local authorities, and so on).

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 this criticism. 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 cited below.

The percentage of GNP devoted to education can be interpreted as reflecting a country's effort in education. Often it bears a weak relationship to measures of output of the education system, as reflected in educational attainment. The pattern suggests wide variations across countries in the efficiency with which the government's resources are translated into education outcomes.

Well-trained and motivated teachers are a critical input to education, but they come at a cost. Typically, two-thirds of education spending goes to teachers' compensation (gross salaries and other benefits). Teachers are defined here as including both full- and part-time teaching staff and teachers assigned to nonteaching duties, but country reporting varies. Comparisons should thus be made with caution.

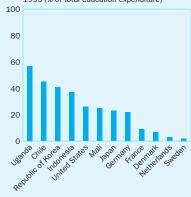
The comparability of pupil-teacher ratios is affected by the definition of teachers, by whether teachers are assigned nonteaching duties, and by differences in class size by grade and in the number of hours taught. Moreover, the underlying enrollment levels are subject to a variety of reporting errors. (See *About the data* for table 2.10 for further discussion of enrollment data.) While the pupil-teacher ratio is often used to compare the quality of schooling across countries, it is often only weakly related to the value added of schooling systems (Behrman and Rosenzweig 1994).

Years of compulsory education show the level of development of the country's education system and education policy. The actual length of compulsory education is influenced by the length of the school day and school year.

Figure 2.9

Households account for much of the spending on education

Private expenditure on education, all levels, 1995 (% of total education expenditure)



Note: Data for Uganda refer to 1990, data for Indonesia to 1991, data for Japan, the Republic of Korea, and the United States to 1994, and data for Chile to 1996.

Source: World Bank, EDSTATS.

Private spending on education is sizable in many countries, averaging 25 percent of all education expenditures in developing countries and 12 percent in high-income countries. Globally, households contribute close to 20 percent of education expenditures.

Definitions

. Public expenditure on education is the percentage of GNP accounted for by public spending on public education plus subsidies to private education at the primary, secondary, and tertiary levels. • Expenditure per student is the public current spending on education divided by the total number of students by level, as a percentage of GNP per capita. • Expenditure on teachers' compensation is the public expenditure on teachers' gross salaries and other benefits as a percentage of the total public current spending on education. • Primary pupilteacher ratio is the number of pupils enrolled in primary school divided by the number of primary school teachers (regardless of their teaching assignment). • Duration of compulsory education is the number of years of compulsory school attendance a child must complete, within a stipulated age range.

Data sources

International data on education are compiled by UNESCO's Institute for Statistics in cooperation with national commissions and national statistical services. The data in the table were compiled using a UNESCO electronic database corresponding to tables in UNESCO's Statistical Yearbook 1999.