



2.1 Population

	Total population			Average annual population growth rate		Age dependency ratio		Population age 60 and above		Women age 60 and above	
	millions			%		dependents as proportion of working-age population		% of total		per 100 men	
	1980	1996	2010	1980-96	1996-2010	1980	1996	1996	2010	1996	2010
Albania	3	3	4	1.3	0.9	0.7	0.6	9.3	11.5	118	114
Algeria	19	29	37	2.7	1.9	1.0	0.7	5.8	6.5	112	113
Angola	7	11	16	2.9	2.7	0.9	1.0	4.6	4.3	121	119
Argentina	28	35	41	1.4	1.0	0.6	0.6	13.2	14.1	134	134
Armenia	3	4	4	1.2	0.4	0.6	0.5	11.7	14.0	138	143
Australia	15	18	20	1.4	0.7	0.5	0.5	15.6	19.3	122	115
Austria	8	8	8	0.4	0.0	0.6	0.5	19.4	23.3	154	129
Azerbaijan	6	8	8	1.3	0.5	0.7	0.6	9.5	10.2	145	154
Bangladesh	87	122	150	2.1	1.5	1.0	0.8	5.0	6.0	82	95
Belarus	10	10	10	0.4	-0.3	0.5	0.5	18.1	19.0	180	172
Belgium	10	10	10	0.2	0.0	0.5	0.5	21.2	23.9	137	130
Benin	3	6	8	3.0	2.7	1.0	1.0	4.4	4.6	124	126
Bolivia	5	8	10	2.2	2.1	0.9	0.8	6.0	6.4	120	123
Bosnia and Herzegovina	4	..	..	..	..	0.5	..	..	..	..	..
Botswana	1	1	2	3.1	1.4	1.0	0.8	3.7	3.5	169	152
Brazil	121	161	190	1.8	1.2	0.7	0.6	7.2	9.0	122	131
Bulgaria	9	8	7	-0.4	-0.9	0.5	0.5	20.7	24.4	127	138
Burkina Faso	7	11	15	2.7	2.4	1.0	1.0	4.7	3.8	111	140
Burundi	4	6	9	2.8	2.4	0.9	1.0	4.3	3.4	151	147
Cambodia	6	10	13	2.9	1.8	0.7	0.8	4.8	5.8	174	159
Cameroon	9	14	19	2.8	2.4	0.9	0.9	5.5	4.9	117	114
Canada	25	30	33	1.2	0.6	0.5	0.5	16.2	20.4	127	118
Central African Republic	2	3	4	2.3	1.9	0.8	0.9	6.1	5.2	132	134
Chad	4	7	9	2.4	2.3	0.8	0.9	5.7	5.2	123	121
Chile	11	14	17	1.6	1.1	0.6	0.6	9.7	12.6	134	130
China	981	1,215	1,349	1.3	0.7	0.7	0.5	9.8	11.9	101	100
Hong Kong, China	5	6	7	1.4	0.5	0.5	0.4	14.1	17.7	103	98
Colombia	28	37	45	1.8	1.3	0.8	0.6	7.8	9.2	109	125
Congo, Dem. Rep.	27	45	69	3.2	3.0	1.0	1.0	4.5	4.3	130	123
Congo, Rep.	2	3	4	3.0	2.4	0.9	1.0	5.6	4.1	145	144
Costa Rica	2	3	4	2.6	1.4	0.7	0.6	7.1	9.5	114	114
Côte d'Ivoire	8	14	19	3.5	2.1	1.0	0.9	4.6	4.8	94	90
Croatia	5	5	5	0.2	-0.3	0.5	0.5	21.3	23.3	155	143
Cuba	10	11	12	0.8	0.4	0.7	0.5	12.6	17.2	107	114
Czech Republic	10	10	10	0.1	-0.2	0.6	0.5	17.4	22.6	145	133
Denmark	5	5	5	0.2	0.0	0.5	0.5	19.5	23.0	132	121
Dominican Republic	6	8	10	2.1	1.4	0.8	0.6	6.3	7.9	102	106
Ecuador	8	12	15	2.4	1.6	0.9	0.7	6.5	7.6	113	119
Egypt, Arab Rep.	41	59	74	2.3	1.6	0.8	0.7	6.6	7.7	116	114
El Salvador	5	6	8	1.5	2.0	1.0	0.7	6.5	6.7	120	133
Eritrea	..	4	6	..	3.0	..	0.9	4.8	4.7	114	110
Estonia	1	1	1	-0.1	-1.0	0.5	0.5	18.6	23.9	187	191
Ethiopia	38	58	89	2.7	3.0	1.0	1.0	4.5	4.3	122	111
Finland	5	5	5	0.4	0.2	0.5	0.5	19.0	24.3	151	131
France	54	58	60	0.5	0.2	0.6	0.5	20.2	22.5	139	133
Gabon	1	1	2	3.0	2.1	0.7	0.8	8.9	8.0	118	122
Gambia, The	1	1	2	3.6	2.3	0.8	0.8	4.8	5.7	112	112
Georgia	5	5	5	0.4	0.0	0.5	0.5	16.7	18.7	155	157
Germany	78	82	81	0.3	-0.1	0.5	0.5	21.0	25.1	152	128
Ghana	11	18	24	3.1	2.3	0.9	0.9	4.8	5.1	118	118
Greece	10	10	11	0.5	0.1	0.6	0.5	22.4	25.5	121	125
Guatemala	7	11	15	2.9	2.3	1.0	0.9	5.3	5.3	108	117
Guinea	4	7	10	2.6	2.6	0.9	1.0	4.2	4.1	109	106
Guinea-Bissau	1	1	1	1.9	2.2	0.8	0.9	6.4	5.7	115	115
Haiti	5	7	9	2.0	1.6	0.8	0.8	5.9	5.8	119	129
Honduras	4	6	9	3.2	2.4	1.0	0.9	4.9	4.9	113	116

	Total population			Average annual population growth rate		Age dependency ratio		Population age 60 and above		Women age 60 and above	
	millions			%		dependents as proportion of working-age population		% of total		per 100 men	
	1980	1996	2010	1980-96	1996-2010	1980	1996	1996	2010	1996	2010
Hungary	11	10	10	-0.3	-0.4	0.5	0.5	19.3	21.5	153	152
India	687	945	1,129	2.0	1.3	0.7	0.6	7.3	8.6	106	106
Indonesia	148	197	236	1.8	1.3	0.8	0.6	6.7	8.4	114	117
Iran, Islamic Rep.	39	63	81	2.9	1.9	0.9	0.8	6.4	6.5	79	84
Iraq	13	21	31	3.1	2.8	0.9	0.8	4.7	5.6	112	111
Ireland	3	4	4	0.4	0.5	0.7	0.5	15.1	17.4	126	120
Israel	4	6	7	2.4	1.7	0.7	0.6	10.9	11.7	122	116
Italy	56	57	55	0.1	-0.3	0.5	0.5	22.1	26.1	136	132
Jamaica	2	3	3	1.1	0.8	0.9	0.6	8.8	9.3	121	122
Japan	117	126	127	0.5	0.1	0.5	0.4	21.0	29.8	131	123
Jordan	2	4	6	4.3	2.6	1.1	0.8	4.6	5.6	78	96
Kazakhstan	15	16	17	0.6	0.1	0.6	0.6	10.2	11.8	174	159
Kenya	17	27	36	3.1	2.0	1.1	0.9	4.2	3.8	114	114
Korea, Dem. Rep.	18	22	26	1.5	0.9	0.8	0.5	7.4	9.6	168	119
Korea, Rep.	38	46	50	1.1	0.7	0.6	0.4	9.2	13.6	146	130
Kuwait	1	2	2	0.9	2.3	0.7	0.6	3.1	6.9	62	74
Kyrgyz Republic	4	5	5	1.4	1.1	0.8	0.7	8.5	7.8	156	146
Lao PDR	3	5	7	2.4	2.4	0.8	0.9	5.6	5.0	109	125
Latvia	3	2	2	-0.1	-0.7	0.5	0.5	19.1	23.3	194	191
Lebanon	3	4	5	1.9	1.4	0.8	0.6	8.3	8.3	115	125
Lesotho	1	2	3	2.4	2.0	0.9	0.8	6.0	6.6	126	119
Libya	3	5	7	3.3	2.3	1.0	0.8	4.9	6.3	83	87
Lithuania	3	4	4	0.5	-0.2	0.5	0.5	17.6	20.0	175	176
Macedonia, FYR	2	2	2	0.3	0.7	0.6	0.5	12.7	15.5	118	119
Madagascar	9	14	20	2.8	2.8	0.9	0.9	4.7	4.8	119	118
Malawi	6	10	14	3.1	2.3	1.0	1.0	4.2	4.0	118	107
Malaysia	14	21	26	2.5	1.6	0.8	0.7	6.0	7.9	117	114
Mali	7	10	15	2.6	2.8	1.0	1.0	4.2	3.9	131	140
Mauritania	2	2	3	2.6	2.3	0.9	0.8	5.1	5.2	124	117
Mauritius	1	1	1	1.0	1.0	0.6	0.5	8.5	11.0	130	131
Mexico	67	93	115	2.1	1.5	1.0	0.6	6.2	8.1	120	125
Moldova	4	4	4	0.5	0.0	0.5	0.5	13.6	14.8	157	152
Mongolia	2	3	3	2.6	1.9	0.9	0.7	5.8	5.9	123	111
Morocco	19	27	34	2.1	1.6	0.9	0.7	6.3	7.1	114	127
Mozambique	12	18	25	2.5	2.4	0.9	0.9	4.1	4.2	126	120
Myanmar	34	46	55	1.9	1.3	0.8	0.7	6.8	7.2	116	118
Namibia	1	2	2	2.7	2.1	0.9	0.8	5.7	5.5	120	115
Nepal	14	22	31	2.6	2.3	0.8	0.9	5.5	5.7	97	101
Netherlands	14	16	16	0.6	0.3	0.5	0.5	17.9	22.3	135	119
New Zealand	3	4	4	1.0	0.7	0.6	0.5	15.4	17.9	123	120
Nicaragua	3	5	6	3.0	2.4	1.0	0.9	4.5	5.1	117	116
Niger	6	9	14	3.3	3.0	1.0	1.0	3.9	3.7	123	130
Nigeria	71	115	166	3.0	2.6	0.9	0.9	4.1	4.3	130	127
Norway	4	4	5	0.4	0.3	0.6	0.5	20.1	22.0	130	119
Oman	1	2	4	4.2	3.8	0.9	1.0	3.9	4.8	99	..
Pakistan	83	134	190	3.0	2.5	0.9	0.9	4.9	5.5	96	97
Panama	2	3	3	2.0	1.3	0.8	0.6	7.6	9.6	103	105
Papua New Guinea	3	4	6	2.2	2.0	0.8	0.7	4.9	5.8	103	109
Paraguay	3	5	7	2.9	2.2	0.9	0.8	5.2	6.0	132	117
Peru	17	24	30	2.1	1.5	0.8	0.7	6.7	7.8	114	116
Philippines	48	72	92	2.5	1.8	0.8	0.7	5.4	6.8	115	116
Poland	36	39	40	0.5	0.2	0.5	0.5	15.8	18.2	151	149
Portugal	10	10	10	0.1	-0.2	0.6	0.5	21.0	21.2	149	147
Puerto Rico	3	4	4	1.0	0.7	0.7	0.5	13.7	16.6	125	152
Romania	22	23	22	0.1	-0.3	0.6	0.5	17.4	19.2	130	138
Russian Federation	139	148	143	0.4	-0.2	0.5	0.5	17.1	18.3	198	181



2.1

	Total population			Average annual population growth rate		Age dependency ratio		Population age 60 and above		Women age 60 and above	
	millions			%		dependents as proportion of working-age population		% of total		per 100 men	
	1980	1996	2010	1980-96	1996-2010	1980	1996	1996	2010	1996	2010
Rwanda	5	7	11	1.7	3.5	1.0	1.0	3.6	3.1	122	125
Saudi Arabia	9	19	31	4.6	3.3	0.9	0.8	4.4	5.6	92	..
Senegal	6	9	12	2.7	2.3	0.9	0.9	4.6	3.9	111	111
Sierra Leone	3	5	6	2.2	2.2	0.9	1.0	4.4	4.2	130	131
Singapore	2	3	3	1.8	0.9	0.5	0.4	9.5	14.5	117	113
Slovak Republic	5	5	6	0.4	0.2	0.6	0.5	15.0	17.6	148	148
Slovenia	2	2	2	0.3	-0.1	0.5	0.4	17.8	22.3	160	138
South Africa	27	38	46	2.0	1.4	0.8	0.6	6.5	7.3	142	140
Spain	37	39	38	0.3	-0.1	0.6	0.5	20.6	22.8	134	141
Sri Lanka	15	18	21	1.4	1.0	0.7	0.5	8.9	11.8	106	120
Sudan	19	27	37	2.4	2.2	0.9	0.8	4.9	5.7	116	110
Sweden	8	9	9	0.4	0.0	0.6	0.6	21.9	26.0	129	119
Switzerland	6	7	7	0.7	0.3	0.5	0.5	19.3	23.6	137	126
Syrian Arab Republic	9	15	20	3.2	2.3	1.1	0.9	4.6	4.9	108	120
Tajikistan	4	6	7	2.5	1.3	0.9	0.8	6.5	6.4	131	124
Tanzania	19	30	42	3.1	2.2	1.0	0.9	4.1	3.9	120	114
Thailand	47	60	66	1.6	0.6	0.8	0.5	7.8	9.8	123	121
Togo	3	4	6	3.0	2.5	0.9	1.0	4.9	4.4	121	117
Trinidad and Tobago	1	1	1	1.1	0.9	0.7	0.6	9.0	11.1	102	101
Tunisia	6	9	11	2.2	1.4	0.8	0.6	7.1	7.8	102	117
Turkey	44	63	76	2.1	1.3	0.8	0.6	8.2	9.7	113	119
Turkmenistan	3	5	6	3.0	1.5	0.8	0.8	6.3	6.2	143	133
Uganda	13	20	27	2.7	2.4	1.0	1.0	3.6	2.5	116	99
Ukraine	50	51	47	0.1	-0.6	0.5	0.5	19.4	20.9	184	170
United Arab Emirates	1	3	3	5.5	1.9	0.4	0.4	3.2	10.2	45	..
United Kingdom	56	59	59	0.3	0.1	0.6	0.5	20.7	23.3	131	121
United States	227	265	294	1.0	0.7	0.5	0.5	16.4	18.8	134	126
Uruguay	3	3	3	0.6	0.6	0.6	0.6	17.0	17.2	133	141
Uzbekistan	16	23	29	2.3	1.6	0.9	0.8	6.6	6.5	141	130
Venezuela	15	22	28	2.5	1.6	0.8	0.7	6.2	8.4	116	116
Vietnam	54	75	94	2.1	1.6	0.9	0.7	7.2	6.8	136	142
West Bank and Gaza	1	2	4	4.0	3.5	0.9	0.9	4.4	4.3	103	119
Yemen, Rep.	9	16	25	3.8	3.3	1.1	1.0	3.9	3.4	126	148
Yugoslavia, FR (Serb./Mont.)	10	11	11	0.5	0.2	0.5	0.5	18.0	19.1	122	123
Zambia	6	9	12	3.0	1.9	1.1	1.0	3.7	3.3	101	106
Zimbabwe	7	11	14	3.0	1.5	1.0	0.8	4.7	4.3	112	103
World	4,427 t	5,754 t	6,788 t	1.6 w	1.2 w	0.7 w	0.6 w	9.6 w	10.8 w	121 w	117 w
Low income	2,375	3,236	3,948	1.9	1.4	0.8	0.7	7.4	8.5	105	105
Excl. China & India	706	1,076	1,471	2.6	2.2	0.9	0.9	5.1	5.2	114	115
Middle income	1,227	1,599	1,875	1.7	1.1	0.7	0.6	9.1	10.1	137	132
Lower middle income	867	1,125	1,313	1.6	1.1	0.7	0.6	9.2	10.1	140	133
Upper middle income	360	473	562	1.7	1.2	0.7	0.6	8.8	10.3	131	130
Low & middle income	3,602	4,835	5,824	1.8	1.3	0.8	0.6	8.0	9.0	116	114
East Asia & Pacific	1,359	1,732	1,975	1.5	0.9	0.7	0.5	8.7	10.6	106	104
Europe & Central Asia	428	478	490	0.7	0.2	0.6	0.5	14.6	16.0	163	156
Latin America & Carib.	358	486	588	1.9	1.4	0.8	0.6	7.5	9.1	120	127
Middle East & N. Africa	175	276	371	2.9	2.1	0.9	0.8	5.8	6.3	101	103
South Asia	902	1,266	1,555	2.1	1.5	0.8	0.7	6.7	7.9	103	104
Sub-Saharan Africa	379	596	844	2.8	2.5	0.9	0.9	4.6	4.5	123	120
High income	825	919	964	0.7	0.3	0.5	0.5	18.0	21.8	134	126

About the data

Knowing the size of a country's population, its growth rate, and its age distribution is important for evaluating the welfare of its citizens, assessing the productive capacity of its economy, and estimating the quantity of goods and services that will be needed to meet future needs. Thus governments, businesses, and anyone interested in analyzing economic performance must have accurate population estimates.

Population estimates are usually based on national censuses, but the frequency and quality of these censuses vary by country. Most countries conduct a complete enumeration no more than once a decade. Precensus and postcensus estimates are interpolations or extrapolations based on demographic models. Errors and undercounting occur even in high-income countries; in developing countries such errors may be substantial because of limits on transportation, communication, and resources required to conduct a full census. Moreover, the international comparability of population indicators is limited by differences in the concepts, definitions, data collection procedures, and estimation methods used by national statistical agencies and other organizations that collect population data.

Of the 148 economies listed in the table, 129 conducted a census between 1987 and 1997. The currentness of a census, along with the availability of complementary data from surveys or registration systems, is one of many objective ways to judge the quality of demographic data. In some European countries registration systems offer complete information on population in the absence of a census. See *Primary data documentation* for the most recent census or survey year and for registration completeness.

Current population estimates for developing countries that lack recent census-based population data, and precensus and postcensus estimates for countries with census data, are provided by national statistical offices or by the United Nations Population Division. The estimation methods require fertility, mortality, and net migration data, which are often collected from sample surveys, some of which may be small or have limited coverage. These estimates are the product of demographic modeling and so are also susceptible to biases and errors due to shortcomings of the model, as well as the data.

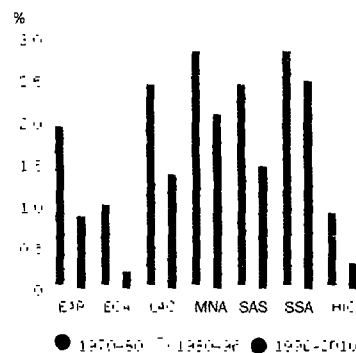
The quality and reliability of official demographic data are also affected by public trust in the government, the government's commitment to full and accurate enumeration, the confidentiality of and protection against misuse accorded to census data,

and the independence of census agencies from undue political influence.

Population projections are made using the cohort component method. This method compiles separate projections of future fertility, mortality, and net migration levels by age and gender, then applies them to the 1995 base year age and gender structure. Future fertility, mortality, and net migration levels are determined from demographic models that use current levels and trends as inputs. Countries where fertility has been falling are assumed to have further declines at the rate of the previous 10 years until fertility reaches the replacement level of about two children. In countries where fertility has remained high, the transition to smaller families is assumed to occur at the average rate of decline of countries that are currently making this transition. Countries where fertility is below two children per woman are assumed to remain at this level for another decade, after which fertility rates will gradually return to replacement level. Similarly, mortality changes are modeled by assuming that the rate of change in the previous decade will continue in the near future. Future mortality in countries with high levels of HIV infection is adjusted to reflect the lagged impact of the disease on mortality.

Figure 2.1a

Population growth rates are declining



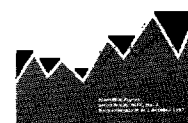
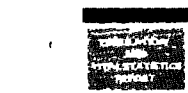
Source: World Bank Staff Estimates

The world's population is expected to increase by more than 1 billion people over the next 14 years. Of this increase, 9 out of 10 people will be added in developing countries. While the highest growth rates will continue to be in Sub-Saharan Africa and the Middle East and North Africa, the variation in growth rates differs from the pattern of absolute increase in population. The largest population increases are expected in South Asia, East Asia, and Sub-Saharan Africa.

Definitions

- **Total population** of an economy includes all residents regardless of legal status or citizenship—except for refugees not permanently settled in the country of asylum, who are generally considered part of the population of their country of origin. The indicators shown are midyear estimates for 1980 and 1996 and projections for 2010.
- **Average annual population growth rate** is the exponential change for the period indicated. See *Statistical methods* for more information.
- **Age dependency ratio** is the ratio of dependents—people younger than 15 and older than 65—to the working-age population—those age 15–64.
- **Population age 60 and above** is the percentage of the total population that is 60 or older.
- **Women age 60 and above** is the ratio of women to men in that age group.

Data sources



The World Bank's population estimates are produced by the Human Development Network and the Development Data Group in consultation with the Bank's operational staff. Important inputs to the World Bank's demographic work

come from the following sources: census reports and other statistical publications and electronic bulletins from country statistical offices; demographic and health surveys conducted by national sources; United Nations Department of Economic and Social Information and Policy Analysis, Statistics Division, *Population and Vital Statistics Report* (quarterly), and Population Division, *World Population Prospects: The 1996 Edition*; Eurostat, *Demographic Statistics* (various years); Council of Europe, *Recent Demographic Developments in Europe and North America 1996*; South Pacific Commission, *Pacific Island Populations Data Sheet 1997*; Centro Latinoamericano de Demografía, *Boletín Demográfico* (various years); Economic and Social Commission for Western Asia, *Demographic and Related Socio-Economic Data Sheets 1995*; and U.S. Bureau of the Census, *World Population Profile 1996*. Projections are based on the methods discussed in Bos and others, *World Population Projections 1994–95*.



2.2 Population dynamics

	Crude death rate		Crude birth rate		Projected additional population from 2000	Population momentum	Future population growth due to			Average annual population growth rates		
	per 1,000 people		per 1,000 people				millions	1996	Momentum millions	Above-replacement fertility millions	Mortality improvements millions	Age 0-14	Age 15-64	Age 65+
	1980	1996	1980	1996	1990-96 %	1990-96 %						1990-96 %
Albania	6	6	29	20	2	1.4	1.2	0.1	0.5	-0.8	0.1	2.6
Algeria	12	5	42	26	31	1.6	18.4	4.8	8.1	0.4	3.5	3.3
Angola	23	19	50	48	37	1.5	6.4	23.7	6.5	3.3	2.8	2.7
Argentina	9	8	24	19	20	1.4	13.5	0.8	5.9	0.2	1.7	2.3
Armenia	6	7	23	13	1	1.2	0.9	-1.0	0.6	-0.5	1.1	6.4
Australia	7	7	15	14	2	1.2	3.2	-1.6	0.8	0.7	1.1	2.1
Austria	12	10	12	11	-2	1.0	0.0	-2.0	0.2	0.8	0.7	0.5
Azerbaijan	7	6	25	17	3	1.3	2.6	-1.8	1.7	0.0	1.0	4.6
Bangladesh	18	10	44	28	127	1.5	69.3	7.8	49.6	0.5	2.6	1.0
Belarus	10	13	16	9	-2	1.0	0.0	-3.2	1.7	-1.5	0.0	3.0
Belgium	12	11	13	11	-2	1.0	0.0	-1.9	0.4	-0.1	0.2	1.2
Benin	19	13	49	42	13	1.6	3.9	6.9	2.6	2.2	3.7	0.3
Bolivia	15	9	39	34	12	1.6	4.6	4.3	2.9	2.0	2.6	3.3
Bosnia and Herzegovina	7	..	19	..	..	..	..	..	..	..	..	..
Botswana	14	13	48	33	2	1.4	0.6	0.4	0.9	1.7	3.1	2.1
Brazil	9	7	31	21	107	1.4	61.6	0.3	44.6	-0.4	2.3	3.2
Bulgaria	11	14	15	9	-3	0.9	-0.6	-2.9	1.0	-2.9	-0.6	1.5
Burkina Faso	20	18	47	45	31	1.4	4.8	19.3	6.6	2.5	2.9	4.0
Burundi	18	17	46	43	18	1.4	3.1	11.1	3.8	3.0	2.4	0.7
Cambodia	27	13	40	34	14	1.4	5.0	5.1	4.3	3.7	2.0	3.2
Cameroon	15	11	47	40	29	1.5	8.0	12.6	8.1	2.7	3.1	2.7
Canada	7	7	15	13	1	1.1	3.7	-3.8	0.8	0.6	1.2	2.6
Central African Republic	19	17	43	38	6	1.4	1.5	2.4	1.7	2.0	2.4	1.9
Chad	22	17	44	42	15	1.5	3.4	8.5	3.0	2.6	2.5	2.2
Chile	7	5	24	19	8	1.4	6.2	0.0	1.5	1.0	1.6	3.1
China	6	7	18	17	348	1.2	276.7	-184.5	255.2	0.1	1.3	3.6
Hong Kong, China	5	5	17	10	-1	1.0	0.3	-2.1	0.5	-0.8	1.8	4.7
Colombia	7	6	30	23	28	1.4	17.5	0.4	9.8	0.8	2.1	5.0
Congo, Dem. Rep.	17	14	48	45	156	1.6	29.8	100.9	25.7	3.3	3.0	2.8
Congo, Rep.	16	15	46	43	8	1.5	1.5	4.5	1.4	3.1	2.6	3.8
Costa Rica	4	4	30	23	3	1.6	2.2	0.1	0.4	1.1	2.5	4.2
Côte d'Ivoire	16	12	51	37	24	1.5	8.4	9.1	6.9	2.2	3.6	3.8
Croatia	..	11	..	11	-1	0.9	-0.3	-1.0	0.6	-2.2	-0.4	4.9
Cuba	6	7	14	14	0	1.2	2.0	-3.0	1.0	-0.1	0.7	1.9
Czech Republic	13	11	15	9	-2	1.0	0.1	-3.6	1.1	-2.5	0.6	0.2
Denmark	11	12	11	13	0	1.0	-0.1	-0.5	0.4	0.9	0.3	-0.4
Dominican Republic	7	5	33	26	7	1.5	4.6	0.4	1.8	0.8	2.4	4.5
Ecuador	9	6	36	26	11	1.6	7.0	1.0	3.0	0.8	2.9	3.2
Egypt, Arab Rep.	13	8	39	26	58	1.5	31.3	9.0	17.7	0.9	2.6	3.3
El Salvador	11	6	39	31	7	1.6	4.1	1.2	1.7	0.5	3.6	4.2
Eritrea	..	13	..	40	11	1.5	2.1	6.1	2.3	2.8	2.6	3.3
Estonia	12	13	15	9	0	0.9	-0.1	-0.5	0.2	-3.1	-1.0	0.9
Ethiopia	20	17	47	48	216	1.5	34.8	148.5	33.0	2.5	1.9	1.8
Finland	9	10	13	12	0	0.9	-0.7	-0.4	1.0	0.1	0.3	1.5
France	10	9	15	13	-1	1.1	6.3	-8.0	0.8	-0.4	0.4	2.0
Gabon	18	14	33	36	2	1.4	0.5	1.0	0.4	3.3	2.2	2.5
Gambia, The	24	14	48	40	2	1.4	0.5	1.1	0.6	3.3	3.8	3.7
Georgia	9	7	18	11	0	1.1	0.6	-1.5	0.7	-1.2	-0.4	3.6
Germany	12	11	11	9	-23	0.9	-5.5	-19.9	2.8	0.4	0.4	1.0
Ghana	15	10	45	36	33	1.6	12.0	14.3	7.0	2.4	2.9	3.7
Greece	9	10	15	10	-2	1.0	0.2	-2.7	0.3	-2.0	0.6	3.4
Guatemala	11	7	43	35	20	1.7	8.2	7.5	4.0	2.3	3.2	4.3
Guinea	24	18	46	43	17	1.5	3.5	10.2	3.4	2.5	2.8	2.9
Guinea-Bissau	25	22	43	44	2	1.4	0.4	1.4	0.6	2.4	1.8	1.7
Haiti	15	12	37	32	9	1.4	3.3	2.1	3.5	2.0	2.1	1.1
Honduras	10	6	43	35	11	1.7	4.8	4.0	2.1	2.4	3.6	4.1

	Crude death rate		Crude birth rate		Projected additional population from 2000	Population momentum	Future population growth due to			Average annual population growth rates				
	per 1,000 people		per 1,000 people				millions	1996	Momentum millions	Above-replacement fertility millions	Mortality improvements millions	Age	Age	Age
	1980	1996	1980	1996								0-14 %	15-64 %	65+ %
Hungary	14	14	14	10	-2	1.0	-0.4	-2.5	1.5	-2.3	0.1	0.6		
India	13	9	35	25	724	1.4	391.9	53.5	278.9	0.9	2.2	3.1		
Indonesia	12	8	34	23	144	1.4	81.0	1.9	61.0	0.2	2.3	3.8		
Iran, Islamic Rep.	11	5	44	26	66	1.6	37.1	13.1	16.1	0.6	3.8	5.3		
Iraq	9	9	41	37	51	1.7	17.2	27.6	5.9	2.1	3.3	3.5		
Ireland	10	9	22	14	1	1.3	0.9	-0.5	0.3	-2.1	1.4	0.5		
Israel	7	6	24	21	4	1.4	2.7	0.5	0.7	2.0	4.2	1.5		
Italy	10	10	11	9	-18	0.9	-3.0	-15.9	1.1	-1.8	0.1	2.2		
Jamaica	7	6	28	21	2	1.5	1.3	-0.3	0.5	0.3	1.4	0.0		
Japan	6	7	14	10	-30	0.8	-21.0	-28.8	19.4	-2.3	0.2	4.0		
Jordan	..	5	..	31	7	1.7	3.4	2.3	1.3	4.0	6.0	5.7		
Kazakhstan	8	10	24	15	6	1.2	3.3	-1.7	4.3	-1.5	0.0	2.7		
Kenya	13	9	51	34	42	1.6	18.2	10.3	13.4	1.4	3.8	1.3		
Korea, Dem. Rep.	6	9	22	22	10	1.2	5.0	-0.9	6.1	1.6	1.4	3.5		
Korea, Rep.	6	6	22	15	6	1.2	7.5	-9.4	8.3	-1.0	1.4	3.5		
Kuwait	4	2	37	22	1	1.5	0.9	0.3	0.2	-4.5	-5.2	1.4		
Kyrgyz Republic	9	8	30	24	4	1.5	2.2	0.2	1.4	0.1	0.7	3.1		
Lao PDR	20	14	45	40	10	1.5	2.7	4.7	2.2	2.7	2.3	6.2		
Latvia	13	14	15	8	-1	1.0	-0.1	-0.9	0.3	-2.3	-1.2	0.8		
Lebanon	9	7	30	24	3	1.5	2.1	0.1	1.0	1.4	2.1	3.2		
Lesotho	15	11	41	32	3	1.5	1.1	1.0	0.8	1.2	2.8	1.9		
Libya	12	5	46	28	9	1.6	3.6	2.9	1.9	1.1	3.6	5.8		
Lithuania	10	12	16	11	0	1.0	0.1	-1.0	0.5	-1.1	-0.1	2.0		
Macedonia, FYR	7	8	21	16	1	1.2	0.4	0.0	0.3	-0.7	0.9	3.5		
Madagascar	16	11	46	41	38	1.6	9.9	21.6	6.8	2.1	3.1	4.7		
Malawi	23	20	57	46	24	1.4	4.6	13.7	5.6	2.5	2.9	1.8		
Malaysia	6	5	31	27	20	1.5	12.3	2.2	5.2	2.0	2.4	3.2		
Mali	22	16	49	49	30	1.6	6.5	17.5	5.9	3.0	2.5	3.2		
Mauritania	19	14	43	38	4	1.5	1.3	2.0	1.0	2.0	3.0	2.2		
Mauritius	6	7	24	18	1	1.3	0.3	0.0	0.2	-0.3	1.6	3.1		
Mexico	7	5	33	26	82	1.6	60.2	2.9	19.1	0.3	2.8	2.3		
Moldova	10	12	20	12	1	1.1	0.5	-0.9	0.9	-1.4	0.2	1.9		
Mongolia	11	7	38	28	3	1.6	1.6	0.4	0.8	0.7	3.1	1.5		
Morocco	12	7	38	25	25	1.5	15.1	2.2	7.7	0.4	2.7	3.9		
Mozambique	20	18	46	44	47	1.5	9.1	27.9	9.9	4.4	3.8	-0.9		
Myanmar	14	10	36	27	39	1.4	21.1	2.7	15.3	0.8	2.2	2.7		
Namibia	14	12	41	36	3	1.5	0.8	1.3	0.8	2.3	2.8	3.0		
Nepal	17	11	43	37	42	1.5	12.6	20.4	9.3	2.6	2.7	2.5		
Netherlands	8	9	13	12	-2	1.0	0.7	-2.8	0.6	0.8	0.5	1.3		
New Zealand	9	8	16	16	1	1.2	0.8	-0.1	0.3	0.8	1.2	2.0		
Nicaragua	11	6	45	33	7	1.7	3.7	1.9	1.5	1.9	3.9	4.6		
Niger	23	18	51	51	33	1.5	5.6	21.7	5.7	3.5	3.0	2.9		
Nigeria	18	13	50	41	280	1.5	68.3	152.7	59.0	2.8	3.1	1.4		
Norway	10	10	12	14	0	1.0	0.1	-0.3	0.4	0.9	0.5	0.1		
Oman	10	4	45	42	10	1.8	2.0	7.3	1.0	5.4	4.9	5.6		
Pakistan	15	8	47	37	260	1.7	105.1	121.1	34.0	2.9	2.8	3.9		
Panama	6	5	29	22	2	1.5	1.5	0.0	0.4	0.6	2.4	2.9		
Papua New Guinea	14	10	37	32	7	1.4	2.0	2.7	2.0	1.8	2.4	5.6		
Paraguay	7	5	36	30	7	1.7	3.6	1.8	1.3	2.3	3.0	2.0		
Peru	11	6	35	25	22	1.5	13.0	1.5	7.1	0.7	2.7	3.8		
Philippines	9	7	35	29	80	1.5	41.0	14.7	24.7	1.6	2.7	3.0		
Poland	10	10	19	11	1	1.1	3.7	-8.6	5.5	-1.9	0.7	2.0		
Portugal	10	11	16	11	-2	1.0	0.2	-2.7	0.9	-1.9	0.0	2.8		
Puerto Rico	6	8	23	17	1	1.3	1.1	-0.3	0.5	-0.5	1.6	1.8		
Romania	10	13	18	10	-4	1.0	0.3	-7.8	3.7	-3.2	0.0	2.0		
Russian Federation	11	14	16	9	-20	1.0	-4.1	-42.6	26.5	-1.8	0.0	3.2		



	Crude death rate		Crude birth rate		Projected additional population from 2000	Population momentum	Future population growth due to			Average annual population growth rates		
	per 1,000 people		per 1,000 people				millions	1996	Momentum millions	Above-replacement fertility millions	Mortality improvements millions	Age 0-14	Age 15-64	Age 65+
	1980	1996	1980	1996	1990-96 %	1990-96 %						1990-96 %
Rwanda	19	21	51	40	18	1.4	3.5	9.3	4.8	-0.3	-0.5	-3.4
Saudi Arabia	9	5	43	35	69	1.6	14.2	46.5	8.0	3.4	3.7	4.7
Senegal	20	14	46	40	18	1.4	3.8	8.9	5.2	2.2	2.8	2.6
Sierra Leone	29	27	49	48	10	1.4	1.8	5.1	2.7	3.3	1.8	-0.5
Singapore	5	5	17	16	0	1.1	0.4	-0.4	0.3	2.5	1.5	4.3
Slovak Republic	10	10	19	11	0	1.1	0.6	-1.5	0.8	-2.0	0.8	1.1
Slovenia	10	9	15	10	-1	0.9	-0.1	-0.6	0.3	-2.8	0.3	1.8
South Africa	12	8	36	27	32	1.5	18.5	1.5	12.3	0.0	2.8	1.1
Spain	8	9	15	9	-10	1.0	0.7	-12.9	1.8	-3.0	0.5	2.3
Sri Lanka	6	6	28	19	10	1.4	6.8	-0.4	3.5	-0.9	1.8	3.6
Sudan	17	12	45	34	48	1.5	13.8	21.6	13.0	0.9	3.0	3.0
Sweden	11	11	12	11	-1	0.9	-0.9	-1.4	1.4	1.3	0.4	0.1
Switzerland	9	9	12	12	-1	1.0	0.1	-1.1	0.1	1.5	0.7	1.0
Syrian Arab Republic	9	5	46	30	23	1.7	11.6	6.2	5.0	1.5	4.1	4.5
Tajikistan	8	5	37	22	6	1.6	3.9	0.0	1.8	1.0	2.3	4.1
Tanzania	15	14	47	41	66	1.5	16.3	32.8	17.2	2.7	3.1	3.2
Thailand	8	7	28	17	17	1.3	18.1	-14.8	13.2	-1.3	2.2	4.0
Togo	16	15	45	42	12	1.5	2.2	7.6	2.3	3.1	2.9	2.7
Trinidad and Tobago	7	7	29	16	1	1.3	0.4	0.0	0.2	-1.3	1.8	1.2
Tunisia	9	6	35	23	7	1.5	4.7	0.1	2.4	0.4	2.6	3.9
Turkey	10	7	32	22	43	1.4	27.5	0.7	14.8	-0.4	2.7	5.3
Turkmenistan	8	7	34	24	4	1.5	2.6	0.3	1.5	3.0	4.1	5.5
Uganda	18	19	49	49	50	1.4	8.4	27.2	14.2	3.3	3.0	1.7
Ukraine	11	15	15	9	-10	0.9	-2.6	-15.1	8.1	-1.7	-0.3	2.1
United Arab Emirates	5	3	30	19	2	1.2	0.6	0.6	0.3	3.8	5.8	6.8
United Kingdom	12	11	13	12	-3	1.1	3.5	-7.8	1.8	0.4	0.3	0.4
United States	9	8	16	15	70	1.2	49.1	11.4	9.9	1.1	1.0	1.2
Uruguay	10	10	19	17	1	1.2	0.7	0.0	0.4	-0.4	0.8	1.6
Uzbekistan	8	6	34	27	24	1.6	14.9	1.9	6.8	1.4	2.4	3.7
Venezuela	6	5	33	25	20	1.5	13.2	1.7	5.1	1.1	2.8	4.3
Vietnam	8	7	36	25	70	1.5	42.8	5.2	22.0	1.2	2.8	2.1
West Bank and Gaza	..	5	..	44	8	1.8	2.0	4.5	1.1	4.6	3.9	4.3
Yemen, Rep.	19	13	53	47	66	1.6	11.1	45.7	9.2	4.3	5.2	3.9
Yugoslavia, FR (Serb./Mont.)	9	11	18	13	1	1.0	0.4	-1.1	1.8	-1.4	-0.1	4.3
Zambia	15	18	50	43	15	1.4	4.0	5.4	5.7	1.9	3.6	1.8
Zimbabwe	13	10	49	31	13	1.5	5.6	1.5	5.6	1.6	2.9	4.2
World	10 w	9 w	27 w	22 w	4,199 t	1.4 w	1,946.2 t	807.4 t	1,445.6 t	0.8 w	1.8 w	2.8 w
Low income	11	9	31	26	3,129	1.5	1,278.8	857.8	992.1	1.2	2.0	3.2
Excl. China & India	16	12	45	37	2,057	1.4	610.2	988.8	458.0	2.1	2.7	2.5
Middle income	10	8	29	21	1,078	1.4	616.7	63.8	397.7	0.2	1.9	3.1
Lower middle income	10	9	29	21	721	1.4	418.0	16.5	286.7	0.2	1.9	3.4
Upper middle income	9	7	28	22	357	1.4	198.7	47.3	111.0	0.1	2.1	2.4
Low & middle income	11	9	30	24	4,207	1.4	1,895.5	921.6	1,389.8	0.9	1.9	3.2
East Asia & Pacific	8	7	22	19	761	1.3	509.3	-160.6	412.0	0.3	1.6	3.6
Europe & Central Asia	10	11	19	13	50	1.1	57.8	-97.6	89.7	-1.2	0.5	2.8
Latin America & Carib.	8	7	31	23	385	1.4	238.3	28.3	118.3	0.4	2.4	3.0
Middle East & N. Africa	11	7	41	29	433	1.6	173.8	172.3	86.4	1.5	3.5	4.1
South Asia	14	9	37	27	1,163	1.4	585.7	202.4	375.3	1.1	2.3	3.0
Sub-Saharan Africa	18	14	47	41	1,416	1.5	330.6	776.8	308.1	2.4	2.9	2.1
High income	9	9	15	12	-8	1.1	50.7	-114.2	55.8	0.4	1.1	2.1

About the data

The vital rates shown in the table are based on data derived from registration systems, censuses, and sample surveys conducted by national statistical offices. As with the basic demographic data in table 2.1, estimates for 1996 are based on projections from censuses or surveys from earlier years, and hence international comparisons are limited by differences in definitions and data collection and estimation methods.

Vital registers are the preferred source of these data, but in many developing countries systems for registering births and deaths do not exist or are incomplete because of deficiencies in geographic coverage or population coverage. For these countries, vital rates are estimated by applying various demographic methods to incomplete vital registration data or to data from surveys and censuses. The United Nations Department of Economic and Social Information and Policy Analysis has monitored vital registration systems for many years. Its quarterly publication, *Population and Vital Statistics Report*, shows that the proportion of countries with at least 90 percent complete vital registration increased from 46 percent in 1990 to 52 percent in 1997. Still, some of the most populous developing countries—China, India, Indonesia, Brazil, Pakistan, Nigeria, Bangladesh—do not have complete vital registration systems. As a result less than 25 percent of vital events worldwide are thought to be recorded.

In many countries fertility rates have fallen to near the two-child replacement level, and in some countries they have fallen well below that. But almost all these countries will continue to have growing populations over the next several decades as large cohorts born in previous years move through the reproductive ages, generating more births than are offset by deaths in the smaller, older cohorts. The reverse may happen in countries with aging populations and a history of low fertility rates. This phenomenon, called *population momentum*, is measured here as the ratio of the population when zero growth has been achieved to the population in 2000, assuming that fertility remains at replacement level from 2000 onward. A momentum ratio greater than one indicates that population will continue to grow even after replacement-level fertility has been achieved; a ratio of less than one indicates that population will decline.

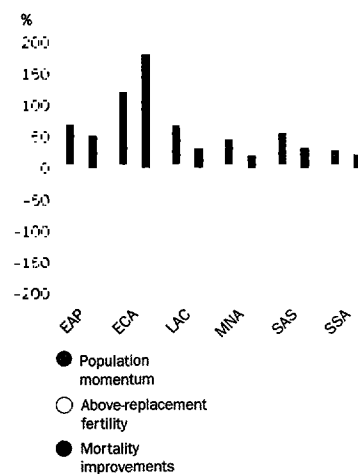
Population will continue to grow in most countries for several reasons: fertility will remain above replacement level, increasing the size of each generation; population momentum in the age structure will lead to

more births than deaths (momentum greater than one); mortality will keep falling (the situation in most countries), with the greatest effect on population growth in countries where infant and child mortality are currently high; and net migration will be positive.

The table shows the contribution that each of these components makes to future population growth (mortality and migration are combined). For example, Algeria's population is projected to grow to 62 million before it stabilizes. Of the 31 million increase, about 18 million is the result of population momentum, 5 million is due to excess fertility, and 8 million is due to projected mortality decline. A negative value for any component indicates that current conditions are such that they would lead to population decline. A momentum indicator of less than one indicates that even a recovery to replacement-level fertility by 2000 will not prevent a decline in population.

Figure 2.2a

Population momentum tends to be the biggest contributor to population growth



Source: World Bank staff estimates.

Between 2000 and when stationary population is reached, the world's population will increase by about 4.2 billion people. This figure shows the contributions that population momentum, high fertility, and mortality improvements will make to future population growth. Population momentum is likely to be a major source of population growth in all regions except Sub-Saharan Africa. In Sub-Saharan Africa the persistence of fertility well above replacement level will account for more than half of the region's future population growth. In contrast, low fertility in Europe and Central Asia and East Asia will reduce overall population growth.

Definitions

- **Crude death rate** and **crude birth rate** are the number of deaths and the number of live births occurring during the year, per 1,000 midyear population. The difference between the crude birth rate and crude death rate is the rate of natural increase.
- **Projected additional population from 2000** is the projected increase in population between 2000 and the projected stationary population that is reached after fertility has been at replacement level for many decades. A negative number indicates a projected decline in population.
- **Population momentum** is the ratio of the population when zero growth has been achieved to the population in year t (in this case the year 2000), given the assumption that fertility remains at replacement level from year t onward.
- **Future population growth due to momentum** is the projected increase in population from 2000 onward that would occur if fertility were at replacement level. A negative number indicates that negative momentum has built up in the age structure as the result of fertility being below replacement level for several decades.
- **Future population growth due to above-replacement fertility** is the projected change in population from 2000 onward that would occur if fertility were not at replacement level.
- **Future population growth due to mortality improvements** is the projected increase in population from 2000 onward due to projected changes in mortality and net migration.
- **Average annual population growth rates** are calculated using the exponential end-point method (see *Statistical methods* for more information).

Data sources

The World Bank's population estimates are produced by the Human Development Network and the Development Data Group in consultation with the Bank's operational staff. Important inputs to the World Bank's demographic work come from the following sources: United Nations Department of Economic and Social Information and Policy Analysis, Statistics Division, *Population and Vital Statistics Report* (quarterly), and Population Division, *World Population Prospects: The 1996 Edition*; census reports and other statistical publications from country statistical offices; demographic and health surveys conducted by national sources; and Eurostat, *Demographic Statistics* (various years). Projections are based on the methods discussed in Bos and others, *World Population Projections 1994-95*.



2.3 Labor force structure

	Population age 15-64			Labor force								
	millions		1980	Total millions	1996	2010	Average annual growth rate		Female		Children 10-14	
	1980	1996					%	1996-2010	% of labor force	% of age group	1980	1996
Albania	2	2	1	2	2	1.8	1.1	39	41	4	1	
Algeria	9	17	5	9	15	3.7	3.6	21	25	7	1	
Angola	4	5	3	5	8	2.3	2.7	47	46	30	27	
Argentina	17	22	11	14	18	1.5	1.9	28	31	8	4	
Armenia	2	2	1	2	2	1.2	0.9	48	48	0	0	
Australia	10	12	7	9	10	1.8	0.7	37	43	0	0	
Austria	5	5	3	4	4	0.5	-0.1	40	41	0	0	
Azerbaijan	4	5	3	3	4	1.1	1.4	47	44	0	0	
Bangladesh	44	66	41	61	81	2.4	1.9	42	42	35	30	
Belarus	6	7	5	5	5	0.2	0.0	50	49	0	0	
Belgium	6	7	4	4	4	0.3	-0.2	34	40	0	0	
Benin	2	3	2	3	4	2.5	2.5	47	48	30	27	
Bolivia	3	4	2	3	4	2.4	2.4	33	37	19	14	
Bosnia and Herzegovina	3	..	2	..	..	..	..	33	..	1	..
Botswana	0	1	0	1	1	2.9	1.7	50	46	26	16	
Brazil	70	103	48	72	87	2.4	1.2	28	35	19	16	
Bulgaria	6	6	5	4	4	-0.5	-0.8	45	48	0	0	
Burkina Faso	3	5	4	6	7	1.9	1.9	48	47	71	50	
Burundi	2	3	2	3	5	2.5	2.6	50	49	50	49	
Cambodia	4	6	3	5	7	2.5	2.3	56	53	27	24	
Cameroon	5	7	4	6	8	2.5	2.5	37	38	34	25	
Canada	17	20	12	16	17	1.5	0.5	40	45	0	0	
Central African Republic	1	2	1	2	2	1.6	1.7	48	47	39	31	
Chad	2	3	2	3	5	2.1	2.3	43	44	42	38	
Chile	7	9	4	6	7	2.3	1.9	26	32	0	0	
China	586	821	539	718	804	1.7	0.7	43	45	30	11	
Hong Kong, China	3	4	2	3	4	1.6	0.7	34	37	6	0	
Colombia	16	23	9	16	22	3.2	2.0	26	38	12	6	
Congo, Dem. Rep.	14	22	12	19	29	2.7	2.8	45	44	33	29	
Congo, Rep.	1	1	1	1	2	2.7	2.4	43	43	27	26	
Costa Rica	1	2	1	1	2	3.1	1.9	21	30	10	5	
Côte d'Ivoire	4	7	3	5	7	2.6	2.0	32	33	28	20	
Croatia	3	3	2	2	2	0.2	-0.3	40	44	0	0	
Cuba	6	8	4	5	6	1.9	0.7	31	38	0	0	
Czech Republic	6	7	5	6	5	0.3	-0.3	47	47	0	0	
Denmark	3	4	3	3	3	0.4	-0.3	44	46	0	0	
Dominican Republic	3	5	2	3	5	2.8	2.2	25	29	25	16	
Ecuador	4	7	3	4	6	3.2	2.5	20	27	9	5	
Egypt, Arab Rep.	23	35	14	22	32	2.4	2.5	26	29	18	11	
El Salvador	2	3	2	2	4	2.3	2.9	27	35	17	15	
Eritrea	..	2	..	2	3	..	2.9	47	47	44	39	
Estonia	1	1	1	1	1	-0.2	-0.7	51	49	0	0	
Ethiopia	19	30	17	26	39	2.6	2.7	42	41	46	42	
Finland	3	3	2	3	2	0.4	-0.3	46	48	0	0	
France	34	38	24	26	27	0.5	0.3	40	44	0	0	
Gabon	0	1	0	1	1	2.0	1.6	45	44	29	18	
Gambia, The	0	1	0	1	1	3.1	2.4	45	45	44	36	
Georgia	3	4	3	3	3	0.2	0.1	49	46	0	0	
Germany	52	56	37	41	40	0.5	0.0	40	42	0	0	
Ghana	6	9	5	8	12	2.8	2.4	51	51	16	13	
Greece	6	7	4	4	5	1.0	0.3	28	37	5	0	
Guatemala	4	6	2	4	6	2.9	3.1	22	27	19	16	
Guinea	2	3	2	3	5	2.0	2.4	47	47	41	33	
Guinea-Bissau	0	1	0	1	1	1.5	2.0	40	40	43	38	
Haiti	3	4	3	3	4	1.4	1.5	45	43	33	25	
Honduras	2	3	1	2	4	3.5	3.4	25	30	14	8	

	Population age 15-64		Labor force								
	millions		Total millions			Average annual growth rate %		Female % of labor force		Children 10-14 % of age group	
	1980	1996	1980	1996	2010	1980-96	1996-2010	1980	1996	1980	1996
Hungary	7	7	5	5	4	-0.4	-0.4	43	44	0	0
India	395	574	300	408	519	1.8	1.6	34	32	21	14
Indonesia	83	124	59	91	124	2.6	2.0	35	40	13	9
Iran, Islamic Rep.	20	35	12	19	31	2.8	3.3	20	25	14	4
Iraq	7	12	4	6	9	2.8	3.3	17	18	11	3
Ireland	2	2	1	1	2	0.8	1.0	28	33	1	0
Israel	2	4	1	2	3	2.8	2.5	34	40	0	0
Italy	36	39	23	25	24	0.6	-0.2	33	38	2	0
Jamaica	1	2	1	1	2	1.9	1.3	46	46	0	0
Japan	79	87	57	66	66	0.9	0.0	38	41	0	0
Jordan	1	2	1	1	2	4.7	3.8	15	22	4	1
Kazakhstan	9	11	7	8	8	0.6	0.5	48	47	0	0
Kenya	8	14	8	13	18	3.1	2.2	46	46	45	41
Korea, Dem. Rep.	10	15	8	11	13	2.3	1.1	45	45	3	0
Korea, Rep.	24	32	16	22	26	2.1	1.2	39	41	0	0
Kuwait	1	1	0	1	1	2.6	1.7	13	29	0	0
Kyrgyz Republic	2	3	2	2	3	1.4	1.7	48	47	0	0
Lao PDR	2	2	2	2	3	1.9	2.5	45	47	31	27
Latvia	2	2	1	1	1	-0.3	-0.6	51	50	0	0
Lebanon	2	2	1	1	2	2.7	2.5	23	28	5	0
Lesotho	1	1	1	1	1	2.2	2.1	38	37	28	22
Libya	2	3	1	1	2	2.6	2.4	19	21	9	0
Lithuania	2	2	2	2	2	0.3	-0.1	50	48	0	0
Macedonia, FYR	1	1	1	1	1	0.7	0.8	36	41	1	0
Madagascar	4	7	4	7	10	2.5	2.8	45	45	40	35
Malawi	3	5	3	5	7	2.6	2.1	51	49	45	34
Malaysia	8	12	5	8	12	2.6	2.4	34	37	8	3
Mali	3	5	3	5	7	2.2	2.6	47	46	61	54
Mauritania	1	1	1	1	2	2.1	2.3	45	44	30	24
Mauritius	1	1	0	0	1	1.9	1.2	26	32	5	3
Mexico	34	57	22	37	52	3.0	2.3	27	31	9	6
Moldova	3	3	2	2	2	0.1	0.2	50	49	3	0
Mongolia	1	1	1	1	2	2.8	2.3	46	46	4	2
Morocco	10	16	7	11	15	2.4	2.4	34	35	21	5
Mozambique	6	9	7	9	13	1.8	2.5	49	48	39	34
Myanmar	19	28	17	23	29	1.8	1.5	44	43	28	24
Namibia	1	1	0	1	1	2.3	2.1	40	41	34	21
Nepal	8	12	7	10	15	2.3	2.4	39	40	56	45
Netherlands	9	11	6	7	7	1.4	0.0	31	40	0	0
New Zealand	2	2	1	2	2	1.7	0.9	34	44	0	0
Nicaragua	1	2	1	2	3	3.1	3.4	28	36	19	14
Niger	3	5	3	4	7	2.8	2.8	45	44	48	45
Nigeria	38	60	30	45	68	2.5	2.6	36	36	29	25
Norway	3	3	2	2	2	0.8	0.3	40	46	0	0
Oman	1	1	0	1	1	3.6	4.1	7	15	6	0
Pakistan	44	72	29	48	76	2.9	3.1	23	27	23	17
Panama	1	2	1	1	1	2.7	1.9	30	34	6	3
Papua New Guinea	2	3	2	2	3	2.0	2.1	42	42	28	19
Paraguay	2	3	1	2	3	2.7	2.7	27	29	15	7
Peru	9	15	5	9	13	2.9	2.4	24	29	4	2
Philippines	27	42	19	30	42	2.7	2.3	35	37	14	8
Poland	23	26	19	19	20	0.3	0.3	45	46	0	0
Portugal	6	7	5	5	5	0.4	0.0	39	43	8	2
Puerto Rico	2	2	1	1	2	1.7	1.3	32	36	0	0
Romania	14	15	11	11	10	-0.1	-0.1	46	44	0	0
Russian Federation	95	99	76	78	78	0.1	0.0	49	49	0	0



	Population age 15-64					Labor force					
	millions		1980	Total millions	2010	Average annual growth rate %		Female % of labor force		Children 10-14 % of age group	
	1980	1996				1980-96	1996-2010	1980	1996	1980	1996
Rwanda	3	3	3	4	6	2.7	2.5	49	49	43	42
Saudi Arabia	5	11	3	6	10	5.0	3.2	8	14	5	0
Senegal	3	4	3	4	5	2.4	2.3	42	43	43	31
Sierra Leone	2	2	1	2	2	1.9	2.3	36	36	19	15
Singapore	2	2	1	1	2	2.0	0.8	35	38	2	0
Slovak Republic	3	4	2	3	3	0.8	0.2	45	48	0	0
Slovenia	1	1	1	1	1	0.2	-0.2	46	46	0	0
South Africa	15	23	10	15	19	2.2	1.6	35	37	1	0
Spain	23	27	14	17	17	1.1	0.2	28	36	0	0
Sri Lanka	9	12	5	8	10	2.0	1.6	27	35	4	2
Sudan	10	15	7	10	15	2.3	2.4	27	29	33	29
Sweden	5	6	4	5	5	0.6	-0.2	44	48	0	0
Switzerland	4	5	3	4	4	1.2	0.2	37	40	0	0
Syrian Arab Republic	4	8	2	4	7	2.9	3.1	23	26	14	5
Tajikistan	2	3	2	2	3	2.0	2.3	47	44	0	0
Tanzania	9	16	10	16	22	2.9	2.2	50	49	43	39
Thailand	26	40	24	35	39	2.1	0.8	47	46	25	15
Togo	1	2	1	2	3	2.5	2.6	39	40	36	28
Trinidad and Tobago	1	1	0	1	1	1.3	1.8	32	37	1	0
Tunisia	3	6	2	3	5	2.7	2.4	29	31	6	0
Turkey	25	40	19	29	38	2.5	1.8	35	36	21	23
Turkmenistan	2	3	1	2	3	2.6	2.5	47	45	0	0
Uganda	6	10	7	10	14	2.3	2.4	48	48	49	45
Ukraine	33	34	26	25	24	-0.2	-0.4	50	49	0	0
United Arab Emirates	1	2	1	1	2	4.3	1.8	5	14	0	0
United Kingdom	36	38	27	29	29	0.5	0.1	39	43	0	0
United States	151	174	110	134	150	1.2	0.7	42	46	0	0
Uruguay	2	2	1	1	2	1.3	0.9	31	41	4	2
Uzbekistan	9	13	6	9	14	2.3	2.4	48	46	0	0
Venezuela	8	13	5	9	13	3.2	2.4	27	33	4	1
Vietnam	28	44	26	38	48	2.3	1.6	48	49	22	8
West Bank and Gaza	..	..	..	..	..	..	..	..	..	..	..
Yemen, Rep.	4	8	2	5	9	3.9	3.8	33	29	26	20
Yugoslavia, FR (Serb./Mont.)	6	7	4	5	5	0.7	0.2	38	42	0	0
Zambia	3	5	2	4	5	2.8	2.3	45	45	19	16
Zimbabwe	3	6	3	5	7	2.9	1.8	44	44	37	29
World	2,595 t	3,586 t	2,034 t	2,739 t	3,343 t	1.7 w	1.3 w	39 w	40 w	20 w	13 w
Low income	1,352	1,973	1,153	1,604	2,000	1.9	1.5	40	40	28	18
Excl. China & India	371	578	315	478	678	2.4	2.3	40	40	31	27
Middle income	715	997	509	695	877	1.8	1.6	37	38	11	7
Lower middle income	506	700	367	494	626	1.7	1.6	39	39	11	7
Upper middle income	209	279	142	201	252	2.0	1.5	32	35	10	7
Low & middle income	2,067	2,970	1,663	2,299	2,878	1.9	1.5	39	39	23	14
East Asia & Pacific	796	1,140	704	966	1,127	1.9	1.0	42	44	27	11
Europe & Central Asia	276	313	215	234	250	0.5	0.4	47	46	3	4
Latin America & Carib.	200	300	130	201	266	2.6	1.9	28	33	13	9
Middle East & N. Africa	91	156	54	89	140	2.9	3.0	24	26	14	5
South Asia	508	749	389	546	716	2.0	1.8	34	33	23	17
Sub-Saharan Africa	196	312	171	263	379	2.5	2.4	42	42	35	30
High income	528	616	372	440	466	1.0	0.4	38	43	0	0

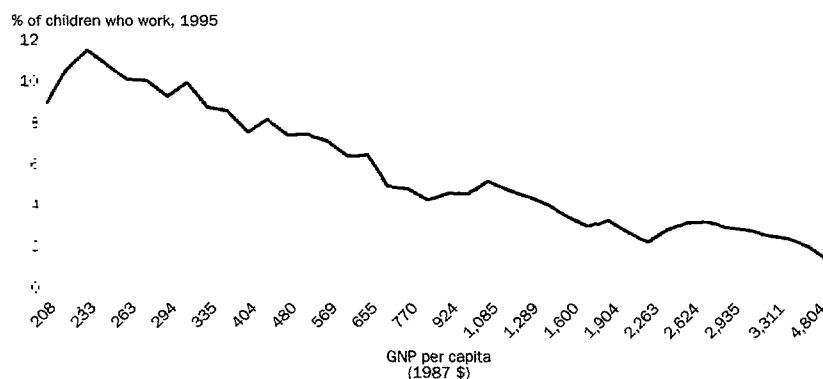
About the data

The labor force is the supply of labor in an economy. It includes people who are currently employed and people who are unemployed but seeking work. Not everyone who works is included, however. Unpaid workers, family workers, and students are usually omitted, and in some countries members of the military are also not counted. The size of the labor force tends to vary during the year as seasonal workers enter and leave the labor force.

Data on the labor force are compiled by the International Labour Organization (ILO) from census or labor force surveys. Despite the ILO's efforts to encourage the use of international standards, labor force data are not fully comparable because of differences among countries, and sometimes within countries, in definitions and methods of collection, classification, and tabulation. In some countries data on the labor force refer to people above a specific age, while in others there is no specific age provision. The reference period of the census or survey is another important source of differences: in some countries data refer to a person's status on the day of the census or survey or during a specific period before the inquiry date, while in others the data are recorded without reference to any period. In developing countries, where the household is often the basic unit of production and all members contribute to output, but some at low intensity or irregular intervals, the estimated labor force may significantly underestimate the numbers actually working (ILO 1990a, *Yearbook of Labour Statistics* 1996).

Figure 2.3a

Children work less as incomes rise



Source: ILO and World Bank estimates.

Child labor is a poverty issue. Children who work rather than attend school cannot fully develop their skills. And premature and extensive engagement in work can damage a child's health and social development, leading to lower earning power and reduced productivity over the longer term. Thus the cycle of poverty continues.

The incidence of child labor declines as per capita income rises. In countries where annual per capita income is \$500 or less, the proportion of children age 10–14 who work is extremely high, at 30–50 percent (see table). But the rate falls to 10–30 percent in countries with annual incomes between \$500 and \$1,000. Many factors affect the prevalence of child labor, including culture and the structure of production. For instance, child labor tends to be more common in countries where agriculture accounts for a large share of GDP.

The population age 15–64 is often used to provide a rough estimate of the potential labor force. But in many developing countries children under 15 work full or part time. And in some high-income countries many workers postpone retirement past age 65. As a result labor force participation rates may systematically over- or underestimate actual rates.

The labor force estimates in the table were calculated by applying gender-specific activity rates from the ILO database to create a labor force series consistent with the World Bank's population estimates. This procedure sometimes results in estimates of the absolute size of the labor force that differ slightly from those published in the ILO's *Yearbook of Labour Statistics*.

Estimates of women in the labor force are not comparable internationally because in many countries large numbers of women assist on farms or in other family enterprises without pay, and countries differ in the criteria used to determine the extent to which such workers are to be counted as part of the labor force.

Reliable estimates of child labor are hard to obtain. In many countries child labor is officially presumed not to exist, and so is not included in surveys or covered in official data. Data are also subject to underreporting because they do not include children engaged in agricultural or household activities with their families.

Definitions

- **Population age 15–64** is the number of people who could potentially be economically active, excluding children.
- **Total labor force** comprises people who meet the ILO definition of the economically active population: all people who supply labor for the production of goods and services during a specified period. It includes both the employed and the unemployed. While national practices vary in the treatment of such groups as the armed forces and seasonal or part-time workers, in general the labor force includes the armed forces, the unemployed, and first-time job-seekers, but excludes homemakers and other unpaid caregivers and workers in the informal sector.
- **Average annual growth rate** of the labor force is calculated using the exponential end-point method (see *Statistical methods* for more information).
- **Females as a percentage of the labor force** shows the extent to which women are active in the labor force.
- **Children 10–14 in the labor force** is the share of that age group that is active in the labor force.

Data sources



Population estimates are from the World Bank's population database. Labor force activity rates are from the ILO database, *Estimates and Projections of the Economically Active Population, 1950–2010*. The ILO publishes estimates of the economically active population in its *Yearbook of Labour Statistics*.



2.4 Employment by occupation

	Employers and own-account workers				Employees				Contributing family workers			
	Male		Female		Male		Female		Male		Female	
	% of economically active male population		% of economically active female population		% of economically active male population		% of economically active female population		% of economically active male population		% of economically active female population	
	1980	1994	1980	1994	1980	1994	1980	1994	1980	1994	1980	1994
Albania												
Algeria												
Angola												
Argentina												
Armenia												
Australia	15.8	16.6	11.2	10.5	78.0	73.2	79.1	79.4	0.3	0.7	0.5	1.3
Austria	15.6	10.9	19.1	8.0	84.4	87.7	80.9	86.9	1.4	1.4	9.1	5.1
Azerbaijan												
Bangladesh		39.2		6.4		15.6		5.2		22.3		83.3
Belarus												
Belgium	14.0	16.1	8.1	8.2	79.5	74.6	70.2	69.5	0.8	0.9	6.9	7.0
Benin												
Bolivia		31.2		42.0		59.3		43.6		3.9		8.4
Bosnia and Herzegovina												
Botswana												
Brazil		28.7		21.9		61.2		64.4		6.4		10.2
Bulgaria												
Burkina Faso												
Burundi												
Cambodia												
Cameroon	61.2		58.7		21.3		3.5		9.2		32.7	
Canada	10.1	11.1	6.4	7.7	89.3	87.9	90.7	90.3	0.3	0.2	1.9	0.9
Central African Republic												
Chad												
Chile	24.4	29.3	16.5	20.4	46.1	63.0	53.8	67.8	9.3	2.3	11.4	5.0
China												
Hong Kong, China	12.6	14.5	4.1	3.2	83.0	83.4	88.5	92.9	0.6	0.2	3.8	2.0
Colombia		32.9		24.1		66.3		62.2		0.6		2.2
Congo, Dem. Rep.												
Congo, Rep.												
Costa Rica	22.6	26.1	10.9	19.1	70.9	70.3	82.8	76.4	5.0	3.2	3.2	3.5
Côte d'Ivoire												
Croatia												
Cuba												
Czech Republic												
Denmark	17.2	12.7	3.0	3.2	81.1	86.8	89.1	93.1	0.1	0.2	5.5	3.4
Dominican Republic												
Ecuador												
Egypt, Arab Rep.	29.7	28.6	12.0	12.2	52.8	54.7	66.0	35.0	13.6	10.2	2.7	35.8
El Salvador	24.5	30.6	35.3	38.1	62.1	54.5	53.6	40.6	12.6	11.6	7.7	8.9
Eritrea												
Estonia												
Ethiopia												
Finland	11.2	16.2	9.0	8.8	85.3	79.9	86.3	87.0	1.6	0.8	2.4	0.4
France												
Gabon												
Gambia, The												
Georgia												
Germany												
Ghana												
Greece	44.6	41.5	18.7	17.3	48.4	51.7	41.4	51.3	3.7	4.4	34.2	22.4
Guatemala	34.5	23.6	49.9	26.4	52.0	72.6	40.4	68.0	11.5	3.4	7.6	4.7
Guinea												
Guinea-Bissau												
Haiti	61.1	60.7	56.9	56.7	15.5	15.4	18.2	18.3	11.0	10.9	9.8	9.7
Honduras												



	Employers and own-account workers				Employees				Contributing family workers			
	Male		Female		Male		Female		Male		Female	
	% of economically active male population		% of economically active female population		% of economically active male population		% of economically active female population		% of economically active male population		% of economically active female population	
	1980	1994	1980	1994	1980	1994	1980	1994	1980	1994	1980	1994
Hungary	2.9	13.5	1.4	8.1	80.6	85.3	78.9	88.3	0.3	1.2	5.7	3.6
India	..	..	..	..	..	..	..	..	..	..	..	..
Indonesia	21.3	52.2	19.4	28.7	63.3	31.5	37.1	24.0	12.6	14.1	39.9	44.7
Iran, Islamic Rep.	..	..	..	..	..	..	..	..	..	..	..	..
Iraq	..	..	..	..	..	..	..	..	..	..	..	..
Ireland	23.5	23.6	6.3	6.8	68.7	72.7	84.4	88.6	2.2	1.2	4.7	1.7
Israel	23.7	19.0	11.6	8.7	71.2	74.4	78.1	79.9	0.9	0.3	4.3	1.5
Italy	24.4	25.9	13.9	13.8	68.5	62.3	63.5	63.7	2.4	2.5	9.7	6.5
Jamaica	..	..	..	..	..	..	..	..	..	..	..	..
Japan	19.0	14.1	13.4	8.9	75.5	81.0	62.0	75.5	3.2	1.8	22.5	12.4
Jordan	..	..	..	..	..	..	..	..	..	..	..	..
Kazakhstan	..	..	..	..	..	..	..	..	..	..	..	..
Kenya	..	..	..	..	..	..	..	..	..	..	..	..
Korea, Dem. Rep.	..	..	..	..	..	..	..	..	..	..	..	..
Korea, Rep.	38.0	33.7	22.4	18.4	49.0	61.2	38.0	56.3	6.8	2.0	36.1	23.0
Kuwait	..	..	..	..	..	..	..	..	..	..	..	..
Kyrgyz Republic	..	..	..	..	..	..	..	..	..	..	..	..
Lao PDR	..	..	..	..	..	..	..	..	..	..	..	..
Latvia	..	..	..	..	..	..	..	..	..	..	..	..
Lebanon	..	..	..	..	..	..	..	..	..	..	..	..
Lesotho	..	..	..	..	..	..	..	..	..	..	..	..
Libya	..	..	..	..	..	..	..	..	..	..	..	..
Lithuania	..	..	..	..	..	..	..	..	..	..	..	..
Macedonia, FYR	..	..	..	..	..	..	..	..	..	..	..	..
Madagascar	..	..	..	..	..	..	..	..	..	..	..	..
Malawi	..	..	..	..	..	..	..	..	..	..	..	..
Malaysia	..	25.0	..	13.7	..	71.4	..	71.5	..	3.6	..	14.8
Mali	..	..	..	..	..	..	..	..	..	..	..	..
Mauritania	..	..	..	..	..	..	..	..	..	..	..	..
Mauritius	..	..	..	..	..	..	..	..	..	..	..	..
Mexico	..	33.2	..	23.1	..	52.5	..	56.6	..	12.0	..	17.1
Moldova	..	..	..	..	..	..	..	..	..	..	..	..
Mongolia	..	..	..	..	..	..	..	..	..	..	..	..
Morocco	..	..	..	..	..	..	..	..	..	..	..	..
Mozambique	..	..	..	..	..	..	..	..	..	..	..	..
Myanmar	..	..	..	..	..	..	..	..	..	..	..	..
Namibia	..	..	..	..	..	..	..	..	..	..	..	..
Nepal	..	..	..	..	..	..	..	..	..	..	..	..
Netherlands	11.8	12.0	4.9	7.5	81.6	81.7	78.7	82.0	0.4	0.4	5.4	2.4
New Zealand	..	66.3	..	77.7	..	23.1	..	12.0	..	0.6	..	1.5
Nicaragua	..	..	..	..	..	..	..	..	..	..	..	..
Niger	..	..	..	..	..	..	..	..	..	..	..	..
Nigeria	51.6	..	65.3	..	33.7	..	15.7	..	7.6	..	11.7	..
Norway	13.6	11.0	4.2	4.8	83.5	82.1	87.6	89.1	1.4	0.7	5.5	1.2
Oman	..	..	..	..	..	..	..	..	..	..	..	..
Pakistan	..	45.8	..	13.0	..	34.0	..	22.6	..	15.6	..	47.6
Panama	33.6	33.9	12.1	11.2	57.7	58.5	78.8	80.1	6.2	4.4	2.7	2.0
Papua New Guinea	..	..	..	..	..	..	..	..	..	..	..	..
Paraguay	..	33.3	..	34.8	..	64.2	..	60.4	..	2.1	..	4.2
Peru	..	33.1	..	36.1	..	62.4	..	44.2	..	3.5	..	7.5
Philippines	40.7	39.5	24.7	30.4	40.5	42.3	38.9	40.8	15.4	10.4	28.0	19.3
Poland	..	24.6	..	18.8	..	67.9	..	69.7	..	4.7	..	7.5
Portugal	20.9	24.6	8.5	21.2	71.7	73.3	58.5	75.3	4.6	1.4	25.2	2.3
Puerto Rico	17.9	19.2	4.4	5.9	80.2	79.7	91.1	90.9	0.5	0.3	2.4	1.3
Romania	..	..	..	..	..	..	..	..	..	..	..	..
Russian Federation	..	..	..	..	..	..	..	..	..	..	..	..



	Employers and own-account workers				Employees				Contributing family workers			
	Male		Female		Male		Female		Male		Female	
	% of economically active male population	% of economically active female population	% of economically active male population	% of economically active female population	% of economically active male population	% of economically active female population	% of economically active male population	% of economically active female population	% of economically active male population	% of economically active female population	% of economically active male population	% of economically active female population
	1980	1994	1980	1994	1980	1994	1980	1994	1980	1994	1980	1994
Rwanda												
Saudi Arabia												
Senegal												
Sierra Leone												
Singapore	15.9	17.2	5.1	5.1	79.6	80.0	87.4	90.3	1.7	0.2	4.0	1.8
Slovak Republic		87.9		92.5		8.3		2.6		0.1		0.2
Slovenia												
South Africa												
Spain	21.7	20.1	14.1	12.0	71.8	72.9	60.7	67.8	3.2	2.2	17.5	6.0
Sri Lanka	28.2	29.1	11.8	14.9	54.7	56.4	53.7	51.8	6.4	4.6	13.6	12.0
Sudan												
Sweden	10.1	13.8	3.9	5.3	88.0	76.6	92.9	87.4	0.2	0.4	0.9	0.5
Switzerland		15.4		9.4		83.3		85.7		1.3		4.9
Syrian Arab Republic	37.1	36.5	9.9	5.7	56.0	50.1	48.1	45.7	5.3	8.3	37.1	34.5
Tajikistan												
Tanzania												
Thailand	43.5	38.1	17.3	22.6	25.9	44.2	16.9	35.4	29.6	11.5	65.1	29.4
Togo												
Trinidad and Tobago	14.6	21.5	9.7	12.8	81.3	75.2	80.8	81.1	2.8	1.7	6.4	5.4
Tunisia												
Turkey		36.0		8.6		49.2		24.1		12.1		62.9
Turkmenistan												
Uganda												
Ukraine												
United Arab Emirates												
United Kingdom		14.9		6.5		71.0		84.1		0.3		0.9
United States	10.2	9.8	5.1	6.6	88.9	89.7	92.7	92.6	0.3	0.1	1.2	0.2
Uruguay		26.4		19.4		70.8		73.8		1.1		3.5
Uzbekistan												
Venezuela	29.9	37.1	17.3	25.1	60.2	53.0	74.4	65.0	3.0	1.6	3.3	1.1
Vietnam												
West Bank and Gaza												
Yemen, Rep.												
Yugoslavia, FR (Serb./Mont.)												
Zambia												
Zimbabwe												

About the data

This table shows the distribution of employment classified by occupational status according to the International Classification of Status in Employment (ICSE). ICSE classifications are based on the explicit or implicit employment contract workers have with other people or organizations. The basic criteria for defining classification groups are the type of economic risk and the type of authority over establishments and other workers that the job incumbent has or will have. Until 1993 the main ICSE groups were *employers, own-account workers, employees, members of producers cooperatives, and unpaid family workers*. In 1993 the group unpaid family workers was changed to *contributing family workers* and the group own-account workers was expanded to include people working in a family enterprise with the same degree of commitment as the head of the enterprise. These people, usually women, were formerly considered unpaid family workers.

Data on employment are drawn from labor force surveys, enterprise censuses and surveys, administrative records of social insurance schemes, and official national estimates. The concept of employment generally refers to people above a certain age who worked or who held a job during a reference period. Shares of occupational employment in the labor force are calculated using the International Labour Organization's (ILO) labor force estimates, which may differ from those based on the World Bank's population estimates as shown in table 2.3. Occupational categories should add up to 100 percent. Where they do not, the difference arises from people who are not classifiable by status.

Employment data include both full-time and part-time workers. There are, however, many differences in how countries define and measure employment status, particularly for part-time workers, students, members of the armed forces, and household workers. Because of these differences, the content of ICSE groups is not easily comparable across countries (ILO, *Yearbook of Labour Statistics 1996*, p. 64). In most countries managers and directors of incorporated enterprises are classified as employees, but in some they are classified as employers. Similarly, in most countries family members who receive regular remuneration in the form of wages, salaries, commissions, piece rates, or in-kind payments are classified as employees, but in some they are classified as contributing family workers. Some countries cannot accurately measure the number of contributing family workers. And many cannot distinguish between own-account workers and employers, so only the sum of the two groups is available.

Countries also take very different approaches to the treatment of unemployed people. In most countries unemployed people with previous job experience are classified according to their last job. In some countries, however, they and people seeking their first job are classified as persons not classifiable by status, and so are not included in the table.

Definitions

• **Employers** operate, alone or with one or more partners, their own economic enterprise, or engage independently in a profession or trade, and hire one or more employees on a continuous basis. The definition of "a continuous basis" is determined by national circumstances. Partners may or may not be members of the same family or household. • **Own-account workers** operate, alone or with one or more partners, their own economic enterprise, or engage independently in a profession or trade, and hire no employees on a continuous basis. As with employers, partners may or may not be members of the same family or household. • **Employees** are people who work for a public or private employer and receive remuneration in the form of wages, salaries, commissions, tips, piece rates, or in-kind payments. • **Contributing family workers** (previously referred to as unpaid family workers) work without pay in an economic enterprise operated by a related person living in the same household and cannot be regarded as a partner because their commitment in terms of working time or other factors is not at a level comparable to that of the head of the enterprise. In countries where it is customary for young people to work without pay in an enterprise operated by a related person, the requirement of living in the same household is often eliminated.

Data sources

Employment data are compiled by the World Bank's Development Data Group using an ILO database corresponding to table 2a in its *Yearbook of Labour Statistics*.





2.5 Employment by economic activity

	Agriculture				Industry				Services			
	Male		Female		Male		Female		Male		Female	
	% of		% of		% of		% of		% of		% of	
	economically active male population	economically active female population	economically active male population	economically active female population	economically active male population	economically active female population	economically active male population	economically active female population	economically active male population	economically active female population	economically active male population	economically active female population
1980	1994	1980	1994	1980	1994	1980	1994	1980	1994	1980	1994	
Albania	54	51	62	60	28	26	17	19	18	23	21	20
Algeria	27	18	69	57	33	38	6	7	40	44	25	36
Angola	67	65	87	86	13	14	1	2	20	21	11	13
Argentina	17	16	3	3	40	39	18	17	44	46	79	80
Armenia	21	24	21	11	48	47	38	39	31	29	41	51
Australia	7	6	4	3	34	32	15	11	44	58	67	80
Austria	9	6	13	8	51	48	24	19	41	45	62	72
Azerbaijan	28	27	42	36	36	35	20	21	36	38	38	43
Bangladesh	67	59	81	74	5	14	14	19	29	26	5	7
Belarus	29	26	23	13	44	45	33	36	28	29	44	51
Belgium	4	3	2	1	40	34	15	11	50	54	68	72
Benin	66	62	69	65	10	12	4	4	24	27	27	30
Bolivia	53	48	53	45	21	22	11	10	26	30	36	45
Bosnia and Herzegovina	26	9	37	16	45	54	24	37	30	37	39	48
Botswana	53	39	74	55	18	30	2	9	28	31	24	36
Brazil	41	28	26	14	28	28	14	13	31	43	60	74
Bulgaria	..	..	22	13	..	..	..	..	..	..	..	..
Burkina Faso	92	91	93	94	3	2	2	2	5	7	5	5
Burundi	88	86	98	98	4	4	1	1	9	10	1	1
Cambodia	70	69	80	78	7	7	7	8	23	24	14	14
Cameroon	65	62	87	83	11	12	2	3	23	26	11	14
Canada	6	4	3	3	34	32	14	11	52	63	74	85
Central African Republic	79	74	90	87	5	6	1	0	15	20	9	13
Chad	82	77	95	91	6	7	0	1	12	16	4	8
Chile	20	20	2	5	25	30	13	14	52	45	79	74
China	71	69	79	76	16	17	12	13	14	14	10	11
Hong Kong, China	1	1	1	1	46	39	56	33	52	60	43	66
Colombia	..	2	..	1	..	36	..	24	..	63	..	75
Congo, Dem. Rep.	62	58	84	81	18	20	4	5	20	23	12	14
Congo, Rep.	42	33	81	69	20	23	2	4	38	44	17	27
Costa Rica	43	34	5	6	23	27	20	26	34	39	75	68
Côte d'Ivoire	60	54	75	72	10	11	5	6	30	34	20	22
Croatia	23	17	28	15	38	38	27	28	39	45	45	57
Cuba	30	24	10	8	32	36	22	21	39	41	68	71
Czech Republic	14	13	11	9	67	54	44	36	19	33	45	55
Denmark	10	7	3	3	41	37	17	16	44	55	76	81
Dominican Republic	40	31	11	9	26	32	16	23	34	38	73	68
Ecuador	44	39	22	16	21	20	15	16	34	41	63	68
Egypt, Arab Rep.	43	32	8	43	20	23	10	9	32	38	56	31
El Salvador	56	50	8	7	20	22	18	19	24	29	73	74
Eritrea	79	77	88	85	7	8	2	2	14	16	11	13
Estonia	19	18	12	11	50	48	36	34	31	34	52	55
Ethiopia	90	86	89	86	2	2	2	2	8	11	10	12
Finland	12	10	9	5	42	38	21	14	38	49	64	76
France	9	6	7	4	43	38	22	17	48	56	71	78
Gabon	59	46	74	59	18	21	5	10	24	33	21	32
Gambia, The	77	74	93	92	10	12	2	3	13	14	5	6
Georgia	31	27	34	24	32	38	21	23	37	34	45	52
Germany	6	4	8	4	54	48	33	24	40	48	59	72
Ghana	66	64	57	55	12	12	14	14	22	25	29	31
Greece	25	19	39	23	34	32	18	17	40	47	39	51
Guatemala	64	64	17	16	17	16	27	23	19	21	56	61
Guinea	86	83	96	92	2	2	1	1	12	15	3	7
Guinea-Bissau	81	78	98	96	3	3	0	0	17	19	2	3
Haiti	79	76	61	57	8	9	8	8	13	15	31	35
Honduras	63	48	40	25	17	23	9	12	20	30	51	64

	Agriculture				Industry				Services			
	Male % of		Female % of		Male % of		Female % of		Male % of		Female % of	
	economically active male population		economically active female population		economically active male population		economically active female population		economically active male population		economically active female population	
	1980	1994	1980	1994	1980	1994	1980	1994	1980	1994	1980	1994
Hungary	21	19	15	11	47	42	38	32	32	39	47	57
India	63	59	83	74	15	17	9	15	22	24	8	11
Indonesia	59	54	56	56	12	14	12	13	29	31	32	31
Iran, Islamic Rep.	36	30	82	73	28	26	6	9	35	44	12	18
Iraq	21	12	62	39	24	19	11	9	55	69	27	52
Ireland	..	16	..	3	..	28	..	16	..	39	..	69
Israel	7	4	4	2	39	37	15	15	51	55	77	77
Italy	11	7	14	7	40	35	24	18	40	49	48	59
Jamaica	42	34	18	15	23	32	9	13	35	34	73	72
Japan	8	5	13	6	39	39	28	25	50	53	57	65
Jordan	11	10	58	41	27	28	3	4	62	63	39	55
Kazakhstan	28	28	20	15	38	37	25	25	34	35	55	60
Kenya	77	75	88	85	10	11	2	3	13	14	10	12
Korea, Dem. Rep.	39	35	52	42	37	38	20	23	24	27	28	35
Korea, Rep.	29	13	38	17	30	37	23	25	35	47	36	56
Kuwait	2	2	0	0	36	32	2	2	62	67	97	98
Kyrgyz Republic	34	36	33	28	34	30	23	23	32	34	44	50
Lao PDR	77	76	82	81	7	7	4	5	16	17	13	14
Latvia	18	19	14	12	49	47	35	33	32	34	50	55
Lebanon	13	6	20	10	29	34	21	22	58	59	59	68
Lesotho	26	29	64	59	52	41	5	5	22	30	31	36
Libya	16	7	63	28	29	27	3	5	55	66	34	68
Lithuania	26	23	29	13	47	47	30	34	27	30	41	53
Macedonia, FYR	30	21	47	23	38	40	23	41	32	39	30	36
Madagascar	72	70	93	88	9	10	2	3	19	20	5	9
Malawi	78	78	96	95	10	9	1	1	12	13	3	3
Malaysia	36	28	49	26	19	23	18	23	44	48	33	52
Mali	86	83	92	89	2	2	1	2	12	15	7	9
Mauritania	65	49	79	63	11	16	2	4	25	35	19	34
Mauritius	27	18	27	14	28	40	27	50	45	42	45	35
Mexico	43	35	19	12	30	25	28	20	28	40	53	69
Moldova	46	38	41	28	29	34	23	26	25	28	36	46
Mongolia	43	31	36	30	21	23	21	22	36	44	43	48
Morocco	48	35	72	63	23	28	14	19	29	37	14	18
Mozambique	72	70	97	96	14	14	1	1	14	15	2	3
Myanmar	72	70	80	78	9	11	7	9	19	19	12	14
Namibia	52	46	64	54	22	21	5	8	27	33	31	39
Nepal	91	91	98	98	1	0	0	0	8	9	2	2
Netherlands	6	5	2	2	36	30	12	9	50	58	74	77
New Zealand	13	13	7	7	39	33	21	14	48	54	72	79
Nicaragua	49	38	16	9	26	28	21	23	26	34	63	69
Niger	86	84	98	97	5	6	1	1	9	10	1	1
Nigeria	52	42	57	44	10	9	5	3	38	49	38	53
Norway	10	7	6	3	40	33	14	10	50	57	80	84
Oman	52	48	25	20	21	22	33	35	27	30	42	45
Pakistan	56	45	73	72	15	20	12	13	29	34	15	15
Panama	35	30	5	3	21	21	11	10	38	46	76	80
Papua New Guinea	76	72	92	89	8	9	2	3	16	18	6	8
Paraguay	58	51	9	8	20	23	22	20	23	26	70	72
Peru	45	41	25	22	20	20	14	12	35	39	61	66
Philippines	61	54	37	31	15	16	16	14	25	29	47	56
Poland	28	27	32	28	46	45	28	25	26	28	40	47
Portugal	21	10	31	12	41	40	24	24	32	49	37	62
Puerto Rico	8	6	0	0	30	29	26	22	24	27	73	78
Romania	26	21	45	28	50	53	29	40	24	26	25	32
Russian Federation	19	17	13	10	50	48	37	35	31	34	50	56



	Agriculture				Industry				Services			
	Male % of economically active male population		Female % of economically active female population		Male % of economically active male population		Female % of economically active female population		Male % of economically active male population		Female % of economically active female population	
	1980	1994	1980	1994	1980	1994	1980	1994	1980	1994	1980	1994
	50 w	48 w	56 w	52 w	24 w	23 w	15 w	15 w	26 w	29 w	28 w	32 w
Rwanda	88	86	98	98	5	6	1	1	7	8	1	2
Saudi Arabia	45	20	25	12	17	21	5	6	39	59	70	82
Senegal	74	70	90	86	9	10	2	4	17	20	8	11
Sierra Leone	63	60	82	81	20	22	4	4	17	18	14	16
Singapore	1	0	1	0	32	35	39	30	63	62	57	68
Slovak Republic	15	14	13	9	37	35	34	31	48	50	54	60
Slovenia	14	5	17	6	49	52	37	39	37	43	46	54
South Africa	18	16	16	10	45	42	16	14	37	42	68	76
Spain	18	10	16	7	42	39	21	14	36	46	56	65
Sri Lanka	41	29	44	32	16	18	12	17	26	37	20	27
Sudan	66	64	88	84	9	10	4	5	24	26	8	11
Sweden	8	5	3	2	45	34	16	11	46	52	79	81
Switzerland	..	6	..	4	..	42	..	19	..	49	..	74
Syrian Arab Republic	27	22	78	69	35	30	7	6	39	49	15	25
Tajikistan	36	37	54	45	29	28	16	17	35	35	30	37
Tanzania	80	78	92	91	7	8	2	2	13	14	7	7
Thailand	..	42	..	38	..	26	..	19	..	26	..	31
Togo	70	66	67	65	12	12	7	7	19	22	26	29
Trinidad and Tobago	..	13	..	5	..	38	..	19	..	49	..	77
Tunisia	33	22	53	42	30	33	32	32	37	44	16	26
Turkey	45	38	88	82	22	24	5	7	33	38	7	11
Turkmenistan	33	34	46	41	32	30	16	14	35	36	38	44
Uganda	84	81	91	88	6	7	2	2	10	12	8	10
Ukraine	26	24	24	16	46	46	33	34	28	31	44	50
United Arab Emirates	5	9	0	0	40	30	7	2	55	61	93	97
United Kingdom	3	3	1	1	44	32	21	13	44	51	72	80
United States	5	4	2	2	39	34	19	13	52	62	78	84
Uruguay	22	21	4	4	31	31	23	21	47	48	74	75
Uzbekistan	35	34	46	35	34	30	19	19	32	35	36	45
Venezuela	19	19	3	2	32	25	19	13	48	48	76	76
Vietnam	71	70	75	73	16	17	10	11	13	13	15	16
West Bank and Gaza	..	..	..	..	..	..	..	..	..	..	..	..
Yemen, Rep.	60	50	98	88	19	22	1	6	21	29	1	7
Yugoslavia, FR (Serb./Mont.)	34	28	47	32	35	38	19	26	31	34	33	41
Zambia	69	68	85	83	13	13	3	3	19	19	13	14
Zimbabwe	63	58	85	81	19	13	4	2	18	29	12	17
World	50 w	48 w	56 w	52 w	24 w	23 w	15 w	15 w	26 w	29 w	28 w	32 w
Low income	69	66	80	76	14	15	10	12	17	19	10	12
East Asia & Pacific	..	..	..	..	..	..	..	..	..	..	..	..
Middle income	34	32	32	29	35	32	24	21	31	35	44	49
Lower middle income	35	35	35	35	35	31	24	21	30	33	40	42
Upper middle income	31	25	23	14	37	34	23	19	32	41	54	67
Low & middle income	..	..	..	..	..	..	..	..	..	..	..	..
East Asia & Pacific	..	..	..	..	..	..	..	..	..	..	..	..
Europe & Central Asia	25	23	27	22	45	43	31	30	30	33	42	48
Latin America & Carib.	..	29	..	12	..	28	..	16	..	42	..	71
Middle East & N. Africa	39	29	53	55	25	26	10	11	35	43	29	29
South Asia	..	..	..	..	..	..	..	..	..	..	..	..
Sub-Saharan Africa	69	65	80	75	11	11	4	4	20	23	17	21
High income	8	6	8	4	41	35	23	18	47	56	66	75

About the data

The International Labour Organization (ILO) classifies economic activity on the basis of the International Standard Industrial Classification (ISIC) of All Economic Activities. Because this classification is based on where work is performed (industry) rather than on the type of work performed (occupation), all of an enterprise's employees are classified under the same industry, regardless of their trade or occupation.

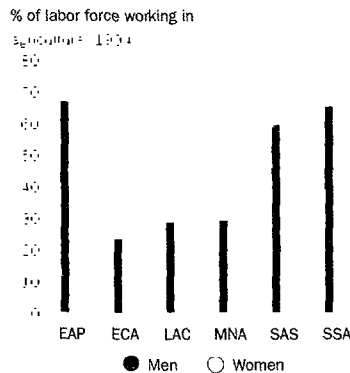
The ILO's *Yearbook of Labour Statistics* reports data by major divisions of the ISIC revision 2 or tabulation categories of the ISIC revision 3. In this table the reported divisions or categories are aggregated into three broad groups: agriculture, industry, and services. An increasing number of countries report economic activity according to the ISIC. Where data are supplied according to national classifications, however, industry definitions and descriptions may differ. Classification into broad groups also may obscure fundamental differences in countries' industrial patterns.

The distribution of economic activity by gender reveals some interesting patterns. Agriculture accounts for the largest share of female employment in much of Africa and Asia. Services account for much of the increase in women's economic participation in North Africa, Latin America and the Caribbean, and high-income economies. Worldwide, women are underrepresented in industry.

There are several explanations for the rising importance of service jobs for women. Many service jobs—such as nursing and social and clerical work—are considered "feminine" because of a perceived similarity with women's traditional roles. Moreover, women often do not receive training to take advantage of changing employment opportunities. Finally, the greater availability of part-time work in service jobs may lure more women, although it is not clear whether this is a cause or an effect (United Nations 1991).

Figure 2.5a

Women's labor force participation depends on how work is defined



Source: ILO.

Although there are still significant differences between men's and women's work by sector, occupation, and type of work, women's overall labor force participation rates are moving closer to those of men. Women's labor force participation continues to be strongly influenced by gender differences in the definition of work in different countries. This is particularly evident in the informal sector and in agriculture, where it is sometimes difficult to distinguish between women's housework and their unpaid work in a family enterprise or in agricultural production.

Female labor force participation and women's share of the work force tend to be large in countries where women's contributions to family agriculture are defined as work. This is particularly evident in Africa, where several countries report more than 90 percent of the female work force in agriculture, resulting in high regional participation rates. In other countries, where the distinction between housework and a subsistence activity—such as tending a home garden—is less clear, the proportion of women active in agriculture can be substantially smaller than that of men. Thus women's work in agriculture and the informal sector warrants special attention in cross-country comparisons of women's share in the work force.

Definitions

- **Agriculture** includes hunting, forestry, and fishing, corresponding to major division 1 (ISIC revision 2) or tabulation categories A and B (ISIC revision 3).
- **Industry** includes mining and quarrying (including oil production), manufacturing, electricity, gas and water, and construction, corresponding to major divisions 2 through 5 (ISIC revision 2) or tabulation categories C through F (ISIC revision 3).
- **Services** include wholesale and retail trade and restaurants and hotels; transport, storage, and communications; financing, insurance, real estate, and business services; and community, social, and personal services, corresponding to major divisions 6 through 9 (ISIC revision 2) or tabulation categories G through P (ISIC revision 3).

Data sources

Employment data are compiled by the World Bank's Development Data Group using an ILO database corresponding to table 2a in its *Yearbook of Labour Statistics*.





2.6 Unemployment

	Male unemployment			Female unemployment			Total unemployment		
	% of male labor force			% of female labor force			% of total labor force		
	1980	1990	1996	1980	1990	1996	1980	1990	1996
Argentina	..	8.4	..	..	10.4	..	2.3	9.2	18.4
Australia	5.1	6.7	8.7	7.9	7.2	8.3	6.1	6.9	8.5
Austria	..	3.0	3.9	..	3.6	4.5	..	3.2	4.1
Belgium	..	4.5	10.5	..	11.4	18.2	..	7.2	13.8
Bolivia	..	6.9	3.7	..	7.8	4.5	..	7.3	4.2
Brazil	4.2	3.8	..	4.4	3.4	..	4.3	3.7	4.6
Bulgaria	..	..	14.1	..	..	14.2	..	1.7	14.2
Canada	..	8.1	9.8	..	8.1	9.4	..	8.1	9.7
Chile	10.6	5.7	..	10.0	5.7	..	10.4	5.6	6.4
Costa Rica	5.3	4.2	..	7.8	5.9	..	5.9	4.6	..
Czech Republic	..	..	3.5	..	..	4.1	..	0.3	3.1
Denmark	..	..	7.8	..	..	9.9	..	..	8.8
Dominican Republic	..	12.5	10.2	..	33.1	28.7	..	19.7	16.7
Finland	4.7	4.0	15.8	4.7	2.8	16.5	4.7	3.4	16.1
France	4.3	6.7	..	9.5	11.7	..	6.4	8.9	12.4
Germany	..	6.0	8.1	..	8.8	10.2	..	7.2	9.0
Greece	3.3	4.3	..	5.7	11.7	..	4.0	7.0	..
Hungary	..	..	10.7	..	..	7.6	..	0.8	11.0
Ireland	..	12.5	11.9	..	13.8	11.9	..	12.9	11.9
Israel	4.1	8.4	..	6.0	11.3	..	4.8	9.6	..
Italy	4.8	7.3	9.3	13.1	17.1	16.7	7.6	11.0	12.0
Jamaica	16.3	9.3	..	39.6	23.1	..	27.3	15.7	..
Japan	2.0	2.0	3.3	2.0	2.2	3.4	2.0	2.1	3.4
Korea, Rep.	..	2.9	2.3	..	1.8	1.6	..	2.4	2.0
Netherlands	6.3	5.4	7.0	13.4	10.7	8.3	7.9	7.5	7.6
New Zealand	..	8.1	6.1	..	7.2	6.1	..	7.8	6.1
Nicaragua	..	9.0	..	..	15.4	..	..	11.1	..
Norway	1.3	5.6	4.9	2.3	4.8	4.9	1.7	5.2	4.9
Panama	..	12.8	11.0	..	22.6	19.4	..	16.1	13.9
Paraguay	3.8	6.6	..	4.8	6.5	..	4.1	6.6	..
Philippines	3.2	7.1	..	7.5	9.8	..	4.8	8.1	..
Poland	..	..	9.8	..	..	13.7	..	6.1	14.0
Portugal	4.1	3.2	6.4	13.0	6.6	8.2	7.8	4.7	7.2
Puerto Rico	19.5	16.2	..	12.3	10.7	..	17.1	14.1	..
Romania	..	..	6.3	..	..	7.4	..	3.0	6.3
Russian Federation	..	..	9.6	..	..	9.0	..	..	9.3
Singapore	..	1.9	2.9	..	1.3	3.1	..	1.7	3.0
Slovak Republic	..	..	10.0	..	..	11.9	..	0.6	13.0
Spain	10.8	12.0	17.3	12.8	24.2	29.4	11.4	16.3	21.9
Sweden	1.7	1.7	8.5	2.3	1.6	7.5	2.0	1.6	8.0
Switzerland	..	..	4.4	..	..	5.1	..	..	4.7
Trinidad and Tobago	8.0	17.8	..	14.0	24.2	..	10.0	20.0	..
United Kingdom	..	6.9	9.2	..	6.5	6.4	..	6.7	8.0
United States	6.8	5.7	5.3	7.4	5.5	5.4	7.0	5.6	5.4
Venezuela	..	10.9	8.2	..	9.3	9.8	5.9	10.4	8.7

About the data

The International Labour Organization (ILO) defines the unemployed as members of the economically active population who are without work but available for and seeking work, including people who have lost their jobs and those who have voluntarily left work. Some unemployment is unavoidable in all economies. At any time some workers are temporarily unemployed—between jobs as employers look for the right workers and workers search for better jobs. Such unemployment, often called frictional unemployment, results from the normal operation of labor markets. Changes in unemployment over time may reflect changes in the demand for and supply of labor, but they may also reflect changes in reporting practices. High and sustained unemployment, however, indicates serious inefficiencies in the allocation of resources.

The ILO definition of unemployment notwithstanding, reference periods and criteria for seeking work vary across countries in their treatment of people temporarily laid off and those seeking work for the first time. In many developing countries it is especially difficult to measure employment and unemployment in agriculture. The timing of a

survey, for example, can maximize the seasonal effects of agricultural unemployment. And informal sector employment is difficult to quantify in the absence of regulation for registering and tracking such activities.

Data on unemployment are drawn from labor force sample surveys, employment office statistics, and administrative records of social insurance programs. Labor force surveys generally yield the most comprehensive data because they include groups—particularly people seeking work for the first time—not covered in other unemployment statistics. In addition, the quality and completeness of data obtained from social insurance programs and employment offices vary widely. The most common exclusion from these sources is discouraged workers who have given up their job search because they believe that no employment opportunities exist or do not register as unemployed after their benefits have been exhausted. Thus measured unemployment may be higher in economies that offer more or longer unemployment benefits. Economies for which unemployment data are not consistently available or were deemed unreliable have been omitted from the table.

Definitions

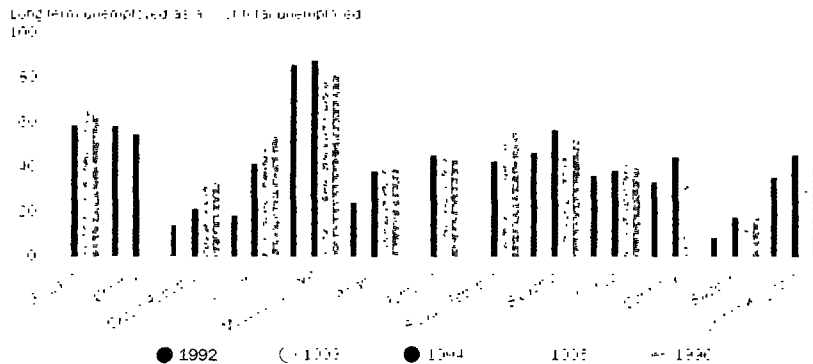
• **Unemployment** is the share of the labor force that is without work but available for and seeking employment. Definitions of labor force and unemployment differ by country (see *About the data*).

Data sources

Unemployment data are from an ILO database corresponding to table 3a in its *Yearbook of Labour Statistics*, the OECD's *Employment Outlook* (1997), and country statistical sources.

Figure 2.6a

Unemployment continues to be high in transition economies



Source: OECD Centre for Co-operation with Economies in Transition, Labour Market Database, World Bank, 2001; Challenges in Transition Database, OECD, 1997.

Growth in long-term unemployment has been one of the most troubling developments accompanying Central and Eastern Europe's transition from planned to market economies. Following an initial rise during 1989–93, unemployment growth in most countries has tapered off, and registered unemployment rates have stabilized or started to decline. But throughout the region, the long-term unemployed—individuals who have been out of work for more than a year—now make up the largest share of the unemployed. Although growth in long-term unemployment is not a phenomenon unique to transition economies, the situation in Central and Eastern Europe is serious because of gaps in social safety nets and a dearth of labor market programs targeted to the needs of the long-term unemployed.

The proportion of long-term unemployed grew steadily between 1992 and 1995 in all countries in the region except Croatia. In 1996 the share of long-term unemployed began to decline slightly in many countries, but it continued to increase in the Czech Republic, Hungary, and the Slovak Republic. Long-term unemployment in Central and Eastern Europe now resembles or even exceeds levels in Western Europe. In Bulgaria long-term unemployment accounts for more than 60 percent of total unemployment—a higher incidence than in Spain, which has experienced chronically high long-term unemployment. Rates approached or surpassed 40 percent in all countries except the Czech Republic, where it reached 33 percent. In FYR Macedonia it was 81 percent.

Long-term unemployment in Central and Eastern Europe is linked to job transition patterns. Individuals are more likely to be hired out of the public sector into the private sector, or between firms, than from the ranks of the unemployed or right out of school. As a result there is little movement out of unemployment, and the pool of unemployed has become increasingly homogeneous. Recent World Bank poverty assessments for Hungary and Romania show that demographic characteristics of the unemployed—age, ethnicity, education—are crucial risk factors for poverty in the region.



2.7 Poverty

	National poverty line				International poverty line								
	Survey year	Population below the poverty line			Survey year	Population below the poverty line			Survey year	Population below \$1 a day %	Poverty gap at \$1 a day %	Population below \$2 a day %	Poverty gap at \$2 a day %
		Rural %	Urban %	National %		Rural %	Urban %	National %					
Albania	1996	..	..	19.6	..	..	..	..	..	..	..	..
Algeria	1988	16.6	7.3	12.2	1995	30.3	14.7	22.6	1995	<2	..	17.6	4.4
Angola	..	..	..	..	..	..	..	..	..	..	..	..	..
Argentina	1991	..	..	25.5	..	..	..	..	..	..	..	..	..
Armenia	..	..	..	..	..	..	..	..	..	..	..	..	..
Australia	..	..	..	..	..	..	..	..	..	..	..	..	..
Austria	..	..	..	..	..	..	..	..	..	..	..	..	..
Azerbaijan	..	..	..	..	..	..	..	..	..	..	..	..	..
Bangladesh	1991-92	46.0	23.3	42.7	1995-96	39.8	14.3	35.6	..	..	..	..	..
Belarus	..	..	..	..	..	..	..	..	1993	<2	..	6.4	0.8
Belgium	..	..	..	..	..	..	..	..	..	..	..	..	..
Benin	1995	..	..	33.0	..	..	..	..	..	..	..	..	..
Bolivia	..	..	..	..	..	..	..	..	..	..	..	..	..
Bosnia and Herzegovina	..	..	..	..	..	..	..	..	..	..	..	..	..
Botswana	..	..	..	..	..	..	..	..	1985-86	33.0	12.4	61.0	30.4
Brazil	1990	32.6	13.1	17.4	..	..	..	..	1995	23.6	10.7	43.5	22.4
Bulgaria	..	..	..	..	..	..	..	..	1992	2.6	0.8	23.5	6.0
Burkina Faso	..	..	..	..	..	..	..	..	..	..	..	..	..
Burundi	1990	..	..	36.2	..	..	..	..	..	..	..	..	..
Cambodia	..	..	..	..	..	..	..	..	..	..	..	..	..
Cameroon	1984	32.4	44.4	40.0	..	..	..	..	..	..	..	..	..
Canada	..	..	..	..	..	..	..	..	..	..	..	..	..
Central African Republic	..	..	..	..	..	..	..	..	..	..	..	..	..
Chad	..	..	..	..	..	..	..	..	..	..	..	..	..
Chile	1992	..	..	21.6	1994	..	..	20.5	1992	15.0	4.9	38.5	16.0
China	1994	11.8	<2	8.4	1995	9.2	<2	6.5	1995	22.2	6.9	57.8	24.1
Hong Kong, China	..	..	..	..	..	..	..	..	..	..	..	..	..
Colombia	1991	29.0	7.8	16.9	1992	31.2	8.0	17.7	1991	7.4	2.3	21.7	8.4
Congo, Dem. Rep.	..	..	..	..	..	..	..	..	..	..	..	..	..
Congo, Rep.	..	..	..	..	..	..	..	..	..	..	..	..	..
Costa Rica	..	..	..	..	..	..	..	..	1989	18.9	7.2	43.8	19.4
Côte d'Ivoire	..	..	..	..	..	..	..	..	1988	17.7	4.3	54.8	20.4
Croatia	..	..	..	..	..	..	..	..	..	..	..	..	..
Cuba	..	..	..	..	..	..	..	..	..	..	..	..	..
Czech Republic	..	..	..	..	..	..	..	..	1993	3.1	0.4	55.1	14.0
Denmark..	..	..	..	..	..	..	..	..	..	..	..	..	..
Dominican Republic	1989	27.4	23.3	24.5	1992	29.8	10.9	20.6	1989	19.9	6.0	47.7	20.2
Ecuador	1994	47.0	25.0	35.0	1995	..	..	..	1994	30.4	9.1	65.8	29.6
Egypt, Arab Rep.	..	..	..	..	..	..	..	..	1990-91	7.6	1.1	51.9	15.3
El Salvador	1992	55.7	43.1	48.3	..	..	..	..	..	..	..	..	..
Eritrea..	..	..	..	..	..	..	..	..	..	..	..	..	..
Estonia	1994	14.7	6.8	8.9	..	..	..	..	1993	6.0	1.6	32.5	10.0
Ethiopia	..	..	..	..	..	..	..	..	1981-82	46.0	12.4	89.0	42.7
Finland	..	..	..	..	..	..	..	..	..	..	..	..	..
France..	..	..	..	..	..	..	..	..	..	..	..	..	..
Gabon..	..	..	..	..	..	..	..	..	..	..	..	..	..
Gambia, The	1992	..	..	64.0	..	..	..	..	..	..	..	..	..
Georgia..	..	..	..	..	..	..	..	..	..	..	..	..	..
Germany..	..	..	..	..	..	..	..	..	..	..	..	..	..
Ghana	1992	34.3	26.7	31.4	..	..	..	..	..	..	..	..	..
Greece..	..	..	..	..	..	..	..	..	..	..	..	..	..
Guatemala	..	..	..	..	..	..	..	..	1989	53.3	28.5	76.8	47.6
Guinea	..	..	..	..	..	..	..	..	1991	26.3	12.4	50.2	25.6
Guinea-Bissau	1991	60.9	24.1	48.8	..	..	..	..	1991	88.2	59.5	96.7	76.6
Haiti	1987	..	..	65.0	..	..	..	..	..	..	..	..	..
Honduras	1992	46.0	56.0	50.0	..	..	..	..	1992	46.9	20.4	75.7	41.9



	National poverty line								International poverty line				
	Survey year	Population below the poverty line			Survey year	Population below the poverty line			Survey year	Population below \$1 a day %	Poverty gap at \$1 a day %	Population below \$2 a day %	Poverty gap at \$2 a day %
		Rural %	Urban %	National %		Rural %	Urban %	National %					
Hungary	1993	..	..	25.3					1993	<2	..	10.7	2.1
India	1992	43.5	33.7	40.9	1994	36.7	30.5	35.0	1992	52.5	15.6	88.8	45.8
Indonesia	1987	16.4	20.1	17.4	1990	14.3	16.8	15.1	1995	11.8	1.8	58.7	19.3
Iran, Islamic Rep.		..	..	..		..	..	..		..	..	..	..
Iraq		..	..	..		..	..	..		..	..	..	..
Ireland		..	..	..		..	..	..		..	..	..	..
Israel		..	..	..		..	..	..		..	..	..	..
Italy		..	..	..		..	..	..		..	..	..	..
Jamaica	1992	..	..	34.2		..	..	..	1993	4.3	0.5	24.9	7.5
Japan		..	..	..		..	..	..		..	..	..	..
Jordan	1991	..	..	15.0		..	..	..	1992	2.5	0.5	23.5	6.3
Kazakhstan		..	..	..		..	..	..	1993	<2	..	12.1	2.5
Kenya	1992	46.4	29.3	42.0		..	..	..	1992	50.2	22.2	78.1	44.4
Korea, Dem. Rep.		..	..	..		..	..	..		..	..	..	..
Korea, Rep.		..	..	..		..	..	..		..	..	..	..
Kuwait		..	..	..		..	..	..		..	..	..	..
Kyrgyz Republic	1993	48.1	28.7	40.0		..	..	..	1993	18.9	5.0	55.3	21.4
Lao PDR	1993	53.0	24.0	46.1		..	..	..		..	..	..	..
Latvia		..	..	..		..	..	..		..	..	..	..
Lebanon		..	..	..		..	..	..		..	..	..	..
Lesotho	1993	53.9	27.8	49.2		..	..	..	1986-87	48.8	23.8	74.1	43.5
Libya		..	..	..		..	..	..		..	..	..	..
Lithuania		..	..	..		..	..	..	1993	<2	..	18.9	4.1
Macedonia, FYR		..	..	..		..	..	..		..	..	..	..
Madagascar		..	..	..		..	..	..	1993	72.3	33.2	93.2	59.6
Malawi	1990-91	..	..	54.0		..	..	..		..	..	..	..
Malaysia	1989	..	..	15.5		..	..	..	1989	5.6	0.9	26.6	8.5
Mali		..	..	..		..	..	..		..	..	..	..
Mauritania	1990	..	..	57.0		..	..	..	1988	31.4	15.2	68.4	33.0
Mauritius	1992	..	..	10.6		..	..	..		..	..	..	..
Mexico	1988	..	..	10.1		..	..	..	1992	14.9	3.8	40.0	15.9
Moldova		..	..	..		..	..	..	1992	6.8	1.2	30.6	9.7
Mongolia	1995	33.1	38.5	36.3		..	..	..		..	..	..	..
Morocco	1984-85	32.6	17.3	26.0	1990-91	18.0	7.6	13.1	1990-91	<2	..	19.6	4.6
Mozambique		..	..	..		..	..	..		..	..	..	..
Myanmar		..	..	..		..	..	..		..	..	..	..
Namibia		..	..	..		..	..	..		..	..	..	..
Nepal	1995-96	44.0	23.0	42.0		..	..	..	1995	50.3	16.2	86.7	44.6
Netherlands		..	..	..		..	..	..		..	..	..	..
New Zealand		..	..	..		..	..	..		..	..	..	..
Nicaragua	1993	76.1	31.9	50.3		..	..	..	1993	43.8	18.0	74.5	39.7
Niger		..	..	..		..	..	..	1992	61.5	22.2	92.0	51.8
Nigeria	1985	49.5	31.7	43.0	1992-93	36.4	30.4	34.1	1992-93	31.1	12.9	59.9	29.8
Norway		..	..	..		..	..	..		..	..	..	..
Oman		..	..	..		..	..	..		..	..	..	..
Pakistan	1991	36.9	28.0	34.0		..	..	..	1991	11.6	2.6	57.0	18.6
Panama		..	..	..		..	..	..	1989	25.6	12.6	46.2	24.5
Papua New Guinea		..	..	..		..	..	..		..	..	..	..
Paraguay	1991	28.5	19.7	21.8		..	..	..		..	..	..	..
Peru	1986	64.0	45.0	52.0	1991	68.0	50.3	54.0		..	..	..	..
Philippines	1985	58.0	42.0	52.0	1991	71.0	39.0	54.0	1991	28.6	7.7	64.5	28.2
Poland	1993	..	..	23.8		..	..	..	1993	6.8	4.7	15.1	7.7
Portugal		..	..	..		..	..	..		..	..	..	..
Puerto Rico		..	..	..		..	..	..		..	..	..	..
Romania	1994	27.9	20.4	21.5		..	..	..	1992	17.7	4.2	70.9	24.7
Russian Federation	1994	..	..	30.9		..	..	..	1993	<2	..	10.9	2.3



	National poverty line								International poverty line				
	Survey year	Population below the poverty line			Survey year	Population below the poverty line			Survey year	Population below	Poverty gap at	Population below	Poverty gap at
		Rural %	Urban %	National %		Rural %	Urban %	National %		\$1 a day %	\$1 a day %	\$2 a day %	\$2 a day %
Rwanda	1993	..	..	51.2	..	..	..	..	1983-85	45.7	11.3	88.7	42.3
Saudi Arabia	..	..	..	..	..	..	..	..	..	..	..	..	..
Senegal	..	..	..	..	..	..	..	..	1991-92	54.0	25.5	79.6	47.2
Sierra Leone	1989	76.0	53.0	68.0	..	..	..	..	..	..	..	..	..
Singapore	..	..	..	..	..	..	..	..	..	..	..	..	..
Slovak Republic	..	..	..	..	..	..	..	..	1992	12.8	2.2	85.1	27.5
Slovenia	..	..	..	..	..	..	..	..	..	..	..	..	..
South Africa	..	..	..	..	..	..	..	..	1993	23.7	6.6	50.2	22.5
Spain	..	..	..	..	..	..	..	..	..	..	..	..	..
Sri Lanka	1985-86	45.5	26.8	40.6	1990-91	38.1	28.4	35.3	1990	4.0	0.7	41.2	11.0
Sudan	..	..	..	..	..	..	..	..	..	..	..	..	..
Sweden	..	..	..	..	..	..	..	..	..	..	..	..	..
Switzerland	..	..	..	..	..	..	..	..	..	..	..	..	..
Syrian Arab Republic	..	..	..	..	..	..	..	..	..	..	..	..	..
Tajikistan	..	..	..	..	..	..	..	..	..	..	..	..	..
Tanzania	1991	..	..	51.1	..	..	..	..	1993	10.5	2.1	45.5	15.3
Thailand	1990	..	..	18.0	1992	15.5	10.2	13.1	1992	<2	..	23.5	5.4
Togo	1987-89	..	..	32.3	..	..	..	..	..	..	..	..	..
Trinidad and Tobago	1992	..	..	21.0	..	..	..	..	..	..	..	..	..
Tunisia	1985	29.2	12.0	19.9	1990	21.6	8.9	14.1	1990	3.9	0.9	22.7	6.8
Turkey	..	..	..	..	..	..	..	..	..	..	..	..	..
Turkmenistan	..	..	..	..	..	..	..	..	1993	4.9	0.5	25.8	7.6
Uganda	1993	..	..	55.0	..	..	..	..	1989-90	69.3	29.1	92.2	56.6
Ukraine	1995	..	..	31.7	..	..	..	..	..	..	..	..	..
United Arab Emirates	..	..	..	..	..	..	..	..	..	..	..	..	..
United Kingdom	..	..	..	..	..	..	..	..	..	..	..	..	..
United States	..	..	..	..	..	..	..	..	..	..	..	..	..
Uruguay	..	..	..	..	..	..	..	..	..	..	..	..	..
Uzbekistan	..	..	..	..	..	..	..	..	..	..	..	..	..
Venezuela	1989	..	..	31.3	..	..	..	..	1991	11.8	3.1	32.2	12.2
Vietnam	1993	57.2	25.9	50.9	..	..	..	..	..	..	..	..	..
West Bank and Gaza	..	..	..	..	..	..	..	..	..	..	..	..	..
Yemen, Rep.	1992	19.2	18.6	19.1	..	..	..	..	..	..	..	..	..
Yugoslavia, FR (Serb./Mont.)	..	..	..	..	..	..	..	..	..	..	..	..	..
Zambia	1991	88.0	46.0	68.0	1993	..	..	86.0	1993	84.6	53.8	98.1	73.4
Zimbabwe	1990-91	..	..	25.5	..	..	..	..	1990-91	41.0	14.3	68.2	35.5

About the data

International comparisons of poverty data entail both conceptual and practical problems. Different countries have different definitions of poverty, and consistent comparisons between countries can be difficult. Local poverty lines tend to have higher purchasing power in rich countries, where more generous standards are used than in poor countries.

Is it reasonable to treat two people with the same standard of living differently—in terms of their command over commodities—because one happens to live in a better-off country? Can we hold the real value of the poverty line constant between countries, just as we do when making comparisons over time?

Poverty measures based on an international poverty line attempt to do this. The commonly used \$1 a day standard, measured in 1985 international prices and adjusted to local currency using purchasing power parities, was chosen for the World Bank's *World Development Report 1990: Poverty* because it is typical of the poverty lines in low-income countries. Purchasing power parity (PPP) exchange rates, such as those from the Penn World Tables, are used because they take into account the local prices of goods and services that are not traded internationally. But PPP rates were designed not for making international poverty comparisons, but for comparing aggregates from national accounts. As a result there is no certainty that an international poverty line measures the same degree of need or deprivation across countries.

Just as there are problems in comparing a poverty measure for one country with that for another, there can also be problems in comparing poverty measures within countries. For example, the cost of living is typically higher in urban than in rural areas. (Food staples, for example, tend to be more expensive in urban areas.) So the urban monetary poverty line should be higher than the rural poverty line. But it is not always clear that the actual difference between urban and rural poverty lines found in practice properly reflects the difference in the cost of living. For some countries the urban poverty line in common use has a higher real value—meaning that it allows poor people to buy more commodities for consumption—than does the rural poverty line. Sometimes the difference has been so large as to imply that the incidence of poverty is greater in urban than in rural areas, even though the reverse is found when adjustments are made only for differences in the cost of living. As with international comparisons, when the real value of the poverty line varies, it is not clear how meaningful such urban-rural comparisons are.

The problems of making poverty comparisons do not end there. Further issues arise in measuring household

living standards. The choice between income and consumption as a welfare indicator is one issue. Incomes are generally more difficult to measure accurately, and consumption accords better with the idea of the standard of living than does income, which can vary over time even if the standard of living does not. But consumption data are not always available, and when they are not there is little choice but to use income. There are still other problems. Household survey questionnaires can differ widely, for example, in the number of distinct categories of consumer goods they identify. Survey quality varies, and even similar surveys may not be strictly comparable.

Comparisons across countries at different levels of development also pose a potential problem, because of differences in the relative importance of consumption of nonmarket goods. The local market value of all consumption in kind (including consumption from own production, particularly important in underdeveloped rural economies) should be included in the measure of total consumption expenditure. Similarly, the imputed profit from production of nonmarket goods should be included in income. This is not always done, though such omissions were a far bigger problem in surveys before the 1980s. Most survey data now include valuations for consumption or income from own production. Nonetheless, valuation methods vary—for example, some surveys use the price at the nearest market, while others use the average farmgate selling price.

The international poverty measures shown here are based on the most recent PPP estimates from the latest version of the Penn World Tables (PWT_5.6). It should be noted, however, that any revisions in the PPP of a country to incorporate better price indexes can produce dramatically different poverty lines in local currency.

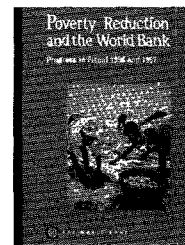
Whenever possible, consumption has been used as the welfare indicator for deciding who is poor. When only household income is available, average income has been adjusted to accord with either a survey-based estimate of mean consumption (when available) or an estimate based on consumption data from national accounts. This procedure adjusts only the mean, however; nothing can be done to correct for the difference in Lorenz (income distribution) curves between consumption and income.

Empirical Lorenz curves were weighted by household size, so they are based on percentiles of population, not households. In all cases the measures of poverty have been calculated from primary data sources (tabulations or household data) rather than existing estimates. Estimation from tabulations requires an interpolation method; the method chosen was Lorenz curves with flexible functional forms, which have proved reliable in past work.

Definitions

- **Survey year** is the year in which the underlying data were collected.
- **Rural poverty rate** is the percentage of the rural population living below the national rural poverty line.
- **Urban poverty rate** is the percentage of the urban population living below the national urban poverty line.
- **National poverty rate** is the percentage of the population living below the poverty line deemed appropriate for the country by its authorities. National estimates are based on population-weighted subgroup estimates from household surveys.
- **Population below \$1 a day and \$2 a day** are the percentages of the population living on less than \$1 a day and \$2 a day at 1985 international prices, adjusted for purchasing power parity.
- **Poverty gap** is the mean shortfall below the poverty line (counting the nonpoor as having zero shortfall) expressed as a percentage of the poverty line. This measure reflects the depth of poverty as well as its incidence.

Data sources



Poverty measures are prepared by the World Bank's Development Research Group. National poverty lines are based on the Bank's country poverty assessments. International poverty lines are based on nationally representative primary household surveys conducted by national statistical offices or by private agencies under government or international agency supervision and obtained from government statistical offices and World Bank country departments.

The World Bank has prepared an annual review of poverty trends since 1993. The most recent is *Poverty Reduction and the World Bank: Progress in Fiscal 1996 and 1997*.



2.8 Distribution of income or consumption

	Survey year	Gini index	Percentage share of income or consumption							
			Lowest 10%	Lowest 20%	Second 20%	Third 20%	Fourth 20%	Highest 20%	Highest 10%	
Albania										
Algeria	1995 ^{a, b}	35.3	2.8	7.0	11.6	16.1	22.7	42.6	26.8	
Angola										
Argentina										
Armenia										
Australia	1989 ^{c, d}	33.7	2.5	7.0	12.2	16.6	23.3	40.9	24.8	
Austria	1987 ^{c, d}	23.1	4.4	10.4	14.8	18.5	22.9	33.3	19.3	
Azerbaijan										
Bangladesh	1992 ^{a, b}	28.3	4.1	9.4	13.5	17.2	22.0	37.9	23.7	
Belarus	1993 ^{c, d}	21.6	4.9	11.1	15.3	18.5	22.2	32.9	19.4	
Belgium	1992 ^{c, d}	25.0	3.7	9.5	14.6	18.4	23.0	34.5	20.2	
Benin										
Bolivia	1990 ^{c, d}	42.0	2.3	5.6	9.7	14.5	22.0	48.2	31.7	
Bosnia and Herzegovina										
Botswana										
Brazil	1995 ^{c, d}	60.1	0.8	2.5	5.7	9.9	17.7	64.2	47.9	
Bulgaria	1992 ^{c, d}	30.8	3.3	8.3	13.0	17.0	22.3	39.3	24.7	
Burkina Faso										
Burundi										
Cambodia										
Cameroon										
Canada	1994 ^{c, d}	31.5	2.8	7.5	12.9	17.2	23.0	39.3	23.8	
Central African Republic										
Chad										
Chile	1994 ^{c, d}	56.5	1.4	3.5	6.6	10.9	18.1	61.0	46.1	
China	1995 ^{c, d}	41.5	2.2	5.5	9.8	14.9	22.3	47.5	30.9	
Hong Kong, China										
Colombia	1995 ^{c, d}	57.2	1.0	3.1	6.8	10.9	17.6	61.5	46.9	
Congo, Dem. Rep.										
Congo, Rep.										
Costa Rica	1996 ^{c, d}	47.0	1.3	4.0	8.8	13.7	21.7	51.8	34.7	
Côte d'Ivoire	1988 ^{a, b}	36.9	2.8	6.8	11.2	15.8	22.2	44.1	28.5	
Croatia										
Cuba										
Czech Republic	1993 ^{c, d}	26.6	4.6	10.5	13.9	16.9	21.3	37.4	23.5	
Denmark	1992 ^{c, d}	24.7	3.6	9.6	14.9	18.3	22.7	34.5	20.5	
Dominican Republic	1989 ^{c, d}	50.5	1.6	4.2	7.9	12.5	19.7	55.7	39.6	
Ecuador	1994 ^{a, b}	46.6	2.3	5.4	8.9	13.2	19.9	52.6	37.6	
Egypt, Arab Rep.	1991 ^{a, b}	32.0	3.9	8.7	12.5	16.3	21.4	41.1	26.7	
El Salvador	1995 ^{c, d}	49.9	1.2	3.7	8.3	13.1	20.5	54.4	38.3	
Eritrea										
Estonia	1993 ^{c, d}	39.5	2.4	6.6	10.7	15.1	21.4	46.3	31.3	
Ethiopia										
Finland	1991 ^{c, d}	25.6	4.2	10.0	14.2	17.6	22.3	35.8	21.6	
France	1989 ^{c, d}	32.7	2.5	7.2	12.7	17.1	22.8	40.1	24.9	
Gabon										
Gambia, The										
Georgia										
Germany	1989 ^{c, d}	28.1	3.7	9.0	13.5	17.5	22.9	37.1	22.6	
Ghana	1992 ^{a, b}	33.9	3.4	7.9	12.0	16.1	21.8	42.2	27.3	
Greece										
Guatemala	1989 ^{c, d}	59.6	0.6	2.1	5.8	10.5	18.6	63.0	46.6	
Guinea	1991 ^{a, b}	46.8	0.9	3.0	8.3	14.6	23.9	50.2	31.7	
Guinea-Bissau	1991 ^{a, b}	56.2	0.5	2.1	6.5	12.0	20.6	58.9	42.4	
Guyana	1993 ^{a, b}	40.2	2.4	6.3	10.7	15.0	21.2	46.9	32.0	
Haiti										
Honduras	1996 ^{c, d}	53.7	1.2	3.4	7.1	11.7	19.7	58.0	42.1	

	Survey year	Gini index	Percentage share of income or consumption						
			Lowest 10%	Lowest 20%	Second 20%	Third 20%	Fourth 20%	Highest 20%	Highest 10%
Hungary	1993 ^{c, d}	27.9	4.1	9.7	13.9	16.9	21.4	38.1	24.0
India	1994 ^{a, b}	29.7	4.1	9.2	13.0	16.8	21.7	39.3	25.0
Indonesia	1995 ^{a, b}	34.2	3.6	8.4	12.0	15.5	21.0	43.1	28.3
Iran, Islamic Rep.		..	..	..	..	..	..	..	..
Iraq		..	..	..	..	..	..	..	..
Ireland	1987 ^{c, d}	35.9	2.5	6.7	11.6	16.4	22.4	42.9	27.4
Israel	1992 ^{c, d}	35.5	2.8	6.9	11.4	16.3	22.9	42.5	26.9
Italy	1991 ^{c, d}	31.2	2.9	7.6	12.9	17.3	23.2	38.9	23.7
Jamaica	1991 ^{a, b}	41.1	2.4	5.8	10.2	14.9	21.6	47.5	31.9
Japan		..	..	..	..	..	..	..	..
Jordan	1991 ^{a, b}	43.4	2.4	5.9	9.8	13.9	20.3	50.1	34.7
Kazakhstan	1993 ^{c, d}	32.7	3.1	7.5	12.3	16.9	22.9	40.4	24.9
Kenya	1992 ^{a, b}	57.5	1.2	3.4	6.7	10.7	17.0	62.1	47.7
Korea, Dem. Rep.		..	..	..	..	..	..	..	..
Korea, Rep.		..	..	..	..	..	..	..	..
Kuwait		..	..	..	..	..	..	..	..
Kyrgyz Republic	1993 ^{c, d}	35.3	2.7	6.7	11.5	16.4	23.1	42.3	26.2
Lao PDR	1992 ^{a, b}	30.4	4.2	9.6	12.9	16.3	21.0	40.2	26.4
Latvia	1993 ^{c, d}	27.0	4.3	9.6	13.6	17.5	22.6	36.7	22.1
Lebanon		..	..	..	..	..	..	..	..
Lesotho	1986-87 ^{a, b}	56.0	0.9	2.8	6.5	11.2	19.4	60.1	43.4
Libya		..	..	..	..	..	..	..	..
Lithuania	1993 ^{c, d}	33.6	3.4	8.1	12.3	16.2	21.3	42.1	28.0
Luxembourg	1991 ^{c, d}	26.9	4.2	9.5	13.6	17.7	22.4	36.7	22.3
Macedonia, FYR		..	..	..	..	..	..	..	..
Madagascar	1993 ^{a, b}	43.4	2.3	5.8	9.9	14.0	20.3	50.0	34.9
Malawi		..	..	..	..	..	..	..	..
Malaysia	1989 ^{c, d}	48.4	1.9	4.6	8.3	13.0	20.4	53.7	37.9
Mali		..	..	..	..	..	..	..	..
Mauritania	1988 ^{a, b}	42.4	0.7	3.6	10.3	16.2	23.0	46.5	30.4
Mauritius		..	..	..	..	..	..	..	..
Mexico	1992 ^{a, b}	50.3	1.6	4.1	7.8	12.5	20.2	55.3	39.2
Moldova	1992 ^{c, d}	34.4	2.7	6.9	11.9	16.7	23.1	41.5	25.8
Mongolia	1995 ^{a, b}	33.2	2.9	7.3	12.2	16.6	23.0	40.9	24.5
Morocco	1990-91 ^{a, b}	39.2	2.8	6.6	10.5	15.0	21.7	46.3	30.5
Mozambique		..	..	..	..	..	..	..	..
Myanmar		..	..	..	..	..	..	..	..
Namibia		..	..	..	..	..	..	..	..
Nepal	1995-96 ^{a, b}	36.7	3.2	7.6	11.5	15.1	21.0	44.8	29.8
Netherlands	1991 ^{c, d}	31.5	2.9	8.0	13.0	16.7	22.5	39.9	24.7
New Zealand		..	..	..	..	..	..	..	..
Nicaragua	1993 ^{a, b}	50.3	1.6	4.2	7.9	12.6	20.0	55.2	39.8
Niger	1992 ^{a, b}	36.1	3.0	7.5	11.8	15.5	21.1	44.1	29.3
Nigeria	1992-93 ^{a, b}	45.0	1.3	4.0	8.9	14.4	23.4	49.4	31.4
Norway	1991 ^{c, d}	25.2	4.1	10.0	14.3	17.9	22.4	35.3	21.2
Oman		..	..	..	..	..	..	..	..
Pakistan	1991 ^{a, b}	31.2	3.4	8.4	12.9	16.9	22.2	39.7	25.2
Panama	1991 ^{c, d}	56.8	0.5	2.0	6.3	11.3	20.3	60.1	42.5
Papua New Guinea	1996 ^{a, b}	50.9	1.7	4.5	7.9	11.9	19.2	56.5	40.5
Paraguay	1995 ^{a, b}	33.1	2.7	7.2	10.7	15.7	22.4	40.6	25.6
Peru	1994 ^{a, b}	44.9	1.9	4.9	9.2	14.1	21.4	50.4	34.3
Philippines	1994 ^{a, b}	42.9	2.4	5.9	9.6	13.9	21.1	49.6	33.5
Poland	1992 ^{a, b}	27.2	4.0	9.3	13.8	17.7	22.6	36.6	22.1
Portugal		..	..	..	..	..	..	..	..
Puerto Rico		..	..	..	..	..	..	..	..
Romania	1992 ^{c, d}	25.5	3.8	9.2	14.4	18.4	23.2	34.8	20.2
Russian Federation	1993 ^{c, d}	31.0	3.0	7.4	12.6	17.7	24.2	38.2	22.2



	Survey year	Gini index	Percentage share of income or consumption						
			Lowest 10%	Lowest 20%	Second 20%	Third 20%	Fourth 20%	Highest 20%	Highest 10%
Rwanda	1983-85 ^{a, b}	28.9	4.2	9.7	13.2	16.5	21.6	39.1	24.2
Saudi Arabia		..	..	..	..	..	..	..	..
Senegal	1991 ^{a, b}	54.1	1.4	3.5	7.0	11.6	19.3	58.6	42.8
Sierra Leone	1989 ^{a, b}	62.9	0.5	1.1	2.0	9.8	23.7	63.4	43.6
Singapore		..	..	..	..	..	..	..	..
Slovak Republic	1992 ^{c, d}	19.5	5.1	11.9	15.8	18.8	22.2	31.4	18.2
Slovenia	1993 ^{c, d}	29.2	4.0	9.3	13.3	16.9	21.9	38.6	24.5
South Africa	1993 ^{a, b}	58.4	1.4	3.3	5.8	9.8	17.7	63.3	47.3
Spain	1990 ^{c, d}	32.5	2.8	7.5	12.6	17.0	22.6	40.3	25.2
Sri Lanka	1990 ^{a, b}	30.1	3.8	8.9	13.1	16.9	21.7	39.3	25.2
Sudan		..	..	..	..	..	..	..	..
Sweden	1992 ^{c, d}	25.0	3.7	9.6	14.5	18.1	23.2	34.5	20.1
Switzerland	1982 ^{c, d}	36.1	2.9	7.4	11.6	15.6	21.9	43.5	28.6
Syrian Arab Republic		..	..	..	..	..	..	..	..
Tajikistan		..	..	..	..	..	..	..	..
Tanzania	1993 ^{a, b}	38.1	2.9	6.9	10.9	15.3	21.5	45.4	30.2
Thailand	1992 ^{a, b}	46.2	2.5	5.6	8.7	13.0	20.0	52.7	37.1
Togo		..	..	..	..	..	..	..	..
Trinidad and Tobago		..	..	..	..	..	..	..	..
Tunisia	1990 ^{a, b}	40.2	2.3	5.9	10.4	15.3	22.1	46.3	30.7
Turkey		..	..	..	..	..	..	..	..
Turkmenistan	1993 ^{c, d}	35.8	2.7	6.7	11.4	16.3	22.8	42.8	26.9
Uganda	1992 ^{a, b}	40.8	3.0	6.8	10.3	14.4	20.4	48.1	33.4
Ukraine	1992 ^{c, d}	25.7	4.1	9.5	14.1	18.1	22.9	35.4	20.8
United Arab Emirates		..	..	..	..	..	..	..	..
United Kingdom	1986 ^{c, d}	32.6	2.4	7.1	12.8	17.2	23.1	39.8	24.7
United States	1994 ^{c, d}	40.1	1.5	4.8	10.5	16.0	23.5	45.2	28.5
Uruguay		..	..	..	..	..	..	..	..
Uzbekistan		..	..	..	..	..	..	..	..
Venezuela	1995 ^{c, d}	46.8	1.5	4.3	8.8	13.8	21.3	51.8	35.6
Vietnam	1993 ^{a, b}	35.7	3.5	7.8	11.4	15.4	21.4	44.0	29.0
West Bank and Gaza		..	..	..	..	..	..	..	..
Yemen, Rep.	1992 ^{a, b}	39.5	2.3	6.1	10.9	15.3	21.6	46.1	30.8
Yugoslavia, FR (Serb./Mont.)		..	..	..	..	..	..	..	..
Zambia	1993 ^{a, b}	46.2	1.5	3.9	8.0	13.8	23.8	50.4	31.3
Zimbabwe	1990 ^{a, b}	56.8	1.8	4.0	6.3	10.0	17.4	62.3	46.9

a. Refers to expenditure shares by percentiles of population. b. Ranked by per capita expenditure. c. Refers to income shares by percentiles of population. d. Ranked by per capita income.

About the data

Inequality in the distribution of income is reflected in the percentage share of either income or consumption accruing to segments of the population ranked by income or consumption levels. The segments ranked lowest by personal income receive the smallest share of total income. The Gini index provides a convenient summary measure of the degree of inequality.

Data on personal or household income or consumption come from nationally representative household surveys. The data in the table refer to different years between 1985 and 1996. Footnotes to the survey year indicate whether the rankings are based on per capita income or consumption. For the first time, every distribution (including high-income economies) is based on percentiles of population—rather than households—with households ranked by income or expenditure per person. Where the original data from the household survey were available, they have been used to directly calculate the income (or consumption) shares by quintile. Otherwise, shares have been estimated from the best available grouped data.

The distribution indicators have been adjusted for household size, providing a more consistent measure of per capita income or consumption. No adjustment has been made for spatial differences in cost of living within countries, because the data needed for such calculations are generally unavailable. For further details on the estimation method for low- and middle-income economies, see Ravallion and Chen (1996).

Because the underlying household surveys differ in method and in the type of data collected, the distribution indicators are not strictly comparable across countries. These problems are diminishing as survey methods improve and become more standardized, but achieving strict comparability is still impossible (see the notes to table 2.7).

The following sources of noncomparability should be noted. First, the surveys can differ in many respects, including whether they use income or consumption expenditure as the living standard indicator. Income is typically more unequally distributed than consumption. In addition, the definitions of income used in surveys are usually very different from the economic definition of income (the maximum level of consumption consistent with keeping productive capacity unchanged). Consumption is usually a much better welfare indicator particularly in developing countries. Second, household units differ in size (number of members) and in extent of income sharing among members. Individuals differ in age and consumption needs. Differences between countries in these respects may bias distribution comparisons.

World Bank staff have made an effort to ensure that the data are as comparable as possible. Whenever possible, consumption has been used rather than income. Households have been ranked by consumption or income per capita in forming the percentiles, and the percentiles are of population, not households. The income distribution and Gini indexes for high-income countries are directly calculated from the Luxembourg Income Study database. The estimation method used here is consistent with that which is applied to developing countries.

Definitions

- **Survey year** is the year in which the underlying data were collected.
- **Gini index** measures the extent to which the distribution of income (or, in some cases, consumption expenditures) among individuals or households within an economy deviates from a perfectly equal distribution. A Lorenz curve plots the cumulative percentages of total income received against the cumulative number of recipients, starting with the poorest individual or household. The Gini index measures the area between the Lorenz curve and a hypothetical line of absolute equality, expressed as a percentage of the maximum area under the line. Thus a Gini index of zero represents perfect equality while an index of 100 implies perfect inequality.
- **Percentage share of income or consumption** is the share that accrues to subgroups of population indicated by deciles or quintiles. Percentage shares by quintiles may not add up to 100 because of rounding.

Data sources

Data on distribution are compiled by the World Bank's Development Research Group using primary household survey data obtained from government statistical agencies and World Bank country departments. Data for high-income economies are from national sources, supplemented by the Luxembourg Income Study database.



2.9 Education policy and infrastructure

	Public expenditure on education		Expenditure per student						Expenditure on teaching materials		Primary pupil-teacher ratio	Duration of primary education
	1980	% of GNP	Primary		Secondary		Tertiary		Primary	Secondary	pupils per teacher 1995 ^a	years 1995 ^a
		1995 ^a	GNP per capita 1980	GNP per capita 1994	GNP per capita 1980	GNP per capita 1995 ^a	GNP per capita 1980	GNP per capita 1995 ^a	% of total for level 1994	% of total for level 1994		
Albania	..	3.4	..	..	..	23.0	..	36.0	..	5.4	18	8
Algeria	7.8	..	8.9	10.6	..	..	..	..	1.1	0.0	27	6
Angola	..	..	..	..	..	..	..	..	..	..	..	4
Argentina	2.7	4.5	6.5	16.2	..	12.0	10.4	17.0	..	..	..	7
Armenia	..	..	..	..	..	..	..	19.0	..	..	22	4
Australia	5.5	5.6	..	..	..	..	..	29.6	..	..	16	6
Austria	5.6	5.5	16.1	18.8	..	25.0	37.9	32.0	..	..	12	4
Azerbaijan	..	3.0	..	..	..	..	..	13.0	..	0.3	20	4
Bangladesh	1.5	2.3	4.8	..	..	23.0	46.8	30.0	..	..	..	5
Belarus	5.2	5.6	19.6	37.4	..	..	..	32.8	..	..	20	4
Belgium	6.1	5.7	17.8	..	..	25.0	..	34.8	0.2	..	12	6
Benin	..	3.1	..	..	..	22.0	..	240.0	..	..	49	6
Bolivia	4.4	6.6	13.7	..	..	18.0	..	67.0	..	..	..	8
Bosnia and Herzegovina	..	..	..	..	..	..	..	..	..	..	..	..
Botswana	..	9.6	13.6	..	..	..	665.5	..	..	..	26	7
Brazil	3.6	..	8.7	..	11.0	..	0.1	..	..	..	23	8
Bulgaria	4.5	4.2	17.5	28.9	..	..	..	21.0	..	..	17	4
Burkina Faso	2.6	3.6	26.5	..	..	..	3,371.1	..	0.8	..	58	6
Burundi	..	2.8	24.2	14.2	..	69.0	..	941.0	1.4	2.5	65	6
Cambodia	..	..	..	..	..	..	..	..	..	..	45	5
Cameroon	3.2	..	10.0	..	..	..	362.8	..	..	..	46	6
Canada	6.9	7.3	..	..	..	..	27.9	36.0	..	4.0	16	6
Central African Republic	..	..	22.1	..	..	..	..	..	..	..	..	6
Chad	..	2.2	..	12.3	..	33.0	..	234.0	..	0.9	62	6
Chile	4.6	2.9	9.6	8.5	..	9.0	..	21.0	0.0	..	27	8
China	2.5	2.3	3.8	5.6	..	14.0	..	81.0	..	..	24	5
Hong Kong, China	..	2.8	..	..	..	12.0	..	52.0	0.3	..	24	6
Colombia	1.9	3.5	5.2	10.5	..	11.0	41.1	29.0	..	..	25	5
Congo, Dem. Rep.	2.6	..	..	..	..	..	748.9	..	..	..	45	6
Congo, Rep.	7.0	5.9	10.1	..	..	..	..	224.0	0.1	..	70	6
Costa Rica	7.8	4.5	13.1	10.6	..	19.0	76.1	44.0	0.4	..	31	6
Côte d'Ivoire	7.2	..	22.5	..	113.0	..	..	..	..	..	45	6
Croatia	..	5.3	..	..	..	..	..	..	..	..	20	4
Cuba	7.2	..	10.4	..	..	..	28.5	..	5.7	..	14	6
Czech Republic	..	6.1	..	41.2	..	25.0	..	41.0	..	36.1	20	4
Denmark	6.9	8.3	38.4	..	..	..	..	55.0	4.3	..	10	6
Dominican Republic	2.2	1.9	3.1	2.9	..	5.0	..	5.0	..	..	35	8
Ecuador	5.6	3.4	5.6	3.9	..	15.0	22.3	34.0	..	..	26	6
Egypt, Arab Rep.	5.7	5.6	..	..	..	..	..	108.0	..	1.0	24	5
El Salvador	3.9	2.2	12.4	..	..	5.0	103.5	8.0	..	..	28	9
Eritrea	..	..	..	..	..	..	..	..	..	..	41	5
Estonia	..	6.6	..	..	..	..	..	40.0	..	3.4	17	5
Ethiopia	..	4.7	19.4	56.9	..	62.0	..	592.0	2.5	..	33	6
Finland	5.3	7.6	20.7	24.0	..	30.0	27.8	46.0	6.2	4.7	..	6
France	5.0	5.9	12.0	15.9	..	26.0	21.8	24.0	..	0.3	19	5
Gabon	2.7	..	..	5.5	..	..	..	..	..	0.6	52	6
Gambia, The	3.3	5.5	21.1	..	..	28.0	..	235.0	..	..	30	6
Georgia	..	5.2	..	..	..	..	..	28.0	..	..	16	4
Germany	..	4.7	..	..	..	..	..	35.0	..	..	18	4
Ghana	3.1	..	3.9	..	..	..	..	..	1.6	..	28	6
Greece	..	3.7	8.3	..	..	19.0	27.0	29.0	2.4	..	16	6
Guatemala	..	1.7	4.9	6.2	..	5.0	..	33.0	..	..	34	6
Guinea	..	..	..	10.4	..	38.0	..	498.0	..	..	49	6
Guinea-Bissau	..	..	32.7	..	..	..	..	..	..	..	..	6
Haiti	1.5	..	5.9	..	..	..	65.3	..	1.5	..	..	6
Honduras	3.2	3.9	10.9	..	..	22.0	72.1	59.0	3.6	..	35	6

	Public expenditure on education		Expenditure per student						Expenditure on teaching materials		Primary pupil-teacher ratio	Duration of primary education
	% of GNP		Primary % of GNP per capita		Secondary % of GNP per capita		Tertiary % of GNP per capita		Primary % of total for level	Secondary % of total for level	pupils per teacher 1995 ^a	years 1995 ^a
	1980	1995 ^a	1980	1994	1980	1995 ^a	1980	1995 ^a	1994	1994		
Hungary	4.7	6.0	14.0	26.0	..	28.0	75.3	73.0	..	..	11	8
India	2.8	3.5	9.4	11.9	..	13.0	..	78.0	..	..	63	5
Indonesia	1.7	..	..	..	..	..	..	..	..	..	23	6
Iran, Islamic Rep.	7.5	4.0	22.4	8.2	..	12.0	..	62.0	..	..	32	5
Iraq	3.0	..	7.0	..	..	..	..	..	..	..	22	6
Ireland	..	6.3	11.5	14.9	..	23.0	38.8	38.0	0.3	0.5	23	6
Israel	7.9	6.6	15.4	..	..	29.0	52.2	31.0	9.9	..	16	8
Italy	..	4.9	..	19.9	..	26.0	..	23.0	..	1.4	11	5
Jamaica	7.0	8.2	14.0	14.7	..	25.0	166.6	193.0	1.7	..	37	6
Japan	5.8	3.8	14.8	..	..	19.0	21.1	16.0	4.8	..	18	6
Jordan	..	6.3	..	..	..	..	..	111.0	..	3.0	21	10
Kazakhstan	..	4.5	..	..	..	..	..	20.0	..	..	20	4
Kenya	6.8	7.4	15.6	17.7	..	47.0	808.2	540.0	..	..	31	8
Korea, Dem. Rep.	..	..	..	..	..	..	..	..	..	..	..	4
Korea, Rep.	3.7	3.7	10.4	14.7	..	12.0	7.1	6.0	2.2	0.1	32	6
Kuwait	2.4	5.6	6.1	..	..	..	27.9	..	6.9	..	15	4
Kyrgyz Republic	..	..	..	..	..	..	..	49.0	..	0.6	20	4
Lao PDR	..	2.4	..	4.7	..	25.0	..	55.0	..	0.3	30	5
Latvia	3.3	6.3	..	..	..	..	..	45.0	..	..	14	4
Lebanon	..	2.0	..	..	..	..	..	..	..	..	12	6
Lesotho	5.1	5.9	8.8	12.6	..	51.0	642.3	399.0	0.4	..	49	7
Libya	3.4	..	..	..	..	..	..	..	..	..	..	9
Lithuania	5.5	6.1	..	..	..	..	..	51.0	..	0.4	17	4
Macedonia, FYR	..	5.5	..	20.6	..	..	..	..	..	0.1	20	8
Madagascar	4.4	..	7.8	..	35.6	..	..	..	1.1	..	40	5
Malawi	3.4	5.7	7.5	9.6	..	145.0	1,136.7	979.0	..	8.1	62	8
Malaysia	6.0	5.3	12.0	10.9	..	22.0	148.6	77.0	6.0	8.8	20	6
Mali	3.8	2.2	32.9	17.5	..	35.0	..	522.0	2.2	..	66	6
Mauritania	..	5.0	30.4	12.7	..	59.0	..	157.0	..	4.8	52	6
Mauritius	5.3	4.3	15.6	..	..	..	163.0	..	0.0	..	22	6
Mexico	4.7	5.3	4.3	7.8	..	20.0	..	61.0	1.3	0.0	29	6
Moldova	..	6.1	..	..	..	..	..	..	..	..	23	4
Mongolia	..	5.6	..	..	..	34.0	..	74.0	..	..	25	3
Morocco	6.1	5.6	15.5	15.5	..	51.0	..	74.0	0.2	..	28	6
Mozambique	4.4	..	..	..	..	..	..	..	..	..	58	5
Myanmar	1.7	1.3	..	..	..	10.0	..	21.0	..	..	48	5
Namibia	1.5	9.4	..	..	..	44.0	..	86.0	..	..	32	7
Nepal	1.8	2.9	14.6	8.4	..	11.9	271.9	156.0	7.2	..	39	5
Netherlands	7.6	5.3	13.8	..	..	20.0	53.7	44.0	3.1	..	19	6
New Zealand	5.8	6.7	15.0	16.9	..	23.0	33.3	39.0	7.9	..	18	6
Nicaragua	3.4	..	7.8	13.1	..	..	85.9	..	0.9	0.3	38	6
Niger	3.1	..	25.4	..	..	..	1,492.6	..	..	..	37	6
Nigeria	6.4	..	4.5	..	..	..	344.6	..	..	..	37	6
Norway	7.2	8.3	30.0	38.2	..	..	28.7	50.0	2.0	5.1	9	6
Oman	2.1	4.6	..	16.8	..	23.0	..	..	..	2.2	26	6
Pakistan	2.0	..	8.7	..	..	..	235.6	..	..	..	..	5
Panama	4.8	5.2	12.0	11.7	..	13.0	29.1	47.0	1.8	..	..	6
Papua New Guinea	..	..	..	..	..	..	..	..	..	..	33	6
Paraguay	1.5	2.9	..	7.9	..	11.0	..	52.0	..	..	24	6
Peru	3.1	..	7.2	..	..	..	5.1	..	0.7	..	28	6
Philippines	1.7	2.2	6.1	..	..	..	..	..	..	..	35	6
Poland	..	4.6	8.2	14.7	..	19.0	..	42.0	..	..	16	8
Portugal	3.8	5.4	13.5	17.2	..	20.0	..	25.0	0.2	..	12	6
Puerto Rico	..	..	..	..	..	..	..	..	..	..	..	8
Romania	3.3	3.2	..	21.7	..	7.0	..	40.0	..	..	20	4
Russian Federation	3.5	4.1	..	..	..	..	..	..	..	..	20	3



	Public expenditure on education		Expenditure per student						Expenditure on teaching materials		Primary pupil-teacher ratio	Duration of primary education
	1980	% of GNP 1995 ^a	Primary % of GNP per capita		Secondary % of GNP per capita		Tertiary % of GNP per capita		Primary % of total for level 1994	Secondary % of total for level 1994	pupils per teacher 1995 ^a	years 1995 ^a
			1980	1994	1980	1995 ^a	1980	1995 ^a	1994	1994		
Rwanda	2.7	..	11.1	..	..	..	..	3.5	..	..	7
Saudi Arabia	4.1	5.5	..	40.8	..	..	63.0	..	..	13	6
Senegal	..	3.6	24.6	..	..	..	..	4.0	..	58	6
Sierra Leone	3.8	..	..	..	..	..	..	..	..	..	7
Singapore	2.8	3.0	6.8	..	13.0	30.9	32.0	0.0	..	..	6
Slovak Republic	..	4.4	22.1	..	4.0	..	39.0	..	..	24	4
Slovenia	..	5.8	23.0	..	24.0	..	38.0	..	6.9	14	4	
South Africa	..	6.8	32.3	..	..	..	59.0	..	..	37	7
Spain	..	5.0	14.1	..	21.0	..	18.0	..	..	18	5
Sri Lanka	2.7	3.1	..	..	..	..	62.2	64.0	..	28	5
Sudan	4.8	..	26.9	..	..	..	440.6	..	..	36	8
Sweden	9.0	8.0	43.0	45.2	25.6	76.0	3.9	6.8	11	6
Switzerland	5.0	5.5	..	..	..	..	55.7	..	..	12	6
Syrian Arab Republic	4.6	..	8.0	..	17.0	..	..	1.9	7.9	24	6
Tajikistan	8.2	8.6	29.7	39.0	23	4
Tanzania	4.4	..	11.1	..	..	2,195.3	..	..	..	37	7
Thailand	3.4	4.2	8.8	..	11.0	..	25.0	1.0	..	20	6	
Togo	5.6	5.6	8.3	11.9	42.0	891.5	521.0	0.2	2.3	51	6	
Trinidad and Tobago	4.0	4.5	9.2	..	17.0	55.1	77.0	5.7	..	25	7	
Tunisia	5.4	6.8	11.8	13.5	23.0	193.9	89.0	2.0	..	25	6	
Turkey	2.8	3.4	8.0	13.2	9.0	107.7	51.0	0.1	0.1	28	5	
Turkmenistan	..	..	..	..	..	..	..	..	..	..	4
Uganda	1.2	..	3.7	..	..	..	..	..	..	35	7
Ukraine	5.6	7.7	21.2	42.9	..	..	38.5	20.0	..	20	4
United Arab Emirates	1.3	1.8	..	..	..	..	..	..	..	17	6
United Kingdom	5.6	5.5	16.0	..	22.0	79.7	44.0	2.9	..	19	6	
United States	6.7	5.3	27.1	..	24.0	48.3	23.0	..	..	16	6
Uruguay	2.3	2.8	9.3	8.3	8.0	..	28.4	5.8	..	20	6	
Uzbekistan	6.4	9.5	..	..	..	..	28.0	..	0.3	21	4
Venezuela	4.4	5.2	3.0	..	..	..	56.8	1.3	..	23	9
Vietnam	..	2.7	..	..	..	..	..	..	..	34	5
West Bank and Gaza	..	..	..	..	..	..	..	..	..	42	6
Yemen, Rep.	..	7.5	..	..	..	..	..	..	..	..	9
Yugoslavia, FR (Serb./Mont.)	..	..	..	..	..	..	..	..	9.3	22	4
Zambia	4.5	1.8	10.6	..	9.0	762.3	160.0	2.8	..	39	7	
Zimbabwe	6.6	8.5	24.2	18.9	39.0	259.8	234.0	0.1	4.1	39	7	
World	4.4 m	5.2 m	11.6 m	14.7 m	..	22.0 m	55.7 m	44.5 m	..	32 w	6 m	
Low income	3.4	3.6	11.0	12.4	..	33.5	362.8	158.5	..	41	6	
Excl. China & India	3.4	3.9	11.1	12.6	..	34.5	362.8	192.0	..	..	6
Middle income	4.4	5.1	11.1	14.1	..	17.0	11.9	41.5	..	..	..
Low & middle income	4.7	5.1	10.4	13.4	..	17.0	49.4	46.0	..	..	..
Upper middle income	4.0	5.0	9.2	16.5	..	19.5	65.2	42.0	..	24	7	
Low & middle income	3.9	4.6	10.4	12.9	..	22.0	107.7	57.0	..	35	6	
East Asia & Pacific	2.1	2.6	7.5	5.6	..	18.0	148.6	64.5	..	25	5	
Europe & Central Asia	5.0	5.6	15.7	23.0	..	21.0	38.5	39.0	..	21	4	
Latin America & Carib.	3.9	3.9	8.7	8.5	..	12.5	55.1	39.0	..	26	6	
Middle East & N. Africa	5.0	5.6	10.3	14.5	..	23.0	193.9	81.5	..	26	6	
South Asia	2.0	3.0	9.1	10.2	..	13.0	148.9	71.0	..	62	5	
Sub-Saharan Africa	4.1	5.3	15.6	12.7	..	42.0	748.9	240.0	..	41	6	
High income	5.6	5.5	15.0	..	..	22.5	30.2	33.5	..	17	6

a. Data are from UNESCO's forthcoming *World Education Report 1998*. They are not yet available in time series.

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. Because coverage, definitions, and data collection methods vary across countries and over time within countries, data on education should be interpreted with caution. Although exceptions are noted in the table, readers seeking greater detail should consult the country- and indicator-specific notes in the source cited below. In addition, Behrman and Rosenzweig (1994) contains a general discussion of the reliability of data on education.

The data on education spending refer solely to public spending—that is, spending on public education plus subsidies for private education. Unless specified, the data 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 of the central government only (excluding education expenditures by other ministries and departments, local authorities, and so on). 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.

In most cases the percentage of GNP devoted to education spending has little or no correlation with cross-national indicators of educational attainment. This percentage can be expected to be reflected in education indicators only when comparing countries that have the same national income per capita. Otherwise, this percentage reflects effort rather than achievement.

The comparability of pupil-teacher ratios is affected by whether both full- and part-time teachers are included, whether teachers are assigned nonteaching duties, and by differences in class size by grade and in number of hours taught. Moreover, the underlying enrollment levels are subject to a variety of reporting errors. (See *About the data* in 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 not strongly related to the value added of schooling systems (Behrman and Rosenzweig 1994).

In many countries the duration of primary education changed between 1980 and 1995 (see table 2.10 for definitions of primary, secondary, and tertiary education). As a result the relative size of public spending on education by level and primary pupil-teacher ratios also may have changed. These changes may affect the comparability of enrollment ratios over time and across countries.

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 on teaching materials** is the percentage of public spending on teaching materials (textbooks, books, and other scholastic supplies) to total public spending on primary or secondary education.
- **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).
- **Duration of primary education** is the minimum number of grades (years) a child is expected to cover in primary schooling.

Data sources

International data on education are compiled by UNESCO's Division of Statistics in cooperation with national commissions for UNESCO and national statistical services. The data in the table were compiled using a UNESCO electronic database corresponding to various tables in its *Statistical Yearbook 1996*.



2.10 Access to education

	Gross enrollment ratio								Net enrollment ratio			
	Preprimary % of relevant age group		Primary % of relevant age group		Secondary % of relevant age group		Tertiary % of relevant age group		Primary % of relevant age group		Secondary % of relevant age group	
	1995	1980	1995	1980	1995	1980	1995	1980	1995	1980	1995	
Albania	38	113	87	67	35	8	10	..	96	..	..
Algeria	2	94	107	33	62	6	11	81	95	31	56	
Angola	68	174	88	21	14	0	1	70	..	..	..
Argentina	50	106	108	56	72	22	38	..	..	..	59
Armenia	22	..	82	..	79	30	49	..	..	..	..
Australia	73	112	108	71	147 ^a	25	72	100	98	70	89	
Austria	76	99	101	99	104	26	45	99	100	..	90	
Azerbaijan	20	115	104	93	74	24	20	..	..	..	..
Bangladesh	..	61	92	18	..	3	..	..	..	..	..
Belarus	80	104	97	98	..	39	..	..	95	..	..
Belgium	116	104	103	91	144 ^a	26	49	97	98	..	98	
Benin	3	67	72	16	16	1	3	..	59	..	..
Bolivia	..	87	..	37	..	16	..	79	..	16	..	
Bosnia and Herzegovina	..	..	..	..	..	..	..	..	..	..	..
Botswana	..	91	115	19	56	1	4	75	96	14	45	
Brazil	56	98	112	33	45	11	11	80	90	14	19	
Bulgaria	62	98	94	84	78	16	39	96	97	73	75	
Burkina Faso	..	17	38	3	8	0	1	15	31	..	7	
Burundi	..	26	70	3	7	1	1	20	52	..	5	
Cambodia	5	..	122	32	27	1	2	..	..	..	..
Cameroon	11	98	88	18	27	2	..	..	..	15	..
Canada	63	99	102	88	106	57	103	..	95	..	92	
Central African Republic	..	71	58	14	10	1	1	56	..	..	..
Chad	1	..	55	..	9	..	1	..	..	..	..
Chile	96	109	99	53	69	12	28	..	86	..	55	
China	29	113	118	46	67	2	5	..	99	..	..
Hong Kong, China	84	107	96	64	75	10	..	95	91	61	71	
Colombia	28	124	114	41	67	9	17	..	85	..	50	
Congo, Dem. Rep.	1	80	72	24	26	1	2	..	61	..	23	
Congo, Rep.	1	141	114	74	53	5	..	96	..	..	..
Costa Rica	70	105	107	48	50	21	32	89	92	39	43	
Côte d'Ivoire	2	75	69	19	23	3	4	..	..	..	..
Croatia	31	..	86	..	82	19	28	..	82	..	66	
Cuba	89	106	105	81	80	17	14	95	99	..	59	
Czech Republic	91	..	96	..	96	18	21	..	98	..	88	
Denmark	81	96	99	105	118	28	45	96	99	88	86	
Dominican Republic	20	118	103	42	41	..	..	..	81	..	22
Ecuador	49	117	109	53	50	35	..	..	92	..	..
Egypt, Arab Rep.	8	73	100	50	74	16	18	..	89	..	65	
El Salvador	31	74	88	25	32	13	18	..	79	..	21	
Eritrea	4	..	57	..	19	..	1	..	31	..	15	
Estonia	56	98	91	..	86	25	38	..	94	..	77	
Ethiopia	1	36	31	9	11	0	1	..	24	..	..
Finland	39	96	100	100	116	32	67	..	99	..	93	
France	84	111	106	85	111	25	50	100	99	79	88	
Gabon	..	..	142	..	..	..	..	..	..	..	..
Gambia, The	24	53	73	11	22	..	2	50	55	..	18	
Georgia	32	..	82	..	73	30	38	..	82	..	71	
Germany	84	..	102	98	103	34	43	..	100	..	88	
Ghana	..	79	76	41	37	2	..	..	..	..	..
Greece	61	103	..	81	95	17	38	103	..	..	85
Guatemala	32	71	84	18	25	8	8	58	..	13	..	
Guinea	9	36	48	17	12	5	..	..	37	..	..
Guinea-Bissau	..	68	64	6	..	..	..	..	47	..	3
Haiti	..	76	..	14	..	1	..	38	..	..	..
Honduras	14	98	111	30	32	8	10	78	90	..	21	

	Gross enrollment ratio							Net enrollment ratio			
	Preprimary % of relevant age group 1995	Primary % of relevant age group		Secondary % of relevant age group		Tertiary % of relevant age group		Primary % of relevant age group		Secondary % of relevant age group	
		1980	1995	1980	1995	1980	1995	1980	1995	1980	1995
Hungary	86	96	97	70	81	14	19	95	93	..	73
India	5	83	100	30	49	5	6	..	..	..	..
Indonesia	19	107	114	29	48	4	11	88	97	..	42
Iran, Islamic Rep.	7	87	99	42	69	..	15	..	..	..	..
Iraq	8	113	90	57	44	9	..	99	79	47	37
Ireland	107	100	104	90	114	18	37	100	100	78	85
Israel	71	95	99	73	89	29	41	..	..	..	..
Italy	96	100	98	72	74	27	41	..	97	..	..
Jamaica	81	103	109	67	66	7	6	96	100	64	64
Japan	49	101	102	93	99	31	40	100	100	93	96
Jordan	25	104	94	75	..	27	..	93	..	68	..
Kazakhstan	29	84	96	93	83	34	33	..	..	..	..
Kenya	36	115	85	20	24	1	..	91	..	..	..
Korea, Dem. Rep.	..	..	..	..	..	..	..	..	..	..	..
Korea, Rep.	85	110	101	78	101	15	52	100	99	70	96
Kuwait	52	102	73	80	64	11	25	85	65	..	54
Kyrgyz Republic	8	116	107	110	81	16	14	..	97	..	..
Lao PDR	7	113	107	21	25	0	2	..	68	..	18
Latvia	44	78	89	100	85	24	26	..	84	..	78
Lebanon	74	111	109	59	81	30	27	..	..	..	..
Lesotho	..	102	99	18	28	1	2	66	65	13	16
Libya	..	125	110	76	97	8	16	100	97	62	..
Lithuania	36	79	96	114	84	35	28	..	..	..	80
Macedonia, FYR	24	100	89	61	57	28	18	..	85	..	51
Madagascar	..	133	72	..	14	3	3	..	..	..	..
Malawi	..	60	135	3	98	1	2	43	100	..	66
Malaysia	..	93	91	48	61	4	11	..	91	..	..
Mali	3	26	34	8	9	1	..	20	25	..	..
Mauritania	0	37	78	11	15	..	4	..	60	..	..
Mauritius	85	93	107	50	62	1	6	79	96	..	..
Mexico	71	120	115	49	58	14	14	..	100	..	..
Moldova	45	83	94	78	80	30	25	..	..	..	..
Mongolia	23	107	88	91	59	..	15	..	80	..	57
Morocco	63	83	83	26	39	6	11	62	72	20	..
Mozambique	..	99	60	5	7	0	1	36	40	..	6
Myanmar	..	91	100	22	32	5	5	..	..	..	..
Namibia	11	..	133	..	62	..	8	..	92	..	36
Nepal	..	86	110	22	38	3	5	..	..	..	..
Netherlands	100	100	107	93	139 ^a	29	49	93	99	81	..
New Zealand	77	111	104	83	117	27	58	100	100	81	93
Nicaragua	20	98	110	43	47	13	9	98	83	23	27
Niger	1	25	29	5	7	0	..	21	..	4	..
Nigeria	..	105	89	16	30	2	4	..	..	..	..
Norway	25	100	99	51	51	25	55	95	99	51	91
Oman	3	51	80	12	66	..	5	43	71	10	56
Pakistan	..	39	74	14	26	..	3	..	..	..	..
Panama	76	106	106	61	68	21	30	89	..	46	..
Papua New Guinea	1	59	80	12	14	2	3	..	..	..	..
Paraguay	38	106	109	27	38	9	10	89	89	..	33
Peru	36	114	123	59	70	17	31	86	91	..	53
Philippines	13	112	116	64	79	24	27	94	100	45	60
Poland	45	100	98	77	96	18	27	98	97	70	83
Portugal	58	123	128	37	102 ^a	11	34	98	100	..	78
Puerto Rico	..	..	..	..	..	48	..	..	..	..	..
Romania	53	102	100	71	66	12	18	..	92	..	73
Russian Federation	63	102	108	96	87	46	43	..	100	..	..



	Gross enrollment ratio							Net enrollment ratio			
	Preprimary % of relevant age group 1995	Primary % of relevant age group		Secondary % of relevant age group		Tertiary % of relevant age group		Primary % of relevant age group		Secondary % of relevant age group	
		1980	1995	1980	1995	1980	1995	1980	1995	1980	1995
Rwanda	..	63	82	3	11	0	..	59	76	..	8
Saudi Arabia	8	61	78	29	58	7	15	49	62	21	48
Senegal	2	46	65	11	16	3	3	37	54	..	..
Sierra Leone	..	52	..	14	..	1	..	..	..	..	..
Singapore	..	108	104	58	62	8	34	99	..	..	..
Slovak Republic	71	..	97	..	91	..	20	..	..	..	..
Slovenia	66	..	98	..	91	..	32	..	100	..	..
South Africa	28	85	117	..	84	..	17	..	96	..	52
Spain	69	109	105	87	118	23	46	100	100	74	94
Sri Lanka	..	103	113	55	75	3	5	..	..	..	..
Sudan	37	50	54	16	13	2	..	..	..	..	..
Sweden	60	97	105	88	132 ^a	31	43	..	100	..	96
Switzerland	94	..	107	..	91	18	32	..	100	..	..
Syrian Arab Republic	7	100	101	46	44	17	18	89	91	39	39
Tajikistan	10	..	89	..	82	24	20	..	..	..	..
Tanzania	..	93	67	3	5	..	1	68	48	..	..
Thailand	58	99	87	29	55	15	20	..	..	..	..
Togo	3	118	118	33	27	2	3	..	85	..	..
Trinidad and Tobago	10	99	96	70	72	4	8	90	88	..	64
Tunisia	..	102	116	27	61	5	13	82	97	23	..
Turkey	6	96	105	35	56	5	18	..	96	..	50
Turkmenistan	..	..	..	..	..	23	..	..	..	..	..
Uganda	..	50	73	5	12	1	2	39	..	..	..
Ukraine	54	102	87	94	91	42	41	..	..	..	..
United Arab Emirates	57	89	95	52	78	3	9	74	83	..	71
United Kingdom	29	103	115	83	134 ^a	19	48	100	100	79	92
United States	68	99	102	91	97	56	81	95	96	..	89
Uruguay	33	107	111	62	82	17	27	..	95	..	..
Uzbekistan	54	81	77	105	93	29	32	..	..	..	..
Venezuela	43	93	94	21	35	21	29	82	88	14	20
Vietnam	35	109	114	42	47	2	4	95	..	..	..
West Bank and Gaza	..	..	..	..	..	..	..	..	..	..	..
Yemen, Rep.	1	..	79	..	23	..	4	..	..	..	..
Yugoslavia, FR (Serb./Mont.)	31	29	72	..	65	..	21	..	..	..	..
Zambia	..	90	89	16	28	2	3	77	77	..	16
Zimbabwe	..	85	116	8	47	1	7	..	..	..	..
World	33 w	97 w	103 w	49 w	62 w	14 w	.. w	.. w	.. w	.. w	.. w
Low income	19	93	107	34	56	3	6	..	..	..	..
Excl. China & India	..	75	82	21	..	3	..	..	..	..	..
Middle income	38	100	105	54	60	19	19	..	93	..	..
Lower middle income	32	99	104	57	60	21	22	..	94	..	..
Upper middle income	56	101	107	47	62	14	14	..	91	..	..
Low & middle income	24	95	103	41	53	8	..	..	..	..	..
Europe & Central Asia	48	97	100	84	81	31	32	..	96	..	..
Latin America & Carib.	56	106	111	42	53	14	15	..	91	..	..
Middle East & N. Africa	14	87	97	42	64	11	15	..	..	..	..
South Asia	5	76	99	27	49	5	6	..	..	..	..
Sub-Saharan Africa	..	78	75	14	27	1	..	..	..	..	..
High income	69	102	103	87	104	35	57	..	98	..	..

a Includes training for the unemployed.

About the data

School enrollment data are important indicators of the size and capacity of a country's education system and may be useful measures of education outcomes, but they are notoriously rife with errors. The indicators in the table are reported to the United Nations Educational, Scientific, and Cultural Organization (UNESCO) by national education authorities on the basis of annual enrollment surveys, typically conducted at the beginning of the school year. They do not reflect actual rates of attendance or dropouts during the school year. Furthermore, school administrators may have incentives to exaggerate enrollments. Behrman and Rosenzweig (1994), comparing official school enrollment data for Malaysia in 1988 with gross school attendance rates from a household survey, found that the official statistics systematically overstated enrollment.

Overage or underage enrollments may occur, particularly when parents prefer for cultural or economic reasons to have children start school at other than the official age. Children's age at enrollment may also be inaccurately estimated or misstated, especially in communities where registration of births is not strictly enforced. Parents who want to enroll their underage children in primary school may do so by overstating the age of the child. And in some education systems ages for children repeating a grade may be deliberately or inadvertently underreported.

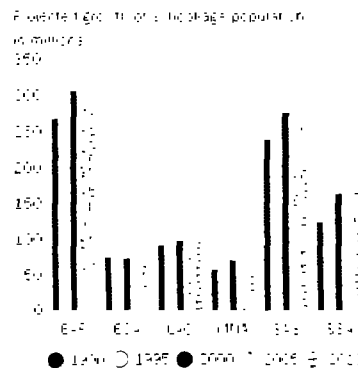
As an international indicator, the gross primary enrollment ratio has an inherent weakness: the length of primary education differs significantly across countries (see table 2.9), so a short duration increases the ratio, and a long duration decreases it (partly because of more dropouts among older children). Other problems affecting cross-country comparisons of enrollment data stem from errors in estimates of school-age populations. Age-gender structures from censuses or vital registration systems, the primary sources of data on school-age populations, are commonly subject to underenumeration (especially of young children) in order to circumvent laws or regulations; errors are also introduced when parents round up children's ages. While census data are often adjusted for age bias, adjustments are rarely made for inadequate vital registration systems. Compounding these problems, pre- and post-census estimates of school-age children are interpolations or projections (see the discussion of demographic data in the notes to table 2.1) based on models that may miss important demographic events.

In using enrollment data, it is also important to consider repetition rates, which are quite high in some

developing countries, leading to a substantial number of overage children enrolled in each grade and raising the gross enrollment ratio. Thus gross enrollment ratios provide an indication of the capacity of each level of the education system, but a high ratio does not necessarily indicate a successful education system. Net enrollment ratios provide a better indicator of a school system's efficiency, but neither indicator measures the quality of the education provided.

Figure 2.10a

Enrollments are improving, but the school-age population is growing



Source: World Bank staff estimates.

Enrollment ratios have improved considerably in all regions and at all education levels, particularly the primary level. Still, a substantial portion of children of school age continue to be out of school. The challenge for developing countries is to create an environment both in school and out of school that is conducive to bringing out-of-school children to schools and retaining them. In many countries this challenge will be exacerbated by sizable projected growth in the population age 6–14—growth that will put increasing pressure on the physical and financial resources of education systems.

Definitions

- **Gross enrollment ratio** is the ratio of total enrollment, regardless of age, to the population of the age group that officially corresponds to the level of education shown. Estimates are based on UNESCO's classification of education levels, as follows.
- **Preprimary** provides education for children not old enough to enter school at the primary level.
- **Primary** provides the basic elements of education at elementary or primary schools (see table 2.9 for the duration of primary school).
- **Secondary** provides general or specialized instruction at middle, secondary, or high schools, teacher training schools, and vocational or technical schools; this level of education is based on at least four years of instruction at the primary level.
- **Tertiary** requires, as a minimum condition of admission, the successful completion of education at the secondary level or evidence of attainment of an equivalent level of knowledge and is provided at universities, teachers colleges, and higher-level professional schools.
- **Net enrollment ratio** is the ratio of the number of children of official school age (as defined by the education system) enrolled in school to the number of children of official school age in the population.

Data sources



Enrollment ratios are from UNESCO's *Statistical Yearbook 1997*.



2.11 Educational attainment

	Percentage of cohort reaching grade 4					Progression to secondary school (general)					Average years of schooling			
	Male %		Female %			Male %		Female %			Male		Female	
	1980	1991	1980	1991	1980	1991	1980	1991	1980	1991	1980	1992	1980	1992
Albania	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Algeria	92	97	91	96	55	78	62	83	9	11	6	9	..	..
Angola	..	..	..	..	..	..	..	..	8	..	7	..	..	..
Argentina	..	..	..	..	..	..	..	..	..	13	..	14	..	..
Armenia	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Australia	..	..	..	..	..	..	..	..	12	13	12	14	..	..
Austria	..	..	..	..	..	..	..	..	11	15	11	14	..	..
Azerbaijan	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Bangladesh	..	..	..	..	..	56	..	47	..	..	..	..	..	..
Belarus	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Belgium	78	..	81	..	..	..	..	..	14	14	13	14	..	..
Benin	..	64	..	62	41	..	39	..	..	..	..	..	..	..
Bolivia	..	..	..	..	..	92	..	90	9	11	8	9	..	..
Bosnia and Herzegovina	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Botswana	..	91	..	95	..	74	..	77	7	10	8	11	..	..
Brazil	..	..	..	..	..	..	..	..	9	..	9	..	..	..
Bulgaria	..	93	..	90	..	40	..	88	11	11	11	12	..	..
Burkina Faso	79	81	79	82	..	..	..	..	2	3	1	2	..	..
Burundi	83	78	83	76	8	12	7	11	3	5	2	4	..	..
Cambodia	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Cameroon	81	..	81	..	24	32	19	30	8	..	6	..	..	..
Canada	..	..	..	..	..	..	..	..	15	17	15	18	..	..
Central African Republic	..	85	..	81	38	..	35	..	..	..	..	..	..	..
Chad	..	74	..	65	..	36	..	35	..	..	..	..	..	..
Chile	..	..	..	..	79	..	80	..	..	12	..	12	..	..
China	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Hong Kong, China	100	..	100	..	87	..	93	..	12	..	12	..	..	..
Colombia	..	72	..	74	..	..	..	..	..	..	..	..	..	..
Congo, Dem. Rep.	77	..	70	..	..	31	..	34	..	7	..	4	..	..
Congo, Rep.	91	88	91	89	86	..	80	..	..	..	..	..	..	..
Costa Rica	80	90	84	91	..	66	..	67	10	10	10	9	..	..
Côte d'Ivoire	94	85	91	83	25	..	21	..	..	..	..	..	..	..
Croatia	..	..	..	..	..	..	..	..	..	11	..	11	..	..
Cuba	..	..	..	..	..	..	..	..	..	12	..	13	..	..
Czech Republic	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Denmark	..	98	..	98	..	..	..	..	14	15	14	15	..	..
Dominican Republic	..	..	..	..	..	..	..	..	..	10	..	10	..	..
Ecuador	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Egypt, Arab Rep.	95	..	65	..	..	..	..	..	..	11	..	9	..	..
El Salvador	..	..	..	..	28	21	26	18	..	9	..	9	..	..
Eritrea	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Estonia	..	..	..	..	..	..	..	..	..	12	..	13	..	..
Ethiopia	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Finland	..	100	..	100	..	..	..	..	..	..	..	..	..	..
France	..	..	..	..	..	..	..	..	13	14	13	15	..	..
Gabon	82	..	79	..	..	..	..	..	..	..	..	..	..	..
Gambia, The	..	..	..	..	41	..	42	..	..	5	6	3	..	..
Georgia	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Germany	..	..	..	..	..	..	..	..	..	15	..	14	..	..
Ghana	87	..	82	..	..	..	..	..	..	..	..	..	..	..
Greece	98	..	98	..	..	..	..	..	12	13	12	13	..	..
Guatemala	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Guinea	..	80	..	73	..	49	..	44	..	4	..	2	..	..
Guinea-Bissau	63	..	46	..	71	..	46	..	6	..	3	..	..	..
Haiti	..	60	..	60	38	80	45	92	..	..	..	..	..	..
Honduras	..	..	..	..	..	..	..	..	..	..	..	..	..	..

	Percentage of cohort reaching grade 4				Progression to secondary school (general)				Average years of schooling			
	Male %		Female %		Male %		Female %		Male		Female	
	1980	1991	1980	1991	1980	1991	1980	1991	1980	1992	1980	1992
Hungary	96	97	96	97	..	..	..	..	9	12	10	12
India	..	..	..	..	..	..	..	..	..	..	..	..
Indonesia	..	..	..	..	..	..	..	..	..	10	..	9
Iran, Islamic Rep.	..	94	..	93	..	83	..	82	..	10	..	8
Iraq	..	..	..	..	46	..	51	..	12	9	9	7
Ireland	..	..	..	..	..	..	..	..	11	13	11	13
Israel	..	..	..	..	..	..	..	..	..	..	..	..
Italy	100	100	100	100	98	99	98	100	..	..	..	..
Jamaica	..	98	..	100	100	98	89	95	10	11	11	11
Japan	100	100	100	100	..	..	..	..	13	..	12	..
Jordan	95	100	95	97	..	..	88	70	12	11	12	12
Kazakhstan	..	..	..	..	..	..	..	..	..	..	..	..
Kenya	..	..	..	..	..	..	..	..	..	..	..	..
Korea, Dem. Rep.	..	..	..	..	..	..	..	..	..	..	..	..
Korea, Rep.	96	100	96	100	99	..	96	..	12	14	11	13
Kuwait	..	..	..	..	98	..	98	..	11	..	11	..
Kyrgyz Republic	..	..	..	..	..	..	..	..	..	..	..	..
Lao PDR	..	..	..	..	..	65	..	60	..	8	..	6
Latvia	..	..	..	..	..	..	..	..	..	..	..	..
Lebanon	..	..	..	..	..	..	..	..	..	..	..	..
Lesotho	61	74	77	84	..	..	..	..	7	8	10	10
Libya	..	..	..	..	..	..	..	..	..	..	..	..
Lithuania	..	..	..	..	..	..	..	..	..	..	..	..
Macedonia, FYR	..	..	..	..	..	..	..	..	..	..	..	..
Madagascar	..	63	..	64	..	44	..	41	..	..	..	..
Malawi	62	73	55	68	..	..	..	..	..	6	..	5
Malaysia	..	98	..	99	..	..	..	..	..	..	..	..
Mali	..	..	..	..	41	61	36	61	..	2	..	1
Mauritania	..	82	..	83	..	37	..	29	..	..	..	..
Mauritius	..	99	..	99	47	45	47	48	..	..	..	..
Mexico	..	..	..	..	..	..	..	..	..	..	..	..
Moldova	..	..	..	..	..	..	..	..	..	..	..	..
Mongolia	..	..	..	..	..	..	..	..	..	..	..	..
Morocco	90	85	89	85	..	79	..	84	8	8	5	6
Mozambique	..	66	..	60	25	39	23	39	5	4	4	3
Myanmar	..	..	..	..	..	..	..	..	..	..	..	..
Namibia	..	..	..	..	..	76	..	72	..	12	..	13
Nepal	..	..	..	..	..	79	..	77	..	..	..	..
Netherlands	97	..	100	..	65	..	75	..	14	16	13	15
New Zealand	..	97	..	97	..	..	..	..	14	15	13	16
Nicaragua	51	..	55	..	..	..	..	..	8	8	9	9
Niger	82	..	79	..	..	42	..	37	..	3	..	1
Nigeria	..	..	..	..	..	..	..	..	..	..	..	..
Norway	99	..	100	..	..	..	..	..	13	15	13	16
Oman	..	..	..	..	74	84	83	88	5	8	2	7
Pakistan	..	..	..	..	..	..	..	..	..	..	..	..
Panama	87	85	88	88	..	..	..	..	11	11	11	11
Papua New Guinea	..	68	..	67	..	..	..	..	..	..	..	..
Paraguay	..	79	..	81	..	..	..	..	..	9	..	8
Peru	85	..	83	..	81	..	78	..	11	..	10	..
Philippines	..	..	..	..	..	..	..	..	10	11	11	11
Poland	..	..	..	..	..	..	..	..	12	12	12	12
Portugal	..	..	..	..	..	67	..	78	..	..	..	..
Puerto Rico	..	..	..	..	..	..	..	..	..	..	..	..
Romania	..	..	..	..	..	..	..	..	..	11	..	11
Russian Federation	..	..	..	..	..	..	..	..	..	..	..	..



2.11

	Percentage of cohort reaching grade 4				Progression to secondary school (general)					Average years of schooling			
	Male %		Female %		Male %		Female %			Male		Female	
	1980	1991	1980	1991	1980	1991	1980	1991	1991	1980	1992	1980	1992
Rwanda	83	72	84	75	5	..	2	..	..	6	..	6
Saudi Arabia	91	..	90	..	85	96	94	94	7	9	5	8	
Senegal	93	94	90	90	..	..	..	..	..	6	..	4
Sierra Leone	..	..	..	..	..	..	..	..	..	..	..	..
Singapore	..	..	..	..	82	..	84	..	11	..	11	..
Slovak Republic	..	..	..	..	..	..	..	..	..	..	..	..
Slovenia	..	..	..	..	..	..	..	..	..	..	..	..
South Africa	..	..	..	..	..	87	..	91	..	12	..	12
Spain	95	97	95	98	..	..	91	..	13	14	12	15
Sri Lanka	..	97	..	98	..	88	..	92	..	..	..	..
Sudan	78	..	78	..	..	..	..	..	..	..	..	..
Sweden	99	..	100	..	..	..	..	..	12	14	13	14
Switzerland	92	..	94	..	42	46	42	48	14	15	13	14	
Syrian Arab Republic	94	95	91	95	76	68	76	61	11	10	8	9	
Tajikistan	..	..	..	..	..	..	..	..	..	..	..	..
Tanzania	..	89	..	90	..	..	..	..	..	..	..	..
Thailand	..	..	..	..	..	..	..	..	..	..	..	..
Togo	90	84	84	79	39	40	34	35	..	11	..	6	
Trinidad and Tobago	..	..	..	..	..	..	..	..	11	11	11	11
Tunisia	94	93	90	93	31	60	31	60	10	11	7	10	
Turkey	..	99	..	98	47	62	33	44	..	..	..	..
Turkmenistan	..	..	..	..	..	..	..	..	..	..	..	..
Uganda	..	..	..	..	..	..	..	..	..	..	..	..
Ukraine	..	..	..	..	..	..	..	..	..	..	..	..
United Arab Emirates	..	94	..	93	91	92	93	96	8	11	7	12	
United Kingdom	..	..	..	..	..	..	..	..	13	15	13	15
United States	..	..	..	..	..	..	..	..	14	16	15	16
Uruguay	93	99	99	99	..	..	..	..	..	..	..	..
Uzbekistan	..	..	..	..	..	..	..	..	..	..	..	..
Venezuela	..	..	..	..	69	70	70	75	..	10	..	11
Vietnam	..	..	..	..	..	..	..	..	..	..	..	..
West Bank and Gaza	..	..	..	..	..	..	..	..	..	..	..	..
Yemen, Rep.	..	..	..	..	..	..	..	..	..	..	..	..
Yugoslavia, FR (Serb./Mont.)	..	..	..	..	..	..	..	..	..	..	..	..
Zambia	..	..	..	..	..	..	..	..	..	..	..	..
Zimbabwe	..	81	..	80	..	..	..	..	..	..	..	..

About the data

Indicators of students' progress through school provide a measure of an education system's success in maintaining a flow of students from one grade to the next and thus in imparting a particular level of education. Although school attendance is mandatory in most countries, at least through the primary level, students drop out of school for a variety of reasons—including discouragement over poor performance, the cost of schooling, and the opportunity cost of time spent in school. In addition, students' progress to higher grades may be limited by the availability of teachers, classrooms, and educational materials.

The rate of progression, or persistence, is measured by the proportion of a single-year cohort of students that eventually reaches a particular grade or level of schooling. Because tracking data for individual students are not available, aggregate student flows from one grade to the next are estimated using data on average promotion, repetition, and dropout rates. Other flows caused by new entrants, reentrants, grade skipping, migration, or school transfers during the school year are not considered. This procedure, called the reconstructed cohort method, makes three simplifying assumptions: dropouts never return to school; promotion, repetition, and dropout rates remain constant over the entire period in which the cohort is enrolled in school; and the same rates apply to all pupils enrolled in a given grade, regardless of whether they previously repeated a grade.

Because data from the United Nations Educational, Scientific, and Cultural Organization (UNESCO) do not include dropouts or dropout rates, the number of dropouts is estimated as the difference between enrollments in successive grades in successive years, after netting out repeaters. The remaining students are assumed to be promoted. Repeated application of the same calculations leads to an estimate of the number of students entering each successive grade (Fredricksen 1991).

The percentage of the cohort reaching grade 4, rather than some other grade, is shown for two reasons. First, four grades are the minimum needed to acquire literacy (United Nations 1993b). Second, using grade 4 minimizes the effect of repetition at or close to the final grade of primary education.

Progression to secondary school measures the percentage of students in the final grade of primary school who enter the first year of the general secondary system. The comparability of this indicator across time and between countries may be affected by changes in the definition of the primary and sec-

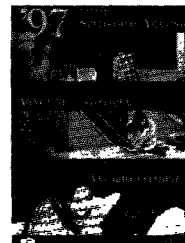
ondary levels, rules governing repetition and promotion, and the availability of special programs and other alternatives to the general secondary education system.

The average years of schooling measures educational attainment for men and women.

Definitions

• **Percentage of cohort reaching grade 4** is the share of children enrolled in primary school in 1980 and 1991 who reached grade 4 in 1983 and 1994, respectively. The estimate is based on the reconstructed cohort method (see *About the data*). • **Progression to secondary school (general)** is the number of new entrants in the first grade of secondary school (general) divided by the number of children enrolled in the final grade of primary school in the previous year (according to the country's duration of primary education, as shown in table 2.9). • **Average years of schooling** is the average number of years of formal schooling received.

Data sources



Estimates of the percentage of cohort reaching grade 4 and progression to secondary school were compiled using UNESCO's database on enrollment by level, grade or field, and gender.



2.12 Gender and education

	Primary education				Secondary general				Secondary vocational			
	Teachers % female		Pupils % female		Teachers % female		Pupils % female		Teachers % female		Pupils % female	
	1980	1995 ^a	1980	1994	1980	1995 ^a	1980	1994	1980	1994	1980	1994
Albania	50	60	47	48	46	51	59	54	32	50	41	31
Algeria	37	44	42	46	..	45	39	47	..	20	21	34
Angola	..	..	47	..	..	..	33	..	..	..	21	..
Argentina	92	..	49	..	75	..	64	..	..	..	47	..
Armenia	..	97	..	50	..	85	..	..	..	..	..	..
Australia	70	76	49	49	45	52	50	49	..	..	..	..
Austria	75	84	49	49	54	61	49	49	36	44	41	43
Azerbaijan	..	83	..	47	..	..	..	48	..	..	32	38
Bangladesh	8	..	37	..	7	..	24	..	5	..	2	..
Belarus	..	..	..	48	..	..	..	50	..	..	..	..
Belgium	59	72	49	49	..	..	..	..	..	..	..	..
Benin	23	24	32	..	..	..	26	..	..	..	..	..
Bolivia	48	..	47	..	..	..	..	..	..	..	..	..
Bosnia and Herzegovina	..	..	..	..	..	..	..	..	..	..	..	..
Botswana	72	76	55	50	35	44	56	53	45	32	25	23
Brazil	85	..	49	..	..	..	..	..	..	..	..	..
Bulgaria	72	89	49	48	64	75	68	67	49	59	40	38
Burkina Faso	20	24	37	39	..	18	33	34	..	21	40	49
Burundi	47	47	39	45	18	..	25	38	10	14	18	39
Cambodia	..	37	..	44	..	28	..	38	..	..	..	..
Cameroon	20	32	45	47	18	25	34	40	24	28	39	41
Canada	66	67	49	48	44	67	49	49	..	..	..	..
Central African Republic	25	..	37	..	12	..	25	..	25	25	49	..
Chad	..	8	..	32	..	4	..	17	..	..	..	..
Chile	..	72	49	49	..	..	55	54	..	..	47	47
China	37	47	45	47	25	36	40	44	25	25	34	46
Hong Kong, China	73	76	48	..	..	51	51	..	..	..	32	..
Colombia	79	80	50	50	41	..	50	..	42	42	45	..
Congo, Dem. Rep.	..	22	42	43	..	..	..	30	..	..	..	..
Congo, Rep.	25	36	48	48	8	15	40	41	..	..	54	..
Costa Rica	79	..	49	49	57	..	54	52	50	..	50	48
Côte d'Ivoire	15	18	40	43	..	..	28	34	..	..	49	..
Croatia	73	89	49	49	..	67	..	65	..	58	..	46
Cuba	75	81	48	49	50	61	51	54	25	34	46	48
Czech Republic	..	93	..	49	..	72	..	52	..	55	..	41
Denmark	..	58	49	49	..	49	51	52	..	..	41	46
Dominican Republic	..	71	40	50	..	50	..	57	..	45	75	57
Ecuador	65	68	49	49	38	44	48	47	37	..	60	55
Egypt, Arab Rep.	47	53	40	45	35	41	36	44	21	21	38	45
El Salvador	65	..	49	49	24	..	43	48	32	..	48	53
Eritrea	..	35	..	44	..	13	..	42	..	3	..	11
Estonia	..	89	49	48	..	83	..	53	..	64	..	47
Ethiopia	22	27	35	38	10	10	36	46	..	..	..	18
Finland	..	..	49	49	..	..	53	53	42	42	47	54
France	68	78	48	48	58	..	49	51	42	..	68	45
Gabon	27	44	49	50	28	19	42	..	17	..	28	..
Gambia, The	34	34	35	41	27	..	30	..	20	..	19	..
Georgia	..	94	..	..	..	..	..	..	..	..	..	..
Germany	..	85	..	49	..	48	..	50	..	35	..	44
Ghana	42	..	44	46	21	..	38	..	21	..	25	..
Greece	48	55	48	48	55	56	50	50	24	44	20	34
Guatemala	62	..	45	46	..	..	43	..	..	..	39	..
Guinea	14	25	33	33	10	12	28	24	4	..	34	25
Guinea-Bissau	24	..	32	..	20	..	22	..	3	22	14	..
Haiti	49	..	46	..	11	..	47	..	..	..	..	..
Honduras	74	73	50	50	..	..	50	..	..	..	49	..

	Primary education				Secondary general				Secondary vocational			
	Teachers % female		Pupils % female		Teachers % female		Pupils % female		Teachers % female		Pupils % female	
	1980	1995 ^a	1980	1994	1980	1995 ^a	1980	1994	1980	1994	1980	1994
Hungary	80	84	49	49	61	67	65	63	..	..	39	45
India	26	32	39	43	30	35	32	38	..	..	32	13
Indonesia	33	52	46	48	..	39	36	46	..	27	27	40
Iran, Islamic Rep.	57	55	40	47	32	46	39	45	10	17	16	24
Iraq	48	68	46	45	42	55	32	39	24	52	29	26
Ireland	74	78	49	49	..	..	51	50	..	..	72	49
Israel	..	83	49	49	..	..	56	53	..	..	46	45
Italy	87	93	49	49	64	71	48	50	45	45	41	43
Jamaica	87	89	50	49	67	..	52	..	56	56	65	..
Japan	57	60	49	49	..	34	50	50	..	28	47	45
Jordan	59	61	48	49	44	48	46	55	28	37	30	35
Kazakhstan	..	97	..	49	..	74	..	52	..	..	..	..
Kenya	31	40	47	49	..	33	42	44	..	..	..	..
Korea, Dem. Rep.	..	..	..	..	..	..	..	..	..	..	..	..
Korea, Rep.	37	59	49	48	28	41	46	47	20	25	44	53
Kuwait	56	71	48	49	50	54	46	49	..	25	..	34
Kyrgyz Republic	88	83	49	50	58	71	49	51	..	38	50	50
Lao PDR	30	42	45	43	26	39	38	39	..	26	28	31
Latvia	..	97	49	48	..	81	..	52	..	..	..	45
Lebanon	..	..	48	48	..	..	51	53	8	35	40	47
Lesotho	75	79	59	53	48	51	60	59	47	..	56	46
Libya	47	..	47	49	24	..	39	..	12	..	25	..
Lithuania	97	98	49	48	85	82	..	52	..	..	..	42
Macedonia, FYR	..	53	..	48	..	52	..	60	..	..	..	44
Madagascar	..	56	49	49	..	..	..	50	..	..	11	34
Malawi	32	38	41	47	..	..	29	39	..	..	..	4
Malaysia	44	59	49	49	46	54	48	51	22	34	29	27
Mali	20	23	36	39	..	18	29	34	..	..	8	34
Mauritania	9	20	35	45	8	10	21	36	..	4	7	23
Mauritius	43	50	49	49	39	44	48	51	..	..	22	..
Mexico	..	..	49	48	..	..	43	48	..	..	66	59
Moldova	96	97	49	49	..	..	51	51	..	..	..	43
Mongolia	..	91	49	51	..	67	52	58	44	56	63	48
Morocco	30	38	37	42	..	32	38	42	..	26	23	40
Mozambique	22	23	43	42	27	19	29	40	15	24	17	25
Myanmar	54	67	48	48	61	74	45	..	..	..	..	..
Namibia	..	65	..	50	..	46	..	55	..	20	..	39
Nepal	10	16	28	39	..	..	..	..	..	..	..	..
Netherlands	46	54	49	50	26	30	52	52	..	31	41	41
New Zealand	66	81	49	49	41	56	49	50	..	49	82	47
Nicaragua	78	84	51	50	..	56	52	53	..	..	56	49
Niger	30	34	35	38	22	23	29	33	15	12	8	13
Nigeria	33	46	43	44	8	..	36	..	38	..	17	..
Norway	56	..	49	49	..	..	51	51	..	..	47	41
Oman	34	50	34	48	27	48	25	48	6	..	7	17
Pakistan	32	..	33	31	30	..	26	..	20	20	17	33
Panama	80	..	48	..	55	..	51	..	47	47	54	..
Papua New Guinea	27	37	41	45	34	35	32	41	31	31	..	31
Paraguay	..	55	48	48	..	65	49	51	..	..	..	43
Peru	60	58	48	..	46	39	46	..	..	..	40	..
Philippines	80	..	49	50	..	..	53	..	..	..	..	..
Poland	..	..	49	48	..	..	71	68	..	..	44	41
Portugal	..	..	48	..	59	..	48	..	..	..	..	..
Puerto Rico	..	..	..	..	..	..	..	..	..	..	..	..
Romania	70	84	49	49	53	65	65	53	41	54	45	42
Russian Federation	98	98	49	49	76	79	51	52	..	..	..	..



	Primary education				Secondary general				Secondary vocational			
	Teachers % female		Pupils % female		Teachers % female		Pupils % female		Teachers % female		Pupils % female	
	1980	1995 ^a	1980	1994	1980	1995 ^a	1980	1994	1980	1994	1980	1994
Rwanda	38	..	48	50	..	..	28	..	..	..	55	..
Saudi Arabia	39	51	39	47	33	49	37	44	..	15	..	12
Senegal	24	26	40	43	15	15	34	35	..	..	25	35
Sierra Leone	22	..	42	..	21	..	30	..	..	..	..	..
Singapore	66	..	48	..	56	..	51	..	24	..	23	..
Slovak Republic	..	91	..	49	..	75	..	51	..	63	..	48
Slovenia	..	92	..	49	..	76	..	52	..	58	..	44
South Africa	..	58	..	49	..	64	..	53	..	..	..	..
Spain	67	71	49	48	43	..	51	51	31	..	46	52
Sri Lanka	..	83	48	48	..	62	51	51	..	..	..	..
Sudan	31	60	40	44	26	..	37	..	..	..	21	..
Sweden	..	72	49	49	..	64	51	51	..	..	52	50
Switzerland	..	69	49	49	..	..	49	50	..	..	39	41
Syrian Arab Republic	54	65	43	47	22	44	37	44	15	34	..	..
Tajikistan	..	51	..	49	..	34	..	47	..	..	..	..
Tanzania	37	43	47	49	28	25	33	43	..	..	..	..
Thailand	49	..	48	49	57	..	46	50	..	..	..	..
Togo	21	14	38	40	13	11	24	26	..	..	..	..
Trinidad and Tobago	66	74	50	49	52	56	50	51	..	..	..	..
Tunisia	29	49	42	47	..	36	39	47	..	..	..	..
Turkey	41	44	45	47	36	40	35	39	34	39	..	..
Turkmenistan	..	..	..	..	..	..	..	..	..	..	..	..
Uganda	30	32	43	44	20	..	29	38	..	..	..	..
Ukraine	97	98	49	49	..	..	..	51	..	..	..	..
United Arab Emirates	54	69	48	48	48	55	45	51	..	..	..	..
United Kingdom	78	82	49	49	49	57	49	49	..	..	57	52
United States	..	86	49	49	..	56	49	49	..	..	..	..
Uruguay	..	..	49	49	..	..	58	55	..	..	..	..
Uzbekistan	78	82	49	49	48	49	46	48	..	..	..	..
Venezuela	83	75	50	50	..	..	..	58	..	..	..	..
Vietnam	65	..	47	..	58	..	47	..	..	..	..	..
West Bank and Gaza	..	48	..	..	..	41	..	..	..	..	..	..
Yemen, Rep.	11	..	..	28	..	..	..	..	..	..	..	..
Yugoslavia, FR (Serb./Mont.)	..	75	..	49	..	..	..	51	..	..	..	..
Zambia	40	43	47	48	..	..	35	38	3	..	..	..
Zimbabwe	38	41	48	48	..	32	42	44	..	..	..	..
World	45 w	53 w	45 w	46 w	.. w	.. w	..	.. w	..	..	34 w	.. w
Low income	32	39	42	44	26	33	..	41	..	..	30	31
Excl. China & India	31	..	42	..	..	..	..	..	..	..	..	..
Middle income	..	..	47	48	..	..	..	..	..	..	..	..
Lower middle income	65	68	47	48	..	..	..	..	..	..	..	..
Upper middle income	..	..	49	..	..	..	..	..	..	..	..	..
Low & middle income	42	47	44	45	31	..	..	..	..	..	32	..
East Asia & Pacific	41	46	45	47	28	35	..	44	..	..	33	45
Europe & Central Asia	84	85	48	48	..	67	..	..	..	..	..	..
Latin America & Carib.	..	..	49	..	..	..	..	..	..	..	..	..
Middle East & N. Africa	44	51	42	45	35	44	..	..	..	..	26	30
South Asia	24	31	38	41	27	34	..	38	..	..	27	15
Sub-Saharan Africa	29	38	43	46	..	..	..	..	..	..	..	..
High income	..	76	49	49	..	49	..	49	..	..	..	..

a. Data are from UNESCO's forthcoming *World Education Report 1998*. They are not yet available in time series.

About the data

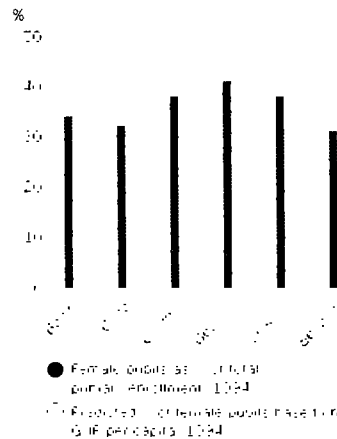
Although data on female enrollment suffer from the same problems affecting data on general enrollment discussed in the notes to table 2.10, female enrollment as a share of total enrollment is a relatively simple indicator that does not raise serious problems of cross-country comparability. Most countries could achieve gender parity in primary and secondary schools, especially if education resources kept pace with the population of children. Yet disparities remain, and female enrollment rates tend to be positively correlated with other indicators of development (UNRISD 1977).

Girls' enrollments have caught up with boys' in most high-income countries, as well as in Latin America and the Caribbean. But they lag behind in Sub-Saharan Africa, South Asia, and the Middle East. In low- and lower-middle-income countries dropout rates at the primary level are higher for girls than for boys, indicating that the gender gap in these countries is wider than is reflected by enrollment rates. One reason for this is early child-bearing in many of these countries, which is clearly incompatible with schooling.

The economic incentives for educating girls lie in the opportunities women have to work. Teaching has always been one of the first professions open to women, making the number of female teachers a revealing indicator of employment opportunities. In addition, female teachers are important role models for girls, particularly in societies where female education is not encouraged or male teaching of females is forbidden. Over the past decade the proportion of female primary school teachers has increased everywhere. But data on teachers may not reflect the functions they perform. Schools may employ teachers in many capacities outside the classroom, and the responsibilities assigned to male and female teachers may differ systematically.

Figure 2.12a

Gender disparities in education do not respond to changes in GNP per capita



Source: UNESCO World Bank, 1994 estimates.

Although the disparity between the enrollment of boys and girls has narrowed, the percentage of enrolled girls continues to lag behind that of boys in many parts of the developing world. The obstacles to female education stem from many factors, national education policies that affect boys and girls differently; uneven distribution of primary schools, especially in rural areas; lack of schools for girls in systems segregated by sex; perceived irrelevance of primary school curricula to women's employment possibilities; and demand for the household labor of girls.

Gender disparities in educational enrollment are not correlated with an overall standard of living such as GNP per capita, so gender disparity is not something that economies "grow out of" (Filmer, King, and Pritchett 1998). Thus any strategy to improve female enrollment should aim at establishing supportive national policies, providing access to schools with adequate infrastructure, and reducing the direct and opportunity cost of girls' attendance.

Definitions

• **Female teachers as a percentage of total teachers** includes full-time and part-time teachers. • **Female pupils as a percentage of total pupils** includes enrollments in public and private schools but may exclude specialized schools and training programs.

Data sources



The estimates in this table were compiled using the United Nations Educational, Scientific, and Cultural Organization's electronic database on institutions, teachers, and pupils.



2.13 Health expenditure, services, and use

	Health expenditure			Health expenditure per capita		Physicians		Hospital beds		Inpatient admission rate	Average length of stay	Outpatient visits per capita
	Public % of GDP	Private % of GDP	Total % of GDP	PPP \$	\$	per 1,000 people		per 1,000 people		% of population	days	
	1990-95 ^a	1990-95 ^a	1990-95 ^{a,b}	1990-95	1990-95	1980	1994	1980	1994	1990-97	1990-97	1990-97
Albania	2.7	..	..	..	..	0.9	1.3	..	3.0	..	11	2
Algeria	3.3	1.3	4.6	247	109	..	0.8	..	2.1	..	..	..
Angola	4.0	..	..	..	..	..	0.0	..	1.3	..	..	..
Argentina	4.3	6.3	10.6	932	877	..	2.7	..	4.6	..	..	..
Armenia	3.1	4.7	7.8	140	10	3.5	3.1	8.4	7.8	8	15	3
Australia	6.0	3.0	8.9	1,728	1,578	1.8	2.2	..	8.9	14	14	11
Austria	5.9	1.9	7.9	1,720	1,926	2.3	2.6	11.2	9.4	25	11	6
Azerbaijan	1.4	6.1	7.5	96	3	3.4	3.8	9.7	10.0	6	18	1
Bangladesh	1.2	1.3	2.4	35	5	0.1	0.2	0.2	0.3	..	..	..
Belarus	5.3	1.1	6.4	280	245	3.4	4.1	12.5	12.4	26	18	11
Belgium	7.0	1.0	8.0	1,784	2,082	2.5	3.7	9.4	7.6	20	12	8
Benin	1.7	..	..	..	..	0.1	0.1	1.5	0.2	..	..	..
Bolivia	2.7	2.4	5.0	138	38	0.5	0.4	..	1.4	..	..	..
Bosnia and Herzegovina	..	..	..	..	..	..	0.6	..	2.0	..	15	..
Botswana	1.9	1.4	3.1	171	109	0.1	0.2	2.4	1.6	..	..	..
Brazil	2.7	4.7	7.4	428	261	0.8	1.4	..	3.0	0 ^c	..	2
Bulgaria	4.0	1.4	6.9	296	197	2.5	3.3	11.1	10.2	18	14	6
Burkina Faso	2.3	3.2	5.5	43	22	0.0	..	..	0.3	..	..	..
Burundi	0.9	..	..	..	..	..	0.1	..	0.7	..	..	..
Cambodia	0.7	6.5	7.2	..	18	0.1	0.1	..	2.1	..	..	..
Cameroon	1.0	0.4	1.4	33	7	..	0.1	..	2.6	..	..	..
Canada	6.8	2.7	9.6	2,238	1,835	1.8	2.2	..	5.4	13	12	7
Central African Republic	1.9	..	..	..	..	0.0	0.0	1.6	0.9	..	..	..
Chad	3.4	0.1	3.5	26	6	..	..	..	0.7	..	..	..
Chile	2.5	4.0	6.5	652	241	..	1.1	3.4	3.2	..	..	..
China	2.1	1.8	3.8	100	23	0.9	1.6	2.0	2.4	4	15	..
Hong Kong, China	1.9	2.5	4.3	1,036	944	0.8	1.3	4.0	..	2	..	1
Colombia	3.0	4.4	7.4	487	138	..	0.9	1.6	1.4	..	..	..
Congo, Dem. Rep.	0.2	..	..	..	..	..	0.1	..	1.4	..	..	..
Congo, Rep.	1.8	3.2	6.3	170	102	0.1	0.3	..	3.3	..	..	..
Costa Rica	6.3	2.2	8.5	536	214	..	0.9	3.3	2.5	..	..	..
Côte d'Ivoire	1.4	2.0	3.4	71	22	..	0.1	..	0.8	..	..	..
Croatia	8.5	1.6	10.1	..	302	..	2.0	..	5.9	14	..	..
Cuba	7.9	..	..	..	..	1.4	3.6	..	5.4	..	..	..
Czech Republic	7.7	1.9	9.6	970	383	..	2.9	..	7.4	19	13	16
Denmark	5.3	1.1	6.4	1,508	1,849	2.4	2.9	..	5.0	25	8	5
Dominican Republic	2.0	3.3	5.3	220	71	..	1.1	..	2.0	..	..	..
Ecuador	2.0	3.3	5.3	253	78	..	1.5	1.9	1.6	..	..	..
Egypt, Arab Rep.	1.6 ^d	2.1 ^d	3.7 ^d	..	..	1.1	1.8	2.0	2.1	3	8	4
El Salvador	1.2	3.8	5.0	132	74	0.3	0.7	..	1.5	..	..	..
Eritrea	1.1	0.9	2.0	..	..	..	..	..	..	..	..	..
Estonia	6.3	..	..	..	..	4.2	3.1	12.4	8.4	18	12	6
Ethiopia	1.7	..	..	..	..	0.0	0.0	0.3	0.2	..	..	..
Finland	5.7	1.9	7.7	1,521	1,526	1.9	2.7	15.5	10.1	23	12	4
France	8.0	1.9	9.9	2,156	2,576	2.2	2.8	..	9.0	21	11	6
Gabon	0.6	..	..	..	..	0.5	0.5	..	3.2	..	..	..
Gambia, The	1.9	..	..	..	..	..	..	..	0.6	..	..	..
Georgia	0.8	..	..	..	..	4.8	4.2	10.7	8.2	5	13	2
Germany	8.2	2.3	10.4	2,123	2,578	2.2	3.3	..	9.7	21	14	13
Ghana	1.3	0.1	1.4	30	4	..	..	..	1.5	..	..	..
Greece	5.5	1.8	7.3	706	488	2.4	4.0	6.2	5.0	14	8	..
Guatemala	0.9	1.7	2.7	92	33	..	0.3	..	1.1	..	..	..
Guinea	1.2	..	..	..	..	0.0	0.2	..	0.6	..	..	..
Guinea-Bissau	1.1	..	..	..	..	0.1	..	1.8	1.5	..	..	..
Haiti	1.3	2.3	3.6	35	8	0.1	0.1	0.7	0.8	..	..	..
Honduras	2.8	2.8	5.6	121	34	0.3	0.4	1.3	1.0	..	..	..

	Health expenditure			Health expenditure per capita		Physicians		Hospital beds		Inpatient admission rate	Average length of stay	Outpatient visits per capita
	Public % of GDP	Private % of GDP	Total % of GDP	PPP \$	\$	per 1,000 people		per 1,000 people		% of population	days	
	1990-95 ^a	1990-95 ^a	1990-95 ^{a,b}	1990-95	1990-95	1980	1994	1980	1994	1990-97	1990-97	1990-97
Hungary	6.8	0.5	7.3	496	295	2.5	3.6	9.1	9.6	24	10	14
India	0.7	4.4	5.6	68	24	0.4	0.4	0.8	0.8	..	..	..
Indonesia	0.7	1.1	1.8	76	17	0.1	0.2	..	0.7	..	6	..
Iran, Islamic Rep.	2.8	2.0	4.8	239	1,343	0.3	0.3	1.5	1.4	..	..	..
Iraq	..	..	..	..	..	0.6	0.6	1.9	1.7	..	..	..
Ireland	5.4	1.3	6.7	1,451	1,151	1.3	2.0	9.7	5.0	15	7	..
Israel	2.1	2.1	4.1	560	825	2.5	..	5.1	6.0	..	..	..
Italy	5.4	2.4	7.7	1,605	1,404	1.3	1.7	..	6.5	16	11	..
Jamaica	3.0	2.3	5.4	212	91	0.4	0.5	..	2.1	..	..	..
Japan	5.7	1.6	7.2	1,587	2,580	1.4	1.8	11.3	16.2	9	46	16
Jordan	3.7	4.2	7.9	347	118	0.8	1.6	1.3	1.6	11	3	3
Kazakhstan	2.2	..	..	..	..	3.2	3.8	13.1	12.2	16	17	1
Kenya	1.9	1.0	2.5	34	13	0.1	0.0	..	1.7	..	..	..
Korea, Dem. Rep.	..	..	..	..	..	2.5	..	..	..	..	..	..
Korea, Rep.	1.8	3.6	5.4	518	420	0.6	1.2	1.7	4.1	6	19	2
Kuwait	3.6	..	..	..	..	1.7	0.2	4.1	..	..	..	..
Kyrgyz Republic	3.7	..	..	..	..	2.9	3.1	12.0	9.9	16	15	1
Lao PDR	1.3	1.3	2.6	..	8	..	0.2	..	2.6	..	..	..
Latvia	4.4	..	..	..	..	4.1	3.0	13.7	11.9	21	14	4
Lebanon	2.1	3.3	5.3	..	..	1.7	1.9	..	3.1	..	..	..
Lesotho	3.5	..	..	..	..	..	0.0	..	..	..	..	..
Libya	..	..	..	..	..	1.3	1.1	4.8	4.2	..	..	..
Lithuania	5.1	..	..	..	..	3.9	4.0	12.1	11.1	20	14	7
Macedonia, FYR	7.3	0.9	8.3	..	..	..	2.3	..	5.5	9	15	3
Madagascar	1.1	..	..	..	..	0.1	0.1	..	0.9	..	..	0.1
Malawi	2.3	..	..	..	..	0.0	0.0	..	1.6	..	..	..
Malaysia	1.4	1.0	2.5	220	85	0.3	0.4	2.3	2.0	..	..	..
Mali	2.0	1.3	2.9	15	11	0.0	0.1	..	..	..	..	..
Mauritania	1.8	4.1	5.2	75	35	..	0.1	..	0.7	..	..	..
Mauritius	2.2	1.7	3.4	408	109	0.5	0.8	3.1	3.1	0 ^c	..	4
Mexico	2.8	3.0	5.3	365	223	0.9	1.3	..	1.2	6	4	2
Moldova	4.9	..	..	..	..	3.1	3.6	12.0	12.2	19	18	8
Mongolia	4.8	0.7	6.7	174	158	9.9	2.7	11.2	11.5	23	..	5
Morocco	1.6	1.6	3.4	126	36	0.1	0.4	1.2	1.1	..	..	..
Mozambique	4.6	..	..	..	..	0.0	..	1.1	0.9	..	..	..
Myanmar	0.4	..	..	..	..	0.2	0.1	0.9	0.6	..	..	..
Namibia	3.7	3.7	7.6	303	153	..	0.2	..	..	..	..	..
Nepal	1.2	3.8	5.0	60	9	0.0	0.1	0.2	0.2	..	..	..
Netherlands	6.7	2.0	8.8	1,813	2,198	2.1	2.5	12.5	11.3	6	33	6
New Zealand	5.7	1.8	7.4	1,260	1,018	1.6	2.1	..	7.3	14	7	..
Nicaragua	4.3	3.5	7.8	..	34	0.4	0.7	..	1.8	..	..	..
Niger	1.6	..	..	..	..	..	0.0	..	..	..	..	..
Nigeria	0.3	1.0	1.4	18	5	0.1	0.2	0.9	1.7	..	..	..
Norway	6.6	1.4	8.0	2,080	2,274	1.9	3.3	15.0	13.5	15	10	4
Oman	2.5	..	..	..	..	0.5	0.9	1.6	2.1	1	5	4
Pakistan	0.8	2.7	3.5	70	17	0.3	0.5	0.6	0.7	..	..	3
Panama	5.4	2.0	7.5	485	201	1.0	1.8	..	2.5	..	..	..
Papua New Guinea	2.8	..	..	..	..	0.1	0.1	5.5	4.0	..	..	..
Paraguay	1.0	3.3	4.3	161	72	0.6	0.3	..	0.6	..	..	..
Peru	2.6	2.3	4.9	199	106	0.7	1.0	..	1.4	0 ^c	..	2
Philippines	1.3	1.0	2.4	60	22	0.1	0.1	1.7	1.1	..	..	..
Poland	4.8	1.1	6.0	283	226	1.8	2.3	5.6	6.3	14	11	6
Portugal	4.5	3.6	8.1	1,058	797	2.0	2.9	..	4.3	11	10	3
Puerto Rico	..	6.0	..	..	..	..	..	..	..	..	..	..
Romania	3.6	..	..	..	..	1.5	1.8	8.8	7.7	18	10	5
Russian Federation	4.1	0.6	4.8	225	96	4.0	3.8	13.0	11.8	20	17	8



	Health expenditure			Health expenditure per capita		Physicians		Hospital beds		Inpatient admission rate	Average length of stay	Outpatient visits per capita
	Public % of GDP	Private % of GDP	Total % of GDP	PPP \$	\$	per 1,000 people		per 1,000 people		% of population	days	1990-97
	1990-95 ^a	1990-95 ^a	1990-95 ^{a,b}	1990-95	1990-95	1980	1994	1980	1994	1990-97	1990-97	1990-97
Rwanda	1.9	..	..	..	..	0.0	0.0	1.5	1.7	..	..	..
Saudi Arabia	3.1	..	..	202	159	0.5	1.3	1.5	2.5	..	..	..
Senegal	2.5	..	..	..	..	0.1	0.1	..	0.7	..	..	..
Sierra Leone	1.6	2.0	3.6	22	18	0.1	..	1.2	..	..	..	..
Singapore	1.3	2.3	3.6	845	987	0.9	1.4	4.2	3.6	12	..	..
Slovak Republic	6.0	..	..	..	..	..	2.8	..	7.1	20	11	12
Slovenia	7.4	..	..	..	..	..	2.2	7.0	5.8	16	11	..
South Africa	3.6	4.3	7.9	396	257	..	..	..	..	..	..	..
Spain	6.0	1.7	7.6	1,166	1,043	2.8	4.1	..	4.0	10	11	..
Sri Lanka	1.4	0.4	1.9	61	12	0.1	0.1	2.9	2.7	..	..	..
Sudan	..	2.7	0.3	..	29	0.1	..	0.9	1.1	..	..	..
Sweden	6.0	1.3	7.3	1,523	1,724	2.2	3.0	14.8	6.5	19	8	3
Switzerland	7.2	2.8	10.0	2,395	3,533	..	3.1	..	20.8	15	..	11
Syrian Arab Republic	..	..	..	..	..	0.4	0.8	1.1	1.1	..	..	..
Tajikistan	6.4	..	..	..	..	2.4	2.1	10.0	8.8	16	15	..
Tanzania	3.0	..	..	..	..	..	..	1.4	0.9	..	..	..
Thailand	1.4	3.9	5.3	336	111	0.1	0.2	1.5	1.7	..	..	..
Togo	1.7	2.2	3.4	40	20	0.1	0.1	..	1.5	..	..	..
Trinidad and Tobago	2.6	1.3	3.9	381	151	0.7	0.7	..	3.2	..	..	..
Tunisia	3.0	2.9	5.9	..	104	0.3	0.6	2.1	1.8	8	..	..
Turkey	2.7	1.5	4.2	239	100	0.6	1.1	2.2	2.5	6	6	1
Turkmenistan	2.8	..	..	..	..	2.9	3.2	10.6	11.5	17	15	..
Uganda	1.6	2.2	3.9	61	10	0.0	..	1.5	0.9	..	..	..
Ukraine	5.0	..	..	..	..	3.7	4.4	12.5	12.2	23	17	10
United Arab Emirates	2.0	0.5	2.5	378	379	1.1	0.8	2.8	3.1	11	5	..
United Kingdom	5.8	1.1	6.9	1,373	1,208	1.6	1.5	9.3	4.9	23	10	6
United States	6.6	7.7	14.2	3,801	3,667	1.8	2.5	5.9	4.2	12	8	6
Uruguay	2.0	6.5	8.5	642	439	2.0	3.2	..	4.5	..	..	..
Uzbekistan	3.5	..	..	..	..	2.9	3.3	11.5	8.7	19	14	..
Venezuela	2.3	4.8	7.1	602	202	0.8	1.6	0.3	2.6	..	..	..
Vietnam	1.1	4.1	5.2	..	..	0.2	0.4	3.5	3.8	7	8	3
West Bank and Gaza	..	..	..	..	..	..	..	..	..	..	..	..
Yemen, Rep.	1.2	1.5	2.6	..	39	0.1	0.1	..	0.8	..	..	..
Yugoslavia, FR (Serb./Mont.)	..	..	..	..	..	3.4	2.0	13.6	5.4	8	12	2
Zambia	2.4	0.7	3.3	31	362	0.1	0.1	3.5	..	..	..	..
Zimbabwe	2.0	4.2	6.5	122	86	0.2	0.1	3.1	0.5	..	..	..
World	3.2 w	2.8 w	5.4 w	532 w	505 w	1.0 w	1.4 w	3.5 w	3.8 w	..	..	..
Low income	1.5	2.7	4.2	78	22	0.6	1.0	1.5	1.6	..	..	..
Excl. China & India	1.1	2.0	3.1	47	18	..	0.4	1.5	1.5	..	..	..
Middle income	4.3	2.4	5.1	264	209	1.4	1.6	..	4.6	..	..	..
Lower middle income	..	..	..	..	..	1.6	1.8	6.9	5.4	..	..	..
Upper middle income	..	..	..	..	..	1.0	1.6	..	3.3	..	..	..
Low & middle income	2.4	2.6	4.5	139	83	0.9	1.2	2.7	2.7	..	..	..
East Asia & Pacific	1.7	1.9	3.6	106	27	0.8	1.4	2.0	2.1	..	..	..
Europe & Central Asia	1.4	1.1	2.4	117	111	..	..	0.4	0.1	..	..	..
Latin America & Carib.	2.9	3.9	6.7	425	248	0.8	1.4	..	..	..	..	..
Middle East & N. Africa	2.4	2.2	4.5	211	433	0.7	..	1.7	1.8	..	..	..
South Asia	1.2	3.8	5.0	64	21	0.3	0.4	0.7	0.7	..	..	..
Sub-Saharan Africa	1.6	1.6	2.9	87	55	..	..	..	1.2	..	..	..
High income	6.9	3.7	9.6	2,227	2,404	1.8	2.5	..	7.4	..	..	..

a. Data are for most recent year available. b. Data may not sum to totals because of rounding. c. Less than 0.5. d. Data are for 1997.

About the data

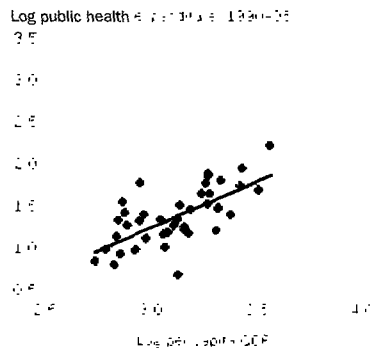
Most industrial countries have national health accounting systems that track and compare public and private health care expenditures. Data on private and public health expenditures are required for the public sector to rationalize its spending and to devise policies that are both efficient and equitable. Few developing countries, however, have national health accounts. As a result cross-country comparisons of health financing data are difficult, especially because records of private out-of-pocket expenditures are often lacking. Compiling estimates of public health expenditures is also complicated in countries where state, provincial, and local governments are involved in health care financing because such data are not regularly reported and are often of poor quality. Furthermore, in some countries health services are considered social services, and so are excluded from health sector expenditures. The data on health expenditures shown here were collected by the World Bank as part of its health, nutrition, and population strategy. No estimates were made for countries with incomplete data.

Health services indicators (physicians and hospital beds per 1,000 people) and health utilization indicators (inpatient admission rates, average length of stay, and outpatient visits) come from a variety of sources (see below). Data are lacking for many countries, and for others comparability is limited by differences in definitions. For example, some countries incorrectly include retired physicians or those working outside the health sector in estimates of health personnel. Moreover, it is important to recognize that these indicators show the availability and use of health services but do not reflect their quality—that is, how well trained physicians are or how well equipped hospitals are.

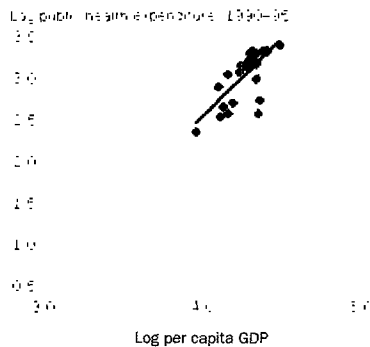
Average length of stay in hospitals is one indicator of the efficiency of resource use. Longer stays may reflect a waste of resources if patients are kept in hospitals beyond the time medically required, inflating demand for hospital beds and increasing hospital costs. Aside from differences in cases and financing methods, cross-country variations in average length of stay may result from differences in the role of hospitals. Many developing countries do not have separate extended facilities, so hospitals become the source of long-term as well as acute care. Data for some countries may not include all public and private hospitals. Admission rates may be overstated in some countries if outpatient surgeries are counted as hospital admissions. And in many countries outpatient visits, especially emergency visits, may result in double counting if a patient receives treatment in more than one department.

Figure 2.13a

Low-income countries devote relatively less public spending to health . . .



. . . than do high-income countries



Note: Public health expenditure and per capita GDP have been adjusted for purchasing power parity.

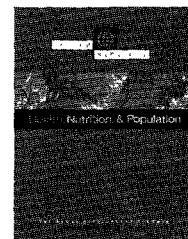
Source: See Data Sources.

The income elasticity of health spending, defined as the percentage change in health spending resulting from a percentage change in income can provide a useful measure of how differences in income translate into differences in health expenditures. Globally, every 1 percent increase in per capita income causes total health expenditures to increase by 1.24 percent. Income elasticities are 1.08 for low-income countries, 1.10 for middle income countries, and 1.96 for high-income countries. Thus countries with higher incomes tend to spend a larger share of their income on health. Public health expenditures increase by 1.33 percent for every 1 percent increase in per capita income. Private health expenditures are less responsive to income changes (income elasticity of 0.99).

Definitions

- **Public health expenditure** consists of recurrent and capital spending from government (central and local) budgets, external borrowings and grants (including donations from international agencies and nongovernmental organizations), and social (or compulsory) health insurance funds.
- **Private health expenditure** includes direct household (out-of-pocket) spending, private insurance, charitable donations, and direct service payments by private corporations.
- **Total health expenditure** is the sum of public and private health expenditures. It covers the provision of health services (preventive and curative), family planning activities, nutrition activities, and emergency aid designated for health but does not include provision of water and sanitation.
- **Physicians** are defined as graduates of any faculty or school of medicine who are working in the country in any medical field (practice, teaching, research).
- **Hospital beds** include inpatient beds available in public, private, general, and specialized hospitals and rehabilitation centers. In most cases beds for both acute and chronic care are included.
- **Inpatient admission rate** is the percentage of the population admitted to hospitals during a year.
- **Average length of stay** is the average duration of inpatient hospital admissions.
- **Outpatient visits per capita** is the number of visits to health care facilities per capita, including repeat visits.

Data sources



Health expenditure estimates come from country sources, supplemented by information from international agencies and World Bank country and sector studies; including the Human Development Network's *Sector Strategy: Health, Nutrition, and Population*. Data were also drawn from World Bank public expenditure reviews, the International Monetary Fund's government finance data files, and other studies. Data for private expenditure are largely from household surveys and World Bank poverty assessments and sector studies. The Organisation for Economic Co-operation and Development (OECD) provided data on public and private health expenditures and health services and use data for member countries. Data for physicians and beds are from the World Health Organization (WHO), supplemented by country data.



2.14 Access to health services

	Health care		Safe water		Sanitation		Child immunization			
	% of population with access		% of population with access		% of population with access		Measles % of children under 12 months		DPT % of children under 12 months	
	1980	1993	1980	1995	1980	1995	1980	1995	1980	1995
Albania	100	..	92	..	..	..	90	91	94	97
Algeria	77	..	..	..	17	69	33	75
Angola	70	24	..	32	..	16	26	32	6	21
Argentina	64	..	89	58	76	41	82
Armenia	95	..	83
Australia	99	100	99	95	99	90	68	..	..	86
Austria	..	100	100	..	85	100	25	60	90	90
Azerbaijan	91	..	90
Bangladesh	..	74	..	79	..	35	0	96	0	91
Belarus	..	100	..	..	50	100	..	96	..	89
Belgium	..	100	..	..	99	100	50	70	95	97
Benin	..	42	..	50	..	20	..	81	..	87
Bolivia	60	..	44	13	83	11	88
Bosnia and Herzegovina	57	..	67
Botswana	..	86	..	70	..	55	63	68	64	76
Brazil	72	..	41	56	78	40	83
Bulgaria	..	100	96	..	..	99	98	93	97	100
Burkina Faso	35	78	5	18	23	55	2	47
Burundi	..	80	..	..	..	..	30	44	38	57
Cambodia	13	..	..	..	75	..	79
Cameroon	20	15	..	41	..	40	16	51	5	48
Canada	..	99	97	100	60	85	..	98	80	93
Central African Republic	..	13	16	18	..	..	12	70	13	40
Chad	..	26	..	24	..	21	..	24	1	18
Chile	..	95	..	..	..	83	87	93	94	98
China	90	..	21	78	89	58	92
Hong Kong, China	74	72	73	83
Colombia	88	87	..	76	..	63	14	77	15	94
Congo, Dem. Rep.	80	59	..	..	..	..	18	41	18	35
Congo, Rep.	47	..	9	49	39	42	50
Costa Rica	..	97	..	..	..	..	60	94	86	85
Côte d'Ivoire	..	60	20	72	17	54	..	57	..	40
Croatia	96	..	68	..	90	..	87
Cuba	..	100	61	93	31	66	48	100	67	100
Czech Republic	96	..	96
Denmark	..	100	100	100	100	100	..	88	85	89
Dominican Republic	71	..	78	29	100	35	83
Ecuador	..	80	..	70	..	64	24	100	10	74
Egypt, Arab Rep.	100	99	90	64	70	11	78	82	84	91
El Salvador	55	..	68	45	94	43	100
Eritrea	29	..	35
Estonia	74	81	84	84
Ethiopia	..	55	4	27	..	10	4	38	3	47
Finland	..	100	..	100	100	100	70	98	92	100
France	100	85	96	0	78	79	89
Gabon	..	87	..	67	..	76	..	50	14	48
Gambia, The	42	76	..	37	71	68	80	78
Georgia	63	..	..
Germany	100	35	75	..	80
Ghana	..	25	..	56	..	27	16	54	7	51
Greece	96	..	70	72	78
Guatemala	..	60	..	60	..	66	23	84	43	80
Guinea	..	45	..	62	12	70	..	69	..	73
Guinea-Bissau	30	..	24	23	..	20	..	68	9	74
Haiti	..	45	..	28	..	24	..	24	3	30
Honduras	..	62	..	65	..	62	35	90	31	96

	Health care		Safe water		Sanitation		Child immunization			
	% of population with access		% of population with access		% of population with access		Measles % of children under 12 months		DPT % of children under 12 months	
	1980	1993	1980	1995	1980	1995	1980	1995	1980	1995
Hungary	..	..	..	..	..	94	99	100	99	100
India	50	..	..	81	..	29	0	84	31	86
Indonesia	..	43	..	62	..	51	0	89	0	92
Iran, Islamic Rep.	50	73	50	..	60	..	39	88	32	99
Iraq	..	98	74	44	..	87	35	88	13	91
Ireland	..	..	..	..	..	100	10	..	34	65
Israel	..	100	..	99	..	70	69	94	84	92
Italy	..	..	99	..	99	100	5	50	..	50
Jamaica	..	..	..	70	..	74	12	82	34	90
Japan	..	100	..	..	..	85	69	68	60	85
Jordan	..	90	89	89	76	100	29	92	30	100
Kazakhstan	..	..	..	..	..	..	..	72	..	80
Kenya	..	..	..	53	..	77	..	35	..	40
Korea, Dem. Rep.	..	100	..	100	..	100	29	98	50	96
Korea, Rep.	..	100	..	89	..	100	4	92	70	100
Kuwait	100	100	100	..	100	100	48	93	67	100
Kyrgyz Republic	..	..	..	75	..	53	..	89	..	83
Lao PDR	..	..	..	39	..	19	..	65	..	54
Latvia	..	..	..	..	..	..	..	85	..	65
Lebanon	..	..	92	..	59	..	..	65	4	94
Lesotho	..	80	18	52	12	6	49	82	56	58
Libya	100	100	90	90	70	..	65	..	60	96
Lithuania	..	..	..	..	..	..	..	94	..	96
Macedonia, FYR	..	..	..	..	..	..	..	85	..	87
Madagascar	..	65	..	29	..	3	..	59	48	67
Malawi	40	80	..	45	..	53	49	99	58	98
Malaysia	..	88	..	88	75	91	11	81	58	90
Mali	20	..	..	37	..	31	..	49	..	46
Mauritania	..	..	..	..	..	..	45	53	18	50
Mauritius	100	99	..	98	..	100	34	85	87	89
Mexico	51	91	..	83	..	66	35	90	41	92
Moldova	..	..	..	..	..	50	..	98	..	86
Mongolia	90	100	..	..	..	..	..	85	76	88
Morocco	..	62	32	52	50	40	17	87	43	90
Mozambique	..	30	9	32	10	21	32	71	56	57
Myanmar	30	..	20	38	20	41	..	66	4	84
Namibia	..	..	..	..	..	34	..	57	..	61
Nepal	10	..	11	48	0	20	2	78	8	65
Netherlands	..	100	100	100	100	100	91	95	96	97
New Zealand	..	100	87	..	..	..	80	87	76	89
Nicaragua	..	..	..	61	..	31	15	81	15	85
Niger	..	30	..	53	..	15	19	38	6	19
Nigeria	40	67	..	39	..	36	55	50	..	44
Norway	..	100	..	..	100	100	80	93	90	92
Oman	75	89	15	..	..	79	22	98	18	100
Pakistan	65	85	38	60	16	30	1	53	2	58
Panama	..	82	..	83	..	87	47	84	47	86
Papua New Guinea	..	96	..	28	..	22	1	55	32	50
Paraguay	..	..	..	..	..	30	19	76	17	79
Peru	..	..	..	60	..	44	21	97	14	94
Philippines	..	..	..	..	..	..	9	86	47	86
Poland	100	100	67	..	50	100	92	96	96	95
Portugal	..	..	57	..	..	100	54	94	73	93
Puerto Rico	..	..	..	..	..	..	..	..	..	..
Romania	..	..	77	..	50	49	83	93	..	98
Russian Federation	..	..	..	..	..	..	..	91	..	72



	Health care		Safe water		Sanitation		Child immunization			
	% of population with access		% of population with access		% of population with access		Measles % of children under 12 months		DPT % of children under 12 months	
	1980	1993	1980	1995	1980	1995	1980	1995	1980	1995
Rwanda	42	74	17	83
Saudi Arabia	85	98	91	93	76	86	8	94	41	96
Senegal	..	40	..	50	..	58	..	80	..	80
Sierra Leone	26	..	..	34	13	11	36	44	13	41
Singapore	..	100	100	100	..	97	47	88	84	95
Slovak Republic	43	51	..	99	..	99
Slovenia	90	..	91	..	98
South Africa	70	..	46	74	77	74	81
Spain	98	99	95	100	8	90	..	88
Sri Lanka	90	90	..	..	..	..	..	88	46	91
Sudan	..	70	..	50	..	22	1	74	1	77
Sweden	..	100	..	..	85	100	56	96	99	99
Switzerland	..	100	..	100	85	100	..	..	..	89
Syrian Arab Republic	..	99	71	85	45	78	13	98	13	92
Tajikistan	62	..	90	..	95
Tanzania	72	93	..	49	..	86	45	75	59	79
Thailand	30	59	..	81	..	70	..	86	49	94
Togo	22	..	65	..	73
Trinidad and Tobago	..	99	..	82	..	56	..	87	24	89
Tunisia	95	90	72	..	46	..	65	89	36	92
Turkey	..	100	67	92	..	94	27	65	42	66
Turkmenistan	85	..	60	..	90	..	87
Uganda	..	71	..	34	..	57	22	79	9	79
Ukraine	..	100	..	97	50	49	..	96	53	94
United Arab Emirates	96	90	100	98	75	95	34	90	11	90
United Kingdom	100	..	96	52	92	44	92
United States	90	98	85	86	89	96	94
Uruguay	83	..	82	50	80	53	87
Uzbekistan	18	..	71	..	65
Venezuela	79	..	58	50	94	56	68
Vietnam	75	..	..	36	..	21	1	95	4	94
West Bank and Gaza
Yemen, Rep.	16	..	..	52	..	51	2	49	1	53
Yugoslavia, FR (Serb./Mont.)	58	100	95	81	90	92
Zambia	..	75	..	43	..	23	..	78	83	76
Zimbabwe	55	..	..	74	5	58	56	77	39	80
World	78 w	..	47 w	42 w	82 w	46 w	84 w
Low income	76	..	28	40	80	39	81
Excl. China & India	51	..	36	18	63	13	63
Middle income	60	38	86	41	87
Lower middle income	58	..	86	35	86
Upper middle income	76	..	64	56	84	54	88
Low & middle income	76	..	37	39	82	40	83
East Asia & Pacific	84	..	29	64	88	49	91
Europe & Central Asia	87	..	81
Latin America & Carib.	73	..	57	44	84	38	86
Middle East & N. Africa	40	83	42	90
South Asia	78	..	30	0	82	25	83
Sub-Saharan Africa	45	..	37	35	56	..	55
High income	92	53	82	79	88

About the data

The indicators in the table are provided to the World Health Organization (WHO) by member states as part of their efforts to monitor and evaluate progress in implementing national health-for-all strategies. Because reliable, observation-based statistical data for these indicators do not exist in many developing countries, in most cases the data are estimates. In some cases these estimates may be skewed by a country's desire to show progress or to establish a need for international assistance.

Access indicators measure the supply of services but reveal little about benefits or rate of use. For example, data on access to health care provide no information on the quality of care or on how the consumption of services differs among groups within countries, regions, or communities. Moreover, unless these indicators are based on survey statistics, they may not fully reflect the situation. In many developing countries services by nongovernmental organizations and private charities play an increasingly important role for the poor and for many rural residents, widening the gap between official statistics and the actual production and consumption of many essential services. It is not known, however, whether such services truly replace publicly provided services, and if so, how they differ in quantity and quality from public services. In addition, health care facilities tend to be concentrated in urban areas. Separate data for rural areas (not shown here) indicate much lower coverage and access.

People's health is also influenced by the environment in which they live. A lack of clean water and basic sanitation is the main reason diseases transmitted by feces are so common in developing countries. Drinking water contaminated by feces deposited near homes and an inadequate supply of water cause diseases that account for 10 percent of the total disease burden in developing countries (World Bank 1993c). To date, however, efforts to improve the provision of water, sanitation, and drainage have been disappointing. At the end of the 1980s—which had been declared the International Drinking Water Supply and Sanitation Decade by a coalition of international aid agencies—most people in poor regions still lacked adequate sanitation.

Governments in developing countries usually finance immunization against measles and DPT (diphtheria, pertussis or whooping cough, and tetanus) as part of the basic public health package, but personnel with limited training are often used to provide the vaccines. According to the World Bank's *World Development Report 1993: Investing in Health*,

these diseases account for about 10 percent of the disease burden among children under 5, compared with an expected 23 percent had vaccination coverage remained at the 1970s level. In many developing countries, however, data recording practices make immunization difficult to measure (WHO 1996a).

Definitions

• **Percentage of population with access to health care** is the share of the population that can expect treatment for common diseases and injuries, including essential drugs on the national list, within one hour's walk or travel. • **Percentage of population with access to safe water** is the share of the population with reasonable access to an adequate amount of safe water (including treated surface water and untreated but uncontaminated water, such as from springs, sanitary wells, and protected boreholes). In urban areas the source may be a public fountain or standpipe located not more than 200 meters away. In rural areas the definition implies that members of the household do not have to spend a disproportionate part of the day fetching water. An adequate amount of safe water is that needed to satisfy metabolic, hygienic, and domestic requirements—usually about 20 liters a person a day. The definition of safe water has changed over time. • **Percentage of population with access to sanitation** is the share of the population with at least adequate excreta disposal facilities that can effectively prevent human, animal, and insect contact with excreta. Suitable facilities range from simple but protected pit latrines to flush toilets with sewerage. To be effective, all facilities must be correctly constructed and properly maintained. • **Child immunization** is the rate of vaccination coverage of children under one year of age for four diseases—measles and DPT (diphtheria, pertussis or whooping cough, and tetanus). A child is considered adequately immunized against measles after receiving one dose of vaccine, and against DPT after receiving two or three doses of vaccine, depending on the immunization scheme.

Data sources

The table was produced using information provided to the WHO by countries as part of their responsibility for monitoring progress toward "health for all" and reported in the WHO's *World Health Report 1996* and 1997; the WHO's Expanded Programme of Immunization Information System; and WHO, the United Nations Children's Fund (UNICEF), and the Water Supply and Sanitation Collaborative Council's *Water Supply and Sanitation Sector Monitoring Report 1996*.



2.15 Reproductive health

	Total fertility rate		Adolescent fertility rate	Unwanted fertility rate	Contraceptive prevalence rate	Births attended by trained health staff		Maternal mortality ratio
	births per woman		births per 1,000 women age 15-19	births per 1,000 women age 15-49	% of women age 15-49	% of total		per 100,000 live births
	1980	1996	1995	1990-97	1990-96	1985	1992	1990-96
Albania	3.6	2.6	26	..	..	99	..	28 ^a
Algeria	6.7	3.4	17	..	51	..	..	140 ^a
Angola	6.9	6.8	218	..	..	15	16	1,500 ^b
Argentina	3.3	2.7	62	..	..	..	..	100 ^b
Armenia	2.3	1.6	50	..	..	..	..	21 ^a
Australia	1.9	1.8	31	..	..	99	..	9 ^b
Austria	1.6	1.4	23	..	..	..	..	10 ^b
Azerbaijan	3.2	2.1	33	..	..	..	..	44 ^a
Bangladesh	6.1	3.4	116	1.3	45	..	7	850 ^b
Belarus	2.0	1.3	39	..	..	100	..	22 ^a
Belgium	1.7	1.5	11	..	..	100	..	10 ^b
Benin	7.0	5.9	127	..	17	34	34	500 ^c
Bolivia	5.5	4.4	82	1.9	45	36	29	370 ^c
Bosnia and Herzegovina	2.1	..	28	..	..	..	..	..
Botswana	6.7	4.3	106	..	..	52	..	250 ^b
Brazil	3.9	2.4	37	..	77	73	..	160 ^c
Bulgaria	2.1	1.2	60	..	..	100	..	20 ^a
Burkina Faso	7.5	6.7	149	0.9	8	..	33	930 ^b
Burundi	6.8	6.4	66	..	..	..	26	1,300 ^a
Cambodia	4.7	4.6	108	..	..	..	..	900 ^b
Cameroon	6.5	5.5	136	0.6	16	..	25	550 ^b
Canada	1.7	1.7	25	..	..	99	100	6 ^b
Central African Republic	5.8	5.0	145	..	14	..	..	700 ^c
Chad	5.9	5.6	183	..	..	..	21	900 ^c
Chile	2.8	2.3	48	..	..	95	..	180 ^a
China	2.5	1.9	17	..	85	..	51	115 ^d
Hong Kong, China	2.0	1.2	13	..	..	..	..	7 ^a
Colombia	3.8	2.7	80	0.8	72	51	..	100 ^b
Congo, Dem. Rep.	6.6	6.3	221	..	..	..	..	..
Congo, Rep.	6.2	6.0	140	..	..	..	..	890 ^b
Costa Rica	3.7	2.7	67	..	..	..	..	55 ^b
Côte d'Ivoire	7.4	5.1	136	1.0	11	..	..	600 ^c
Croatia	..	1.6	28	..	..	..	..	12 ^a
Cuba	2.0	1.6	68	..	..	99	100	36 ^a
Czech Republic	2.1	1.2	34	..	69	..	..	7 ^a
Denmark	1.5	1.8	18	..	..	..	..	9 ^b
Dominican Republic	4.2	3.1	53	..	64	98	44	110 ^b
Ecuador	5.0	3.1	68	..	57	27	..	150 ^b
Egypt, Arab Rep.	5.1	3.3	56	1.0	48	..	24	170 ^b
El Salvador	5.3	3.5	91	..	53	35	..	300 ^b
Eritrea	..	5.9	125	..	8	..	..	1,400 ^b
Estonia	2.0	1.3	36	..	..	..	..	52 ^a
Ethiopia	6.6	7.0	164	..	4	58	..	1,400 ^b
Finland	1.6	1.8	20	..	..	..	..	11 ^b
France	1.9	1.7	17	..	..	..	..	15 ^b
Gabon	4.5	5.0	150	..	..	92	..	500 ^b
Gambia, The	6.5	5.3	167	..	..	54	65	1,100 ^b
Georgia	2.3	1.5	40	..	..	..	..	19 ^a
Germany	1.4	1.3	14	..	..	..	..	22 ^b
Ghana	6.5	5.0	109	..	20	73	42	740 ^a
Greece	2.2	1.4	19	..	..	..	..	10 ^b
Guatemala	6.2	4.6	106	1.1	32	..	22	190 ^c
Guinea	6.1	5.7	213	..	2	..	76	880 ^c
Guinea-Bissau	6.0	6.0	186	..	..	16	..	910 ^b
Haiti	5.9	4.3	70	1.8	18	20	..	600 ^c
Honduras	6.5	4.5	112	..	47	50	63	220 ^b

	Total fertility rate		Adolescent fertility rate	Unwanted fertility rate	Contraceptive prevalence rate	Births attended by trained health staff		Maternal mortality ratio
	births per woman		births per 1,000 women age 15-19	births per 1,000 women age 15-49	% of women age 15-49	% of total		per 100,000 live births
	1980	1996	1995	1990-97	1990-96	1985	1992	1990-96
Hungary	1.9	1.5	31	..	..	..	99	14 ^a
India	5.0	3.1	81	0.8	43	33	75	437 ^c
Indonesia	4.3	2.6	57	0.5	55	31	..	390 ^c
Iran, Islamic Rep.	6.1	3.8	80	..	52	..	70	120 ^b
Iraq	6.4	5.3	61	..	..	24	74	310 ^b
Ireland	3.2	1.9	23	..	60	..	..	10 ^b
Israel	3.2	2.6	28	..	..	99	..	7 ^b
Italy	1.6	1.2	14	..	..	100	..	12 ^b
Jamaica	3.7	2.3	67	..	..	89	88	120 ^b
Japan	1.8	1.4	6	..	..	100	100	8 ^a
Jordan	6.8	4.4	43	..	..	75	86	150 ^b
Kazakhstan	2.9	2.1	40	..	..	..	..	53 ^a
Kenya	7.8	4.6	95	2.0	..	..	..	650 ^b
Korea, Dem. Rep.	3.0	2.1	30	..	..	100	..	..
Korea, Rep.	2.6	1.7	8	..	..	65	95	30 ^a
Kuwait	5.3	2.9	45	..	..	99	98	18 ^a
Kyrgyz Republic	1.1	1.0	11	..	..	..	..	13 ^a
Lao PDR	6.7	5.7	59	..	..	..	..	650 ^b
Latvia	2.0	1.2	34	..	..	..	..	15 ^a
Lebanon	4.0	2.7	43	..	..	45	..	300 ^b
Lesotho	5.6	4.6	55	..	23	28	..	610 ^b
Libya	7.3	4.0	106	..	45	76	68	220 ^b
Lithuania	2.0	1.4	34	..	..	..	..	13 ^a
Macedonia, FYR	2.5	2.1	38	..	..	..	..	22 ^a
Madagascar	6.5	5.7	145	0.9	17	62	71	660 ^c
Malawi	7.6	6.5	151	1.0	22	59	41	620 ^c
Malaysia	4.2	3.4	30	..	..	82	92	43 ^a
Mali	7.1	6.7	190	0.7	7	27	..	580 ^c
Mauritania	6.3	5.1	123	..	..	23	..	800 ^b
Mauritius	2.7	2.1	42	..	75	84	91	112 ^a
Mexico	4.5	2.9	57	..	..	..	45	110 ^b
Moldova	2.4	1.9	46	..	..	..	..	33 ^a
Mongolia	5.4	3.3	45	..	..	100	100	65 ^b
Morocco	5.4	3.3	38	1.4	50	26	..	372 ^a
Mozambique	6.5	6.1	122	..	..	28	29	1,500 ^b
Myanmar	5.1	3.4	30	..	..	25	97	580 ^b
Namibia	5.9	4.9	130	..	29	..	71	220 ^c
Nepal	6.1	5.0	82	..	..	10	..	1,500 ^b
Netherlands	1.6	1.5	8	..	..	..	..	12 ^b
New Zealand	2.0	2.0	43	..	..	99	100	25 ^b
Nicaragua	6.2	4.0	136	..	44	..	42	160 ^b
Niger	7.4	7.4	222	0.3	4	47	21	593 ^c
Nigeria	6.9	5.4	120	1.0	6	..	45	1,000 ^b
Norway	1.7	1.9	22	..	..	..	100	6 ^b
Oman	9.9	7.0	123	..	..	60	90	..
Pakistan	7.0	5.1	107	1.2	14	24	70	340 ^b
Panama	3.7	2.6	61	..	..	83	85	55 ^b
Papua New Guinea	5.7	4.7	44	..	..	34	20	930 ^b
Paraguay	4.8	3.9	72	..	51	22	..	190 ^c
Peru	4.5	3.1	52	1.5	55	44	..	280 ^b
Philippines	4.8	3.6	47	1.2	48	..	76	208 ^c
Poland	2.3	1.6	28	..	..	..	..	10 ^a
Portugal	2.2	1.4	23	..	..	..	..	15 ^b
Puerto Rico	2.6	1.9	48	..	78	..	..	..
Romania	2.4	1.3	34	..	57	99	..	41 ^a
Russian Federation	1.9	1.3	31	..	34	..	..	53 ^a



2.15

	Total fertility rate		Adolescent fertility rate	Unwanted fertility rate	Contraceptive prevalence rate	Births attended by trained health staff		Maternal mortality ratio
	births per woman		births per 1,000 women age 15-19	births per 1,000 women age 15-49	% of women age 15-49	% of total		per 100,000 live births
	1980	1996	1995	1990-97	1990-96	1985	1992	1990-96
Rwanda	8.3	6.1	65	2.0	21	..	28	1,300 ^b
Saudi Arabia	7.3	6.2	61	..	..	79	..	18 ^a
Senegal	6.7	5.7	118	0.9	7	..	..	510 ^c
Sierra Leone	6.5	6.5	203	..	..	25	..	1,800 ^b
Singapore	1.7	1.7	13	..	..	100	100	10 ^b
Slovak Republic	2.3	1.5	35	..	..	..	..	8 ^a
Slovenia	2.1	1.3	19	..	..	..	..	5 ^a
South Africa	4.6	2.9	68	..	69	..	..	230 ^b
Spain	2.2	1.2	11	..	..	96	..	7 ^b
Sri Lanka	3.5	2.3	33	..	..	87	85	30 ^a
Sudan	6.5	4.7	84	..	10	20	..	370 ^a
Sweden	1.7	1.7	20	..	..	100	..	7 ^b
Switzerland	1.6	1.5	7	..	..	..	100	6 ^b
Syrian Arab Republic	7.4	4.0	89	..	40	37	80	179 ^a
Tajikistan	5.6	3.7	48	..	..	..	..	74 ^a
Tanzania	6.7	5.6	123	0.7	18	74	..	530 ^c
Thailand	3.5	1.8	18	..	..	59	71	200 ^b
Togo	6.6	6.2	124	..	..	..	..	640 ^b
Trinidad and Tobago	3.3	2.1	46	..	..	90	..	90 ^b
Tunisia	5.2	2.8	32	..	60	60	50	..
Turkey	4.3	2.6	44	0.9	..	78	..	180 ^b
Turkmenistan	4.9	3.3	26	..	..	..	..	44 ^a
Uganda	7.2	6.7	193	1.3	15	..	..	550 ^e
Ukraine	2.0	1.3	48	..	..	100	..	30 ^a
United Arab Emirates	5.4	3.5	58	..	..	96	94	..
United Kingdom	1.9	1.7	30	..	..	98	..	9 ^a
United States	1.8	2.1	46	..	..	99	100	12 ^b
Uruguay	2.7	2.2	47	..	..	..	100	85 ^b
Uzbekistan	4.8	3.4	43	..	..	..	..	24 ^a
Venezuela	4.1	3.0	60	..	..	..	82	200 ^a
Vietnam	5.0	3.0	42	..	..	..	..	105 ^a
West Bank and Gaza	..	..	..	..	..	..	..	..
Yemen, Rep.	7.9	7.2	141	1.7	..	..	..	1,400 ^b
Yugoslavia, FR (Serb./Mont.)	2.3	1.9	41	..	..	..	..	12 ^a
Zambia	7.0	5.8	122	..	26	..	43	230 ^c
Zimbabwe	6.8	3.9	68	0.8	58	67	49	280 ^c
World	3.7 w	2.8 w	67 w			.. w	.. w	
Low income	4.3	3.2	81			..	..
Excl. China & India	6.3	4.9	115			..	..
Middle income	3.8	2.6	54			..	..
Lower middle income	3.8	2.6	51			..	..
Upper middle income	3.7	2.6	63			..	..
Low & middle income	4.1	3.0	72			..	..
East Asia & Pacific	3.1	2.2	25			..	..
Europe & Central Asia	2.5	1.8	40			..	..
Latin America & Carib.	4.1	2.8	72			..	..
Middle East & N. Africa	6.1	4.0	53			..	..
South Asia	5.3	3.4	106			..	..
Sub-Saharan Africa	6.6	5.6	136			..	..
High income	1.9	1.7	27			..	..

a. Official estimate. b. UNICEF WHO estimate based on statistical modeling. c. Indirect estimate based on sample survey. d. Based on a survey covering 30 provinces. e. Based on sample survey.

About the data

The number of women and men in need of reproductive health services is expected to nearly double over the next two decades (Conly and Epp 1997). Thus any action taken now to expand reproductive choices—including improved access to safe and reliable contraception—is likely to have a significant effect on the health, well-being, eventual size, and quality of life of a country's population.

Reproductive health behavior is complex and is influenced by a broad range of relevant interventions. Fertility outcomes, maternal mortality, births attended by skilled providers, and contraceptive prevalence are complex measures and indicate the demand for, access to, and use of reproductive health services.

Total and adolescent fertility rates are based on data from vital registration systems or, in their absence, from censuses or sample surveys. Provided that the surveys are fairly recent, the estimated rates are generally considered reliable. In cases where no empirical information on age-specific fertility rates is available, a model is used to estimate the proportion of all births that are teenage births. As with other basic demographic data (see *About the data* in table 2.1), international comparisons of fertility rates are limited by differences in data definitions and collection and estimation methods. Fertility rates for 1996 are generally based on projections from censuses or surveys from earlier years.

The unwanted fertility rate is based on survey responses by women of reproductive age and so is affected by response bias. In many developing countries fertility is not seen as within the control of an individual; women do not report a numerical ideal family size, and hence no birth is reported as unwanted. In such cases women are assumed to want all their births.

Contraceptive prevalence reflects all methods—ineffective traditional methods as well as highly effective modern methods. Unmarried women are often excluded from surveys, which may bias the estimate. Contraceptive prevalence rates are obtained mainly from demographic and health surveys and contraceptive prevalence surveys (see *Primary data documentation* for the most recent survey year).

Births attended by health staff is an indicator of a health system's ability to provide adequate care for pregnant women. Good health care improves maternal health and reduces mortality. However, data may not reflect this because health information systems are often weak, maternal deaths are underreported, and rates of maternal mortality are difficult to mea-

sure. The data in the table are from the World Health Organization (WHO), supplemented by data from the United Nations Children's Fund (UNICEF). They are based on national sources, derived from official community and hospital records; some reflect only births in hospitals and other medical institutions. In some cases smaller private and rural hospitals are excluded, and sometimes even primitive local facilities are included. Thus the coverage is not always comprehensive, and cross-country comparisons should be made with extreme caution.

Civil registers in many developing countries provide extremely unreliable mortality statistics, especially for maternal mortality. Classifying a death as maternal requires a cause of death attribution, which depends on the information available at the time of death. In many developing countries causes of death are assigned by nonphysicians and often attributed to "ill-defined causes." Even when causes are assigned by medically qualified staff with the aid of diagnostic information, some doubts remain about the diagnosis in the absence of autopsies and the assignment of appropriate International Classification of Diseases (ICD) codes. Maternal deaths are also likely to go unrecorded if they occur in remote and rural areas. Differences in definitions also may affect the comparability of estimates over time and across countries. The maternal mortality ratios shown here are official estimates from administrative records, survey-based indirect estimates, or derived from a demographic model developed by UNICEF and the WHO. Official or survey-based estimates are shown wherever they are available. In all cases the standard errors of maternal mortality ratios are large, which makes the ratio particularly unsuitable for monitoring changes over a short period.

Definitions

- **Total fertility rate** is the number of children that would be born to a woman if she were to live to the end of her childbearing years and bear children in accordance with current age-specific fertility rates.
- **Adolescent fertility rate** is the number of births to women age 15–19 per 1,000 women in the same age group.
- **Unwanted fertility rate** is the difference between the total fertility rate and the wanted fertility rate. Unwanted births are defined as those that exceed the number considered ideal or wanted by women of reproductive age.
- **Contraceptive prevalence rate** is the percentage of women who are practicing, or whose sexual partners are practicing, any form of contraception. It is usually measured for married women age 15–49 only.
- **Births attended by trained health staff** is the percentage of deliveries attended by personnel trained to give the necessary supervision, care, and advice to women during pregnancy, labor, and the postpartum period, to conduct deliveries on their own, and to care for newborns.
- **Maternal mortality ratio** is the number of women who die during pregnancy and childbirth, per 100,000 live births.

Data sources

Data on reproductive health come from demographic and health surveys and from WHO and UNICEF, *Revised 1990 Estimates of Maternal Mortality: A New Approach*.



2.16 Health: risk factors and future challenges

	Prevalence of anemia	Low-birthweight babies		Prevalence of child malnutrition	Smoking prevalence		Incidence of tuberculosis	Adult HIV-1 seroprevalence			
	% of pregnant women	% of births		% of children under 5	% of adult		per 100,000 population	% infected		Women attending urban antenatal clinic	
	1985-95	1980	1989-95	1990-96	1985-95	1985-95	1995	Survey year	Urban high-risk group		Survey year
Albania	..	..	7	..	50	8	40	..	..	..	..
Algeria	42	..	9	10	53	10	53	1981-89	0.0 ^a	..	..
Angola	29	..	19	35	..	..	225	1988	24.7 ^{a,b}	1995	1.0 ^b
Argentina	26	..	7	2	40	23	50	1996	41.4 ^c	1995	2.8 ^d
Armenia	..	..	..	..	..	..	40	..	..	..	..
Australia	..	..	..	..	29	21	6	..	..	..	..
Austria	..	..	6	..	42	27	20	..	..	..	..
Azerbaijan	..	..	..	10	..	..	47	1995	0.0 ^a	..	..
Bangladesh	53	..	34	68	60	15	220	1996	0.6 ^{e,f}	..	..
Belarus	..	..	5	..	..	..	50	..	..	..	..
Belgium	..	..	6	..	31	19	16	..	..	..	..
Benin	41	..	10	24	..	..	135	1993-94	53.3 ^{b,e}	1993	0.4 ^g
Bolivia	51	10	10	16	50	21	335	1988	5.1 ^{f,g,h}	..	..
Bosnia and Herzegovina	..	..	..	..	..	..	80	..	..	..	..
Botswana	..	..	8	27	21	..	400	1995	42.8 ^{a,g}	1995	34.2 ^g
Brazil	33	..	11	7	40	25	80	1994-95	40.4 ^{c,g}	1995	1.7 ^{g,i}
Bulgaria	..	..	6	..	49	17	40	1993	0.0 ^a	1993	0.0
Burkina Faso	24	21	21	33	..	..	289	1994	60.4 ^{b,e}	1995	12.0
Burundi	68	..	..	38	..	..	367	1986	18.5 ^{a,f}	1993	17.2
Cambodia	..	..	..	38	..	..	235	1996	43.0 ^{e,g}	1996	3.2
Cameroon	44	..	13	15	..	..	194	1994	21.2 ^{b,e}	1996	1.9
Canada	..	6	6	..	31	29	8	..	..	..	..
Central African Republic	67	23	15	23	..	..	139	1994-95	34.0 ^a	1993	10.0 ^g
Chad	37	11	..	..	..	..	167	..	..	1992	4.5 ^g
Chile	13	..	7	1	38	25	67	1994	0.7 ^{a,g}	1994	0.1
China	52	..	6	16	61	7	85	1994	66.5 ^{c,d}	1993	0.0 ^j
Hong Kong, China	..	..	..	..	..	..	140	..	..	..	..
Colombia	24	3	9	8	35	19	67	1994	26.2 ^{g,h}	1994	0.5 ^g
Congo, Dem. Rep.	76	13	15	34	..	..	333	1995	30.3 ^e	1993	4.6
Congo, Rep.	..	15	16	24	..	..	250	1987	49.2 ^{e,f,g}	1994	7.1
Costa Rica	28	..	7	2	35	20	15	1994	4.9 ^h	1992	0.0
Côte d'Ivoire	..	14	14	24	..	..	196	1994-95	67.6 ^{b,e}	1995-96	11.6 ^{d,g}
Croatia	..	..	8	..	37	38	65	..	..	..	..
Cuba	47	..	8	8	39	25	20	1993	0.0 ^a	1996	0.0 ^j
Czech Republic	23	..	6	1	43	31	25	1995	10.3 ^h	1995	0.0
Denmark	..	..	5	..	37	37	12	..	..	..	..
Dominican Republic	..	..	16	6	66	14	110	1994	7.7 ^h	1995	2.8 ^g
Ecuador	17	..	13	17	..	..	166	1988	28.8 ^{f,g,h}	1992	0.3
Egypt, Arab Rep.	24	7	12	9	40	1	78	1994	7.6 ^c	1992	0.0
El Salvador	14	9	11	11	38	12	110	1995-96	6.0 ^a	1994-95	0.0 ^j
Eritrea	..	..	..	41	..	..	155	1989	5.8 ^e	..	..
Estonia	..	..	..	..	52	24	60	1996	0.0 ^a	..	..
Ethiopia	42	..	16	48	..	..	155	1991	67.5 ^{e,g}	1991	4.9 ^g
Finland	..	4	5	..	27	19	15	..	..	..	..
France	..	5	5	..	40	27	20	..	..	..	..
Gabon	..	..	10	15	..	..	100	1988	4.2 ^{a,b}	1994	1.7
Gambia, The	80	35	10	17	..	..	166	1993	34.7 ^{b,e}	1993-95	1.7 ^b
Georgia	..	..	..	..	..	..	70	..	..	..	..
Germany	..	..	..	..	37	22	18	..	..	..	..
Ghana	..	..	17	27	..	..	222	1986-87	30.8 ^{e,g}	1995	2.2 ^{b,g}
Greece	..	6	9	..	46	28	12	..	..	..	..
Guatemala	39	10	14	33	38	25	110	1990-93	5.3 ^{a,g}	1990-91	0.0
Guinea	..	18	21	24	40	2	166	1994	36.6 ^e	1990-91	0.7 ^b
Guinea-Bissau	74	13	20	23	..	..	220	1987	36.7 ^{b,e,f}	1995	6.9 ^b
Haiti	38	..	15	28	..	..	333	1989	41.9 ^e	1993	8.4
Honduras	14	9	9	18	36	11	133	1992	30.0 ^{d,h}	1996	1.0 ^c

	Prevalence of anemia	Low-birthweight babies		Prevalence of child malnutrition	Smoking prevalence		Incidence of tuberculosis	Adult HIV-1 seroprevalence			Women attending urban antenatal clinic
	% of pregnant women	% of births		% of children under 5	% of adult		per 100,000 population	% infected			
	1985-95	1980	1989-95	1990-96	1985-95	1985-95	1995	Survey year	Urban high-risk group	Survey year	
Hungary	..	..	9	..	40	27	50	..	..	..	..
India	88	..	33	66	40	3	220	1994	51.0 ^{d,e}	1995	0.3 ^k
Indonesia	64	..	14	40	53	4	220	1994	0.3 ^e	1986-87	0.0
Iran, Islamic Rep.	..	4	12	16	..	..	50	..	..	..	..
Iraq	18	6	15	12	40	5	150	..	..	..	..
Ireland	..	..	4	..	29	28	18	..	..	..	..
Israel	..	..	..	..	45	30	12	..	..	..	..
Italy	..	7	7	..	38	26	25	..	..	..	..
Jamaica	40	10	11	10	43	13	10	1994-95	24.6 ^e	1996	0.7
Japan	..	..	6	3	59	15	42	..	..	..	..
Jordan	..	..	7	10	43	5	14	..	..	..	..
Kazakhstan	11	..	..	1	..	..	77	..	..	..	..
Kenya	35	18	16	23	52	7	140	1992	85.5 ^e	1995	13.7 ^g
Korea, Dem. Rep.	..	..	..	..	..	..	162	..	..	..	..
Korea, Rep.	..	9	4	..	68	7	162	1988	0.1 ^e	..	..
Kuwait	40	7	7	6	52	12	40	..	..	..	..
Kyrgyz Republic	..	..	..	..	..	..	68	..	..	..	..
Lao PDR	..	..	18	40	..	..	235	1990-93	1.2 ^e	..	..
Latvia	..	..	..	..	67	12	70	..	..	..	..
Lebanon	..	..	..	9	..	..	35	..	..	..	..
Lesotho	7	8	11	21	38	1	250	1993	15.2 ^{a,g}	1993	6.1
Libya	..	5	5	5	..	..	12	..	..	..	..
Lithuania	..	..	..	..	52	10	82	1995	0.0 ^a	1995	0.0
Macedonia, FYR	..	..	..	..	..	..	60	..	..	..	..
Madagascar	..	..	10	32	29	28	310	1995	0.3 ^a	1995	0.1
Malawi	55	22	20	28	..	..	173	1994	78.0 ^{a,g}	1996	32.8
Malaysia	56	10	8	23	41	4	67	1992	29.5 ^c	..	..
Mali	58	13	17	31	..	..	289	1995	55.5 ^{b,e}	1994	3.5 ^g
Mauritania	..	..	11	48	..	..	220	1993-94	0.9 ^a	1993-94	0.5 ^b
Mauritius	29	..	8	15	47	4	50	1988-91	0.8 ^a	1986	0.0
Mexico	14	..	12	14	38	14	60	1994	32.7 ^h	1996	0.0
Moldova	50	..	..	..	..	..	70	..	..	1995	0.0
Mongolia	45	..	10	12	40	7	100	1987-93	0.0 ^{a,g}	1987-93	0.0
Morocco	45	9	9	10	40	9	125	1990	7.1 ^{e,f}	1993	0.2
Mozambique	58	16	20	47	..	..	189	1994	24.0 ^{a,g}	1994	10.5 ^g
Myanmar	58	..	16	31	..	..	189	1995	56.5 ^c	1995	1.3
Namibia	16	..	12	26	..	..	400	1992	7.2 ^{a,d}	1996	17.6
Nepal	65	..	26	49	..	..	167	1993	0.9 ^e	1992	0.0 ^{d,i}
Netherlands	..	4	4	..	36	29	13	..	..	..	..
New Zealand	..	5	6	..	24	22	10	..	..	..	..
Nicaragua	36	..	15	24	..	..	110	1990-91	1.6 ^{e,f}	..	..
Niger	41	..	15	43	..	..	144	1993	15.4 ^{b,e}	1993	1.3 ^b
Nigeria	55	18	16	35	24	7	222	1993-94	22.5 ^{e,g}	1993-94	3.8 ^g
Norway	..	4	5	..	36	36	8	..	..	..	..
Oman	54	..	10	14	..	..	20	..	..	..	..
Pakistan	37	..	25	40	27	4	150	1995	11.5 ^c	1995	0.2 ^{d,g}
Panama	..	8	10	7	56	20	90	1984-86	3.1 ^h	1994	0.3 ⁱ
Papua New Guinea	13	..	23	30	46	28	275	1992	0.1 ^{a,g}	1992	0.0
Paraguay	29	7	8	4	24	6	166	1987-90	8.8 ^h	1992	0.0
Peru	53	9	11	11	41	13	250	1989-90	41.0 ^h	..	..
Philippines	48	..	..	30	43	8	400	1993	0.6 ^{e,g}	..	..
Poland	16	8	8	..	51	29	50	1995	4.7 ^{c,i}	..	..
Portugal	..	8	5	..	38	15	60	..	..	..	..
Puerto Rico	..	..	..	..	..	..	8	..	..	..	..
Romania	31	..	..	6	..	..	120	..	..	..	..
Russian Federation	30	..	..	3	67	30	99	1995	0.5 ^h	1995	0.0



	Prevalence of anemia	Low-birthweight babies		Prevalence of child malnutrition	Smoking prevalence		Incidence of tuberculosis	Adult HIV-1 seroprevalence			
		% of births			% of adult			% infected		Women attending urban antenatal clinic	
		1985-95	1980		1989-95	1990-96		1985-95	1985-95		Survey year
Rwanda	..	..	17	29	..	..	260	1984	87.9 ^{e,f}	1995	25.3 ^g
Saudi Arabia	..	..	..	..	53	..	22	..	..	..	..
Senegal	26	..	11	22	48	35	166	1994	22.1 ^{e,g}	1994	1.1 ^{b,g}
Sierra Leone	..	..	17	29	..	..	167	1995	26.7 ^e	1990	0.8 ^{b,d}
Singapore	..	8	7	14	32	3	82	..	..	..	..
Slovak Republic	..	..	6	..	43	26	40	1995	0.0 ^{a,c}	1992	0.0
Slovenia	..	..	6	..	35	23	35	1995	0.0 ^c	1995	0.0
South Africa	37	..	..	9	52	17	222	1994	20.1 ^a	1995	10.4 ^m
Spain	..	1	1	..	48	25	250	..	..	..	..
Sri Lanka	39	25	17	38	55	1	49	1993	0.5 ^{d,e}	..	..
Sudan	36	17	15	34	..	..	211	1989	19.1 ^{a,g}	1995	3.0 ^d
Sweden	..	..	5	..	22	24	7	..	..	..	..
Switzerland	..	..	5	..	36	26	18	..	..	..	..
Syrian Arab Republic	..	10	8	..	..	..	58	..	..	..	..
Tajikistan	50	..	..	..	..	..	133	..	..	..	..
Tanzania	..	..	14	29	..	..	187	1993	49.5 ^e	1995-96	13.9 ^a
Thailand	57	12	13	13	49	4	173	1995	34.4 ^{c,g}	1995	2.4 ^{g,i}
Togo	48	..	20	25	..	..	244	1993	7.3 ^{a,b,d}	..	..
Trinidad and Tobago	53	..	10	7	42	8	20	1983-84	40.0 ⁿ	1990	0.3 ^j
Tunisia	..	7	10	9	58	6	55	1987	0.0 ^e	1991	0.0
Turkey	..	8	8	10	63	24	57	1992	0.1 ^a	1987-88	0.0
Turkmenistan	..	..	..	..	27	1	72	..	..	..	..
Uganda	30	..	..	26	10	0	300	1987	86.0 ^e	1994-95	21.2
Ukraine	..	6	5	..	..	..	50	1995	13.0 ^{c,n}	1995	0.0
United Arab Emirates	46	8	8	7	..	..	30	..	..	..	..
United Kingdom	..	..	..	..	28	26	12	..	..	..	..
United States	..	7	7	..	28	23	10	..	..	..	..
Uruguay	20	..	8	4	41	27	20	1996	13.0 ^{b,c}	1991	0.0
Uzbekistan	..	..	..	4	40	1	55	..	..	..	..
Venezuela	29	..	9	5	..	..	44	1994	25.0 ^{d,h}	..	..
Vietnam	52	..	17	45	73	4	166	1995	7.5 ^{c,f}	1995	0.0 ^g
West Bank and Gaza	..	..	..	..	..	..	..	..	..	..	..
Yemen, Rep.	..	..	19	30	..	..	96	1992	0.0 ^{a,f}	..	..
Yugoslavia, FR (Serb./Mont.)	..	..	..	..	52	31	50	..	..	..	..
Zambia	34	..	13	29	39	7	345	1992-93	58.0 ^a	1994	27.9
Zimbabwe	..	15	14	16	36	15	207	1994-95	86.0 ^{b,e}	1995	35.2 ^g

World	48 w	12 w	129 w
Low income	51	6	160
Excl. China & India	..	..	195
Middle income	48	16	118
Lower middle income	52	13	136
Upper middle income	42	22	74
Low & middle income	50	9	146
East Asia & Pacific	59	6	125
Europe & Central Asia	58	26	72
Latin America & Carib.	40	20	89
Middle East & N. Africa	..	..	71
South Asia	41	4	209
Sub-Saharan Africa	..	..	220
High income	39	22	37

a. Patients with sexually transmitted diseases. b. HIV-1 and/or HIV-2. c. injecting drug users. d. Sample size unknown. e. Sex workers. f. Data are best available but not reliable because of small sample size. g. Data averaged. h. Homosexual or bisexual men. i. Not specifically urban. j. For Yunnan Province. k. For Tamil Nadu State. l. UNAIDS data. m. National data. n. Data are from UNAIDS 1996.

About the data

The limited availability of data on health status is a major constraint to assessing the health situation in developing countries. Surveillance data are lacking for a number of major public health concerns. Estimates of prevalence and incidence are available for some diseases but are often unreliable and variable. National health authorities differ widely in their capability and willingness to collect or report information. Even when intentions are good, reporting is based on definitions that may vary widely across countries or over time. To compensate for the paucity of data and ensure a reasonable degree of reliability and international comparability, the World Health Organization (WHO) prepares estimates in accordance with epidemiological and statistical procedures.

Adequate quantities of micronutrients (vitamins and minerals) are essential for healthy growth and development. Studies indicate that more people are deficient in iron (anemic) than any other micronutrient, and most of those suffering are women of reproductive age. Anemia during pregnancy can harm both the mother and the fetus, causing loss of the baby, premature birth, or low birthweight. Estimates of the prevalence of anemia among pregnant women are generally drawn from clinical data, which suffer from two weaknesses: one, the sample is not random, but based on those who seek care; and two, private clinics or hospitals may not be part of the reporting network.

Low birthweight, which is associated with maternal malnutrition, raises the risk of infant mortality and stunts growth in infancy and childhood, increasing the incidence of other forms of retarded development. Estimates of low-birthweight infants are drawn mostly from hospital records. But many births in developing countries take place at home without assistance from formal medical practitioners and are seldom recorded. How this factor skews the data is uncertain. A hospital birth may indicate higher income and therefore better nutrition, or it could indicate a higher-risk birth, possibly skewing the data toward lower birthweight. Changes in this indicator are more likely to reflect changes in reporting practices than improvements or deterioration. The data should be treated with caution and no comparisons within or across countries should be attempted.

Estimates of child malnutrition are from national survey data on weight for age. Weight for age is a composite indicator of both weight for height (wasting) and height for age (stunting). The disadvantage

of this indicator is that it cannot indicate whether malnutrition is due to wasting or stunting. Still, weight for age is useful for comparisons with earlier surveys because it was the first anthropometric measure in general use. Assessment methods vary, but the indicator used here reflects weight less than minus two standard deviations from the median weight for age of the U.S. National Center of Health Statistics reference population age 0–59 months. This reference population, adopted by the WHO in 1983, is based on children from the United States, who are assumed to be well nourished.

Data on smoking are obtained through surveys and should be interpreted with caution because a one-time estimate of the prevalence of smoking does not give any information on its duration (usually longer for males).

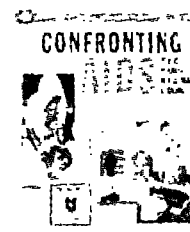
Tuberculosis (TB) has reemerged as a global health problem. From an economic point of view this epidemic is about wasted lives and lost productivity. From a health perspective it is about the need to efficiently organize and finance the health sector to serve the needs of the population. And from a social perspective it is about the need to provide equitable access to appropriate health services because TB is most likely to be contracted by the poor. Data on case notifications and treatment outcomes are reported to the WHO by national TB control offices. WHO checks these data for inconsistencies and adjusts them where necessary. The data in the table show the overall incidence of TB rather than just smear-positive incidence.

Adult HIV-1 seroprevalence rates reflect the rate of HIV-1 infection for each country's adult population. The global HIV pandemic currently involves two HIV viruses: HIV-1 and HIV-2. HIV-1 is the dominant type worldwide. HIV-2 appears to be less easily transmitted than HIV-1, and the progression from HIV-2 infection to AIDS appears to be slower than that for HIV-1. AIDS is late-stage infection characterized by a severely weakened immune system that can no longer ward off life-threatening opportunistic infections and cancers. This table uses only seroprevalence surveys measuring HIV-1, except where otherwise noted. Estimates of HIV seroprevalence are not based on national samples. Most HIV data originate from diagnostic centers or screening programs and so are subject to selection (usually high-risk groups) and participation bias. The results from high-risk groups should not be considered indicative of prevalence in the general, low-risk population (World Bank 1997a).

Definitions

- **Prevalence of anemia**, or iron deficiency, is defined as hemoglobin levels less than 11 grams per deciliter among pregnant women.
- **Low-birthweight babies** are newborns weighing less than 2,500 grams, with the measurement taken within the first hours of life, before significant postnatal weight loss has occurred.
- **Prevalence of child malnutrition** is the percentage of children under 5 whose weight for age is less than minus two standard deviations from the median of the reference population (see *About the data*).
- **Smoking prevalence** is the percentage of men and women over 15 who smoke tobacco products.
- **Incidence of tuberculosis** is the estimated number of new tuberculosis cases (all forms).
- **Adult HIV-1 seroprevalence** is the estimated percentage of people over 15 who are HIV-1 positive.

Data sources



The data presented here are drawn from a variety of sources, including the United Nations *Update on the Nutrition Situation*; the WHO's *World Health Statistics Annual*, *Global Tuberculosis Control Report 1997*, and *Tobacco or Health: A Global Status Report 1997*; the World Bank's *Confronting AIDS: Public Priorities in a Global Epidemic*; the WHO-EC Collaborating Centre on AIDS' *European HIV Prevalence Database*; and the U.S. Bureau of Census' *HIV/AIDS Surveillance Database*.



2.17 Mortality

	Life expectancy at birth		Infant mortality rate		Under-five mortality rate		Child mortality rate		Adult mortality rate			
	years		per 1,000 live births		per 1,000		Male	Female	Male		Female	
	1980	1996	1980	1996	1980	1996	per 1,000 1988-97	per 1,000 1988-97	1980	1995	1980	1995
Albania	69	72	47	37	..	40	15	15	140	122	82	65
Algeria	59	70	98	32	139	39	..	..	226	177	197	133
Angola	41	46	153	124	..	209	..	..	569	493	458	406
Argentina	70	73	35	22	38	25	..	..	205	176	102	84
Armenia	73	73	26	16	..	20	..	..	158	209	85	108
Australia	74	78	11	6	..	7	..	..	167	110	85	60
Austria	73	77	14	5	..	6	2	1	197	148	92	64
Azerbaijan	68	69	30	20	..	23	..	..	262	231	127	91
Bangladesh	48	58	132	77	207	112	47	62	383	314	388	292
Belarus	71	69	16	13	..	17	..	..	255	301	95	100
Belgium	73	77	12	7	..	7	2	1	173	135	90	68
Benin	49	55	120	87	205	140	89	90	486	472	397	399
Bolivia	52	61	118	67	171	102	53	47	357	292	273	237
Bosnia and Herzegovina	70	..	31	..	..	..	..	..	181	..	108	..
Botswana	58	51	69	56	80	85	18	16	341	212	278	153
Brazil	63	67	67	36	86	42	8	9	221	181	161	123
Bulgaria	71	71	20	16	..	20	..	..	190	213	106	106
Burkina Faso	44	46	121	98	241	158	107	110	467	426	362	340
Burundi	47	47	121	97	195	176	101	114	489	481	400	403
Cambodia	40	53	201	105	..	170	..	..	473	370	355	298
Cameroon	50	56	94	54	172	102	64	75	489	413	415	341
Canada	75	79	10	6	..	7	2	1	161	125	85	65
Central African Republic	46	49	117	96	193	164	63	64	540	505	424	406
Chad	42	48	147	115	206	189	..	..	556	470	449	385
Chile	69	75	32	12	37	13	3	2	218	155	120	82
China	67	70	42	33	60	39	10	11	185	155	148	130
Hong Kong, China	74	79	11	4	12	6	..	..	150	109	87	57
Colombia	66	70	45	25	58	31	7	7	237	214	162	118
Congo, Dem. Rep.	49	53	111	90	..	..	..	..	..	..	..	..
Congo, Rep.	50	51	89	90	..	145	..	..	408	405	298	313
Costa Rica	73	77	20	12	29	15	..	..	159	115	100	68
Côte d'Ivoire	51	54	108	84	157	150	..	..	421	392	346	333
Croatia	70	72	21	9	..	10	..	..	233	176	106	78
Cuba	74	76	20	8	22	10	..	..	135	122	94	78
Czech Republic	70	74	16	6	..	10	2	2	225	195	102	83
Denmark	74	75	8	6	..	6	1	1	163	145	102	92
Dominican Republic	64	71	74	40	92	47	18	20	183	155	138	100
Ecuador	63	70	67	34	98	40	12	9	229	179	176	110
Egypt, Arab Rep.	56	65	120	53	175	66	22	28	257	278	204	238
El Salvador	57	69	81	34	125	40	17	20	410	229	178	154
Eritrea	46	55	..	64	..	120	82	69	..	429	..	342
Estonia	69	69	17	10	..	16	..	..	291	284	110	95
Ethiopia	41	49	155	109	213	177	..	..	491	442	401	352
Finland	73	77	8	4	..	5	1	1	206	150	74	64
France	74	78	10	5	..	6	2	2	190	155	85	58
Gabon	48	55	116	87	..	145	..	..	474	386	387	322
Gambia, The	40	53	159	79	..	107	83	79	584	511	466	419
Georgia	71	72	25	17	..	19	..	..	210	189	94	77
Germany	73	76	12	5	..	6	2	1	177	145	90	70
Ghana	53	59	100	71	157	110	63	62	400	320	334	253
Greece	74	78	18	8	..	9	..	..	134	113	86	61
Guatemala	58	66	81	41	140	56	22	24	336	245	266	166
Guinea	40	46	185	122	..	210	122	112	589	498	507	497
Guinea-Bissau	39	44	168	134	..	223	..	..	535	584	517	572
Haiti	52	55	123	72	200	130	59	58	348	391	275	329
Honduras	60	67	70	44	101	50	..	..	306	166	237	111

	Life expectancy at birth		Infant mortality rate		Under-five mortality rate		Child mortality rate		Adult mortality rate			
	years		per 1,000 live births		per 1,000		Male per 1,000	Female per 1,000	Male per 1,000		Female per 1,000	
	1980	1996	1980	1996	1980	1996	1988-97	1988-97	1980	1995	1980	1995
Hungary	70	70	23	11	..	13	2	2	270	330	130	138
India	54	63	116	65	173	85	29	42	261	229	279	219
Indonesia	55	65	90	49	124	60	30	27	368	262	308	205
Iran, Islamic Rep.	60	70	92	36	130	37	..	..	221	158	190	149
Iraq	62	62	80	101	93	136	..	..	207	182	191	143
Ireland	73	76	11	5	..	7	2	1	175	125	103	72
Israel	73	77	15	6	19	9	2	2	138	105	85	65
Italy	74	78	15	6	..	7	1	1	163	125	80	57
Jamaica	71	74	21	12	34	14	..	..	186	144	121	90
Japan	76	80	8	4	..	6	1	1	129	101	70	47
Jordan	..	71	41	30	64	35	6	6	..	171	..	120
Kazakhstan	67	65	33	25	..	30	8	7	312	296	140	120
Kenya	55	58	72	57	115	90	33	33	417	362	339	295
Korea, Dem. Rep.	67	63	32	56	..	..	..	..	270	215	156	102
Korea, Rep.	67	72	26	9	18	11	..	..	270	230	156	96
Kuwait	71	77	27	11	33	14	6	5	172	126	116	68
Male	67	67	41	30	64	35	6	6	..	171	..	120
Lao PDR	45	53	127	101	..	140	..	..	531	444	439	375
Latvia	69	69	20	16	..	18	..	..	281	328	106	102
Lebanon	65	70	48	31	..	36	..	..	241	191	181	135
Lesotho	53	58	108	74	..	113	..	..	371	347	279	258
Libya	57	68	79	25	..	30	6	5	276	215	218	166
Lithuania	71	70	20	10	..	13	..	..	243	304	92	97
Macedonia, FYR	..	72	54	16	..	18	..	..	..	144	..	92
Madagascar	51	58	138	88	175	135	85	82	353	445	278	384
Malawi	44	43	169	133	271	217	126	114	429	553	349	487
Malaysia	67	72	30	11	..	14	4	4	230	182	149	110
Mali	42	50	184	120	291	220	136	138	454	412	362	326
Mauritania	47	53	120	94	..	155	..	..	505	467	416	396
Mauritius	66	71	32	17	38	20	..	..	277	222	181	116
Mexico	67	72	51	32	76	36	15	17	205	162	121	89
Moldova	66	67	35	20	..	24	..	..	289	275	173	128
Mongolia	58	65	82	53	..	71	..	..	320	221	273	182
Morocco	58	66	99	53	147	67	21	19	264	213	207	163
Mozambique	44	45	155	123	285	214	..	..	468	431	361	339
Myanmar	52	60	109	80	134	109	..	..	384	308	313	252
Namibia	53	56	90	61	108	92	30	34	427	356	366	304
Nepal	48	57	132	85	179	116	..	..	376	327	395	354
Netherlands	76	77	9	5	..	6	2	1	133	110	74	65
New Zealand	73	76	13	6	..	7	..	..	177	137	91	70
Nicaragua	59	68	90	44	120	57	..	..	277	177	189	130
Niger	42	47	150	118	300	..	212	232	562	510	453	401
Nigeria	46	53	99	78	196	130	118	102	535	450	453	377
Norway	76	78	8	4	..	6	2	1	144	118	71	60
Oman	60	71	41	18	..	20	13	17	389	201	326	134
Pakistan	55	63	124	88	161	123	22	37	283	208	291	228
Panama	70	74	32	22	47	25	..	..	172	139	117	88
Papua New Guinea	51	58	67	62	..	85	..	..	514	371	478	339
Paraguay	67	71	50	24	59	45	10	12	198	158	144	108
Peru	60	68	81	42	126	58	29	31	287	211	229	157
Philippines	61	66	52	37	69	44	28	25	323	254	259	189
Poland	71	72	21	12	..	15	2	2	253	179	105	92
Portugal	71	75	24	7	..	8	..	..	199	163	95	76
Puerto Rico	74	75	19	12	22	14	..	..	159	147	78	61
Romania	69	69	29	22	..	28	7	5	216	270	116	119
Russian Federation	67	66	22	17	..	25	3	2	341	472	120	172

	Life expectancy at birth		Infant mortality rate		Under-five mortality rate		Child mortality rate		Adult mortality rate			
	years		per 1,000 live births		per 1,000		Male	Female	Male		Female	
	1980	1996	1980	1996	1980	1996	per 1,000 1988-97	per 1,000 1988-97	per 1,000 1980	per 1,000 1995	per 1,000 1980	per 1,000 1995
Rwanda	46	41	128	129	218	205	87	73	503	542	409	461
Saudi Arabia	61	70	65	22	..	28	..	..	283	181	241	149
Senegal	45	50	91	60	218	88	96	80	586	561	516	496
Sierra Leone	35	37	190	174	335	284	..	..	540	589	527	470
Singapore	71	76	12	4	13	5	1	1	199	130	115	75
Slovak Republic	70	73	21	11	..	13	..	..	226	221	105	93
Slovenia	70	74	15	5	..	6	..	..	250	188	105	81
South Africa	57	65	67	49	..	66	..	..	..	..	..	..
Spain	76	77	12	5	..	6	2	2	144	140	69	57
Sri Lanka	68	73	34	15	48	19	10	9	210	172	152	108
Sudan	48	54	94	74	132	116	62	63	537	445	462	378
Sweden	76	79	7	4	..	5	1	1	142	102	76	60
Switzerland	76	78	9	5	..	6	1	1	145	113	70	58
Syrian Arab Republic	62	69	56	31	74	36	..	..	..	217	..	154
Tajikistan	66	69	58	32	..	38	..	..	190	200	129	197
Tanzania	50	50	108	86	176	144	59	52	451	485	370	417
Thailand	63	69	49	34	58	38	11	11	280	199	210	119
Togo	49	50	110	87	175	138	75	90	457	377	375	311
Trinidad and Tobago	68	73	35	13	39	15	4	3	234	170	166	130
Tunisia	62	70	69	30	100	35	19	19	227	171	224	148
Turkey	61	69	109	42	133	47	12	14	153	158	98	111
Turkmenistan	64	66	54	41	..	50	..	..	263	250	154	122
Uganda	48	43	116	99	180	141	82	72	463	622	395	558
Ukraine	69	67	17	14	..	17	..	..	282	294	112	112
United Arab Emirates	68	75	55	15	..	17	6	5	153	122	106	92
United Kingdom	74	77	12	6	..	7	1	1	160	120	96	69
United States	74	77	13	7	..	8	2	2	194	160	102	85
Uruguay	70	74	37	18	43	22	..	..	176	174	91	83
Uzbekistan	67	69	47	24	..	35	..	..	219	209	116	101
Venezuela	68	73	36	22	42	28	..	..	219	173	123	94
Vietnam	63	68	57	40	60	48	..	..	262	206	204	136
West Bank and Gaza	..	68	..	38	..	..	10	7	..	..	..	..
Yemen, Rep.	49	54	141	98	198	130	41	47	382	384	304	331
Yugoslavia, FR (Serb./Mont.)	70	72	33	14	..	19	..	..	164	170	106	99
Zambia	51	44	90	112	149	202	96	93	482	534	413	494
Zimbabwe	55	56	82	56	107	86	26	26	389	391	321	393
World	63 w	67 w	80 w	54 w	132 w	73 w	3 w	3 w	247 w	217 w	189 w	164 w
Low income	58	63	98	68	145	94	..	..	263	231	241	206
Excl. China & India	51	56	116	88	175	131	..	..	402	354	346	304
Middle income	63	68	65	37	..	45	6	6	268	238	168	141
Lower middle income	63	67	69	40	..	49	7	7	285	260	180	155
Upper middle income	66	70	53	30	..	36	2	2	226	181	136	107
Low & middle income	60	65	87	59	133	80	6	6	265	233	215	184
East Asia & Pacific	65	68	56	39	75	47	..	..	222	180	180	145
Europe & Central Asia	68	68	41	24	..	30	..	..	269	303	114	128
Latin America & Caribbean	65	70	59	33	82	41	3	2	225	182	151	114
Middle East & North Africa	59	67	96	50	141	63	..	..	249	211	208	177
South Asia	54	62	120	73	174	93	..	..	278	239	292	230
Sub-Saharan Africa	48	52	115	91	193	147	..	..	487	448	404	376
High income	74	77	13	6	..	7	2	2	174	142	91	70

About the data

Age-specific mortality data such as infant and child mortality rates, along with life expectancy at birth, are probably the best general indicators of a community's current health status and are often cited as overall measures of a population's welfare or quality of life. They may be used nationally to identify populations in need, or internationally to compare levels of socioeconomic development. Despite variations in the quality of these data, discussed below, there is general agreement that age-specific mortality rates, especially child mortality rates, are a key indicator in any health monitoring system.

The main sources of mortality data are vital registration systems and direct or indirect estimates based on sample surveys or censuses. However, civil registers with relatively complete vital registration systems—that is, systems covering at least 90 percent of the population—are fairly uncommon in

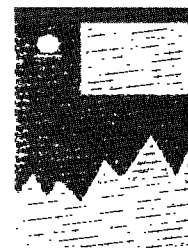
developing countries. Thus estimates must be obtained from sample surveys or derived by applying indirect estimation techniques to registration, census, or survey data. Survey data are subject to recall error and require large samples, especially if disaggregation is required. Indirect estimates rely on estimated actuarial ("life") tables that may be inappropriate to the population concerned. The life expectancy at birth that is estimated using this method would be accurate only if current mortality conditions were to remain the same for the entire life of the birth cohort.

Life expectancy at birth and age-specific mortality rates for 1996 are generally estimates based on the most recently available census or survey (see *Primary data documentation*). Extrapolations based on dated surveys may not be reliable for monitoring changes in health status.

Definitions

• **Life expectancy at birth** is the number of years a newborn infant would live if prevailing patterns of mortality at the time of its birth were to stay the same throughout its life. • **Infant mortality rate** is the number of infants who die before reaching one year of age, per 1,000 live births in a given year. • **Under-five mortality rate** is the probability that a newborn baby will die before reaching age 5, if subject to current age-specific mortality rates. • **Child mortality rate** is the probability of dying between the ages of 1 and 5, if subject to current age-specific mortality rates. • **Adult mortality rate** is the probability of dying between the ages of 15 and 60—that is, the population of 15-year olds who will die before their 60th birthday.

Data sources

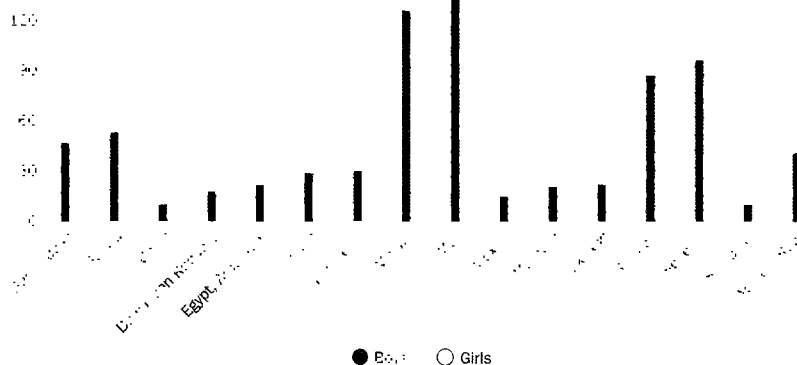


United Nations Department of Economic and Social Information and Policy Analysis, *Population and Vital Statistics Report*; demographic and health surveys from national sources; and United Nations Children's Fund (UNICEF), *The State of the World's Children 1998*.

Figure 2.17a

Child mortality rates show gender discrimination

Child mortality rate per 1,000



Source: Demographic and Health Surveys (DHS) and vital registration data.

In many countries parents have either a preference for sons or a preference for a certain sex distribution of their children. Son preference is most prominent in North America, South Asia, and East Asia, and has been documented by demographic and health surveys in these regions. No consistent pattern for gender preference has been found in Sub-Saharan Africa, while in some countries in Latin America there is a weak preference for daughters.

Preferences for boys lead to discrimination in how parents treat their sons and daughters. For example, boys receive clear preference with respect to school attendance. Findings are less clear and consistent in other areas, although in some South Asian countries one-year-old boys have higher immunization rates than one-year-old girls. The effect of gender preferences on mortality is often difficult to ascertain because infant mortality is higher for boys than for girls in all countries. Child mortality (between ages 1 and 5) better captures the effect of gender discrimination, as malnutrition and medical interventions are often more important for this age group. When female child mortality is higher, there is good reason to believe that girls are discriminated against.

The data provide only indirect evidence of discrimination by parents, but an alternative explanation exists. One consequence of son preference is that girls tend to grow up in larger families than boys, as parents attempt to achieve their desired sex distribution of children through continued childbearing. The higher number of siblings reduces the amount of resources per child even if there is no discrimination in allocation of household resources. It has been estimated that, if gender preferences were absent, pregnancy rates would decrease by 9–21 percent in countries that have high son preference.