21 PEOPLE

The world is in the middle of a major demographic transition. Its population continues to grow every year, but the pace of growth has slowed as fertility rates decline. As population growth slows, the age structure of the population is changing, with the share of the young declining and that of the elderly growing. This changing age structure has important implications for economic and social policies and hence for sustainable development.

But different countries and regions are at varying stages of this transition, depending on their fertility, mortality, and migration trends, creating a "demographic divide" between countries (Kent and Haub 2005). In much of the industrial world increasing life expectancy and aging populations have coincided with income growth, healthier lifestyles, and fertility rates that are below population replacement levels. For these countries there will be little change in future population size in the absence of inmigration. In fact, large increases in inmigration or in the retirement age would be needed to stabilize the labor force and maintain current labor force to population ratios. In developing countries fertility rates have also declined but remain much higher than in industrial countries, and fertility rates vary considerably across regions: high in Sub-Saharan Africa and the Middle East, but low in East Asia. Except in the transition economies of Eastern Europe, where fertility rates are near or below replacement levels, the population in developing countries will continue to grow well into the twenty-first century, and outmigration will only modestly reduce the population growth rate.

Technology, consumption patterns, unequal distribution of wealth, and the choices people and governments make all affect demographic trends. These, in turn, affect social and economic outcomes, and, consequently, what place these countries will take on the world stage in the future. Sub-Saharan African countries are trailing most others in their progress through the demographic transition. And if economic growth continues to lag behind population growth, as was the case in the early 1990s, it will exacerbate poverty in the region.

Rapid population growth in Sub-Saharan Africa

The challenges facing Sub-Saharan Africa as it strives to meet its development objectives are more daunting than those facing other regions. Its efforts to alleviate poverty, empower women, reduce child mortality, and improve maternal health have been undercut by the AIDS epidemic, by conflict, and by human displacement in the wake of natural disasters. In the past three decades its population has grown faster than that of any other region, doubling between 1975 and 2000 and now growing at 2.5 percent a year. Roughly 47 percent of the Sub-Saharan population is between the ages of 5 and 24, indicating that the population will continue to increase well into the twenty-first century. This large cohort will require substantial increases in future spending on health, education, and care for dependents.

Has success bred complacency?

Too little is being said about the challenge of continuing rapid population growth to African development. One possible reason for this may be that the success of fertility reductions in other regions and in some African countries has left the impression that the population problem has been solved (Cleland and Sinding 2005). Fertility rates have declined dramatically in the past 25 years where governments have increased investments in education and in women's reproductive health (table 2a). Globally, contraceptive prevalence increased from 54 percent in 1990 to 59 percent in 1995 and to more than 60 percent in 2003 (box 2b).

The slowdown in population growth (table 2c) can be traced to these fertility declines. In Europe and Central Asia women now have on average only 1.6 births—too few to replace today's population. At the other extreme is Sub-Saharan Africa, with average fertility remaining very high.

Even in Sub-Saharan Africa regional figures mask huge differences across countries (table 2d). In South Africa, Botswana, Zimbabwe, and Lesotho fertility continues to decline as a result of successful family planning programs. Of women ages 15–49, 54 percent were using contraception in Zimbabwe and 48 percent in Botswana, compared with 14 percent in Niger and 8 percent in Chad in the past decade. Even in countries with high fertility, the rates vary by socioeconomic status. In Benin the fertility rate was 7.3 births for women in the lowest asset quintile and 3.8 for women in the richest quintile.

Why is fertility still high?

Sub-Saharan Africa is becoming fragmented in its fertility declines. There are several reasons for this. The logistical and cultural challenge of delivering family planning programs, the often poor quality of health services, ignorance about reproductive health issues, differences in economic status, and continuing gender inequality all contribute to high fertility rates. Desired family size, though decreasing slowly over past decades, remains high—as high as eight children in some

2a

Total fertility rates by region, 1970, 1980, and 2004

Region	1970	1980	2004
East Asia & Pacific	5.4	3.0	2.1
Europe & Central Asia	2.5	2.2	1.6
Latin America & Caribbean	5.3	4.2	2.4
Middle East & North Africa	6.7	6.2	3.1
South Asia	6.0	5.2	3.1
Sub-Saharan Africa	6.8	6.7	5.4
High-income	2.5	1.9	1.7
World	4.8	3.7	2.6

Source: World Bank database.

2b

Family planning and the fertility transition

The use of family planning among married women worldwide rose from 10 percent in 1960 to more than 60 percent in 2003. Due in part to modern contraception, the decline in fertility and the shift to smaller families occurred faster in developing countries—in only a few decades—than had occurred in industrial countries, where the transition to low fertility began in the 1830s. Crude birth rates were about 37 per 1,000 people in pre-Revolutionary France and 42–43 in the 1850s in the United States, before gradually commencing a decline to their current levels of 8 per 1,000 people.

What contributed to smaller families? Organized family planning programs bringing contraceptive supplies and services to the people, along with information campaigns promoting smaller, healthier families. Studies in the 1990s showed that these programs were responsible for about half the fertility decline of developing countries since the 1960s. Even couples in remote rural communities in Bangladesh and Vietnam gained access to modern contraceptives through nationwide family planning programs.

Contraceptive prevalence is a key determinant of declining fertility. Based on the current use of family planning services, contraceptive rates are not expected to increase rapidly because of Africa's widespread poverty, high rates of illiteracy, largely rural populations, and strong traditional preferences for large families. However, there is an emerging preference for spacing and limiting births among married women of reproductive age in African countries, ranging from 10 percent to 35 percent. The increased availability of contraception has reduced the gap between the number of women who want to limit births and those who can in most countries. But in some countries unmet need remains high.

2c

Population growth rates by region (%)

Region	1950–80	1980–90	1990–2004
East Asia & Pacific	2.0	1.6	1.2
Europe & Central Asia	1.3	0.9	0.1
Latin America & Caribbean	2.6	2.0	1.6
Middle East & North Africa	2.6	3.0	2.1
South Asia	2.2	2.2	1.8
Sub-Saharan Africa	2.6	2.9	2.5
High-income	1.1	0.7	0.8
World	1.9	1.7	1.4

Source: World Bank database.

2d

Total fertility rates in selected Sub-Saharan countries, 2004

Country	Fertility rate	Country	Fertility rate
Niger	7.7	Lesotho	3.5
Uganda	7.1	Zimbabwe	3.4
Guinea-Bissau	7.1	Botswana	3.1
Mali	6.9	South Africa	2.7
Burundi	6.8	Mauritius	2.0

Source: World Bank database.

African countries (table 2e). By contrast, the desired family size in South Asia is typically fewer than three children.

High desired family sizes are associated with high infant mortality rates. But when birth rates began to drop in Bangladesh and Nepal in the 1980s their infant mortality rates were higher than those in many western and central African countries (Cleland and Sinding 2005).

Another reason for high fertility rates is that contraceptive prevalence rates remain low. For 9 of 20 African countries that conducted Demographic and Health Surveys between 1999 and 2005, contraceptive use, including traditional methods, was less than 10 percent for women ages 15–49. Compare that with other regions, where on average 40 percent of women were using a method of contraception. In addition to contraceptive use, the method of contraception is also important for sustained fertility declines. In countries with low contraceptive prevalence, fewer women use modern methods, further diluting the effect of low contraceptive use on fertility (table 2f). Of 17 African countries that conducted Demographic and Health Surveys between 2000 and 2004, in 8 of them use of modern methods was estimated at less than 10 percent.

Finally, HIV/AIDS has affected fertility and mortality trends in Sub-Saharan Africa. AIDS-related deaths among working-age adults in the seven worst AIDS-affected countries will produce an age structure not seen before, with large numbers of old and very young and a relatively small working-age population. But recent data indicate that prevalence among pregnant women attending antenatal clinics in Zimbabwe is declining in all age groups. In South Africa, with the largest number of infected people, rates of HIV infection among pregnant women ages 15–24 have stabilized since 2000. HIV prevalence among pregnant women has declined countrywide in Kenya and Uganda (UNAIDS and WHO 2005). But in western and central Africa there is no consistent evidence of declining prevalence among pregnant women in recent years. And overall in Sub-Saharan Africa the prevalence of HIV infections in people ages 15–49 has remained at about 7 percent since 2000. So while life expectancy has fallen in some cases, fertility remains stubbornly high for many Sub-Saharan African countries, and high fertility remains the dominant influence on current and future population growth and size.

In many West African countries, where HIV prevalence has remained lower than in other regions in Africa, more women die from unsafe abortions than as a result of AIDS (Population Action International 2006). If African nations can expand the capacity and quality of family planning sevices, that will bring about much needed declines in fertility rates while strengthening the status of women. Until this happens, continuing high fertility rates and rapid population growth may prove a more serious obstacle to poverty reduction than will AIDS.

2e

Desired family size in selected countries in Sub-Saharan Africa and South Asia, latest year available

Sub-Saharan Africa	Desired number of children	South Asia	Desired number of children
Cameroon (2004)	5.7	Bangladesh (1999/2000)	2.5
Chad (1996/97)	8.3	India (1998/99)	2.6
Eritrea (2002)	5.8	Nepal (2001)	2.6
Niger (1998)	8.2		

Source: Demographic and Health Surveys.

2f

Contraceptive method mix, selected countries, 2000–04

	Contraceptive use	
Country	Any method	Any modern
Kenya	39.3	31.5
Madagascar	27.1	18.3
Benin	18.6	7.2
Burkina Faso	13.8	8.8
Nigeria	12.6	8.2
Bangladesh	58.5	47.6
Haiti	28.1	22.8
Cambodia	23.8	18.8

Source: Demographic and Health Surveys.

What will high fertility mean for Sub-Saharan Africa's future population?

The population of Sub-Saharan Africa has grown from 225 million in 1960 to 733 million in 2004. The World Bank projects a doubling of the population to 1.4 billion by 2050, increasing the region's share of the world population from 13 percent today to 20 percent. Fertility rates will remain over 3.5 births per woman until 2025, producing a youthful age structure, with a large proportion of children under 15 years old. Comparisons with South Asia, another region with high fertility, show that the fertility transition in Sub-Saharan Africa lags one generation behind (figure 2g).

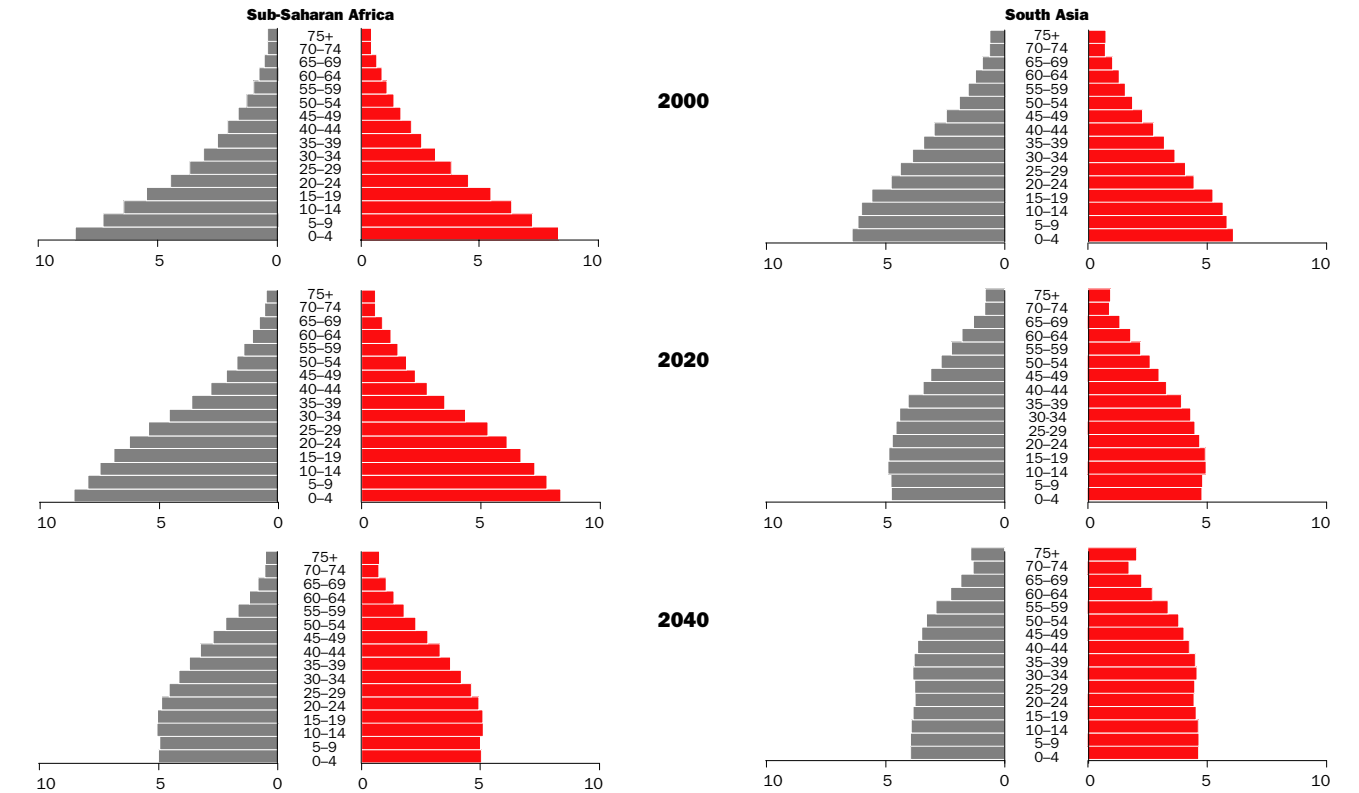
Very rapid population growth is expected to continue in several African countries, with the population likely to triple in Burkina Faso, Burundi, Chad, Democratic Republic of Congo, Republic of Congo, Guinea-Bissau, Liberia, Mali, Niger, and Uganda (United Nations 2005). Among the nine countries expected by the United Nations to account for half the world's projected population increase between 2005 and 2050, four are in Sub-Saharan Africa: Democratic Republic of Congo, Ethiopia, Nigeria, and Uganda.

Although fertility rates have started to decline in many Sub-Saharan countries, the rates of decline are expected to be more modest and to be achieved over a longer period of time. And they will occur at different paces. For several

2g

Sub-Saharan Africa's delayed demographic transition

Share of deaths in each age group (%)



Source: World Bank staff estimates.

2h

Projected fertility rates in selected African regions

Region	2005–10	2010–15	2015–20	2020–25	2025–30	2030–35	2035–40
Western Africa	5.4	4.8	4.4	3.9	3.5	3.2	3.0
Central Africa	6.1	5.8	5.4	5.0	4.5	4.1	3.6
Southern Africa	2.7	2.5	2.4	2.3	2.2	2.1	2.0

Source: United Nations 2005.

decades fertility declines in western and central Africa are expected to lag behind those that have already taken place in southern Africa (table 2h).

What does high fertility mean for Africa's development?

As average population growth slowed globally over the past half century, the range of national and regional demographic experiences widened. Growth rates remained high in many African countries such as Burkina Faso and Chad, while they plummeted in countries in other regions, including Italy, the Republic of Korea, and Thailand. Other countries with moderate growth rates—such as Bangladesh, Brazil, India, and Indonesia, which have had impressive fertility declines—still have considerable momentum for future growth due to a young age structure.

Each demographic situation is associated with its own social, economic, environmental, and political challenge (box 2i). What is of concern about the demographic divide is not the differences in population growth rates, but the disparities in living standards, personal well-being, and future prospects associated with these trends.

People in Japan and Nigeria, with populations of similar size in 2004 but at opposing ends of the divide, have starkly different lives today—and they face very different futures (table 2j). In Japan the elderly dependency ratio is expected to increase dramatically, straining government budgets because of higher spending on pensions, health care, and long-term residential care. Econometric models suggest that the projected decline in the working-age population could result in lower savings and investment rates and slower GDP growth (IMF 2004).

By contrast, in Nigeria, a microcosm of Sub-Saharan Africa, per capita growth could be boosted by the increase in the working-age population. With 36 percent of its population under age 15 in 2025, Nigeria has a considerable momentum for future growth well into the twenty-first century. This growth depends, however, on the country pursuing sound economic and social policies to enable the large wave of potential workers to acquire skills and find productive employment. Its inability to deal with a higher burden of infectious diseases, lower education levels, and limited investment in health infrastructure could result in very different economic outcomes. Without investments in physical stocks and human capital, Nigeria's population growth will exert an unsustainable demand for public-sector-provided health, education, and other services.

2i

Population projections—trends and uncertainty

Future trends in population size, age structure, births, deaths, and other demographic variables are of interest to policymakers, government planners, and industry strategists. The reason: population forecasts can imply a wide range of consequences for society and its environment. Country projections became more accurate over the 1950s and 1960s, as demographic data improved, but since then there have been few significant improvements.

Fertility, mortality, and migration are the components of population growth. While broad trends can be discerned and projected into the future with reasonable confidence, substantial uncertainty is attached to the specific trend for any country or region. Uncertainty arises in part because the present demographic situation in any country is not known perfectly. But the main cause of uncertainty is that future trends in fertility, mortality, and migration are subject to unpredictable influences. Future economic development; societal, cultural, epidemiological, and environmental changes; or progress in science and technology cannot be predicted. Uncertainty also arises from the fact that humans can influence the future through deliberate policy intervention, such as investing heavily in family planning and reproductive services.

Some demographers argue that population forecasts should not go beyond a horizon of 30–35 years, due to the rapid increase in uncertainty beyond this point. Others note, however, that if the forecast carries an appropriate indication of the range of uncertainty, users can decide when the informational content of the forecast ceases to be useful.

Source: NRC 2000.

2j

The demographic divide: Nigeria and Japan

	Nigeria		Japan	
	2004	2025	2004	2025
Population (millions)	137	205	128	120
Total fertility rate per woman	5.6	3.3	1.3	1.8
Population ages 0–14 (percent)	45.1	36.2	14.8	12.5
Population ages 65 and older (percent)	2.7	3.4	16.5	28.1
Life expectancy at birth (years)	45	52	82	84
Infant mortality rate (per 1,000 live births)	98	72	3	3
Adults with HIV/AIDS (percent ages 15–49)	5.4	..	0.1	..
Health expenditure per capita	60	..	2,476	..
GNI per capita	430	..	37,060	..

Source: World Bank database.

2.1 Population dynamics

	Total population			Average annual population growth rate		Population age composition			Dependency ratio		Crude death rate	Crude birth rate
		millions		%		%			dependents as proportion of working-age population			
	1990	2004	2020	1990–2004	2004–20	Ages 0–14 2004	Ages 15–64 2004	Ages 65+ 2004	Young 2004	Old 2004	per 1,000 people 2004	per 1,000 people 2004
Afghanistan	14.6	..	..	..	..	..	..	..	..	..	..	..
Albania	3.3	3.1	3.4	–0.4	0.6	27.6	64.3	8.1	0.4	0.1	6	17
Algeria	25.3	32.4	40.6	1.8	1.4	30.4	65.1	4.5	0.5	0.1	5	21
Angola	10.5	15.5	23.8	2.8	2.7	46.6	51.0	2.5	0.9	0.0[a]	22	48
Argentina	32.6	38.4	44.5	1.2	0.9	26.7	63.1	10.1	0.4	0.2	8	18
Armenia	3.5	3.0	3.0	–1.1	–0.2	21.7	66.4	11.9	0.3	0.2	9	12
Australia	17.1	20.1	23.3	1.2	0.9	20.0	67.5	12.6	0.3	0.2	7	13
Austria	7.7	8.2	8.3	0.4	0.1	15.8	67.8	16.4	0.2	0.2	9	10
Azerbaijan	7.2	8.3	9.4	1.1	0.8	26.8	66.2	6.9	0.4	0.1	6	16
Bangladesh	104.0	139.2	181.2	2.1	1.6	35.9	60.5	3.6	0.6	0.1	8	27
Belarus	10.2	9.8	8.9	–0.3	–0.6	15.8	69.7	14.6	0.2	0.2	15	9
Belgium	10.0	10.4	10.6	0.3	0.1	16.9	65.6	17.5	0.3	0.3	10	11
Benin	5.2	8.2	12.7	3.3	2.8	44.5	52.8	2.7	0.8	0.1	12	41
Bolivia	6.7	9.0	11.6	2.1	1.6	38.5	57.0	4.5	0.7	0.1	8	29
Bosnia and Herzegovina	4.3	3.9	3.8	–0.7	–0.1	16.9	69.6	13.5	0.2	0.2	9	9
Botswana	1.4	1.8	1.7	1.5	–0.4	37.9	58.9	3.2	0.6	0.1	26	26
Brazil	149.4	183.9	219.2	1.5	1.1	28.1	65.9	6.0	0.4	0.1	7	20
Bulgaria	8.7	7.8	6.9	–0.8	–0.8	14.1	69.2	16.8	0.2	0.2	14	9
Burkina Faso	8.5	12.8	20.3	2.9	2.9	47.4	49.8	2.8	1.0	0.1	17	47
Burundi	5.7	7.3	12.3	1.8	3.3	45.5	51.7	2.8	0.9	0.1	18	45
Cambodia	9.7	13.8	18.6	2.5	1.9	37.7	59.0	3.4	0.6	0.1	11	30
Cameroon	11.7	16.0	20.4	2.3	1.5	41.6	54.7	3.7	0.8	0.1	17	35
Canada	27.8	32.0	36.4	1.0	0.8	17.9	69.1	13.0	0.3	0.2	7	10
Central African Republic	3.0	4.0	5.0	2.0	1.4	43.1	52.9	4.0	0.8	0.1	22	37
Chad	6.1	9.4	14.9	3.2	2.8	47.2	49.7	3.1	0.9	0.1	20	48
Chile	13.2	16.1	18.6	1.4	0.9	25.5	66.6	7.9	0.4	0.1	5	16
China	1,135.2	1,296.2	1,423.9	0.9	0.6	22.0	70.5	7.5	0.3	0.1	6	12
Hong Kong, China	5.7	6.9	8.1	1.3	1.0	14.8	73.4	11.8	0.2	0.2	5	7
Colombia	35.0	44.9	55.0	1.8	1.3	31.4	63.6	5.0	0.5	0.1	5	21
Congo, Dem. Rep.	37.8	55.9	90.0	2.8	3.0	47.2	50.1	2.7	0.9	0.1	20	50
Congo, Rep.	2.5	3.9	6.4	3.2	3.1	47.0	50.1	2.9	0.9	0.1	13	44
Costa Rica	3.1	4.3	5.3	2.3	1.3	29.0	65.3	5.7	0.4	0.1	4	17
Côte d'Ivoire	12.7	17.9	23.3	2.5	1.7	42.1	54.6	3.2	0.8	0.1	17	37
Croatia	4.8	4.4	4.4	–0.5	–0.1	15.8	67.2	17.0	0.2	0.3	11	9
Cuba	10.5	11.2	11.4	0.5	0.1	19.5	70.0	10.5	0.3	0.2	7	11
Czech Republic	10.4	10.2	9.9	–0.1	–0.2	15.0	71.0	14.1	0.2	0.2	11	10
Denmark	5.1	5.4	5.6	0.4	0.2	18.8	66.3	14.9	0.3	0.2	10	12
Dominican Republic	7.1	8.8	10.7	1.5	1.2	33.1	62.8	4.1	0.5	0.1	6	24
Ecuador	10.3	13.0	16.0	1.7	1.3	32.8	61.5	5.7	0.5	0.1	5	23
Egypt, Arab Rep.	55.7	72.6	94.8	1.9	1.7	33.9	61.4	4.7	0.6	0.1	6	26
El Salvador	5.1	6.8	8.5	2.0	1.5	34.3	60.4	5.3	0.6	0.1	6	24
Eritrea	3.0	4.2	6.6	2.4	2.8	44.8	52.9	2.3	0.8	0.0[a]	11	39
Estonia	1.6	1.3	1.3	–1.1	–0.4	15.6	68.1	16.3	0.2	0.2	13	10
Ethiopia	51.2	70.0	107.7	2.2	2.7	44.8	52.3	2.9	0.9	0.1	19	40
Finland	5.0	5.2	5.4	0.3	0.2	17.5	66.8	15.7	0.3	0.2	9	11
France	56.7	60.4	63.0	0.4	0.3	18.2	65.2	16.6	0.3	0.3	8	13
Gabon	1.0	1.4	1.7	2.5	1.4	40.5	55.1	4.4	0.7	0.1	13	30
Gambia, The	0.9	1.5	2.1	3.3	2.1	40.3	56.0	3.7	0.7	0.1	12	35
Georgia	5.5	4.5	4.1	–1.4	–0.7	19.5	66.5	14.1	0.3	0.2	11	11
Germany	79.4	82.5	82.3	0.3	0.0[a]	14.6	67.2	18.3	0.2	0.3	10	9
Ghana	15.5	21.7	28.8	2.4	1.8	39.5	56.9	3.6	0.7	0.1	11	31
Greece	10.2	11.1	11.2	0.6	0.1	14.4	67.6	18.0	0.2	0.3	9	9
Guatemala	8.9	12.3	17.5	2.3	2.2	43.5	52.3	4.3	0.8	0.1	6	35
Guinea	6.2	9.2	13.4	2.8	2.3	43.8	52.7	3.5	0.8	0.1	13	41
Guinea-Bissau	1.0	1.5	2.5	3.0	3.0	47.4	49.5	3.1	1.0	0.1	20	50
Haiti	6.9	8.4	10.3	1.4	1.3	38.0	58.1	4.0	0.7	0.1	13	30

2.1 Population dynamics

	Total population			Average annual population growth rate		Population age composition			Dependency ratio		Crude death rate	Crude birth rate
	millions			%		%			dependents as proportion of working-age population		per 1,000 people	per 1,000 people
	1990	2004	2020	1990–2004	2004–20	Ages 0–14 2004	Ages 15–64 2004	Ages 65+ 2004	Young 2004	Old 2004	2004	2004
Honduras	4.9	7.0	9.5	2.6	1.9	39.7	56.5	3.8	0.7	0.1	6	29
Hungary	10.4	10.1	9.6	–0.2	–0.3	16.0	68.9	15.1	0.2	0.2	13	9
India	849.5	1,079.7	1,332.0	1.7	1.3	32.5	62.3	5.2	0.5	0.1	8	24
Indonesia	178.2	217.6	255.9	1.4	1.0	28.6	66.0	5.4	0.4	0.1	7	20
Iran, Islamic Rep.	54.4	67.0	85.0	1.5	1.5	29.8	65.7	4.5	0.5	0.1	5	19
Iraq	18.5	..	..	..	..	..	..	..	..	..	..	..
Ireland	3.5	4.1	4.9	1.1	1.2	20.3	68.7	10.9	0.3	0.2	7	16
Israel	4.7	6.8	8.3	2.7	1.2	27.9	62.0	10.1	0.4	0.2	6	21
Italy	56.7	57.6	57.1	0.1	0.0[a]	14.1	66.3	19.7	0.2	0.3	9	10
Jamaica	2.4	2.6	2.8	0.7	0.3	31.7	60.8	7.6	0.5	0.1	6	18
Japan	123.5	127.8	126.7	0.2	–0.1	14.1	66.7	19.2	0.2	0.3	9	9
Jordan	3.2	5.4	7.6	3.9	2.1	37.6	59.3	3.1	0.6	0.1	4	27
Kazakhstan	16.3	15.0	14.9	–0.6	0.0[a]	23.9	67.8	8.3	0.4	0.1	10	15
Kenya	23.4	33.5	49.6	2.5	2.5	42.9	54.2	2.8	0.8	0.1	15	39
Korea, Dem. Rep.	19.7	22.4	23.7	0.9	0.4	25.4	68.0	6.5	0.4	0.1	11	16
Korea, Rep.	42.9	48.1	49.4	0.8	0.2	19.1	71.9	9.0	0.3	0.1	5	9
Kuwait	2.1	2.5	3.7	1.0	2.5	24.5	73.8	1.7	0.3	0.0[a]	2	19
Kyrgyz Republic	4.4	5.1	6.1	1.0	1.1	32.1	61.8	6.1	0.5	0.1	7	22
Lao PDR	4.1	5.8	8.0	2.4	2.0	41.2	55.1	3.6	0.7	0.1	12	35
Latvia	2.7	2.3	2.1	–1.0	–0.5	15.2	68.1	16.6	0.2	0.2	14	9
Lebanon	2.7	3.5	4.1	1.8	1.0	29.1	63.6	7.3	0.5	0.1	7	19
Lesotho	1.6	1.8	1.7	0.9	–0.3	39.0	55.8	5.2	0.7	0.1	25	28
Liberia	2.1	3.2	5.0	3.0	2.8	47.0	50.8	2.2	0.9	0.0[a]	21	50
Libya	4.3	5.7	7.5	2.0	1.7	30.4	65.7	4.0	0.5	0.1	4	23
Lithuania	3.7	3.4	3.2	–0.5	–0.4	17.4	67.4	15.2	0.3	0.2	12	9
Macedonia, FYR	1.9	2.0	2.1	0.4	0.1	20.1	69.0	10.9	0.3	0.2	9	12
Madagascar	12.0	18.1	26.6	2.9	2.4	44.2	52.7	3.1	0.8	0.1	12	39
Malawi	9.5	12.6	17.8	2.1	2.2	47.3	49.7	3.0	1.0	0.1	21	43
Malaysia	17.8	24.9	31.5	2.4	1.5	32.8	62.8	4.5	0.5	0.1	5	22
Mali	8.9	13.1	20.9	2.8	2.9	48.3	49.0	2.7	1.0	0.1	17	49
Mauritania	2.0	3.0	4.5	2.7	2.5	43.1	53.5	3.4	0.8	0.1	14	41
Mauritius	1.1	1.2	1.4	1.1	0.7	24.9	68.6	6.5	0.4	0.1	7	16
Mexico	83.2	103.8	124.7	1.6	1.1	31.6	63.2	5.2	0.5	0.1	5	19
Moldova	4.4	4.2	4.1	–0.2	–0.2	19.1	70.9	10.0	0.3	0.1	12	10
Mongolia	2.1	2.5	3.1	1.3	1.4	31.3	65.0	3.8	0.5	0.1	6	22
Morocco	23.9	29.8	38.3	1.6	1.6	31.5	63.8	4.8	0.5	0.1	6	23
Mozambique	13.4	19.4	25.5	2.6	1.7	44.1	52.6	3.3	0.8	0.1	20	39
Myanmar	40.8	50.0	57.1	1.5	0.8	30.1	65.0	4.9	0.5	0.1	10	20
Namibia	1.4	2.0	2.4	2.6	1.1	42.1	54.4	3.4	0.8	0.1	6	23
Nepal	19.1	26.6	35.7	2.4	1.8	39.5	56.9	3.6	0.7	0.1	8	29
Netherlands	15.0	16.3	17.0	0.6	0.3	18.3	67.7	14.0	0.3	0.2	8	12
New Zealand	3.4	4.1	4.4	1.2	0.5	21.7	66.1	12.2	0.3	0.2	7	14
Nicaragua	4.0	5.4	7.2	2.2	1.8	39.5	57.2	3.3	0.7	0.1	5	28
Niger	8.5	13.5	22.6	3.3	3.2	49.0	49.0	2.0	1.0	0.0[a]	21	54
Nigeria	90.6	128.7	175.8	2.5	1.9	44.5	52.5	3.0	0.8	0.1	19	41
Norway	4.2	4.6	5.0	0.6	0.5	19.7	65.3	15.0	0.3	0.2	9	12
Oman	1.8	2.5	3.5	2.3	2.0	34.9	62.7	2.5	0.6	0.0[a]	3	25
Pakistan	108.0	152.1	211.7	2.4	2.1	38.9	57.3	3.8	0.7	0.1	7	27
Panama	2.4	3.2	4.0	2.0	1.5	30.6	63.5	5.9	0.5	0.1	5	22
Papua New Guinea	4.1	5.8	7.6	2.4	1.7	40.7	56.9	2.4	0.7	0.0[a]	10	30
Paraguay	4.2	6.0	8.3	2.5	2.0	38.0	58.3	3.7	0.7	0.1	5	29
Peru	21.8	27.6	34.2	1.7	1.4	32.7	62.1	5.2	0.5	0.1	6	23
Philippines	61.1	81.6	103.3	2.1	1.5	35.7	60.5	3.8	0.6	0.1	5	25
Poland	38.1	38.2	37.7	0.0[a]	–0.1	16.8	70.3	12.8	0.2	0.2	10	9
Portugal	9.9	10.5	10.9	0.4	0.2	15.9	67.2	16.9	0.2	0.3	10	10
Puerto Rico	3.5	3.9	4.2	0.7	0.5	22.5	65.6	11.9	0.3	0.2	8	14

2.1 Population dynamics

	Total population			Average annual population growth rate		Population age composition			Dependency ratio		Crude death rate	Crude birth rate
		millions		%		Ages 0–14	% Ages 15–64	Ages 65+	dependents as proportion of working-age population Young	Old	per 1,000 people	per 1,000 people
	1990	2004	2020	1990–2004	2004–20	2004	2004	2004	2004	2004	2004	2004
Romania	23.2	21.7	20.4	–0.5	–0.4	15.9	69.5	14.6	0.2	0.2	12	10
Russian Federation	148.3	143.8	133.1	–0.2	–0.5	15.7	70.7	13.6	0.2	0.2	16	11
Rwanda	7.1	8.9	12.4	1.6	2.1	44.1	53.5	2.4	0.8	0.0[a]	18	41
Saudi Arabia	16.4	24.0	34.0	2.7	2.2	37.8	59.4	2.9	0.6	0.0[a]	4	27
Senegal	8.0	11.4	16.0	2.5	2.1	43.0	53.9	3.1	0.8	0.1	11	36
Serbia and Montenegro	10.5[b]	8.1	10.3	0.1[c]	1.5	18.6	67.4	14.0	0.3	0.2	14	11
Sierra Leone	4.1	5.3	7.7	1.9	2.3	42.8	53.9	3.3	0.8	0.1	23	46
Singapore	3.0	4.2	5.0	2.4	1.0	20.2	71.6	8.2	0.3	0.1	4	10
Slovak Republic	5.3	5.4	5.4	0.1	0.0[a]	17.2	71.1	11.7	0.2	0.2	10	10
Slovenia	2.0	2.0	1.9	0.0[a]	–0.3	14.2	70.4	15.4	0.2	0.2	9	9
Somalia	6.7	8.0	12.3	1.3	2.7	44.1	53.3	2.6	0.8	0.0[a]	17	45
South Africa	35.2	45.5	48.1	1.8	0.3	32.8	63.1	4.1	0.5	0.1	22	24
Spain	38.8	42.7	44.4	0.7	0.2	14.3	69.2	16.5	0.2	0.2	9	11
Sri Lanka	17.0	19.4	22.9	0.9	1.0	24.5	68.4	7.1	0.4	0.1	6	19
Sudan	26.1	35.5	47.5	2.2	1.8	39.5	56.9	3.6	0.7	0.1	11	32
Swaziland	0.8	1.1	1.0	2.7	–0.8	41.6	55.0	3.4	0.8	0.1	20	34
Sweden	8.6	9.0	9.5	0.4	0.3	17.7	65.1	17.1	0.3	0.3	10	11
Switzerland	6.7	7.4	7.4	0.7	0.0[a]	16.8	67.6	15.7	0.2	0.2	8	10
Syrian Arab Republic	12.8	18.6	26.0	2.6	2.1	37.4	59.5	3.1	0.6	0.1	3	28
Tajikistan	5.3	6.4	8.2	1.4	1.5	39.7	56.5	3.8	0.7	0.1	7	29
Tanzania	26.2	37.6	49.3	2.6	1.7	42.9	53.9	3.2	0.8	0.1	17	37
Thailand	54.6	63.7	71.0	1.1	0.7	24.1	69.0	6.9	0.3	0.1	7	16
Togo	4.0	6.0	8.7	3.0	2.4	43.7	53.2	3.1	0.8	0.1	12	38
Trinidad and Tobago	1.2	1.3	1.3	0.5	0.2	22.0	70.7	7.2	0.3	0.1	8	14
Tunisia	8.2	9.9	11.6	1.4	1.0	26.7	67.1	6.2	0.4	0.1	6	17
Turkey	56.2	71.7	86.8	1.7	1.2	29.5	65.1	5.4	0.5	0.1	6	19
Turkmenistan	3.7	4.8	5.8	1.9	1.2	32.7	62.7	4.7	0.5	0.1	8	22
Uganda	17.8	27.8	50.6	3.2	3.7	50.4	47.1	2.5	1.1	0.1	15	50
Ukraine	51.9	47.5	39.6	–0.6	–1.1	15.4	68.8	15.8	0.2	0.2	16	9
United Arab Emirates	1.8	4.3	6.1	6.4	2.2	22.4	76.5	1.1	0.3	0.0[a]	1	16
United Kingdom	57.6	59.9	62.5	0.3	0.3	18.2	65.9	15.9	0.3	0.2	10	12
United States	249.6	293.7	338.4	1.2	0.9	20.9	66.8	12.3	0.3	0.2	8	14
Uruguay	3.1	3.4	3.8	0.7	0.6	24.4	62.4	13.2	0.4	0.2	9	15
Uzbekistan	20.5	26.2	32.5	1.7	1.3	34.0	61.3	4.7	0.6	0.1	7	21
Venezuela, RB	19.8	26.1	33.5	2.0	1.5	31.7	63.4	4.9	0.5	0.1	5	22
Vietnam	66.2	82.2	99.9	1.5	1.2	30.3	64.2	5.5	0.5	0.1	6	18
West Bank and Gaza	2.0	3.5	5.7	4.1	3.0	45.7	51.1	3.1	0.9	0.1	4	35
Yemen, Rep.	12.1	20.3	32.7	3.7	3.0	46.7	51.0	2.3	0.9	0.0[a]	8	40
Zambia	8.4	11.5	15.1	2.3	1.7	46.0	51.0	3.0	0.9	0.1	22	41
Zimbabwe	10.6	12.9	14.1	1.4	0.6	40.5	55.9	3.6	0.7	0.1	23	30
World	**5,256.3 s**	**6,365.0 s**	**7,573.5 s**	**1.4 w**	**1.1 w**	**28.5 w**	**64.2 w**	**7.3 w**	**0.4 w**	**0.1 w**	**9 w**	**20 w**
Low income	1,763.4	2,343.0	3,084.4	2.0	1.7	36.8	58.9	4.3	0.6	0.1	11	29
Middle income	2,589.4	3,017.8	3,427.1	1.1	0.8	25.4	67.4	7.2	0.4	0.1	7	16
Lower middle income	2,082.8	2,441.6	2,796.9	1.1	0.8	25.5	67.6	6.8	0.4	0.1	7	16
Upper middle income	506.6	576.2	630.2	0.9	0.6	24.9	66.3	8.8	0.4	0.1	10	16
Low & middle income	4,352.8	5,360.8	6,511.5	1.5	1.2	30.4	63.7	5.9	0.5	0.1	9	22
East Asia & Pacific	1,596.1	1,869.5	2,107.6	1.1	0.7	24.5	68.7	6.8	0.4	0.1	7	15
Europe & Central Asia	466.1	472.5	476.9	0.1	0.1	20.2	68.2	11.6	0.3	0.2	12	13
Latin America & Carib.	437.6	545.9	660.3	1.6	1.2	30.4	63.6	5.9	0.5	0.1	6	21
Middle East & N. Africa	225.5	300.3	399.1	2.0	1.8	34.0	61.8	4.2	0.6	0.1	6	25
South Asia	1,113.1	1,446.8	1,834.9	1.9	1.5	33.8	61.4	4.8	0.6	0.1	8	25
Sub-Saharan Africa	514.4	725.8	1,032.7	2.5	2.2	43.7	53.2	3.1	0.8	0.1	18	40
High income	903.5	1,004.2	1,062.0	0.8	0.4	18.4	67.0	14.6	0.3	0.2	8	12
Europe EMU	293.3	309.3	315.7	0.4	0.1	15.6	66.9	17.5	0.2	0.3	9	10

a. Less than 0.05. b. Includes population of Kosovo until 1999. c. Data are for 1990–99.

2.1 Population dynamics

About the data

Population estimates are usually based on national population censuses, but the frequency and quality of these vary by country. Most countries conduct a complete enumeration no more than once a decade. Estimates for the years before and after the censuses 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 in the transport, communications, and other resources required to conduct and analyze a full census.

The quality and reliability of official demographic data are also affected by the public trust in the government, the government's commitment to full and accurate enumeration, the confidentiality and protection against misuse accorded to census data, and the independence of census agencies from undue political influence. 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 152 economies listed in the table, 119 (about 78 percent) conducted a census between 1995 and 2005. 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 the completeness of registration.

Current population estimates for developing countries that lack recent census-based data, and pre- and post-census estimates for countries with census data, are provided by the United Nations Population Division, national statistical offices, and other agencies. The standard estimation method requires fertility, mortality, and net migration data, which are often collected from sample surveys, some of which may be small or limited in coverage. The population estimates are the product of demographic modeling and so are susceptible to biases and errors because of shortcomings in the model as well as in the data. Population projections are made using the cohort component method.

The growth rate of the total population conceals the fact that different age groups may grow at very different rates. In many developing countries the population under age 15 was previously growing rapidly but is now starting to shrink. Previously high fertility rates and declining mortality rates are now reflected in the larger share of the working-age population.

Dependency ratios take into account variations in the different age groups: the proportions of children, elderly people, and working-age people in the population. Separate calculations of young-age and old-age dependency suggest the burden of dependency that the working-age population must bear in relation to children and the elderly. But dependency ratios show only the age composition of a population, not economic dependency. Some children and elderly people are part of the labor force, and many working-age people are not.

The vital rates shown in the table are based on data derived from birth and death registration systems, censuses, and sample surveys conducted by national statistical offices and other organizations, or on demographic analysis. The estimates for 2004 for many countries are national projections based on extrapolations of levels and trends measured in earlier years.

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 the coverage of events or of geographic areas. Many developing countries carry out special household surveys that estimate vital rates by asking respondents about births and deaths in the recent past. Estimates derived in this way are subject to sampling errors as well as errors due to inaccurate recall by the respondents.

The United Nations Statistics Division monitors the completeness of vital registration systems. The share of countries with at least 90 percent complete vital registration increased from 45 percent in 1988 to 54 percent in 2004. Still, some of the most populous developing countries—China, India, Indonesia, Brazil, Pakistan, Bangladesh, Nigeria—do not have complete vital registration systems. Fewer than 30 percent of births and deaths and fewer than 40 percent of infant deaths worldwide are thought to be registered and reported.

International migration is the only other factor besides birth and death rates that directly determines a country's population growth. From 1990 to 2000 the number of migrants in high-income countries increased by 23 million. About 175 million people currently live outside their home country, accounting for about 3 percent of the world's population. Estimating international migration is difficult. At any time many people are located outside their home country as tourists, workers, or refugees or for other reasons. Standards relating to the duration and purpose of international moves that qualify as migration vary, and accurate estimates require information on flows into and out of countries that is difficult to collect.

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 values shown are midyear estimates for 1990 and 2004 and projections for 2020. • **Average annual population growth rate** is the exponential change for the period indicated. See *Statistical methods* for more information. • **Population age composition** refers to the percentage of the total population that is in specific age groups. • **Dependency ratio** is the ratio of dependents—people younger than 15 or older than 64—to the working-age population—those ages 15–64. • **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 population, estimated at midyear. Subtracting the crude death rate from the crude birth rate provides the rate of natural increase, which is equal to the population growth rate in the absence of migration.

Data sources

The World Bank's population estimates are compiled and produced by its Human Development Network and Development Data Group in consultation with its operational staff and country offices. Important inputs to the World Bank's demographic work come from the United Nations Population Division's *World Population Prospects: The 2004 Revision*; census reports and other statistical publications from national statistical offices; household surveys conducted by national agencies, Macro International, and the U.S. Centers for Disease Control and Prevention; Eurostat, *Demographic Statistics* (various years); Centro Latinoamericano de Demografía, *Boletín Demográfico* (various years); and U.S. Bureau of the Census, International Database.

2.2 Labor force structure

	Labor force participation rate				Labor force				
	% ages 15–64				Total millions		Ages 15 and older average annual % growth	Female % of labor force	
	Male		Female						
	1990	2004	1990	2004	1990	2004	1990–2004	1990	2004
Afghanistan	88.7	..	38.2	..	5.0	..	..	28.4	..
Albania	86.3	76.3	63.3	55.1	1.6	1.4	–1.0	40.2	42.1
Algeria	81.0	83.3	23.7	37.0	7.2	12.9	4.2	22.6	30.2
Angola	90.9	92.2	76.0	75.7	4.5	6.8	2.9	46.4	45.8
Argentina	84.7	82.4	43.5	59.9	13.0	17.9	2.3	34.4	42.4
Armenia	89.7	66.4	76.7	55.6	1.9	1.3	–3.0	47.7	48.9
Australia	84.4	81.0	61.5	67.0	8.4	10.2	1.3	41.3	45.3
Austria	80.1	77.6	55.3	63.3	3.5	3.9	0.8	40.8	44.4
Azerbaijan	80.6	78.0	68.5	65.5	3.3	4.0	1.4	47.4	47.4
Bangladesh	89.8	88.1	64.5	55.4	46.9	62.4	2.0	40.2	37.0
Belarus	82.2	72.5	72.4	66.5	5.3	4.8	–0.7	48.6	49.2
Belgium	71.3	72.7	46.2	56.9	3.9	4.5	0.9	39.0	43.2
Benin	90.0	86.7	59.2	55.0	2.0	3.2	3.3	40.8	38.5
Bolivia	80.9	84.0	49.9	63.9	2.5	4.0	3.4	39.2	43.5
Bosnia and Herzegovina	82.4	78.3	66.1	69.4	2.3	2.0	–0.7	44.7	47.8
Botswana	76.0	68.6	58.9	47.2	0.5	0.6	1.3	45.2	41.9
Brazil	88.8	84.1	47.6	60.6	62.4	89.9	2.6	35.0	42.5
Bulgaria	77.8	63.0	72.3	53.3	4.4	3.1	–2.5	48.0	46.2
Burkina Faso	92.1	90.4	79.3	79.5	3.8	5.6	2.8	46.3	46.6
Burundi	90.7	93.0	91.8	92.8	2.8	3.7	1.9	52.6	52.2
Cambodia	86.7	81.3	81.0	78.0	4.4	6.6	2.9	52.6	51.5
Cameroon	83.5	81.6	58.2	54.1	4.4	6.2	2.4	41.5	39.8
Canada	84.9	82.5	68.3	72.4	14.7	17.4	1.2	44.0	46.2
Central African Republic	89.4	89.4	71.7	70.9	1.4	1.8	2.1	47.0	46.2
Chad	79.0	77.4	64.7	66.0	2.3	3.6	3.0	46.0	46.8
Chile	80.9	76.7	35.2	40.6	5.0	6.4	1.8	30.5	34.6
China	88.9	88.0	79.1	76.2	650.1	768.0	1.2	44.8	44.6
Hong Kong, China	85.5	81.4	53.0	61.2	2.9	3.6	1.7	36.3	45.8
Colombia	85.0	85.3	48.5	65.0	14.1	21.8	3.1	36.9	44.0
Congo, Dem. Rep.	91.2	91.1	62.6	63.1	15.0	22.3	2.8	41.6	41.2
Congo, Rep.	86.3	86.6	57.7	56.2	1.0	1.5	3.0	41.5	40.3
Costa Rica	87.6	84.9	35.3	47.2	1.2	1.9	3.5	27.6	34.5
Côte d'Ivoire	90.3	89.1	44.5	40.2	4.6	6.7	2.6	30.2	29.3
Croatia	76.9	71.4	55.0	57.4	2.2	2.0	–0.9	42.1	44.8
Cuba	79.5	82.4	43.5	50.5	4.5	5.3	1.2	34.8	37.3
Czech Republic	82.2	77.7	74.1	63.7	5.5	5.2	–0.4	47.4	44.9
Denmark	87.1	82.9	77.6	74.3	2.9	2.8	–0.2	46.1	46.6
Dominican Republic	85.6	84.1	37.8	47.5	2.6	3.8	2.5	29.6	35.3
Ecuador	85.9	85.2	33.6	62.7	3.7	6.2	3.7	27.8	42.0
Egypt, Arab Rep.	76.7	76.6	27.6	21.6	16.6	22.3	2.1	26.3	21.8
El Salvador	81.9	79.5	53.5	49.7	2.0	2.7	2.3	41.2	39.6
Eritrea	92.6	90.7	63.1	59.9	1.2	1.7	2.4	42.4	41.1
Estonia	83.0	73.7	76.0	64.3	0.9	0.7	–1.8	49.9	49.3
Ethiopia	92.3	90.9	74.5	73.5	22.6	30.9	2.2	44.9	44.9
Finland	79.0	76.8	72.2	72.7	2.6	2.6	0.2	47.2	47.8
France	75.0	73.8	57.0	62.4	24.8	26.9	0.6	43.3	45.9
Gabon	85.5	84.0	65.5	64.2	0.4	0.6	2.7	43.9	43.4
Gambia, The	86.2	86.7	63.3	60.4	0.4	0.6	3.5	43.4	41.7
Georgia	78.2	76.2	79.1	53.7	2.9	2.3	–1.7	52.3	43.9
Germany	81.4	79.2	56.8	66.5	38.3	40.8	0.5	40.4	44.9
Ghana	80.5	75.8	77.5	72.0	6.7	9.6	2.5	48.9	48.1
Greece	76.7	78.6	43.1	54.8	4.2	5.1	1.4	36.2	40.5
Guatemala	90.7	84.8	30.2	35.1	2.9	4.0	2.3	24.7	31.1
Guinea	90.8	88.9	82.8	82.7	3.0	4.3	2.6	46.2	46.5
Guinea-Bissau	91.4	93.0	60.5	62.9	0.4	0.6	2.9	40.3	40.9
Haiti	82.7	83.1	59.1	57.4	2.6	3.6	2.2	43.3	41.7

Labor force structure 2.2

	Labor force participation rate				Labor force				
	% ages 15–64				Total millions		Ages 15 and older average annual % growth	Female % of labor force	
	Male		Female						
	1990	2004	1990	2004	1990	2004	1990–2004	1990	2004
Honduras	89.0	90.5	34.6	54.6	1.6	3.0	4.4	27.7	36.9
Hungary	74.4	66.9	57.3	53.4	4.5	4.2	–0.5	44.5	45.0
India	86.6	84.4	40.3	36.1	335.1	427.2	1.7	29.9	28.3
Indonesia	82.9	87.0	52.1	52.8	75.3	105.1	2.4	38.4	37.8
Iran, Islamic Rep.	82.3	75.4	22.5	39.1	15.6	26.2	3.7	20.2	33.0
Iraq	77.8	..	16.4	..	4.7	..	..	16.8	..
Ireland	77.9	80.1	42.3	60.7	1.3	2.0	2.9	34.3	42.5
Israel	68.1	65.9	46.8	58.1	1.6	2.7	3.4	40.5	46.8
Italy	76.7	74.5	44.6	49.3	23.9	24.0	0.0	37.1	39.6
Jamaica	83.0	78.4	71.3	60.0	1.1	1.2	0.3	46.8	43.7
Japan	83.1	85.0	57.1	60.4	63.9	67.0	0.3	40.6	41.0
Jordan	71.3	79.5	18.6	28.3	0.8	1.8	6.3	18.8	24.1
Kazakhstan	81.6	80.1	68.0	73.1	7.7	8.0	0.2	46.3	49.4
Kenya	90.6	89.6	76.2	71.4	9.8	15.1	3.1	46.0	44.0
Korea, Dem. Rep.	84.0	80.7	56.4	50.0	9.7	10.6	0.6	39.3	38.6
Korea, Rep.	75.3	77.3	49.7	54.0	19.1	24.1	1.7	39.3	40.7
Kuwait	83.1	86.5	35.6	49.3	0.9	1.3	3.2	21.8	24.8
Kyrgyz Republic	78.0	77.6	65.0	60.0	1.8	2.2	1.4	46.2	44.3
Lao PDR	81.6	82.3	56.3	56.4	1.5	2.3	2.8	41.3	40.7
Latvia	83.4	71.9	75.0	62.8	1.5	1.1	–2.0	49.5	48.6
Lebanon	81.5	83.7	34.4	35.0	0.9	1.4	2.7	31.8	30.0
Lesotho	86.8	74.3	59.4	49.2	0.6	0.6	0.4	46.5	44.7
Liberia	85.2	84.0	55.9	55.7	0.8	1.2	2.9	39.4	39.9
Libya	81.4	82.3	19.9	32.3	1.3	2.2	4.2	17.3	26.3
Lithuania	81.7	72.8	70.4	65.9	1.9	1.6	–1.1	48.1	49.1
Macedonia, FYR	77.5	73.2	52.8	47.8	0.9	0.9	0.1	40.0	39.1
Madagascar	83.6	86.3	79.5	79.8	5.4	8.3	3.1	49.2	48.4
Malawi	91.7	90.0	86.2	86.0	4.5	5.8	1.9	50.3	49.8
Malaysia	82.7	83.8	45.3	47.6	7.1	10.7	2.9	34.8	35.6
Mali	90.7	85.9	75.1	74.7	3.8	5.3	2.5	46.0	47.3
Mauritania	87.6	85.0	57.8	56.5	0.8	1.2	2.7	40.7	40.4
Mauritius	86.6	84.4	45.2	46.4	0.5	0.6	1.4	33.9	35.3
Mexico	85.4	83.8	36.2	42.2	29.5	42.4	2.6	30.6	34.7
Moldova	81.5	75.8	70.4	65.4	2.1	2.1	0.0	48.6	47.8
Mongolia	83.7	83.2	59.3	56.3	0.8	1.2	2.4	41.0	40.2
Morocco	83.9	83.8	25.6	28.5	7.5	10.9	2.7	23.7	25.4
Mozambique	88.0	83.1	88.1	85.1	6.3	9.1	2.6	54.0	53.5
Myanmar	89.2	87.7	71.2	70.0	20.0	26.9	2.1	44.6	44.9
Namibia	67.1	65.0	50.6	48.8	0.4	0.6	2.6	44.1	43.6
Nepal	82.5	80.6	50.4	52.3	7.1	10.2	2.6	37.9	40.3
Netherlands	80.0	84.5	53.1	69.0	6.9	8.6	1.5	39.1	44.0
New Zealand	83.0	83.4	63.2	70.5	1.7	2.1	1.7	43.1	46.3
Nicaragua	87.0	87.2	36.8	36.7	1.3	2.0	3.1	30.1	29.7
Niger	94.7	95.5	72.4	72.9	3.6	5.7	3.4	42.6	41.9
Nigeria	86.9	85.9	49.0	46.8	32.7	46.7	2.5	36.2	34.8
Norway	82.5	83.7	69.9	77.2	2.2	2.5	0.9	44.7	47.2
Oman	83.8	82.8	15.7	22.7	0.6	0.9	3.6	11.1	15.6
Pakistan	88.1	85.7	28.8	33.0	35.2	54.5	3.1	23.3	26.5
Panama	82.7	83.4	41.6	53.8	0.9	1.4	3.1	32.5	38.3
Papua New Guinea	75.9	75.1	72.3	72.7	1.8	2.5	2.5	46.4	47.6
Paraguay	85.7	86.9	54.4	67.7	1.6	2.8	3.7	38.3	43.1
Peru	82.0	83.5	48.6	60.3	8.5	13.0	3.0	37.0	41.6
Philippines	83.7	84.6	48.7	55.5	23.4	35.9	3.1	36.6	39.4
Poland	79.2	69.2	65.1	57.8	18.6	17.3	–0.5	45.8	45.7
Portugal	82.6	79.6	59.2	67.1	4.8	5.5	1.0	42.7	46.2
Puerto Rico	67.4	67.8	35.0	44.0	1.2	1.4	1.6	35.8	41.2

2.2 Labor force structure

	Labor force participation rate				Labor force				
	% ages 15–64								
	Male		Female		Total millions		Ages 15 and older average annual % growth	Female % of labor force	
	1990	2004	1990	2004	1990	2004	1990–2004	1990	2004
Romania	77.2	68.8	61.1	55.6	11.0	10.4	–0.4	44.3	46.1
Russian Federation	81.6	75.2	71.7	66.9	77.2	73.1	–0.4	48.3	49.0
Rwanda	88.3	85.1	87.4	82.4	3.1	4.1	2.0	51.0	51.4
Saudi Arabia	81.3	80.5	15.6	18.2	5.1	7.7	2.9	11.4	14.8
Senegal	87.8	83.9	63.4	58.7	3.1	4.5	2.6	43.4	42.4
Serbia and Montenegro	77.0	75.9	54.9	53.3	4.9[a]	3.9	0.0[b]	41.7	41.7
Sierra Leone	90.2	94.4	55.6	58.3	1.7	2.3	2.1	38.5	38.4
Singapore	83.9	83.2	54.2	56.7	1.6	2.2	2.3	38.8	39.8
Slovak Republic	82.5	76.5	70.6	62.4	2.6	2.7	0.1	46.3	45.2
Slovenia	76.9	75.2	63.3	66.1	1.0	1.0	0.3	45.5	46.2
Somalia	95.8	95.1	63.1	61.0	2.8	3.4	1.3	39.9	39.3
South Africa	81.6	82.1	57.4	49.7	14.4	19.1	2.0	41.6	38.4
Spain	80.3	80.5	41.9	56.3	16.0	20.3	1.7	34.3	40.8
Sri Lanka	82.9	81.8	48.2	38.6	7.3	8.3	0.9	34.8	30.5
Sudan	78.9	72.6	27.8	24.2	7.8	10.3	2.0	26.0	24.8
Swaziland	79.6	74.9	39.6	33.2	0.2	0.3	2.7	38.0	33.1
Sweden	86.0	79.2	81.9	75.1	4.7	4.7	–0.1	47.7	47.4
Switzerland	90.2	88.0	62.8	74.7	3.7	4.2	0.9	40.4	46.3
Syrian Arab Republic	83.7	88.8	29.7	39.3	3.7	7.3	4.9	26.2	30.4
Tajikistan	77.6	66.1	56.2	49.7	1.9	2.1	0.8	42.2	43.6
Tanzania	92.1	90.8	90.2	88.4	12.8	18.9	2.8	50.2	49.5
Thailand	90.6	84.6	79.2	70.7	30.4	35.3	1.1	46.6	46.0
Togo	90.8	90.4	55.2	51.9	1.5	2.4	3.1	38.5	37.0
Trinidad and Tobago	79.7	82.2	45.9	51.2	0.5	0.6	2.0	36.1	38.9
Tunisia	79.2	78.3	22.1	30.4	2.4	3.7	3.0	21.5	27.1
Turkey	84.5	80.3	36.2	29.0	21.0	26.5	1.7	29.4	26.4
Turkmenistan	80.0	76.5	69.1	65.0	1.5	2.1	2.4	46.9	46.6
Uganda	92.4	87.8	82.0	81.2	7.8	11.5	2.8	47.5	48.2
Ukraine	79.7	72.3	70.7	63.1	26.3	22.4	–1.1	49.2	49.1
United Arab Emirates	92.4	92.1	25.9	38.2	0.9	2.6	7.5	9.8	13.2
United Kingdom	87.9	82.2	67.2	69.2	29.4	30.4	0.2	44.0	45.9
United States	85.1	81.7	67.5	70.1	129.3	153.7	1.2	44.4	46.2
Uruguay	85.9	86.1	54.3	65.7	1.4	1.7	1.6	39.9	43.9
Uzbekistan	78.5	75.6	64.4	60.2	8.2	11.1	2.2	45.4	44.5
Venezuela, RB	82.4	85.5	39.8	60.1	7.3	12.4	3.8	31.8	40.3
Vietnam	85.5	82.6	79.4	77.6	31.3	43.1	2.3	48.3	48.5
West Bank and Gaza	67.0	69.0	9.5	10.9	0.4	0.7	4.5	11.9	13.1
Yemen, Rep.	76.1	77.4	28.6	30.4	3.0	5.7	4.7	27.3	27.7
Zambia	90.4	91.5	67.8	68.3	3.5	4.9	2.4	43.2	42.4
Zimbabwe	81.0	85.1	69.9	64.8	4.3	5.7	2.1	47.2	44.2
World	**85.5 w**	**83.9 w**	**58.9 w**	**57.8 w**	**2,390.7 t**	**2,981.1 t**	**1.6 w**	**39.9 w**	**40.0 w**
Low income	87.0	85.0	50.7	47.8	709.0	956.4	2.1	35.7	35.0
Middle income	85.8	84.3	64.0	62.7	1,254.1	1,536.1	1.4	41.8	42.1
Lower middle income	86.6	85.5	66.3	65.2	1,033.5	1,280.1	1.5	42.0	42.4
Upper middle income	82.5	78.9	54.7	52.4	220.6	256.0	1.1	40.5	40.5
Low & middle income	86.3	84.6	59.0	56.7	1,963.1	2,492.5	1.7	39.6	39.3
East Asia & Pacific	87.8	87.2	74.3	71.6	856.8	1,049.4	1.4	44.1	43.8
Europe & Central Asia	80.8	74.6	65.1	58.1	223.8	218.5	–0.2	45.6	44.9
Latin America & Carib.	85.9	83.8	43.8	55.3	171.0	248.8	2.7	34.0	40.2
Middle East & N. Africa	79.9	79.1	24.5	30.5	64.9	104.6	3.4	22.9	27.2
South Asia	86.9	84.9	41.7	38.0	437.0	572.7	1.9	30.6	29.3
Sub-Saharan Africa	87.8	86.4	65.1	62.7	209.7	298.5	2.5	43.0	42.2
High income	82.1	80.6	58.6	63.5	427.6	488.5	1.0	41.3	43.6
Europe EMU	78.5	77.5	51.6	60.4	130.5	144.5	0.7	39.5	43.4

a. Includes population of Kosovo until 1999. b. Data are for 1990–99.

Labor force structure 2.2

About the data

The labor force is the supply of labor available for the production of goods and services in an economy. It includes people who are currently employed and people who are unemployed but seeking work as well as first-time job-seekers. Not everyone who works is included, however. Unpaid workers, family workers, and students are among those usually omitted, and in some countries members of the military are not counted. The size of the labor force tends to vary during the year as seasonal workers enter and leave it.

Data on the labor force are compiled by the International Labour Organization (ILO) from labor force surveys, censuses, establishment censuses and surveys, and various types of administrative records such as employment exchange registers and unemployment insurance schemes. For some countries a combination of these sources is used. While the resulting statistics may provide rough estimates of the labor force, they are not comparable across countries because of the noncomparability of the original data and the different ways the original sources may be combined.

For international comparisons the most comprehensive source is labor force surveys, which can be designed to cover all noninstitutionalized civilians, all branches and sectors of the economy, and all categories of workers, including people who hold multiple jobs. 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 both concepts and methodologies. Most important to data comparability is the nature of the data source. Labor force data obtained from population censuses are often based on a limited number of questions on the economic characteristics of individuals, with little scope to probe. The resulting data are often contrary to labor force survey data and often vary considerably from economy to economy, depending on the scope and coverage of the census. Establishment censuses and surveys on the other hand provide data only on the employed population, leaving out unemployed workers, workers in small establishments, and workers in the informal sector (ILO, *Key Indicators of the Labour Market 2001–2002*).

The reference period of the census or survey is another important source of differences: in some countries data refer to people'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 be significantly smaller than the numbers actually working.

The labor force estimates in the table were calculated by World Bank staff by applying labor force participation rates from the ILO database to population estimates to create a series consistent with these population estimates. This procedure sometimes results in estimates of labor force size that differ slightly from those in the ILO's *Yearbook of Labour Statistics*. The labor force estimates in this year's *World Development Indicators* are for the population ages 15 and older. In previous editions the labor force included children under age 15. For this reason, labor force estimates are not comparable across editions. The labor force participation rate of the population ages 15–64 provides an indication of the relative size of the supply of labor. But in many developing countries children under age 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 calculated in this way may systematically over- or under-estimate actual rates.

In general, estimates of women in the labor force are lower than those of men and are not comparable internationally, reflecting the fact that for women demographic, social, legal, and cultural trends and norms determine whether their activities are regarded as economic. In many countries large numbers of women work on farms or in other family enterprises without pay, while others work in or near their homes, mixing work and family activities during the day. Countries differ in the criteria used to determine the extent to which such workers are to be counted as part of the labor force. In most economies the gap between male and female labor force participation rates has been narrowing since 1980. This stems from both falling rates for men and rising rates for women. The largest gap between men and women in labor force participation is observed in the Middle East and North Africa, where low participation of women in the work force also brings down the overall labor force participation rate.

Definitions

• **Labor force participation rate** is the proportion of the population ages 15–64 that is economically active: all people who supply labor for the production of goods and services during a specified period. • **Total labor force** comprises people ages 15 and older who meet the ILO definition of the economically active population. 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, the labor force generally 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 endpoint method (see *Statistical methods* for more information). • **Females as a percentage of the labor force** show the extent to which women are active in the labor force.

Data sources

The labor force participation rates are from the ILO database *Estimates and Projections of the Economically Active Population, 1980–2020*, fifth edition. The ILO publishes estimates of the economically active population in its *Yearbook of Labour Statistics*. Labor force numbers were calculated by World Bank staff, applying labor force participation rates from the ILO database to population estimates.

2.3 Employment by economic activity

	Agriculture				Industry				Services			
	Male % of male employment		Female % of female employment		Male % of male employment		Female % of female employment		Male % of male employment		Female % of female employment	
	1990–92[a]	2000–04[a]	1990–92[a]	2000–04[a]	1990–92[a]	2000–04[a]	1990–92[a]	2000–04[a]	1990–92[a]	2000–04[a]	1990–92[a]	2000–04[a]
Afghanistan	..	..	..	..	..	..	..	..	..	..	..	..
Albania	..	..	..	..	..	..	..	..	..	..	..	..
Algeria	..	..	..	..	..	..	..	..	..	..	..	..
Angola	..	..	..	..	..	..	..	..	..	..	..	..
Argentina	0[b, c]	2[c]	0[b, c]	1[b, c]	40[c]	28[c]	18[c]	9[c]	59[c]	70[c]	81[c]	90[c]
Armenia	..	..	..	..	..	..	..	..	..	..	..	..
Australia	6	5[c]	4	3[c]	32	30[c]	12	10[c]	62	65[c]	85	87[c]
Austria	6	5	8	6	47	43	20	13	46	51	72	81
Azerbaijan	..	41	..	39	..	15	..	8	..	44	..	54
Bangladesh	54	53	85	77	16	8	9	9	26	30	2	12
Belarus	..	..	..	..	..	..	..	..	..	..	..	..
Belgium	3	2	2	1	38	35	13	12	57	63	84	87
Benin	..	..	..	..	..	..	..	..	..	..	..	..
Bolivia	3[c]	6	1[c]	3	42[c]	39	17[c]	14	55[c]	55	82[c]	82
Bosnia and Herzegovina	..	..	..	..	..	..	..	..	..	..	..	..
Botswana	..	17	..	6	..	31	..	17	..	51	..	76
Brazil	31[c]	23[c]	25[c]	16[c]	27[c]	28[c]	10[c]	13[c]	43[c]	49[c]	65[c]	71[c]
Bulgaria	..	12	..	8	..	37	..	29	..	51	..	64
Burkina Faso	..	..	..	..	..	..	..	..	..	..	..	..
Burundi	..	..	..	..	..	..	..	..	..	..	..	..
Cambodia	..	72	..	75	..	7	..	10	..	20	..	15
Cameroon	53	..	68	..	14	..	4	..	26	..	23	..
Canada	6[c]	4[c]	3[c]	2[c]	31[c]	32[c]	11[c]	11[c]	63[c]	64[c]	86[c]	87[c]
Central African Republic	..	..	..	..	..	..	..	..	..	..	..	..
Chad	..	..	..	..	..	..	..	..	..	..	..	..
Chile	24	18	6	5	32	29	15	12	45	53	79	83
China	..	..	..	..	..	..	..	..	..	..	..	..
Hong Kong, China	1	0[b]	0[b]	0[b]	37	25	27	8	63	75	73	92
Colombia	2[c]	31[c]	1[c]	8[c]	35[c]	21[c]	25[c]	17[c]	63[c]	49[c]	74[c]	75[c]
Congo, Dem. Rep.	..	..	..	..	..	..	..	..	..	..	..	..
Congo, Rep.	..	..	..	..	..	..	..	..	..	..	..	..
Costa Rica	32	21	5	4	27	26	25	14	41	52	69	81
Côte d'Ivoire	..	..	..	..	..	..	..	..	..	..	..	..
Croatia	..	16	..	18	..	39	..	19	..	45	..	64
Cuba	..	..	..	..	..	..	..	..	..	..	..	..
Czech Republic	9	6	7	3	55	50	33	27	36	45	61	70
Denmark	7	5[c]	3	2[c]	37	34[c]	16	12[c]	56	61[c]	81	86[c]
Dominican Republic	26	23	3	2	23	24	21	15	52	53	76	83
Ecuador	10[c]	11[c]	2[c]	5[c]	29[c]	28[c]	17[c]	14[c]	62[c]	61[c]	81[c]	81[c]
Egypt, Arab Rep.	35	28	52	28	25	23	10	10	41	50	37	62
El Salvador	48	29	15	4	23	27	23	22	29	45	63	74
Eritrea	..	..	..	..	..	..	..	..	..	..	..	..
Estonia	23	9	13	4	42	42	30	23	36	50	57	73
Ethiopia	..	..	..	..	..	..	..	..	..	..	..	..
Finland	12	7	6	3	39	39	15	13	49	54	78	84
France	..	..	..	..	..	..	..	..	..	..	..	..
Gabon	..	..	..	..	..	..	..	..	..	..	..	..
Gambia, The	..	..	..	..	..	..	..	..	..	..	..	..
Georgia	..	53	..	57	..	12	..	4	..	35	..	39
Germany	4	3	4	2	51	44	24	17	45	53	72	81
Ghana	66	60	59	50	10	14	10	15	23	27	32	36
Greece	20[c]	15[c]	26[c]	18[c]	32[c]	30[c]	17[c]	11[c]	48[c]	56[c]	56[c]	71[c]
Guatemala	..	50	..	18	..	18	..	23	..	27	..	56
Guinea	..	..	..	..	..	..	..	..	..	..	..	..
Guinea-Bissau	..	..	..	..	..	..	..	..	..	..	..	..
Haiti	..	..	..	..	..	..	..	..	..	..	..	..

2.3 Employment by economic activity

	Agriculture				Industry				Services			
	Male % of male employment		Female % of female employment		Male % of male employment		Female % of female employment		Male % of male employment		Female % of female employment	
	1990–92[a]	2000–04[a]	1990–92[a]	2000–04[a]	1990–92[a]	2000–04[a]	1990–92[a]	2000–04[a]	1990–92[a]	2000–04[a]	1990–92[a]	2000–04[a]
Honduras	53[c]	52[c]	6[c]	9[c]	18[c]	19[c]	25[c]	26[c]	29[c]	29[c]	69[c]	66[c]
Hungary	15	8	8	3	42	42	29	24	44	50	64	74
India	..	..	..	..	..	..	..	..	..	..	..	..
Indonesia	55	43	56	45	10	13	12	14	35	45	32	42
Iran, Islamic Rep.	..	..	..	..	..	..	..	..	..	..	..	..
Iraq	..	..	..	..	..	..	..	..	..	..	..	..
Ireland	19	10	3	2	33	39	18	13	48	51	78	85
Israel	5	3	2	1	38	33	15	11	57	64	83	88
Italy	8	6	9	4	38	40	22	20	54	55	70	76
Jamaica	36	28	16	8	25	26	12	6	39	46	72	84
Japan	6	5	7	5	40	36	27	19	54	59	65	75
Jordan	..	..	..	..	..	..	..	..	..	..	..	..
Kazakhstan	..	36	..	34	..	23	..	10	..	40	..	56
Kenya	19[c]	..	20[c]	..	23[c]	..	9[c]	..	58[c]	..	71[c]	..
Korea, Dem. Rep.	..	..	..	..	..	..	..	..	..	..	..	..
Korea, Rep.	12[c]	8[c]	17[c]	10[c]	41[c]	34[c]	28[c]	18[c]	47[c]	58[c]	55[c]	72[c]
Kuwait	..	..	..	..	..	..	..	..	..	..	..	..
Kyrgyz Republic	..	43	..	43	..	19	..	10	..	38	..	47
Lao PDR	..	..	..	..	..	..	..	..	..	..	..	..
Latvia	25	17	14	10	37	35	26	18	38	47	59	71
Lebanon	..	..	..	..	..	..	..	..	..	..	..	..
Lesotho	..	..	..	..	..	..	..	..	..	..	..	..
Liberia	..	..	..	..	..	..	..	..	..	..	..	..
Libya	..	..	..	..	..	..	..	..	..	..	..	..
Lithuania	..	21	..	15	..	35	..	22	..	44	..	64
Macedonia, FYR	..	22	..	22	..	36	..	31	..	42	..	47
Madagascar	..	77	..	79	..	7	..	6	..	16	..	15
Malawi	..	..	..	..	..	..	..	..	..	..	..	..
Malaysia	23	16	20	11	31	35	32	27	46	49	48	62
Mali	..	..	..	..	..	..	..	..	..	..	..	..
Mauritania	..	..	..	..	..	..	..	..	..	..	..	..
Mauritius	17	11	11	6	32	36	64	40	48	53	24	54
Mexico	33	22	10	5	25	28	19	20	41	50	71	75
Moldova	..	44	..	42	..	20	..	12	..	35	..	46
Mongolia	..	44	..	40	..	17	..	14	..	39	..	46
Morocco	..	39	..	57	..	21	..	19	..	40	..	25
Mozambique	..	..	..	..	..	..	..	..	..	..	..	..
Myanmar	..	..	..	..	..	..	..	..	..	..	..	..
Namibia	45	33	52	29	21	17	8	7	34	49	40	63
Nepal	..	..	..	..	..	..	..	..	..	..	..	..
Netherlands	5	4	3	2	33	29	10	9	60	64	82	87
New Zealand	13[c]	10[c]	8[c]	6[c]	31[c]	32[c]	13[c]	11[c]	56[c]	58[c]	80[c]	83[c]
Nicaragua	..	43	..	10	..	19	..	17	..	32	..	52
Niger	..	..	..	..	..	..	..	..	..	..	..	..
Nigeria	..	..	..	..	..	..	..	..	..	..	..	..
Norway	8	6	3	2	35	35	10	9	57	60	86	89
Oman	..	7	..	5	..	11	..	14	..	82	..	80
Pakistan	45	38	69	65	20	22	15	16	35	40	16	20
Panama	35	25	3	4	20	22	11	9	45	53	85	88
Papua New Guinea	..	..	..	..	..	..	..	..	..	..	..	..
Paraguay	3[c]	39	0[b, c]	20	33[c]	19	19[c]	10	64[c]	42	80[c]	70
Peru	1[c]	1[c]	0[b, c]	0[c]	30[c]	28[c]	13[c]	11[c]	69[c]	71[c]	87[c]	89[c]
Philippines	53	45	32	25	17	18	14	12	29	37	55	63
Poland	..	19	..	18	..	38	..	17	..	43	..	65
Portugal	11[c]	12	13[c]	14	40[c]	43	24[c]	20	49[c]	45	63[c]	66
Puerto Rico	5	3	0[b]	0[b]	27	26	19	12	67	71	80	88

2.3 Employment by economic activity

	Agriculture				Industry				Services			
	Male % of male employment		Female % of female employment		Male % of male employment		Female % of female employment		Male % of male employment		Female % of female employment	
	1990–92[a]	2000–04[a]	1990–92[a]	2000–04[a]	1990–92[a]	2000–04[a]	1990–92[a]	2000–04[a]	1990–92[a]	2000–04[a]	1990–92[a]	2000–04[a]
Romania	29	34	38	37	44	34	30	25	28	32	33	38
Russian Federation	..	12	..	8	..	39	..	23	..	48	..	70
Rwanda	..	..	..	..	..	..	..	..	..	..	..	..
Saudi Arabia	..	5	..	1	..	24	..	1	..	71	..	98
Senegal	..	..	..	..	..	..	..	..	..	..	..	..
Serbia and Montenegro	..	..	..	..	..	..	..	..	..	..	..	..
Sierra Leone	..	..	..	..	..	..	..	..	..	..	..	..
Singapore	1	0[b]	0[b]	0[b]	36	29	32	18	63	70	68	82
Slovak Republic	..	8[c]	..	4[c]	..	49[c]	..	26[c]	..	43[c]	..	71[c]
Slovenia	..	8	..	8	..	46	..	26	..	45	..	65
Somalia	..	..	..	..	..	..	..	..	..	..	..	..
South Africa	..	13	..	7	..	33	..	14	..	54	..	79
Spain	11	7	8	4	41	42	16	14	48	52	76	82
Sri Lanka	..	32[c]	..	40[c]	..	40[c]	..	35[c]	..	29[c]	..	25[c]
Sudan	..	..	..	..	..	..	..	..	..	..	..	..
Swaziland	..	..	..	..	..	..	..	..	..	..	..	..
Sweden	5	3	2	1	40	35	12	10	55	62	86	89
Switzerland	5	5	4	3	39	33	15	12	57	62	81	85
Syrian Arab Republic	..	24	..	58	..	31	..	7	..	45	..	35
Tajikistan	..	..	..	..	..	..	..	..	..	..	..	..
Tanzania	78[c]	80[c]	90[c]	84[c]	7[c]	4[c]	1[c]	1[c]	15[c]	16[c]	8[c]	15[c]
Thailand	59	47	62	43	17	21	13	19	24	33	25	39
Togo	..	..	..	..	..	..	..	..	..	..	..	..
Trinidad and Tobago	15	10	6	2	34	37	14	14	51	53	80	84
Tunisia	..	..	..	..	..	..	..	..	..	..	..	..
Turkey	33	24	72	59	26	26	11	13	41	49	17	28
Turkmenistan	..	..	..	..	..	..	..	..	..	..	..	..
Uganda	91	60	91	77	4	11	6	5	5	29	3	18
Ukraine	..	21	..	17	..	38	..	21	..	41	..	62
United Arab Emirates	..	9	..	0[b]	..	36	..	14	..	55	..	86
United Kingdom	3	2	1	1	41	35	16	10	55	64	82	89
United States	4[c]	4[c]	1[c]	1[c]	33[c]	31[c]	14[c]	11[c]	62[c]	65[c]	85[c]	88[c]
Uruguay	7[c]	7[c]	1[c]	2[c]	36[c]	29[c]	21[c]	12[c]	57[c]	65[c]	78[c]	86[c]
Uzbekistan	..	..	..	..	..	..	..	..	..	..	..	..
Venezuela, RB	17	16	2	2	32	25	16	11	52	59	82	86
Vietnam	..	58	..	62	..	20	..	13	..	23	..	25
West Bank and Gaza	..	12	..	34	..	30	..	8	..	57	..	57
Yemen, Rep.	..	..	..	..	..	..	..	..	..	..	..	..
Zambia	..	..	..	..	..	..	..	..	..	..	..	..
Zimbabwe	..	..	..	..	..	..	..	..	..	..	..	..
World	.. w	.. w	.. w	.. w	.. w	.. w	.. w	.. w	.. w	.. w	.. w	.. w
Low income	..	..	..	..	..	..	..	..	..	..	..	..
Middle income	..	..	..	..	..	..	..	..	..	..	..	..
Lower middle income	..	..	..	..	..	..	..	..	..	..	..	..
Upper middle income	..	16	..	11	..	33	..	19	..	51	..	71
Low & middle income	..	..	..	..	..	..	..	..	..	..	..	..
East Asia & Pacific	..	..	..	..	..	..	..	..	..	..	..	..
Europe & Central Asia	..	20	..	19	..	35	..	20	..	45	..	61
Latin America & Carib.	20	21	14	9	30	27	14	14	50	52	72	76
Middle East & N. Africa	..	..	..	..	..	..	..	..	..	..	..	..
South Asia	..	..	..	..	..	..	..	..	..	..	..	..
Sub-Saharan Africa	..	..	..	..	..	..	..	..	..	..	..	..
High income	6	4	4	3	38	35	19	14	56	60	77	83
Europe EMU	7	5	7	4	43	42	21	17	49	53	72	80

Note: Data across sectors may not sum to 100 percent because of workers not classified by sectors.
a. Data are for the most recent year available. b. Less than 0.5. c. Limited coverage.

Employment by economic activity 2.3

About the data

The International Labour Organization (ILO) classifies economic activity using the International Standard Industrial Classification (ISIC) of All Economic Activities, revision 2 (1968) and revision 3 (1990). Because this classification is based on where work is performed (industry) rather than on what type of work is performed (occupation), all of an enterprise's employees are classified under the same industry, regardless of their trade or occupation. The categories should add up to 100 percent. Where they do not, the differences arise because of workers who cannot be classified by economic activity.

Data on employment are drawn from labor force surveys, household surveys, establishment 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. Employment data include both full-time and part-time workers.

There are many differences in how countries define and measure employment status, particularly for students, part-time workers, members of the armed forces, and household or contributing family workers. Where the armed forces are included, they are allocated to the service sector, causing that sector to be somewhat overstated relative to the service sector in economies where they are excluded. Where data are obtained from establishment surveys, they cover only employees; thus self-employed and contributing family workers are excluded. In such cases the employment share of the agricultural sector is severely underreported. Moreover, the age group and area covered could differ by country or change over time within a country. For detailed information on breaks in series, consult the original source.

Countries also take different approaches to the treatment of unemployed people. In most countries unemployed people with previous job experience are classified according to their last job. But in some countries the unemployed and people seeking their first job are not classifiable by economic activity. Because of these differences, the size and distribution of employment by economic activity may not be fully comparable across countries.

The ILO's *Yearbook of Labour Statistics* and its database Key Indicators of the Labour Market report data by major divisions of the ISIC revision 2 or revision 3. In this table the reported divisions or categories are aggregated into three broad groups: agriculture, industry, and services. Such broad classification may obscure fundamental shifts within countries' industrial patterns. Most economies report economic activity according to the ISIC revision 2, although a group of economies moved to ISIC revision 3. The use of one classification or another should not have a significant impact on the information for the three broad sectors presented in this table.

The distribution of economic wealth in the world remains strongly correlated with employment by economic activity. The wealthier economies are those with the largest share of total employment in services, whereas the poorer economies are largely agriculture based.

The distribution of economic activity by gender reveals some clear patterns. Industry accounts for a larger share of male employment than female employment worldwide, whereas a higher proportion of women work in the services sector. Employment in agriculture is also male-dominated, although not as much as industry. Segregating one sex in a narrow range of occupations significantly reduces economic efficiency by reducing labor market flexibility and thus the economy's ability to adapt to change. This segregation is particularly harmful for women, who have a much narrower range of labor market choices and lower levels of pay than men. But it is also detrimental to men when job losses are concentrated in industries dominated by men and job growth is centered in service occupations, where women often dominate, as has been the recent experience in many countries.

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 to women's traditional roles. Women often do not receive the training needed to take advantage of changing employment opportunities. And the greater availability of part-time work in service industries may lure more women, although it is unclear whether this is a cause or an effect.

Definitions

• **Agriculture** corresponds to division 1 (ISIC revision 2) or tabulation categories A and B (ISIC revision 3) and includes hunting, forestry, and fishing. • **Industry** corresponds to divisions 2–5 (ISIC revision 2) or tabulation categories C–F (ISIC revision 3) and includes mining and quarrying (including oil production), manufacturing, construction, and public utilities (electricity, gas, and water). • **Services** correspond to divisions 6–9 (ISIC revision 2) or tabulation categories G–P (ISIC revision 3) and 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.

Data sources

Data on employment are from the ILO database Key Indicators of the Labour Market, fourth edition.

2.4 Child labor

	Survey year	Economically active children					Employment by economic activity[a]					
		% of children ages 7–14			% of economically active children ages 7–14		% of economically active children ages 7–14					
							Agriculture		Manufacturing		Services	
		Total	Male	Female	Work only	Work and study	Male	Female	Male	Female	Male	Female
Afghanistan		..	..	..	..	..	..	..	..	..	..	..
Albania	2000	36.6	41.1	31.8	43.1	56.9	..	..	..	..	..	..
Algeria		..	..	..	..	..	..	..	..	..	..	..
Angola	1995	5.2	4.9	5.6	77.6	22.4	5.7	7.9	6.2	8.4	82.4	79.9
Argentina	1997	20.7	25.4	16.0	8.6	91.4	..	..	..	..	..	..
Armenia		..	..	..	..	..	..	..	..	..	..	..
Australia		..	..	..	..	..	..	..	..	..	..	..
Austria		..	..	..	..	..	..	..	..	..	..	..
Azerbaijan	2000	9.7	12.0	7.3	4.2	95.8	..	..	..	..	..	..
Bangladesh	2003	17.5	20.9	13.9	63.3	36.7	61.4	64.0	11.6	15.5	25.2	18.3
Belarus		..	..	..	..	..	..	..	..	..	..	..
Belgium		..	..	..	..	..	..	..	..	..	..	..
Benin		..	..	..	..	..	..	..	..	..	..	..
Bolivia	2000	19.2	20.4	18.0	19.7	80.3	77.8	72.9	4.3	3.5	15.0	23.6
Bosnia and Herzegovina	2000	20.2	22.8	17.6	4.0	96.0	..	..	..	..	..	..
Botswana		..	..	..	..	..	..	..	..	..	..	..
Brazil	2003	7.1	9.5	4.6	5.8	94.2	64.3	49.8	6.5	9.1	26.8	40.9
Bulgaria		..	..	..	..	..	..	..	..	..	..	..
Burkina Faso[b]	1998	66.5	65.4	67.7	95.9	4.1	98.0	98.2	0.6	0.5	1.3	1.2
Burundi	2000	37.0	38.4	35.7	48.3	51.7	..	..	..	..	..	..
Cambodia	2001	52.3	52.4	52.1	16.5	83.5	78.5	73.6	4.7	5.4	15.7	20.4
Cameroon[b]	2001	15.9	14.5	17.4	52.5	47.5	90.4	86.3	1.9	2.3	5.1	8.8
Canada		..	..	..	..	..	..	..	..	..	..	..
Central African Republic	2000	67.0	66.5	67.6	54.9	45.1	..	..	..	..	..	..
Chad	2000	69.9	73.5	66.5	44.6	55.4	..	..	..	..	..	..
Chile	2003	8.8	10.5	6.9	4.0	96.0	31.5	11.9	7.6	5.8	58.5	80.6
China		..	..	..	..	..	..	..	..	..	..	..
Hong Kong, China		..	..	..	..	..	..	..	..	..	..	..
Colombia	2001	12.2	16.6	7.7	23.0	77.0	..	..	..	..	..	..
Congo, Dem. Rep.	2000	39.8	39.9	39.8	35.7	64.3	..	..	..	..	..	..
Congo, Rep.		..	..	..	..	..	..	..	..	..	..	..
Costa Rica	2002	6.7	9.7	3.5	20.8	79.2	56.5	55.2	8.7	2.7	28.0	42.1
Côte d'Ivoire	2000	40.7	40.9	40.5	46.4	53.6	..	..	..	..	..	..
Croatia		..	..	..	..	..	..	..	..	..	..	..
Cuba		..	..	..	..	..	..	..	..	..	..	..
Czech Republic		..	..	..	..	..	..	..	..	..	..	..
Denmark		..	..	..	..	..	..	..	..	..	..	..
Dominican Republic	2000	12.5	16.7	8.1	7.2	92.8	..	..	..	..	..	..
Ecuador	2001	17.9	22.1	13.6	25.0	75.0	65.1	69.2	10.7	8.6	21.2	22.1
Egypt, Arab Rep.	1998	6.4	4.0	8.9	60.9	39.1	..	..	..	..	..	..
El Salvador	2003	12.7	17.1	8.1	19.5	80.5	66.4	17.6	10.8	16.1	21.2	66.3
Eritrea		..	..	..	..	..	..	..	..	..	..	..
Estonia		..	..	..	..	..	..	..	..	..	..	..
Ethiopia	2001	57.1	67.9	45.9	63.5	36.5	96.5	88.7	0.5	2.8	2.5	6.2
Finland		..	..	..	..	..	..	..	..	..	..	..
France		..	..	..	..	..	..	..	..	..	..	..
Gabon		..	..	..	..	..	..	..	..	..	..	..
Gambia, The	2000	25.3	25.4	25.3	41.6	58.4	..	..	..	..	..	..
Georgia		..	..	..	..	..	..	..	..	..	..	..
Germany		..	..	..	..	..	..	..	..	..	..	..
Ghana	2000	28.5	28.5	28.4	36.4	63.6	81.0	59.1	4.5	7.6	13.8	32.0
Greece		..	..	..	..	..	..	..	..	..	..	..
Guatemala	2000	20.1	25.9	13.9	38.5	61.5	74.5	39.8	5.9	20.1	14.7	40.0
Guinea	1994	48.3	47.2	49.5	98.6	1.4	..	..	..	..	..	..
Guinea-Bissau	2000	67.5	67.4	67.5	63.7	36.3	..	..	..	..	..	..
Haiti		..	..	..	..	..	..	..	..	..	..	..

Child labor 2.4

	Survey year	Economically active children: % of children ages 7–14			Economically active children: % of economically active children ages 7–14		Employment by economic activity[a]: % of economically active children ages 7–14					
							Agriculture		Manufacturing		Services	
		Total	Male	Female	Work only	Work and study	Male	Female	Male	Female	Male	Female
Honduras	2002	11.4	16.5	6.1	41.9	58.1	73.6	19.8	5.9	24.4	18.6	55.7
Hungary		..	..	..	..	..	..	..	..	..	..	..
India	2000	5.2	5.3	5.1	89.8	10.2	70.5	76.6	10.0	15.4	15.9	6.5
Indonesia		..	..	..	..	..	..	..	..	..	..	..
Iran, Islamic Rep.		..	..	..	..	..	..	..	..	..	..	..
Iraq	2000	13.7	17.4	9.7	51.7	48.3	..	..	..	..	..	..
Ireland		..	..	..	..	..	..	..	..	..	..	..
Israel		..	..	..	..	..	..	..	..	..	..	..
Italy		..	..	..	..	..	..	..	..	..	..	..
Jamaica		..	..	..	..	..	..	..	..	..	..	..
Japan		..	..	..	..	..	..	..	..	..	..	..
Jordan		..	..	..	..	..	..	..	..	..	..	..
Kazakhstan	1996	29.7	30.3	29.1	4.4	95.6	..	..	..	..	..	..
Kenya	1999	6.7	6.9	6.4	44.8	55.2	87.3	74.4	2.5	0.3	8.8	25.3
Korea, Dem. Rep.		..	..	..	..	..	..	..	..	..	..	..
Korea, Rep.		..	..	..	..	..	..	..	..	..	..	..
Kuwait		..	..	..	..	..	..	..	..	..	..	..
Kyrgyz Republic	1998	8.6	9.7	7.6	7.0	93.0	93.0	96.3	0.0	0.0	7.0	2.7
Lao PDR		..	..	..	..	..	..	..	..	..	..	..
Latvia		..	..	..	..	..	..	..	..	..	..	..
Lebanon		..	..	..	..	..	..	..	..	..	..	..
Lesotho	2000	30.8	34.2	27.5	17.6	82.4	..	..	..	..	..	..
Liberia		..	..	..	..	..	..	..	..	..	..	..
Libya		..	..	..	..	..	..	..	..	..	..	..
Lithuania		..	..	..	..	..	..	..	..	..	..	..
Macedonia, FYR		..	..	..	..	..	..	..	..	..	..	..
Madagascar	2001	25.6	26.1	25.1	85.1	14.9	94.1	93.9	0.6	1.4	2.0	2.9
Malawi	2000	10.6	9.4	11.6	17.1	82.9	..	..	..	..	..	..
Malaysia		..	..	..	..	..	..	..	..	..	..	..
Mali	2001	25.3	32.3	18.6	68.7	31.3	..	..	..	..	..	..
Mauritania		..	..	..	..	..	..	..	..	..	..	..
Mauritius		..	..	..	..	..	..	..	..	..	..	..
Mexico[c]	1996	14.7	20.0	9.5	45.6	54.4	61.3	38.3	11.4	12.9	22.6	48.2
Moldova	2000	33.5	34.1	32.8	3.8	96.2	..	..	..	..	..	..
Mongolia	2000	22.0	23.5	20.6	28.2	71.8	..	..	..	..	..	..
Morocco	1998-99	13.2	13.5	12.8	93.2	6.8	60.8	60.3	8.1	8.5	13.5	6.4
Mozambique		..	..	..	..	..	..	..	..	..	..	..
Myanmar		..	..	..	..	..	..	..	..	..	..	..
Namibia	1999	15.4	16.2	14.7	9.5	90.5	91.5	91.7	0.4	0.4	8.1	8.0
Nepal	1999	47.2	42.2	52.4	35.6	64.4	89.0	86.1	1.2	1.5	9.7	12.3
Netherlands		..	..	..	..	..	..	..	..	..	..	..
New Zealand		..	..	..	..	..	..	..	..	..	..	..
Nicaragua	2001	12.1	17.5	6.5	33.3	66.7	73.2	32.0	3.0	10.2	23.3	57.8
Niger		..	..	..	..	..	..	..	..	..	..	..
Nigeria		..	..	..	..	..	..	..	..	..	..	..
Norway		..	..	..	..	..	..	..	..	..	..	..
Oman		..	..	..	..	..	..	..	..	..	..	..
Pakistan		..	..	..	..	..	..	..	..	..	..	..
Panama	2000	4.0	6.4	1.4	37.5	62.5	71.1	38.4	1.4	8.0	27.2	49.5
Papua New Guinea		..	..	..	..	..	..	..	..	..	..	..
Paraguay	1999	8.1	11.7	4.4	24.2	75.7	61.2	30.9	3.8	4.6	33.1	64.5
Peru	1994	17.7	20.4	15.2	7.3	92.7	78.9	76.3	3.6	3.4	17.5	20.3
Philippines	2001	13.3	16.3	10.0	14.8	85.2	72.6	53.6	3.6	5.3	22.1	41.0
Poland		..	..	..	..	..	..	..	..	..	..	..
Portugal	2001	3.6	4.6	2.6	3.6	96.4	52.7	40.7	11.4	10.7	25.6	47.7
Puerto Rico		..	..	..	..	..	..	..	..	..	..	..

2.4 Child labor

	Survey year	Economically active children: % of children ages 7–14 Total	Male	Female	% of economically active children ages 7–14 Work only	Work and study	Employment by economic activity[a]: % of economically active children ages 7–14 Agriculture Male	Female	Manufacturing Male	Female	Services Male	Female
Romania		..	..	..	..	..	..	..	..	..	..	..
Russian Federation		..	..	..	..	..	..	..	..	..	..	..
Rwanda	2000	33.1	36.1	30.3	27.5	72.5	..	..	..	..	..	..
Saudi Arabia		..	..	..	..	..	..	..	..	..	..	..
Senegal	2000	35.4	43.2	27.7	56.2	43.8	..	..	..	..	..	..
Serbia and Montenegro		..	..	..	..	..	..	..	..	..	..	..
Sierra Leone	2000	74.0	24.7	72.7	53.8	46.2	..	..	..	..	..	..
Singapore		..	..	..	..	..	..	..	..	..	..	..
Slovak Republic		..	..	..	..	..	..	..	..	..	..	..
Slovenia		..	..	..	..	..	..	..	..	..	..	..
Somalia		..	..	..	..	..	..	..	..	..	..	..
South Africa	1999	27.7	29.0	26.4	5.1	94.9	..	..	..	..	..	..
Spain		..	..	..	..	..	..	..	..	..	..	..
Sri Lanka		..	..	..	..	..	..	..	..	..	..	..
Sudan	2000	19.1	21.5	16.8	55.9	44.1	..	..	..	..	..	..
Swaziland	2000	11.2	11.4	10.9	14.0	86.0	..	..	..	..	..	..
Sweden		..	..	..	..	..	..	..	..	..	..	..
Switzerland		..	..	..	..	..	..	..	..	..	..	..
Syrian Arab Republic		..	..	..	..	..	..	..	..	..	..	..
Tajikistan		..	..	..	..	..	..	..	..	..	..	..
Tanzania	2001	40.4	41.5	39.2	40.0	60.0	83.5	73.1	0.1	0.2	16.3	26.7
Thailand		..	..	..	..	..	..	..	..	..	..	..
Togo	2000	72.5	73.4	71.6	28.4	71.6	..	..	..	..	..	..
Trinidad and Tobago	2000	3.9	5.2	2.8	12.8	87.2	..	..	..	..	..	..
Tunisia		..	..	..	..	..	..	..	..	..	..	..
Turkey	1999	4.5	5.2	3.8	66.8	33.2	52.7	83.4	19.9	10.2	10.2	1.8
Turkmenistan		..	..	..	..	..	..	..	..	..	..	..
Uganda	2002–03	13.1	15.0	11.3	18.3	81.7	94.3	92.3	1.5	1.3	3.2	6.0
Ukraine		..	..	..	..	..	..	..	..	..	..	..
United Arab Emirates		..	..	..	..	..	..	..	..	..	..	..
United Kingdom		..	..	..	..	..	..	..	..	..	..	..
United States		..	..	..	..	..	..	..	..	..	..	..
Uruguay		..	..	..	..	..	..	..	..	..	..	..
Uzbekistan	2000	18.1	22.0	14.0	4.1	95.9	..	..	..	..	..	..
Venezuela, RB	2003	9.1	11.4	6.6	17.6	82.4	35.2	9.2	7.3	9.5	53.9	81.0
Vietnam		..	..	..	..	..	..	..	..	..	..	..
West Bank and Gaza		..	..	..	..	..	..	..	..	..	..	..
Yemen, Rep.	1999	13.1	12.4	14.0	64.3	35.7	87.2	96.6	1.2	0.8	10.8	1.8
Zambia	1999	14.4	15.0	13.9	72.8	27.2	92.7	88.1	0.3	0.8	6.6	11.0
Zimbabwe		..	..	..	..	..	..	..	..	..	..	..

a. Shares by major industrial category do not sum to 100 percent because of a residual category not included in the table. b. Data are for children ages 10–14. c. Data are for children ages 12–14.

Child labor 2.4

About the data

The data in the table refer to children's economic activity, a broader concept than child labor. According to a gradually emerging consensus, child labor is a subset of children's economic activity or children's work that is injurious and therefore targeted for elimination.

In line with the international definition of employment, the threshold for classifying a child as economically active is spending one hour on economic activity during the reference week. Economic activity is as defined by the 1993 United Nations System of National Accounts (revision 3) and corresponds to the international definition of employment adopted by the Thirteenth International Conference of Labor Statisticians in 1982. Economic activity covers all market production and certain types of nonmarket production, including production of goods for own use. It excludes household chores performed by children in their own household. But some forms of economic activity are not captured by household surveys and so are not reflected in the estimates. These include unconditional forms of child labor, such as child commercial sexual exploitation and child slavery, which require different data collection methodologies.

The data used to develop the indicators are from household surveys conducted by the International Labor Organization (ILO), the United Nations Children's Fund (UNICEF), the World Bank, and national statistical offices. These surveys yield a variety of data in education, employment, health, expenditure, and consumption that relate to child work. But they do not provide information on unconditional forms of children's work.

Household survey data generally include information on work type—for example, whether a child is working for pay in cash or in kind or is involved in unpaid work, whether a child is working for someone who is not a member of the household, whether a child is involved in any type of family work (on the farm or in a business), and the like. The ages used in country surveys to define child labor range from 5 to 14 years old. The data in the table have been recalculated to present statistics for children ages 7–14.

Although efforts are made to harmonize the definition of employment and the questions on employment used in survey questionnaires, some differences remain among the survey instruments used to collect the information on working children. Differences exist not only among different household surveys in the same country, but also within the same type of survey carried out in different countries.

Because of the differences in the underlying survey instruments and in survey dates, estimates of the economically active child population are not fully comparable across countries. Caution should be exercised in drawing conclusions concerning relative levels of child economic activity across countries or regions based on the published estimates.

The table aggregates the distribution of working children by the industrial categories of the International Standard Industrial Classification (ISIC): agriculture, industry, and services. The residual category, which includes mining and quarrying; electricity, gas, and water; construction; extraterritorial organization; and other inadequately defined activities, is not presented in the table, and so the broad groups do not add up to 100 percent. The use of either ISIC revision 2 or revision 3 is strictly related to the codification applied by each country in describing the economic activity. The use of two different classifications does not affect the definition of the groups presented in the table.

Definitions

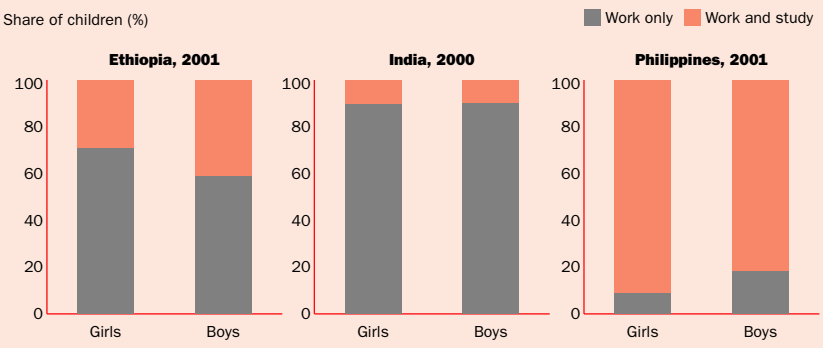
• **Economically active children** refer to children involved in economic activity for at least one hour in the reference week of the survey. • **Work only** refers to children involved in economic activity and not attending school. • **Work and study** refer to children attending school in combination with economic activity. • **Employment by economic activity** refers to the distribution of economically active children by the major industrial categories (ISIC revision 2 or revision 3). • **Agriculture** corresponds to division 1 (ISIC revision 2) or categories A and B (ISIC revision 3) and includes agriculture and hunting, forestry and logging, and fishing. • **Manufacturing** corresponds to division 3 (ISIC revision 2) or category D (ISIC revision 3). • **Services** correspond to divisions 6–9 (ISIC revision 2) or categories G–P (ISIC revision 3) and include wholesale and retail trade, hotels and restaurants, transport, financial intermediation, real estate, public administration, education, health and social work, other community services, and private household activity.

Data sources

Estimates are produced by the Understanding Children's Work project based on household survey datasets made available by the ILO's International Programme on the Elimination of Child Labour under its Statistical Monitoring Programme on Child Labour, UNICEF under its Multiple Indicator Cluster Survey program, the World Bank under its Living Standards Measurement Study program, and national statistical offices. Information on how the data were collected and some indication of their reliability can be found at www.ilo.org/public/english/standards/ipec/simpoc/, www.childinfo.org, and www.worldbank.org/lsms. Detailed country statistics can be found at www.ucw-project.org.

2.4a

Of children who work, some combine work and schooling



A little light work that does not interfere with education is not necessarily bad, but long working hours are likely to have serious health and developmental consequences for children. Studies suggest more children who work are working long hours.

Source: Understanding Children's Work project.

2.5 Unemployment

	Unemployment						Long-term unemployment			Unemployment by educational attainment		
	Male % of male labor force		Female % of female labor force		Total % of total labor force		% of total unemployment			% of total unemployment		
	1990–92[a]	2000–04[a]	1990–92[a]	2000–04[a]	1990–92[a]	2000–04[a]	Male 2000–03[a]	Female 2000–03[a]	Total 2000–03[a]	Primary 2000–04[a]	Secondary 2000–04[a]	Tertiary 2000–04[a]
Afghanistan	..	..	..	..	..	..	..	..	..	..	..	..
Albania	..	13.1	..	18.3	..	15.2	..	..	..	56.4	38.4	3.4
Algeria	24.2	26.6	20.3	31.4	23.0	27.3	..	..	..	..	..	..
Angola	..	..	..	..	..	..	..	..	..	..	..	..
Argentina	6.4[b]	16.3[b]	7.0[b]	14.7[b]	6.7[b]	15.6[b]	..	..	..	42.8[b]	38.5[b]	17.7[b]
Armenia	..	..	..	..	..	..	72.2[b]	70.8[b]	71.6[b]	5.2	81.5	13.3
Australia	11.3	5.3[b]	9.5	5.5[b]	10.5	5.4[b]	27.1[b]	17.0[b]	22.5[b]	48.3	32.7	19.0
Austria	3.5	4.5	3.8	5.4	3.6	4.9	25.0	23.9	24.5	37.3	55.7	7.0
Azerbaijan	..	..	..	..	..	..	..	..	..	4.6	31.4	64.1
Bangladesh	..	3.2	..	3.3	..	3.3	..	..	..	54.3	22.7	8.4
Belarus	..	..	..	..	..	..	..	..	..	10.2	40.6	49.1
Belgium	4.8	6.6	9.5	8.3	6.7	7.4	44.8	48.2	46.3	43.7	38.1	18.2
Benin	..	..	..	..	..	..	..	..	..	..	..	..
Bolivia	5.5[b]	4.3	5.6[b]	6.9	5.5[b]	5.5	..	..	..	60.2[b]	32.5[b]	4.4[b]
Bosnia and Herzegovina	..	..	..	..	..	..	..	..	..	..	..	..
Botswana	11.7	15.7	17.3	22.3	13.9	18.6	..	..	..	63.8	23.8	..
Brazil	5.4[b]	7.8[b]	7.9[b]	12.3[b]	6.4[b]	9.7[b]	..	..	..	..	..	..
Bulgaria	..	14.1	..	13.2	..	13.7	..	..	..	37.8	50.9	11.4
Burkina Faso	..	..	..	..	..	..	..	..	..	46.8	19.3	5.6
Burundi	..	..	..	..	..	..	..	..	..	..	..	..
Cambodia	..	1.4	..	2.0	..	1.8	..	..	..	..	..	..
Cameroon	..	8.2	..	6.7	..	7.5	..	..	..	..	..	..
Canada	12.1[b]	7.5[b]	10.2[b]	6.8[b]	11.2[b]	7.2[b]	11.4[b]	8.4[b]	10.1[b]	29.0[b]	30.8[b]	40.2[b]
Central African Republic	..	..	..	..	..	..	..	..	..	..	..	..
Chad	..	..	..	..	..	..	..	..	..	..	..	..
Chile	3.9	6.9	5.3	8.3	4.4	7.4	..	..	..	18.5	59.0	21.8
China	..	..	..	..	2.3[b]	4.0[b]	..	..	..	..	..	..
Hong Kong, China	2.0[b]	9.3[b]	1.9[b]	6.2[b]	2.0[b]	7.9[b]	..	..	..	48.6	39.4	10.1
Colombia	6.7	11.0	13.0	18.5	9.4	14.2	..	..	..	26.9	52.9	16.5
Congo, Dem. Rep.	..	..	..	..	..	..	..	..	..	..	..	..
Congo, Rep.	..	..	..	..	..	..	..	..	..	..	..	..
Costa Rica	3.4	5.8	5.4	8.2	4.0	6.7	8.9	13.3	10.9	62.2	24.1	9.9
Côte d'Ivoire	..	..	..	..	..	..	..	..	..	..	..	..
Croatia	..	13.1	..	15.7	..	14.3	..	..	56.4	21.5	68.4	9.8
Cuba	..	..	..	..	4.6	3.3	..	..	..	..	..	..
Czech Republic	..	7.0	..	9.9	..	8.3	47.4	51.9	49.9	24.6	71.8	3.5
Denmark	8.3	5.0	9.9	5.4	9.0	5.2	21.8	17.9	19.9	25.9	46.6	25.5
Dominican Republic	11.7	9.4	34.9	26.0	20.3	15.6	2.2	1.3	1.6	..	..	..
Ecuador	6.0[b]	9.0[b]	13.2[b]	15.0[b]	8.9[b]	11.4[b]	..	..	..	28.8	47.7	21.9
Egypt, Arab Rep.	6.4	6.3	17.0	23.9	9.0	11.0	..	..	..	..	..	..
El Salvador	8.4[b]	9.3	7.2[b]	3.5	7.9[b]	6.9	..	..	..	..	..	..
Eritrea	..	..	..	..	..	..	..	..	..	..	..	..
Estonia	3.9	10.2	3.5	9.9	3.7	10.0	..	..	..	20.9	62.1	16.8
Ethiopia	..	..	..	..	..	..	..	..	..	..	..	..
Finland	13.6	8.8	9.7	9.0	11.7	8.9	27.7	21.4	24.7	35.8	46.3	17.5
France	7.9[b]	9.0[b]	12.7[b]	11.1[b]	10.0[b]	9.9[b]	43.1[b]	42.8[b]	42.9[b]	40.6	39.9	17.7
Gabon	..	..	..	..	..	..	..	..	..	..	..	..
Gambia, The	..	..	..	..	..	..	..	..	..	..	..	..
Georgia	..	11.5	..	11.5	..	11.5	..	..	..	5.8	57.6	36.5
Germany	5.3	10.2	8.4	9.3	6.6	9.8	48.3	52.3	50.0	27.1	60.5	12.4
Ghana	..	7.5	..	8.7	..	8.2	..	..	..	..	..	..
Greece	4.9	6.4	12.9	15.9	7.8	10.2	49.2	61.0	56.5	34.2	50.0	15.1
Guatemala	2.6[b]	2.2	4.6[b]	3.7	3.2[b]	2.8	..	..	..	..	..	..
Guinea	..	..	..	..	..	..	..	..	..	..	..	..
Guinea-Bissau	..	..	..	..	..	..	..	..	..	..	..	..
Haiti	11.2	..	13.6	..	12.2	..	..	..	..	..	..	..

Unemployment 2.5

	Unemployment						Long-term unemployment			Unemployment by educational attainment		
	Male % of male labor force		Female % of female labor force		Total % of total labor force		% of total unemployment			% of total unemployment		
	1990–92[a]	2000–04[a]	1990–92[a]	2000–04[a]	1990–92[a]	2000–04[a]	Male 2000–03[a]	Female 2000–03[a]	Total 2000–03[a]	Primary 2000–04[a]	Secondary 2000–04[a]	Tertiary 2000–04[a]
Honduras	3.3[b]	..	3.0[b]	..	3.2[b]	5.1[b]	..	..	..	..	..	..
Hungary	11.0	6.1	8.7	6.1	9.9	6.1	42.2	42.2	42.2	33.5	61.2	5.4
India	..	4.4[b]	..	4.1[b]	..	4.3[b]	..	..	..	27.0	41.1	31.9
Indonesia	3.5	8.1	4.5	12.9	3.9	9.9	..	..	..	26.3	52.8	6.7
Iran, Islamic Rep.	..	10.1	..	20.4	..	11.6	..	..	..	38.3	37.1	19.3
Iraq	..	30.2	..	16.0	..	28.1	..	..	..	..	..	..
Ireland	15.2	4.9	15.2	3.7	15.2	4.4	40.9	26.0	35.4	48.2	24.9	24.0
Israel	9.2	10.2	13.9	11.3	11.2	10.7	..	..	..	20.2	48.8	27.0
Italy	8.1	6.4	17.3	10.5	11.6	8.0	57.5	58.9	58.2	49.4	41.4	7.5
Jamaica	9.4	8.1	22.2	15.7	15.4	11.4	24.4	36.2	31.7	13.0	5.4	6.1
Japan	2.1[b]	4.9[b]	2.2[b]	4.4[b]	2.2[b]	4.7[b]	38.9[b]	24.6[b]	33.5[b]	70.8	0.0	29.2
Jordan	..	11.8	..	20.7	..	13.2	..	..	..	..	..	..
Kazakhstan	..	7.2	..	10.4	..	8.8	..	..	..	7.9	53.2	38.9
Kenya	..	..	..	..	..	..	..	..	..	..	..	..
Korea, Dem. Rep.	..	..	..	..	..	..	..	..	..	..	..	..
Korea, Rep.	2.8	3.7	2.1	3.1	2.5	3.5	0.7	0.3	0.6	17.0	53.4	29.6
Kuwait	..	..	..	..	..	..	..	..	..	27.5	39.9	6.1
Kyrgyz Republic	..	9.4	..	10.5	..	9.9	47.8	54.3	50.9	7.7	77.7	18.5
Lao PDR	..	..	..	..	..	..	..	..	..	..	..	..
Latvia	..	10.7	..	10.5	..	10.6	..	..	..	22.4	68.5	8.8
Lebanon	..	..	..	..	..	..	..	..	..	..	..	..
Lesotho	..	..	..	..	..	..	..	..	..	..	..	..
Liberia	..	..	..	..	..	..	..	..	..	..	..	..
Libya	..	..	..	..	..	..	..	..	..	..	..	..
Lithuania	..	12.7	..	12.2	..	12.4	..	..	57.8	15.0	68.5	16.5
Macedonia, FYR	..	37.0	..	36.3	..	36.7	..	..	..	..	..	..
Madagascar	..	3.5	..	5.6	..	4.5	..	..	..	42.7	18.8	6.1
Malawi	..	..	..	..	..	..	..	..	..	..	..	..
Malaysia	..	..	..	..	3.7	3.5	..	..	..	32.0	48.8	15.6
Mali	..	..	..	..	..	..	..	..	..	..	..	..
Mauritania	..	..	..	..	..	..	..	..	..	..	..	..
Mauritius	3.2	9.0	3.6	12.6	3.3	10.2	..	..	..	71.5[b]	28.2[b]	..
Mexico	2.7	2.9	4.0	3.4	3.1	3.0	1.1	0.8	1.0	13.7	30.1	46.4
Moldova	..	9.6	..	6.4	..	7.9	..	..	..	..	..	..
Mongolia	..	14.3	..	14.1	..	14.2	..	..	..	35.0	45.8	18.4
Morocco	13.0[b]	10.6	25.3[b]	11.4	16.0[b]	10.8	..	..	..	50.9[b]	20.6[b]	19.3[b]
Mozambique	..	..	..	..	..	..	..	..	..	..	..	..
Myanmar	..	..	..	..	..	..	..	..	..	..	..	..
Namibia	20.0	26.8	19.0	35.9	19.0	31.1	..	..	..	..	..	..
Nepal	..	..	..	..	..	..	..	..	..	..	..	..
Netherlands	4.3	4.1	7.3	4.4	5.5	4.3	30.1	28.1	29.2	46.3	35.1	17.4
New Zealand	11.0[b]	3.5[b]	9.6[b]	4.4[b]	10.4[b]	3.9[b]	15.5[b]	11.0[b]	13.3[b]	1.0	48.8	16.0
Nicaragua	11.3	7.6	19.4	8.0	14.4	7.8	..	..	..	50.8[b]	24.8[b]	19.7[b]
Niger	..	..	..	..	..	..	..	..	..	..	..	..
Nigeria	..	..	..	..	..	..	..	..	..	..	..	..
Norway	6.6	4.8	5.1	3.8	5.9	4.4	7.1	5.4	6.4	21.7	54.7	21.7
Oman	..	..	..	..	..	..	..	..	..	..	..	..
Pakistan	4.3	6.2	14.2	16.4	5.8	7.8	..	..	..	14.7	12.3	24.1
Panama	10.8	10.5	22.3	18.8	14.7	13.6	24.0	35.7	29.3	35.9	37.3	26.0
Papua New Guinea	9.0	4.3	5.9	1.3	7.7	2.8	..	..	..	..	..	..
Paraguay	6.3[b]	6.7	3.8[b]	8.9	5.2[b]	7.6	..	..	..	..	..	..
Peru	7.5[b]	9.0[b]	12.5[b]	11.9[b]	9.4[b]	10.3[b]	..	..	..	9.4[b]	61.4[b]	28.6[b]
Philippines	7.9	9.4	9.9	10.3	8.6	9.8	..	..	..	..	..	..
Poland	12.2	18.2	14.7	19.9	13.3	19.0	48.6	50.8	49.7	18.0	75.4	6.7
Portugal	3.5[b]	5.8	5.0[b]	7.6	4.1[b]	6.7	31.2	32.7	32.0	70.7	14.6	8.8
Puerto Rico	19.1[b]	12.8[b]	13.3[b]	10.9[b]	16.9[b]	12.0[b]	..	..	..	..	..	..

2.5 Unemployment

	Unemployment						Long-term unemployment			Unemployment by educational attainment		
	Male % of male labor force		Female % of female labor force		Total % of total labor force		% of total unemployment			% of total unemployment		
	1990–92[a]	2000–04[a]	1990–92[a]	2000–04[a]	1990–92[a]	2000–04[a]	Male 2000–03[a]	Female 2000–03[a]	Total 2000–03[a]	Primary 2000–04[a]	Secondary 2000–04[a]	Tertiary 2000–04[a]
Romania	..	7.5	..	6.4	..	7.0	..	..	..	26.0	66.9	5.4
Russian Federation	5.2	9.9	5.2	8.8	5.2	8.6	..	..	..	..	..	..
Rwanda	0.6	..	0.2	..	0.3	..	..	..	..	60.7	24.1	5.9
Saudi Arabia	..	4.2	..	11.5	..	5.2	..	..	..	38.3	34.7	20.1
Senegal	..	..	..	..	..	..	..	..	..	..	..	..
Serbia and Montenegro	..	14.4[b]	..	16.4[b]	..	15.2[b]	..	..	..	..	..	..
Sierra Leone	..	..	..	..	..	..	..	..	..	..	..	..
Singapore	2.7	5.5	2.6	5.3	2.7	5.4	..	..	..	22.4	25.0	38.8
Slovak Republic	..	17.3	..	19.1	..	18.1	60.2	62.1	61.1	24.1	71.7	4.3
Slovenia	..	6.2	..	6.6	..	6.6	..	..	..	26.2	63.9	8.2
Somalia	..	..	..	..	..	..	..	..	..	..	..	..
South Africa	..	25.5[b]	..	31.7[b]	..	28.4[b]	..	..	..	50.2	41.0	5.1
Spain	13.9	8.2	25.8	15.0	18.1	11.0	34.3	43.9	39.8	56.0	20.4	22.7
Sri Lanka	10.1[b]	6.2[b]	19.9[b]	14.7[b]	13.3[b]	9.0[b]	..	..	..	47.2	0.0	52.8
Sudan	..	..	..	..	..	..	..	..	..	..	..	..
Swaziland	..	..	..	..	..	..	..	..	..	..	..	..
Sweden	6.8	6.9	4.6	6.2	5.7	6.5	19.6	15.3	17.8	23.2	58.1	17.5
Switzerland	2.3	3.9	3.5	4.8	2.8	4.3	21.6	32.6	27.0	28.7	54.5	16.9
Syrian Arab Republic	..	8.3	..	24.1	..	11.7	..	..	..	75.2	10.3	9.8
Tajikistan	..	..	..	..	..	..	..	..	..	..	..	..
Tanzania	2.7[b]	4.4	4.2[b]	5.8	3.5[b]	5.1	..	..	..	..	..	..
Thailand	1.3	1.6	1.5	1.4	1.4	1.5	..	..	..	40.0	47.2	0.2
Togo	..	..	..	..	..	..	..	..	..	..	..	..
Trinidad and Tobago	17.0	7.8	23.9	14.5	19.6	10.4	20.3	34.7	27.6	55.5	40.5	1.8
Tunisia	..	..	..	..	..	14.3	..	..	..	43.4	37.4	10.0
Turkey	8.8	10.5	7.8	9.7	8.5	10.3	22.1	30.9	24.4	53.5	29.2	12.7
Turkmenistan	..	..	..	..	..	..	..	..	..	..	..	..
Uganda	..	2.5	..	3.9	..	3.2	..	..	..	..	..	..
Ukraine	..	8.9	..	8.3	..	8.6	..	..	..	13.5	54.3	32.2
United Arab Emirates	..	2.2	..	2.6	..	2.3	..	..	..	..	..	..
United Kingdom	11.5[b]	5.0[b]	7.3[b]	4.2[b]	9.7[b]	4.6[b]	26.5	17.1	23.0	30.3	44.4	14.6
United States	7.9[b]	5.6[b]	7.0[b]	5.4[b]	7.5[b]	5.5[b]	12.5[b]	11.0[b]	11.8[b]	18.4	34.3	47.3
Uruguay	6.8[b]	13.5[b]	11.8[b]	20.8[b]	9.0[b]	16.8[b]	..	..	..	54.8[b]	31.3[b]	13.9[b]
Uzbekistan	..	..	..	..	..	..	..	..	..	..	..	..
Venezuela, RB	8.1	14.4	6.8	20.3[b]	7.7	16.8[b]	..	..	..	..	..	..
Vietnam	..	1.9	..	2.4	..	2.1	..	..	..	..	..	..
West Bank and Gaza	..	26.9	..	18.6	..	25.6	..	..	..	57.5	14.5	17.6
Yemen, Rep.	..	..	..	..	..	..	..	..	..	..	..	..
Zambia	16.3	..	22.4	..	18.9	..	..	..	..	..	..	..
Zimbabwe	..	10.4	..	6.1	..	8.2	..	..	..	..	..	..
World	.. w	.. w	.. w	.. w	.. w	6.5 w	.. w	.. w	.. w	.. w	.. w	.. w
Low income	..	..	..	..	..	..	..	..	..	..	..	..
Middle income	..	..	..	..	4.1	6.8	..	..	..	..	..	..
Lower middle income	..	..	..	..	3.6	5.9	..	..	..	..	..	..
Upper middle income	6.2	11.0	6.8	13.4	6.3	12.0	..	..	..	38.2	47.3	11.5
Low & middle income	..	..	..	..	..	5.6	..	..	..	..	..	..
East Asia & Pacific	..	..	..	..	2.5	4.4	..	..	..	..	..	..
Europe & Central Asia	..	11.1	..	10.7	..	10.6	..	..	..	..	..	..
Latin America & Carib.	5.5	8.0	8.5	11.8	6.7	9.5	..	..	..	..	..	..
Middle East & N. Africa	..	12.7	..	21.9	..	13.6	..	..	..	..	..	..
South Asia	..	4.4	..	5.0	..	4.5	..	..	..	30.0	33.8	27.4
Sub-Saharan Africa	..	..	..	..	..	..	..	..	..	..	..	..
High income	7.0	6.2	7.9	6.6	7.4	6.4	27.3	23.9	26.0	34.8	34.4	29.7
Europe EMU	7.5	8.2	12.6	10.6	9.5	9.2	44.2	46.4	45.5	40.4	42.3	16.4

a. Data are for the most recent year available. b. Limited coverage.

Unemployment 2.5

About the data

Unemployment and total employment in an economy are the broadest indicators of economic activity as reflected by the labor market. 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. Ironically, low unemployment rates can often disguise substantial poverty in a country, while high unemployment rates can occur in countries with a high level of economic development and low incidence of poverty. In countries without unemployment or welfare benefits, people eke out a living in the informal sector. In countries with well-developed safety nets, workers can afford to wait for suitable or desirable jobs. But high and sustained unemployment indicates serious inefficiencies in the allocation of resources.

The ILO definition of unemployment notwithstanding, reference periods, the criteria for those considered to be seeking work, and the treatment of people temporarily laid off and those seeking work for the first time vary across countries. 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 effects of seasonal unemployment in agriculture. And informal sector employment is difficult to quantify where informal activities are not registered and tracked.

Data on unemployment are drawn from labor force sample surveys and general household sample surveys, censuses, and other administrative records such as social insurance statistics, employment office statistics, and official estimates, which are usually based on information drawn from one or more of the above sources. Labor force surveys generally yield the most comprehensive data because they include groups not covered in other unemployment statistics, particularly people seeking work for the first time. These surveys generally use a definition of unemployment that follows the international recommendations more closely than that used by other sources and therefore generate statistics that are more comparable internationally. But the age group and area covered could differ by country or change over time within a country. For detailed information on breaks in series, consult the original source.

In contrast, the quality and completeness of data from employment offices and social insurance programs vary widely. Where employment offices work closely with social insurance schemes and registration with such offices is a prerequisite for receipt of unemployment benefits, the two sets of unemployment estimates tend to be comparable. Where registration is voluntary and where employment offices function only in more populous areas, employment office statistics do not give a reliable indication of unemployment. Most commonly excluded from both these sources are 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 countries that offer more or longer unemployment benefits.

Women tend to be excluded from the unemployment count for various reasons. Women suffer more from discrimination and from structural, social, and cultural barriers that impede them from actively seeking work. Also, women are often responsible for the care of children and the elderly or for other household affairs. They may not be available for work during the short reference period, as they need to make arrangements before starting work. Furthermore, women are considered to be employed when they are working part-time or in temporary jobs in the informal sector, despite the instability of these jobs or their active searching for more secure employment.

Long-term unemployment is measured by the length of time that an unemployed person has been without work and looking for a job. The underlying assumption is that shorter periods of joblessness are of less concern, especially when the unemployed are covered by unemployment benefits or similar forms of welfare support. The length of time that a person has been unemployed is difficult to measure, because the ability to recall that time diminishes as the period of joblessness extends. Women's long-term unemployment is likely to be lower in countries where women constitute a large share of the unpaid family workforce. Women in such countries have more access than men to nonmarket work and are more likely to drop out of the labor force and not be counted as unemployed.

Unemployment by level of educational attainment provides insights into the relationship between the educational attainment of workers and unemployment and may be used to draw inferences about changes in employment demand. Information on education attainment is the best available indicator of skill levels of the labor force.

Besides the limitations to comparability raised for measuring unemployment, the different ways of classifying the level of education across countries may also cause inconsistency. The level of education is supposed to be classified according to International Standard Classification of Education 1997 (ISCED97). For more information on ISCED97, see *About the data* for table 2.10.

Definitions

• **Unemployment** refers to the share of the labor force without work but available for and seeking employment. Definitions of labor force and unemployment differ by country (see *About the data*). • **Long-term unemployment** refers to the number of people with continuous periods of unemployment extending for a year or longer, expressed as a percentage of the total unemployed. • **Unemployment by educational attainment** shows the unemployed by level of educational attainment, as a percentage of the total unemployed. The levels of educational attainment accord with the International Standard Classification of Education 1997 of the United Nations Educational, Cultural, and Scientific Organization.

Data sources

Data on unemployment are from the ILO database Key Indicators of the Labour Market, fourth edition.

2.6 Wages and productivity

	Hours worked		Minimum wage		Agricultural wage		Labor cost per worker in manufacturing		Value added per worker in manufacturing	
	average per week		$ per year		$ per year		$ per year		$ per year	
	1980–84	1995–99[a]	1980–84	1995–99[a]	1980–84	1995–99[a]	1980–84	1995–99[a]	1980–84	1995–99[a]
Afghanistan	..	..	..	..	..	..	..	..	..	..
Albania	..	..	..	..	..	..	..	..	..	..
Algeria	..	..	..	*1,340*	..	..	6,242	*2,638*	11,306	..
Angola	..	..	..	..	..	..	..	..	..	..
Argentina	41	*40*	..	2,400	..	..	6,768	*7,338*	33,694	*37,480*
Armenia	..	..	..	..	..	..	..	..	..	..
Australia	37	*39*	..	*12,712*	11,212	*15,124*	14,749	26,087	27,801	*57,857*
Austria	33	*32*	..	[b]	..	..	11,949	*28,342*	20,956	*53,061*
Azerbaijan	..	..	..	..	..	..	..	..	..	..
Bangladesh	..	*52*	..	*492*	192	*360*	556	*671*	1,820	*1,711*
Belarus	..	..	..	..	1,641	410	2,233	754	..	..
Belgium	..	*38*	7,661	15,882	6,399	..	12,805	*24,132*	25,579	*58,678*
Benin	..	..	..	..	..	..	..	..	..	..
Bolivia	..	*46*	..	529	..	..	4,432	*2,343*	21,519	*26,282*
Bosnia and Herzegovina	..	..	..	..	..	..	..	..	..	..
Botswana	45	..	894	961	650	*1,223*	3,250	*2,884*	7,791	..
Brazil	..	..	1,690	1,308	..	..	10,080	*14,134*	43,232	*61,595*
Bulgaria	..	..	..	*573*	..	*1,372*	2,485	*1,179*	..	..
Burkina Faso	..	..	695	585	..	..	3,282	..	15,886	..
Burundi	..	..	..	..	..	..	..	..	..	..
Cambodia	..	..	..	..	..	..	..	..	..	..
Cameroon	..	..	..	..	..	..	..	..	..	..
Canada	38	*38*	4,974	7,897	20,429	*30,625*	17,710	*28,424*	36,903	*60,712*
Central African Republic	..	..	..	..	..	..	..	..	..	..
Chad	..	..	..	..	..	..	..	..	..	..
Chile	43	45	663	1,781	..	..	6,234	*5,822*	32,805	*32,977*
China	..	..	..	..	349	*325*	472	729	3,061	*2,885*
Hong Kong, China	48	*46*	..	..	..	..	4,127	*10,353*	7,886	32,611
Colombia	..	..	..	*1,128*	..	..	2,988	*2,507*	15,096	*17,061*
Congo, Dem. Rep.	..	..	..	..	..	..	..	..	..	..
Congo, Rep.	..	..	..	..	..	..	..	..	..	..
Costa Rica	..	*47*	1,042	*1,638*	982	*1,697*	2,433	*2,829*	7,185	*7,184*
Côte d'Ivoire	..	..	1,246	871	..	..	5,132	*9,995*	16,158	..
Croatia	..	..	..	..	..	..	..	..	..	..
Cuba	..	..	..	..	..	..	..	..	..	..
Czech Republic	43	43	..	942	2,277	3,090	2,306	3,815	5,782	*5,094*
Denmark	..	*37*	9,170	19,933	..	..	16,169	*29,235*	27,919	*49,273*
Dominican Republic	44	44	..	*1,439*	..	..	2,191	*1,806*	8,603	..
Ecuador	..	..	1,637	*492*	..	..	5,065	*3,738*	12,197	*9,747*
Egypt, Arab Rep.	58	..	343	*415*	..	..	2,210	*1,863*	3,691	*5,976*
El Salvador	..	..	..	*790*	..	..	3,654	..	14,423	..
Eritrea	..	..	..	..	..	..	..	..	..	..
Estonia	..	..	..	..	..	..	..	..	..	..
Ethiopia	..	..	..	..	..	..	..	*1,596*	..	*7,094*
Finland	..	*38*	..	[b]	..	..	11,522	*26,615*	25,945	*55,037*
France	40	*39*	6,053	*12,072*	..	..	18,488	..	26,751	*61,019*
Gabon	..	..	..	..	..	..	..	..	..	..
Gambia, The	..	..	..	..	..	..	..	..	..	..
Georgia	..	..	..	..	..	..	..	..	..	..
Germany	41	*40*	..	[b]	..	..	15,708	*33,226*	34,945	*79,616*
Ghana	..	..	..	..	1,470	..	2,306	..	12,130	..
Greece	..	*41*	..	6,057	..	..	6,461	*12,296*	14,561	*30,429*
Guatemala	..	..	..	*459*	..	..	2,605	*1,802*	11,144	*9,235*
Guinea	40	..	..	..	..	..	..	..	..	..
Guinea-Bissau	48	..	..	..	..	..	..	..	..	..
Haiti	..	..	..	..	..	..	..	..	..	..

2.6 Wages and productivity

	Hours worked		Minimum wage		Agricultural wage		Labor cost per worker in manufacturing		Value added per worker in manufacturing	
	average per week		$ per year		$ per year		$ per year		$ per year	
	1980–84	1995–99[a]	1980–84	1995–99[a]	1980–84	1995–99[a]	1980–84	1995–99[a]	1980–84	1995–99[a]
Honduras	..	*44*	..	..	1,623	..	2,949	*2,658*	7,458	*7,427*
Hungary	35	*33*	1,186	1,132	1,186	2,676	1,410	3,755	4,307	10,918
India	46	..	..	*408*	205	*245*	1,035	*1,192*	2,108	*3,118*
Indonesia	40	43	..	*241*	..	..	898	3,054	3,807	*5,139*
Iran, Islamic Rep.	..	..	..	..	..	..	9,737	*30,562*	17,679	*89,787*
Iraq	..	..	..	..	..	..	4,624	*13,288*	13,599	*34,316*
Ireland	41	*41*	5,556	12,087	..	..	10,190	*22,681*	26,510	*86,036*
Israel	36	*36*	..	*5,861*	4,582	*7,906*	13,541	*21,150*	23,459	*35,526*
Italy	..	*32*	..	[b]	..	..	9,955	*34,859*	24,580	*50,760*
Jamaica	..	*39*	782	*692*	..	..	5,218	*3,655*	12,056	*11,091*
Japan	47	47	3,920	12,265	..	..	12,306	*31,687*	34,456	*92,582*
Jordan	..	*50*	[b]	[b]	..	..	4,643	2,082	16,337	*11,906*
Kazakhstan	..	..	..	..	..	..	..	..	..	..
Kenya	41	*39*	..	551	508	*568*	1,043	810	2,345	1,489
Korea, Dem. Rep.	..	..	..	..	..	..	..	..	..	..
Korea, Rep.	52	*48*	..	3,903	..	..	3,153	*10,743*	11,617	*40,916*
Kuwait	..	..	..	*8,244*	..	..	10,281	..	30,341	..
Kyrgyz Republic	..	..	..	65	1,695	168	2,287	687	..	..
Lao PDR	..	..	..	..	..	..	..	..	..	..
Latvia	..	..	..	..	..	..	..	*366*	..	..
Lebanon	..	..	..	..	..	..	..	..	..	..
Lesotho	..	*45*	..	..	..	..	1,442	..	6,047	..
Liberia	..	..	..	..	..	..	..	..	..	..
Libya	..	..	..	..	..	..	8,648	..	21,119	..
Lithuania	..	..	..	..	..	..	..	..	..	..
Macedonia, FYR	..	..	..	..	..	..	..	..	..	..
Madagascar	..	*40*	..	..	..	..	1,575	..	3,542	..
Malawi	..	..	..	..	..	..	..	..	..	..
Malaysia	..	..	..	[b]	1,435	..	2,519	*3,429*	8,454	*12,661*
Mali	..	..	321	*459*	..	..	2,983	..	10,477	..
Mauritania	..	..	..	..	..	..	..	..	..	..
Mauritius	..	..	..	..	..	..	1,465	*1,973*	2,969	*4,217*
Mexico	43	*45*	1,343	768	1,031	*908*	3,772	7,607	17,448	*25,931*
Moldova	..	..	..	..	..	..	..	..	..	..
Mongolia	..	..	..	..	..	..	..	..	..	..
Morocco	..	..	..	*1,672*	..	..	2,583	*3,391*	6,328	*9,089*
Mozambique	..	..	..	..	..	..	..	..	..	..
Myanmar	..	..	..	..	..	..	..	..	..	..
Namibia	..	..	..	..	..	..	..	..	..	..
Nepal	..	..	..	..	..	..	371	..	1,523	..
Netherlands	40	*40*	9,074	15,170	..	..	18,891	*34,326*	27,491	*56,801*
New Zealand	39	*39*	3,309	9,091	..	..	10,605	*18,419*	16,835	*32,723*
Nicaragua	..	*44*	..	..	..	..	..	..	..	..
Niger	40	..	..	..	..	..	4,074	..	22,477	..
Nigeria	..	..	..	*300*	..	..	4,812	..	20,000	..
Norway	35	*35*	..	[b]	..	..	14,935	38,415	24,905	*51,510*
Oman	..	..	..	..	..	..	..	*3,099*	..	*61,422*
Pakistan	48	..	..	*600*	427	*416*	1,264	..	6,214	..
Panama	..	..	..	..	..	..	4,768	*6,351*	15,327	*17,320*
Papua New Guinea	44	..	..	..	..	..	4,825	..	13,563	..
Paraguay	36	*39*	..	..	1,606	*1,210*	2,509	*3,241*	..	*14,873*
Peru	48	..	..	..	..	*944*	2,988	..	15,962	..
Philippines	47	*43*	915	1,472	382	..	1,240	*2,450*	5,266	*10,781*
Poland	36	*33*	320	1,584	1,726	*1,301*	1,682	*1,714*	6,242	*7,637*
Portugal	39	*40*	1,606	4,086	..	..	3,115	*6,237*	7,161	*17,273*
Puerto Rico	..	..	..	..	..	..	..	..	..	..

2.6 Wages and productivity

	Hours worked		Minimum wage		Agricultural wage		Labor cost per worker in manufacturing		Value added per worker in manufacturing	
	average per week		$ per year		$ per year		$ per year		$ per year	
	1980–84	1995–99[a]	1980–84	1995–99[a]	1980–84	1995–99[a]	1980–84	1995–99[a]	1980–84	1995–99[a]
Romania	34	*34*	..	*531*	1,669	*1,864*	1,757	*1,190*	..	*3,482*
Russian Federation	..	..	863	297	2,417	659	2,524	1,528	..	..
Rwanda	..	..	..	..	..	..	1,871	..	9,835	..
Saudi Arabia	..	..	..	..	..	..	9,814	..	..	..
Senegal	..	..	993	848	..	..	2,828	*7,754*	6,415	..
Serbia and Montenegro	..	..	..	..	..	..	..	..	..	..
Sierra Leone	44	..	..	..	..	..	1,624	..	7,807	..
Singapore	46	47	..	..	..	*4,856*	5,576	21,317	16,442	*40,674*
Slovak Republic	43	*40*	..	..	2,277	*1,885*	2,306	*1,876*	5,782	*5,094*
Slovenia	..	..	..	..	..	..	..	*9,632*	..	*12,536*
Somalia	..	..	..	..	..	..	..	..	..	..
South Africa	42	*41*	..	[b]	888	..	6,261	*8,475*	12,705	*16,612*
Spain	38	*37*	3,058	5,778	..	..	8,276	*19,329*	18,936	*47,016*
Sri Lanka	50	*53*	..	..	198	*264*	447	*604*	2,057	*3,405*
Sudan	..	..	..	..	..	..	..	..	..	..
Swaziland	..	..	..	..	..	..	..	..	..	..
Sweden	36	*37*	..	..	9,576	*27,098*	13,038	*26,601*	32,308	*56,675*
Switzerland	44	*42*	..	[b]		..	..	..	..	*61,848*
Syrian Arab Republic	..	..	..	..	..	..	2,844	*4,338*	9,607	*9,918*
Tajikistan	..	..	..	..	..	..	..	..	..	..
Tanzania	..	..	..	..	..	..	1,123	..	3,339	..
Thailand	50	*47*	749	*1,159*	..	..	2,305	3,868	11,072	*19,946*
Togo	..	..	..	..	..	..	..	..	..	..
Trinidad and Tobago	..	*40*	..	*2,974*	..	..	..	..	14,008	..
Tunisia	..	..	1,381	*1,525*	668	*968*	3,344	*3,599*	7,111	..
Turkey	..	*48*	594	1,254	1,015	*2,896*	3,582	*7,958*	13,994	*32,961*
Turkmenistan	..	..	..	..	..	..	..	..	..	..
Uganda	43	..	..	..	..	..	253	..	..	..
Ukraine	..	..	..	..	..	..	..	..	..	..
United Arab Emirates	..	..	..	..	..	..	6,968	..	20,344	..
United Kingdom	42	*40*	..	[b]	..	..	11,406	*23,843*	24,716	*55,060*
United States	40	*41*	6,006	8,056	..	..	19,103	*28,907*	47,276	*81,353*
Uruguay	48	*42*	1,262	1,027	1,289	..	4,128	*3,738*	13,722	*16,028*
Uzbekistan	..	..	..	..	..	..	..	..	..	..
Venezuela, RB	41	..	1,869	*1,463*	..	..	11,188	*4,667*	37,063	*24,867*
Vietnam	..	47	..	134	..	442	..	711	..	..
West Bank and Gaza	..	..	..	..	..	..	..	..	..	..
Yemen, Rep.	..	..	..	..	..	..	4,492	1,291	17,935	5,782
Zambia	..	*45*	..	..	..	..	3,183	*4,292*	11,753	*16,615*
Zimbabwe	..	..	..	..	1,065	..	4,097	*3,422*	9,625	*11,944*

Note: Data are period averages.
a. Figures in italics refer to 1990–94. b. Country has sectoral minimum wage but no minimum wage policy.

Wages and productivity 2.6

About the data

Much of the data on labor markets are collected through national reporting systems that depend on plant-level surveys. Even when these data are compiled and reported by international agencies such as the International Labour Organization or the United Nations Industrial Development Organization, differences in definitions, coverage, and units of account limit their comparability across countries. The indicators in this table are the result of a research project at the World Bank that has compiled results from more than 300 national and international sources to provide a set of uniform and representative labor market indicators. Nevertheless, many differences in reporting practices persist, some of which are described below. The purpose of the table is to explore the relationship between labor markets and economic growth in the long run, not to follow labor market developments in the short run.

Analyses of labor force participation, employment, and underemployment often rely on the number of hours worked per week, which is the time spent at the workplace working, preparing for work, or waiting for work to be supplied or for a machine to be fixed. It also includes the time spent at the workplace when no work is being performed but for which payment is made under a guaranteed work contract and time spent on short periods of rest. Hours paid for but not spent at the workplace—such as paid annual and sick leave, paid holidays, paid meal breaks, and time spent commuting—are not included. When this information is not available, the number of hours paid for—the hours actually worked plus the hours paid for but not spent in the workplace—is reported. Data on hours worked are influenced by differences in methods of compilation and coverage and by national practices relating to number of days worked and overtime, making comparisons across countries difficult.

Wages refer to remuneration in cash and in kind paid to employees at regular intervals. They exclude employer contributions to social security and pension schemes as well as other benefits received by employees under these schemes. In some countries the national minimum wage represents a "floor," with higher minimum wages for particular occupations and skills sets through collective bargaining. In those countries the agreements reached by employers associations and trade unions are extended by the government to all firms in the sector or at least to large firms. Changes in the national minimum wage are generally associated with parallel changes in the minimum wages set through collective bargaining.

In many developing countries agricultural workers are hired on a casual or daily basis and lack any social security benefits. International comparisons of agricultural wages should be subject to more caution than those of wages in other activities. The nature of the work carried out by different categories of agricultural workers and the length of the workday and workweek vary considerably from one country to another. Seasonal fluctuations in agricultural wages are more important in some countries than in others. And the methods followed in different countries for estimating the monetary value of payments in kind are not uniform.

Labor cost per worker in manufacturing is sometimes used as a measure of international competitiveness. The indicator reported in the table is the ratio of total compensation to the number of workers in the manufacturing sector. Compensation includes direct wages, salaries, other remuneration paid directly by employers, and all contributions by employers to social security programs on behalf of their employees. But there are unavoidable differences in concepts and reference periods and in reporting practices. Remuneration for time not worked, bonuses and gratuities, and housing and family allowances should be considered part of the compensation costs, along with severance and termination pay. These indirect labor costs can vary substantially from country to country, depending on labor laws and collective bargaining agreements.

International competitiveness also depends on productivity, which is often measured by value added per worker in manufacturing. The indicator reported in the table is the ratio of total value added in manufacturing to the number of employees engaged in that sector. Total value added is estimated as the difference between the value of industrial output and the value of materials and supplies for production (including fuel and purchased electricity) and cost of industrial services received.

Observations on labor costs and value added per worker are from plant surveys covering relatively large establishments, usually employing 10 or more workers and mostly in the formal sector. In high-income countries the coverage of these surveys tends to be quite good. In developing countries there is often a substantial bias toward very large establishments in the formal sector. As a result, the data may not be strictly comparable across countries. The data are converted into U.S. dollars using the average exchange rate for each year.

Definitions

• **Hours worked** are average hours per week actually worked, hours paid for, or statutory hours of work in a normal workweek for all workers (male and female) in nonagricultural activities or, if unavailable, in manufacturing. • **Minimum wage** corresponds to the most general regime for nonagricultural activities. When rates vary across sectors, only that for manufacturing (or commerce, if the manufacturing wage is unavailable) is reported. • **Agricultural wage** is the daily wage in agriculture. To ensure comparability with the other wage series, full employment over the year is assumed, although many wage earners in agriculture are employed seasonally. • **Labor cost per worker in manufacturing** is the total payroll of manufacturing establishments divided by the number of people employed or engaged in those establishments. • **Value added per worker in manufacturing** is the value added of manufacturing establishments divided by the number of people employed or engaged in those establishments.

Data sources

Data on wages and productivity are drawn from Martin Rama and Raquel Artecona's "Database of Labor Market Indicators across Countries" (2002).

2.7 Poverty

	National poverty line								International poverty line				
	Population below the poverty line				Population below the poverty line								
	Survey year	Rural %	Urban %	National %	Survey year	Rural %	Urban %	National %	Survey year	Population below $1 a day %	Poverty gap at $1 a day %	Population below $2 a day %	Poverty gap at $2 a day %
Afghanistan		..	..	..		..	..	..		..	..	..	..
Albania	2002	29.6	19.8	25.4		..	..	..	2002[a]	<2	<0.5	11.8	2.0
Algeria	1988	16.6	7.3	12.2	1995	30.3	14.7	22.6	1995[a]	<2	<0.5	15.1	3.8
Angola		..	..	..		..	..	..		..	..	..	..
Argentina	1995	..	28.4		1998	..	29.9	..	2003[b]	7.0	2.0	23.0	8.4
Armenia	1998–99	50.8	58.3	55.1	2001	48.7	51.9	50.9	2003[a]	<2	<0.5	31.1	7.1
Australia		..	..	..		..	..	..		..	..	..	..
Austria		..	..	..		..	..	..		..	..	..	..
Azerbaijan	1995	..	..	68.1	2001	42.0	55.0	49.0	2002[a]	<2	<0.5	<2	<0.5
Bangladesh	1995–96	55.2	29.4	51.0	2000	53.0	36.6	49.8	2000[a]	36.0	8.1	82.8	36.3
Belarus	2000	..	..	41.9		..	..	..	2002[a]	<2	<0.5	<2	<0.5
Belgium		..	..	..		..	..	..		..	..	..	..
Benin	1995	25.2	28.5	26.5	1999	33.0	23.3	29.0	2003[a]	30.9	8.2	73.7	31.7
Bolivia	1997	77.3	53.8	63.2	1999	81.7	50.6	62.7	2002[b]	23.2	13.6	42.2	23.2
Bosnia and Herzegovina	2001–02	19.9	13.8	19.5		..	..	..		..	..	..	..
Botswana		..	..	..		..	..	..	1993[a]	23.5	7.7	50.1	22.8
Brazil	1996	54.0	15.4	23.9	1998	51.4	14.7	22.0	2003[b]	7.5	3.4	21.2	8.5
Bulgaria	1997	..	..	36.0	2001	..	..	12.8	2003[a]	<2	<0.5	6.1	1.5
Burkina Faso	1998	61.1	22.4	54.6	2003	52.4	19.2	46.4	2003[a]	27.2	7.3	71.8	30.4
Burundi	1990	36.0	43.0	36.4		..	..	..	1998[a]	54.6	22.7	87.6	48.9
Cambodia	1997	40.1	21.1	36.1	1999	40.1	13.9	35.9	1997[a]	34.1	9.7	77.7	34.5
Cameroon	1996	59.6	41.4	53.3	2001	49.9	22.1	40.2	2001[a]	17.1	4.1	50.6	19.3
Canada		..	..	..		..	..	..		..	..	..	..
Central African Republic		..	..	..		..	..	..	1993[a]	66.6	38.1	84.0	58.4
Chad	1995–96	67.0	63.0	64.0		..	..	..		..	..	..	..
Chile	1996	..	..	19.9	1998	..	..	17.0	2000[b]	<2	<0.5	9.6	2.5
China	1996	7.9	<2	6.0	1998	4.6	<2	4.6	2001[a]	16.6	3.9	46.7	18.4
Hong Kong, China		..	..	..		..	..	..		..	..	..	..
Colombia	1995	79.0	48.0	60.0	1999	79.0	55.0	64.0	2003[b]	7.0	3.1	17.8	7.7
Congo, Dem. Rep.		..	..	..		..	..	..		..	..	..	..
Congo, Rep.		..	..	..		..	..	..		..	..	..	..
Costa Rica	1992	25.5	19.2	22.0		..	..	..	2001[b]	2.2	0.8	7.5	2.8
Côte d'Ivoire		..	..	..		..	..	..	2002[a]	14.8	4.1	48.8	18.4
Croatia		..	..	..		..	..	..	2001[a]	<2	<0.5	<2	<0.5
Cuba		..	..	..		..	..	..		..	..	..	..
Czech Republic		..	..	..		..	..	..	1996[b]	<2	<0.5	<2	<0.5
Denmark		..	..	..		..	..	..		..	..	..	..
Dominican Republic	1992	49.0	19.3	33.9	1998	42.1	20.5	28.6	2003[b]	2.5	0.8	11.0	3.6
Ecuador	1995	56.0	19.0	34.0	1998	69.0	30.0	46.0	1998[b]	15.8	6.3	37.2	15.8
Egypt, Arab Rep.	1995–96	23.3	22.5	22.9	1999–2000	..	..	16.7	1999–2000[a]	3.1	<0.5	43.9	11.3
El Salvador	1992	55.7	43.1	48.3		..	..	..	2002[b]	19.0	9.3	40.6	17.7
Eritrea	1993–94	..	..	53.0		..	..	..		..	..	..	..
Estonia	1995	14.7	6.8	8.9		..	..	..	2003[a]	<2	<0.5	7.5	1.9
Ethiopia	1995–96	47.0	33.3	45.5	1999–2000	45.0	37.0	44.2	1999–2000[a]	23.0	4.8	77.8	29.6
Finland		..	..	..		..	..	..		..	..	..	..
France		..	..	..		..	..	..		..	..	..	..
Gabon		..	..	..		..	..	..		..	..	..	..
Gambia, The	1992	..	..	64.0	1998	61.0	48.0	57.6	1998[a]	59.3	28.8	82.9	51.1
Georgia	2002	55.4	48.5	52.1	2003	52.7	56.2	54.5	2003[a]	6.5	2.1	25.3	8.6
Germany		..	..	..		..	..	..		..	..	..	..
Ghana	1992	..	..	50.0	1998–99	49.9	18.6	39.5	1998–99[a]	44.8	17.3	78.5	40.8
Greece		..	..	..		..	..	..		..	..	..	..
Guatemala	1989	71.9	33.7	57.9	2000	74.5	27.1	56.2	2002[b]	13.5	5.5	31.9	13.8
Guinea	1994	..	..	40.0		..	..	..		..	..	..	..
Guinea-Bissau		..	..	..		..	..	..		..	..	..	..
Haiti	1987	..	..	65.0	1995	66.0	..	..	2001[b]	53.9	26.6	78.0	47.4

Poverty 2.7

	National poverty line								International poverty line				
	Population below the poverty line				Population below the poverty line								
	Survey year	Rural %	Urban %	National %	Survey year	Rural %	Urban %	National %	Survey year	Population below $1 a day %	Poverty gap at $1 a day %	Population below $2 a day %	Poverty gap at $2 a day %
Honduras	1997	58.0	35.0	47.0	1999	58.0	37.0	48.0	1999[b]	20.7	7.5	44.0	20.2
Hungary	1993	..	..	14.5	1997	..	..	17.3	2002[a]	<2	<0.5	<2	<0.5
India	1993–94	37.3	32.4	36.0	1999–2000	30.2	24.7	28.6	1999–2000[a]	34.7	8.2	52.4	15.7
Indonesia	1996	..	..	15.7	1999	34.4	16.1	27.1	2002[a]	7.5	0.9	52.4	15.7
Iran, Islamic Rep.		..	..	..		..	..	..	1998[a]	<2	<0.5	7.3	1.5
Iraq		..	..	..		..	..	..		..	..	..	..
Ireland		..	..	..		..	..	..		..	..	..	..
Israel		..	..	..		..	..	..		..	..	..	..
Italy		..	..	..		..	..	..		..	..	..	..
Jamaica	1995	37.0	18.7	27.5	2000	25.1	12.8	18.7	2000[a]	<2	<0.5	13.3	2.7
Japan		..	..	..		..	..	..		..	..	..	..
Jordan	1991	..	..	15.0	1997	..	..	11.7	2002–03[a]	<2	<0.5	7.0	1.5
Kazakhstan	1996	39.0	30.0	34.6		..	..	..	2003[a]	<2	<.5	16.0	3.8
Kenya	1994	47.0	29.0	40.0	1997	53.0	49.0	52.0	1997[a]	22.8	5.9	58.3	23.9
Korea, Dem. Rep.		..	..	..		..	..	..		..	..	..	..
Korea, Rep.		..	..	..		..	..	..	1998[b]	<2	<0.5	<2	<0.5
Kuwait		..	..	..		..	..	..		..	..	..	..
Kyrgyz Republic	2000	56.4	43.9	52.0	2001	51.0	41.2	47.6	2003[a]	<2	<0.5	21.4	4.4
Lao PDR	1993	48.7	33.1	45.0	1997–98	41.0	26.9	38.6	2002[a]	27.0	6.1	74.1	30.2
Latvia		..	..	..		..	..	..	2003[a]	<2	<0.5	4.7	1.2
Lebanon		..	..	..		..	..	..		..	..	..	..
Lesotho		..	..	..		..	..	..	1995[a]	36.4	19.0	56.1	33.1
Liberia		..	..	..		..	..	..		..	..	..	..
Libya		..	..	..		..	..	..		..	..	..	..
Lithuania		..	..	..		..	..	..	2003[a]	<2	<0.5	7.8	1.8
Macedonia, FYR		..	..	..		..	..	..	2003[a]	<2	<0.5	<2	<0.5
Madagascar	1997	76.0	63.2	73.3	1999	76.7	52.1	71.3	2001[a]	61.0	27.9	85.1	51.8
Malawi	1990–91	..	..	54.0	1997–98	66.5	54.9	65.3	1997–98[a]	41.7	14.8	76.1	38.3
Malaysia	1989	..	..	15.5		..	..	..	1997[b]	<2	<0.5	9.3	2.0
Mali	1998	75.9	30.1	63.8		..	..	..	1994[a]	72.3	37.4	90.6	60.5
Mauritania	1996	65.5	30.1	50.0	2000	61.2	25.4	46.3	2000[a]	25.9	7.6	63.1	26.8
Mauritius		..	..	..		..	..	..		..	..	..	..
Mexico	1996	52.4	26.5	37.1	2002	34.8	11.4	20.3	2002[a]	4.5	1.2	20.4	6.5
Moldova	2001	64.1	58.0	62.4	2002	67.2	42.6	48.5	2001[a]	22.0	5.8	63.7	25.1
Mongolia	1995	33.1	38.5	36.3	1998	32.6	39.4	*35.6*	1998[a]	27.0	8.1	74.9	30.6
Morocco	1990–91	18.0	7.6	13.1	1998–99	27.2	12.0	19.0	1999[a]	<2	<0.5	14.3	3.1
Mozambique	1996–97	71.3	62.0	69.4		..	..	..	1996[a]	37.9	12.0	78.4	36.8
Myanmar		..	..	..		..	..	..		..	..	..	..
Namibia		..	..	..		..	..	..	1993[b]	34.9	14.0	55.8	30.4
Nepal	1995–96	43.3	21.6	41.8	2003–04	34.6	9.6	30.9	2003–04[a]	24.1	5.4	68.5	26.8
Netherlands		..	..	..		..	..	..		..	..	..	..
New Zealand		..	..	..		..	..	..		..	..	..	..
Nicaragua	1993	76.1	31.9	50.3	1998	68.5	30.5	47.9	2001[a]	45.1	16.7	79.9	41.2
Niger	1989–93	66.0	52.0	63.0		..	..	..	1995[a]	60.6	34.0	85.8	54.6
Nigeria	1985	49.5	31.7	43.0	1992–93	36.4	30.4	34.1	2003[a]	70.8	34.5	92.4	59.5
Norway		..	..	..		..	..	..		..	..	..	..
Oman		..	..	..		..	..	..		..	..	..	..
Pakistan	1993	33.4	17.2	28.6	1998–99	35.9	24.2	32.6	2002[a]	17.0	3.1	73.6	26.1
Panama	1997	64.9	15.3	37.3		..	..	..	2002[b]	6.5	2.3	17.1	6.9
Papua New Guinea	1996	41.3	16.1	37.5		..	..	..		..	..	..	..
Paraguay	1991	28.5	19.7	21.8		..	..	..	2002[b]	16.4	7.4	33.2	16.2
Peru	1994	67.0	46.1	53.5	1997	64.7	40.4	49.0	2002[b]	12.5	4.4	31.8	13.4
Philippines	1994	53.1	28.0	40.6	1997	50.7	21.5	36.8	2000[a]	15.5	3.0	47.5	17.8
Poland	1993	..	..	23.8		..	..	..	2002[a]	<2	<0.5	<2	<0.5
Portugal		..	..	..		..	..	..	1994[b]	<2	<0.5	<2	<0.5
Puerto Rico		..	..	..		..	..	..		..	..	..	..

2.7 Poverty

	National poverty line								International poverty line				
	Population below the poverty line				Population below the poverty line								
	Survey year	Rural %	Urban %	National %	Survey year	Rural %	Urban %	National %	Survey year	Population below $1 a day %	Poverty gap at $1 a day %	Population below $2 a day %	Poverty gap at $2 a day %
Romania	1994	27.9	20.4	21.5		..	..	..	2003[a]	<2	0.5	12.9	3.0
Russian Federation	1994	..	..	30.9		..	..	..	2002[a]	<2	<0.5	12.1	3.1
Rwanda	1993	..	..	51.2	1999–2000	65.7	14.3	60.3	1999–2000[a]	51.7	20.0	83.7	45.5
Saudi Arabia		..	..	..		..	..	..		..	..	..	..
Senegal	1992	40.4	23.7	33.4		..	..	..	1995[a]	22.3	5.7	63.0	25.2
Serbia and Montenegro		..	..	..		..	..	..		..	..	..	..
Sierra Leone	1989	..	..	82.8	2003–04	79.0	56.4	70.2	1989[a]	57.0	39.5	74.5	51.8
Singapore		..	..	..		..	..	..		..	..	..	..
Slovak Republic		..	..	..		..	..	..	1996[b]	<2	<0.5	2.9	0.8
Slovenia		..	..	..		..	..	..	1998[a]	<2	<0.5	<2	<0.5
Somalia		..	..	..		..	..	..		..	..	..	..
South Africa		..	..	..		..	..	..	2000[a]	10.7	1.7	34.1	12.6
Spain		..	..	..		..	..	..		..	..	..	..
Sri Lanka	1990–91	22.0	15.0	20.0	1995–96	27.0	15.0	25.0	2002[a]	5.6	0.8	41.6	11.9
Sudan		..	..	..		..	..	..		..	..	..	..
Swaziland		..	..	..		..	..	..		..	..	..	..
Sweden		..	..	..		..	..	..		..	..	..	..
Switzerland		..	..	..		..	..	..		..	..	..	..
Syrian Arab Republic		..	..	..		..	..	..		..	..	..	..
Tajikistan		..	..	..		..	..	..	2003[a]	7.4	1.3	42.8	13.0
Tanzania	1991	40.8	31.2	38.6	2000–01	38.7	29.5	35.7	2000–01[a]	57.8	20.7	89.9	49.3
Thailand	1990	..	..	18.0	1992	15.5	10.2	13.1	2002[a]	<2	<0.5	25.2	6.2
Togo	1987–89	..	..	32.3		..	..	..		..	..	..	..
Trinidad and Tobago	1992	20.0	24.0	21.0		..	..	..	1992[b]	12.4	3.5	39.0	14.6
Tunisia	1990	13.1	3.5	7.4	1995	13.9	3.6	7.6	2000[a]	<2	<0.5	6.6	1.3
Turkey	1994	..	..	28.3	2002	34.5	22.0	27.0	2003[a]	3.4	0.8	18.7	5.7
Turkmenistan		..	..	..		..	..	..		..	..	..	..
Uganda	1999–2000	37.4	9.6	33.8	2002–03	41.7	12.2	37.7		..	..	..	..
Ukraine	2000	34.9		31.5	2003	28.4	..	19.5	2003[b]	<2	<0.5	4.9	0.9
United Arab Emirates		..	..	..		..	..	..		..	..	..	..
United Kingdom		..	..	..		..	..	..		..	..	..	..
United States		..	..	..		..	..	..		..	..	..	..
Uruguay	1994	..	20.2	..	1998	..	24.7	..	2003[b]	<2	<0.5	5.7	1.6
Uzbekistan	2000	30.5	22.5	27.5		..	..	..		..	..	..	..
Venezuela, RB	1989	..	..	31.3		..	..	..	2000[b]	8.3	2.8	27.6	10.2
Vietnam	1998	45.5	9.2	37.4	2002	35.6	6.6	28.9		..	..	..	..
West Bank and Gaza		..	..	..		..	..	..		..	..	..	..
Yemen, Rep.	1998	45.0	30.8	41.8		..	..	..	1998[a]	15.7	4.5	45.2	15.0
Zambia	1996	82.8	46.0	69.2	1998	83.1	56.0	72.9	2002–03[a]	75.8	36.4	94.1	62.2
Zimbabwe	1990–91	35.8	3.4	25.8	1995–96	48.0	7.9	34.9	1995–96[a]	56.1	24.2	83.0	48.2

a. Expenditure base. b. Income base.

2.7a

Regional poverty estimates

Region	1981	1984	1987	1990	1993	1996	1999	2002[a]
People living on less than $1 a day (millions)								
East Asia & Pacific	796	562	426	472	415	287	282	214
China	634	425	308	375	334	212	223	180
Europe & Central Asia	3	2	2	2	17	20	30	10
Latin America & Caribbean	36	46	45	49	52	52	54	47
Middle East & North Africa	9	8	7	6	4	5	8	5
South Asia	475	460	473	462	476	461	429	437
Sub-Saharan Africa	164	198	219	227	242	271	294	303
Total	**1,482**	**1,277**	**1,171**	**1,218**	**1,208**	**1,097**	**1,096**	**1,015**
Excluding China	848	852	863	844	873	886	873	835
Share of people living on less than $1 a day (%)								
East Asia & Pacific	57.7	38.9	28.0	29.6	24.9	16.6	15.7	11.6
China	63.8	41.0	28.5	33.0	28.4	17.4	17.8	14.0
Europe & Central Asia	0.7	0.5	0.4	0.5	3.7	4.3	6.3	2.1
Latin America & Caribbean	9.7	11.8	10.9	11.3	11.3	10.7	10.5	8.9
Middle East & North Africa	5.1	3.8	3.2	2.3	1.6	2.0	2.6	1.6
South Asia	51.5	46.8	45.0	41.3	40.1	36.6	32.2	31.2
Sub-Saharan Africa	41.6	46.3	46.8	44.6	44.0	45.6	45.7	44.0
Total	**40.4**	**32.8**	**28.4**	**27.9**	**26.3**	**22.8**	**21.8**	**19.4**
Excluding China	31.7	29.8	28.4	26.1	25.6	24.6	23.1	21.1
People living on less than $2 a day (millions)								
East Asia & Pacific	1,170	1,109	1,028	1,116	1,079	922	900	748
China	876	814	731	825	803	650	627	533
Europe & Central Asia	20	18	15	23	81	98	113	76
Latin America & Caribbean	99	119	115	125	136	117	127	123
Middle East & North Africa	52	50	53	51	52	61	70	61
South Asia	821	859	911	958	1,005	1,029	1,039	1,091
Sub-Saharan Africa	288	326	355	382	410	447	489	516
Total	**2,450**	**2,480**	**2,478**	**2,654**	**2,764**	**2,674**	**2,739**	**2,614**
Excluding China	1,574	1,666	1,747	1,829	1,961	2,024	2,111	2,082
Share of people living on less than $2 a day (%)								
East Asia & Pacific	84.8	76.6	67.7	69.9	64.8	53.3	50.3	40.7
China	88.1	78.5	67.4	72.6	68.1	53.4	50.1	41.6
Europe & Central Asia	4.7	4.1	3.3	4.9	17.2	20.7	23.8	16.1
Latin America & Caribbean	26.9	30.4	27.8	28.4	29.5	24.1	25.1	23.4
Middle East & North Africa	28.9	25.2	24.2	21.4	20.2	22.3	24.3	19.8
South Asia	89.1	87.2	86.7	85.5	84.5	81.7	78.1	77.8
Sub-Saharan Africa	73.3	76.1	76.1	75.0	74.6	75.1	76.1	74.9
Total	**66.7**	**63.7**	**60.1**	**60.8**	**60.2**	**55.5**	**54.4**	**50.0**
Excluding China	58.8	58.4	57.5	56.6	57.4	56.3	55.8	52.7

Note: Estimates are computed based on population data from *World Development Indicators 2005*.
a. Preliminary estimates not strictly comparable with earlier estimates. See *About the data* for more information.

2.7 Poverty

About the data

The World Bank produced its first global poverty estimates for developing countries for *World Development Report 1990* using household survey data for 22 countries (Ravallion, Datt, and van de Walle 1991). Incorporating survey data collected during the last 15 years, the database has expanded considerably and now includes 440 surveys representing almost 100 developing countries. Some 1.1 million randomly sampled households were interviewed in these surveys, representing 93 percent of the population of developing countries. The surveys asked detailed questions on sources of income and how it was spent and on other household characteristics such as the number of people sharing that income. Most interviewas were conducted by staff of government statistics offices. Along with improvements in data coverage and quality, the underlying methodology has also improved, resulting in better and more comprehensive estimates.

Data availability

Since 1979 there has been considerable expansion in the number of countries that field such surveys, the frequency of the surveys, and the quality of their data. The number of data sets rose dramatically from a mere 13 between 1979 and 1981 to 100 between 1997 and 1999. The drop to 41 available surveys after 1999 reflects the lag between the time data are collected and the time they become available for analysis, not a reduction in data collection. Data coverage is improving in all regions, but Sub-Saharan Africa continues to lag, with only 28 of 48 countries having at least one data set available. A complete overview of data availability by year and country can be obtained at http://iresearch.worldbank.org/povcalnet/.

Data quality

The problems of estimating poverty and comparing poverty rates do not end with data availability. Several other issues, some related to data quality, also arise in measuring household living standards from survey data. One relates to the choice of income or consumption as a welfare indicator. Income is generally more difficult to measure accurately, and consumption comes closer to the notion of standard of living. And income can vary over time even if the standard of living does not. But consumption data are not always available. Another issue is that household surveys can differ widely, for example, in the number of consumer goods they identify. And even similar surveys may not be strictly comparable because of differences in timing or the quality and training of survey enumerators.

Comparisons of 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 own production, particularly important in underdeveloped rural economies) should be included in total consumption expenditure. Similarly, imputed profit from the 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 in the nearest market, while others use the average farmgate selling price.

Whenever possible, the table uses consumption data for deciding who is poor and income surveys only when consumption data are unavailable. In recent editions there has been a change in how income surveys are used. In the past, average household income was adjusted to accord with consumption and income data from national accounts. But in testing this approach using data for some 20 countries for which income and consumption expenditure data were both available from the same surveys, income was found to yield a higher mean than consumption but also higher inequality. When poverty measures based on consumption and income were compared, these two effects roughly cancelled each other out: statistically, there was no significant difference. So recent editions use income data to estimate poverty directly, without adjusting average income measures.

International poverty lines

International comparisons of poverty estimates entail both conceptual and practical problems. Countries have different definitions of poverty, and consistent comparisons across 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—in terms of their command over commodities—differently because one happens to live in a better-off country?

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

Early editions of *World Development Indicators* used PPPs from the Penn World Tables. Recent editions use 1993 consumption PPP estimates produced by the World Bank. Recalculated in 1993 PPP terms, the original international poverty line of $1 a day in 1985 PPP terms is now about $1.08 a day. Any revisions in the PPP of a country to incorporate better price indexes can produce dramatically different poverty lines in local currency.

Issues also arise when comparing poverty measures within countries. For example, the cost of living is typically higher in urban than in rural areas. One reason is that food staples 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 difference between urban and rural poverty lines found in practice reflects only differences in the cost of living. In some countries the urban poverty line in common use has a higher real value—meaning that it allows the purchase of 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.

By combining all this information, a team in the World Bank's Development Research Group calculates the number of people living below various international poverty lines, as well as other poverty and inequality measures that are published in *World Development Indicators*. The database is updated annually as new survey data become available, and

a major reassessment of progress against poverty is made about every three years.

Do it yourself: PovcalNet

Recently, this research team developed *PovcalNet*, an interactive Web-based computational tool that allows users to replicate the calculations by the World Bank's researchers in estimating the extent of absolute poverty in the world. *PovcalNet* is self-contained and powered by reliable built-in software that performs the relevant calculations from a primary database. The underlying software can also be downloaded from the site and used with distributional data of various formats. The *PovcalNet* primary database consists of distributional data calculated directly from household survey data. Detailed information for each of these is also available from the site.

Estimation from distributional data requires an interpolation method. The method chosen was Lorenz curves with flexible functional forms, which have proved reliable in past work. The Lorenz curve can be graphed as the cumulative percentages of total consumption or income against the cumulative number of people, starting with the poorest individual. The empirical Lorenz curves estimated by *PovcalNet* are weighted by household size, so they are based on percentiles of population, not households.

PovcalNet also allows users to calculate poverty measures under different assumptions. For example, instead of $1 a day, users can specify a different poverty line, say $1.50 or $3. Users can also specify different PPP rates and aggregate the estimates using alternative country groupings (for example, UN country groupings or groupings based on average incomes) or a selected set of individual countries. *PovcalNet* is available online at http://iresearch.worldbank.org/povcalnet/.

Note on the 2002 estimates

The 2002 estimates are adapted from *Global Economic Prospects 2006* (page 9, table 1.3). Note that a typesetting error occurred in the printed edition of *Global Economic Prospects 2006*; the 2002 poverty rate estimates reported in table 2.7a are the correct estimates.

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 national poverty line. National estimates are based on population-weighted subgroup estimates from household surveys. • **Population below $1 a day** and **population below $2 a day** are the percentages of the population living on less than $1.08 a day and $2.15 a day at 1993 international prices. As a result of revisions in PPP exchange rates, poverty rates for individual countries cannot be compared with poverty rates reported in earlier editions. • **Poverty gap** is the mean shortfall from 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

The poverty measures are prepared by the World Bank's Development Research Group. The national poverty lines are based on the World Bank's country poverty assessments. The international poverty lines are based on nationally representative primary household surveys conducted by national statistical offices or by private agencies under the supervision of government or international agencies and obtained from government statistical offices and World Bank Group country departments. The World Bank Group has prepared an annual review of its poverty work since 1993. For details on data sources and methods used in deriving the World Bank's latest estimates, see Chen and Ravallion (2004), "How Have the World's Poorest Fared Since the Early 1980s?"

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%
Afghanistan		..	..	..	..	..	..	..	..
Albania	2002[a]	28.2	3.8	9.1	13.5	17.3	22.8	37.4	22.4
Algeria	1995[a]	35.3	2.8	7.0	11.6	16.1	22.7	42.6	26.8
Angola		..	..	..	..	..	..	..	..
Argentina[b]	2003[c]	52.8	1.1	3.2	7.0	12.1	20.7	56.8	39.6
Armenia	2003[a]	33.8	3.6	8.5	12.3	15.7	20.6	42.8	29.0
Australia	1994[c]	35.2	2.0	5.9	12.0	17.2	23.6	41.3	25.4
Austria	2000[c]	29.1	3.3	8.6	13.3	17.4	22.9	37.8	23.0
Azerbaijan	2002[a]	19.0	5.4	12.2	15.8	18.7	22.2	31.1	18.0
Bangladesh	2000[a]	31.8	3.9	9.0	12.5	15.9	21.2	41.3	26.7
Belarus	2002[a]	29.7	3.4	8.5	13.2	17.3	22.7	38.3	23.5
Belgium	2000[c]	33.0	3.4	8.5	13.0	16.3	20.8	41.4	28.1
Benin	2003[a]	36.5	3.1	7.4	11.3	15.4	21.5	44.5	29.0
Bolivia	2002[c]	60.1	0.3	1.5	5.9	10.9	18.7	63.0	47.2
Bosnia and Herzegovina	2001[a]	26.2	3.9	9.5	14.2	17.9	22.6	35.8	21.4
Botswana	1993[a]	63.0	0.7	2.2	4.9	8.2	14.4	70.3	56.6
Brazil	2003[c]	58.0	0.8	2.6	6.2	10.7	18.4	62.1	45.8
Bulgaria	2003[a]	29.2	3.4	8.7	13.7	17.2	22.1	38.3	23.9
Burkina Faso	2003[a]	39.5	2.8	6.9	10.9	14.5	20.5	47.2	32.2
Burundi	1998[a]	42.4	1.7	5.1	10.3	15.1	21.5	48.0	32.8
Cambodia	1997[a]	40.4	2.9	6.9	10.7	14.7	20.1	47.6	33.8
Cameroon	2001[a]	44.6	2.3	5.6	9.3	13.7	20.4	50.9	35.4
Canada	2000[c]	32.6	2.6	7.2	12.7	17.2	23.0	39.9	24.8
Central African Republic	1993[a]	61.3	0.7	2.0	4.9	9.6	18.5	65.0	47.7
Chad		..	..	..	..	..	..	..	..
Chile	2000[c]	57.1	1.2	3.3	6.6	10.5	17.4	62.2	47.0
China	2001[a]	44.7	1.8	4.7	9.0	14.2	22.1	50.0	33.1
Hong Kong, China	1996[c]	43.4	2.0	5.3	9.4	13.9	20.7	50.7	34.9
Colombia	2003[c]	58.6	0.7	2.5	6.2	10.6	18.0	62.7	46.9
Congo, Dem. Rep.		..	..	..	..	..	..	..	..
Congo, Rep.		..	..	..	..	..	..	..	..
Costa Rica	2001[c]	49.9	1.3	3.9	8.1	12.8	20.4	54.8	38.4
Côte d'Ivoire	2002[a]	44.6	2.0	5.2	9.1	13.7	21.3	50.7	34.0
Croatia	2001[a]	29.0	3.4	8.3	12.8	16.8	22.6	39.6	24.5
Cuba		..	..	..	..	..	..	..	..
Czech Republic	1996[c]	25.4	4.3	10.3	14.5	17.7	21.7	35.9	22.4
Denmark	1997[c]	24.7	2.6	8.3	14.7	18.2	22.9	35.8	21.3
Dominican Republic	2003[c]	51.7	1.4	3.9	7.8	12.1	19.4	56.8	41.3
Ecuador	1998[a]	43.7	0.9	3.3	7.5	11.7	19.4	58.0	41.6
Egypt, Arab Rep.	1999–2000[a]	34.4	3.7	8.6	12.1	15.4	20.4	43.6	29.5
El Salvador	2002[c]	52.4	0.7	2.7	7.5	12.8	21.2	55.9	38.8
Eritrea		..	..	..	..	..	..	..	..
Estonia	2003[a]	35.8	2.5	6.7	11.8	16.3	22.4	42.8	27.6
Ethiopia	1999–00[a]	30.0	3.9	9.1	13.2	16.8	21.5	39.4	25.5
Finland	2000[c]	26.9	4.0	9.6	14.1	17.5	22.1	36.7	22.6
France	1995[c]	32.7	2.8	7.2	12.6	17.2	22.8	40.2	25.1
Gabon		..	..	..	..	..	..	..	..
Gambia, The	1998[a]	50.2	1.8	4.8	8.7	12.8	20.3	53.4	37.0
Georgia	2003[a]	40.4	2.0	5.6	10.5	15.3	22.3	46.4	30.3
Germany	2000[c]	28.3	3.2	8.5	13.7	17.8	23.1	36.9	22.1
Ghana	1998–99[a]	40.8	2.1	5.6	10.1	14.9	22.9	46.6	30.0
Greece	2000[c]	34.3	2.5	6.7	11.9	16.8	23.0	41.5	26.0
Guatemala	2002[c]	55.1	0.9	2.9	7.0	11.6	19.0	59.5	43.4
Guinea	1994[a]	40.3	2.6	6.4	10.4	14.8	21.2	47.2	32.0
Guinea-Bissau	1993[a]	47.0	2.1	5.2	8.8	13.1	19.4	53.4	39.3
Haiti	2001[c]	59.2	0.7	2.4	6.2	10.4	17.7	63.4	47.7

Distribution of income or consumption 2.8

	Survey year	Gini index	Percentage share of income or consumption						
			Lowest 10%	Lowest 20%	Second 20%	Third 20%	Fourth 20%	Highest 20%	Highest 10%
Honduras	2003[c]	53.8	1.2	3.4	7.1	11.6	19.6	58.3	42.2
Hungary	2002[a]	26.9	4.0	9.5	13.9	17.6	22.4	36.5	22.2
India	1999–2000[a]	32.5	3.9	8.9	12.3	16.0	21.2	43.3	28.5
Indonesia	2002[a]	34.3	3.6	8.4	11.9	15.4	21.0	43.3	28.5
Iran, Islamic Rep.	1998[a]	43.0	2.0	5.1	9.4	14.1	21.5	49.9	33.7
Iraq		..	..	..	..	..	..	..	..
Ireland	2000[c]	34.3	2.9	7.4	12.3	16.3	21.9	42.0	27.2
Israel	2001[c]	39.2	2.1	5.7	10.5	15.9	23.0	44.9	28.8
Italy	2000[c]	36.0	2.3	6.5	12.0	16.8	22.8	42.0	26.8
Jamaica	2000[a]	37.9	2.7	6.7	10.7	15.0	21.7	46.0	30.3
Japan	1993[c]	24.9	4.8	10.6	14.2	17.6	22.0	35.7	21.7
Jordan	2002–03[a]	38.8	2.7	6.7	10.8	14.9	21.3	46.3	30.6
Kazakhstan	2003[a]	33.9	3.0	7.4	11.9	16.4	22.8	41.5	25.9
Kenya	1997[a]	42.5	2.5	6.0	9.8	14.3	20.8	49.1	33.9
Korea, Dem. Rep.		..	..	..	..	..	..	..	..
Korea, Rep.	1998[c]	31.6	2.9	7.9	13.6	18.0	23.1	37.5	22.5
Kuwait		..	..	..	..	..	..	..	..
Kyrgyz Republic	2003[a]	30.3	3.8	8.9	12.8	16.4	22.5	39.4	24.3
Lao PDR	2002[a]	34.6	3.4	8.1	11.9	15.6	21.1	43.3	28.5
Latvia	2003[a]	37.7	2.5	6.6	11.2	15.5	22.0	44.7	29.1
Lebanon		..	..	..	..	..	..	..	..
Lesotho	1995[a]	63.2	0.5	1.5	4.3	8.9	18.8	66.5	48.3
Liberia		..	..	..	..	..	..	..	..
Libya		..	..	..	..	..	..	..	..
Lithuania	2003[a]	36.0	2.7	6.8	11.6	16.0	22.3	43.2	27.7
Macedonia, FYR	2003[a]	39.0	2.4	6.1	10.8	15.5	22.2	45.5	29.6
Madagascar	2001[a]	47.5	1.9	4.9	8.5	12.7	20.4	53.5	36.6
Malawi	1997[a]	50.3	1.9	4.9	8.5	12.3	18.3	56.1	42.2
Malaysia	1997[c]	49.2	1.7	4.4	8.1	12.9	20.3	54.3	38.4
Mali	1994[a]	50.5	1.8	4.6	8.0	11.9	19.3	56.2	40.4
Mauritania	2000[a]	39.0	2.5	6.2	10.6	15.2	22.3	45.7	29.5
Mauritius		..	..	..	..	..	..	..	..
Mexico	2002[a]	49.5	1.6	4.3	8.3	12.6	19.7	55.1	39.4
Moldova	2003[a]	33.2	3.2	7.8	12.2	16.5	22.1	41.4	26.4
Mongolia	1998[a]	30.3	2.1	5.6	10.0	13.8	19.4	51.2	37.0
Morocco	1998–99[a]	39.5	2.6	6.5	10.6	14.8	21.3	46.6	30.9
Mozambique	1996–97[a]	39.6	2.5	6.5	10.8	15.1	21.1	46.5	31.7
Myanmar		..	..	..	..	..	..	..	..
Namibia	1993[c]	74.3	0.5	1.4	3.0	5.4	11.5	78.7	64.5
Nepal	2003–04[a]	47.2	2.6	6.0	9.0	12.4	18.0	54.6	40.6
Netherlands	1999[c]	30.9	2.5	7.6	13.2	17.2	23.3	38.7	22.9
New Zealand	1997[c]	36.2	2.2	6.4	11.4	15.8	22.6	43.8	27.8
Nicaragua	2001[a]	43.1	2.2	5.6	9.8	14.2	21.1	49.3	33.8
Niger	1995[a]	50.5	0.8	2.6	7.1	13.9	23.1	53.3	35.4
Nigeria	2003[a]	43.7	1.9	5.0	9.6	14.5	21.7	49.2	33.2
Norway	2000[c]	25.8	3.9	9.6	14.0	17.2	22.0	37.2	23.4
Oman		..	..	..	..	..	..	..	..
Pakistan	2002[a]	30.6	4.0	9.3	13.0	16.3	21.1	40.3	26.3
Panama	2002[c]	56.4	0.8	2.5	6.4	11.2	19.6	60.3	43.6
Papua New Guinea	1996[a]	50.9	1.7	4.5	7.9	11.9	19.2	56.5	40.5
Paraguay	2002[c]	57.8	0.6	2.2	6.3	11.3	18.8	61.3	45.4
Peru	2002[c]	54.6	1.1	3.2	7.1	11.8	19.3	58.7	43.2
Philippines	2000[a]	46.1	2.2	5.4	8.8	13.1	20.5	52.3	36.3
Poland	2002[a]	34.5	3.1	7.5	11.9	16.1	22.2	42.2	27.0
Portugal	1997[c]	38.5	2.0	5.8	11.0	15.5	21.9	45.9	29.8
Puerto Rico		..	..	..	..	..	..	..	..

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%
Romania	2003[a]	31.0	3.3	8.1	12.9	17.1	22.7	39.2	24.4
Russian Federation	2002[a]	39.9	2.4	6.1	10.5	14.9	21.8	46.6	30.6
Rwanda	1983–85[a]	28.9	4.2	9.7	13.2	16.5	21.6	39.1	24.2
Saudi Arabia		..	..	..	..	..	..	..	..
Senegal	1995[a]	41.3	2.6	6.4	10.3	14.5	20.6	48.2	33.5
Serbia and Montenegro		..	..	..	..	..	..	..	..
Sierra Leone	1989[a]	62.9	0.5	1.1	2.0	9.8	23.7	63.4	43.6
Singapore	1998[c]	42.5	1.9	5.0	9.4	14.6	22.0	49.0	32.8
Slovak Republic	1996[c]	25.8	3.1	8.8	14.9	18.7	22.8	34.8	20.9
Slovenia	1998–99[c]	28.4	3.6	9.1	14.2	18.1	22.9	35.7	21.4
Somalia		..	..	..	..	..	..	..	..
South Africa	2000[a]	57.8	1.4	3.5	6.3	10.0	18.0	62.2	44.7
Spain	2000[c]	34.7	2.6	7.0	12.1	16.4	22.5	42.0	26.6
Sri Lanka	1999–2000[a]	33.2	3.4	8.3	12.5	16.0	21.0	42.2	27.8
Sudan		..	..	..	..	..	..	..	..
Swaziland	1994[c]	60.9	1.0	2.7	5.8	10.0	17.1	64.4	50.2
Sweden	2000[c]	25.0	3.6	9.1	14.0	17.6	22.7	36.6	22.2
Switzerland	2000[c]	33.7	2.9	7.6	12.2	16.3	22.6	41.3	25.9
Syrian Arab Republic		..	..	..	..	..	..	..	..
Tajikistan	2003[a]	32.6	3.3	7.9	12.3	16.5	22.4	40.8	25.6
Tanzania	2000–01[a]	34.6	2.9	7.3	12.0	16.1	22.3	42.4	26.9
Thailand	2002[a]	42.0	2.7	6.3	9.9	14.0	20.8	49.0	33.4
Togo		..	..	..	..	..	..	..	..
Trinidad and Tobago	1992[c]	40.3	2.1	5.5	10.3	15.5	22.7	45.9	29.9
Tunisia	2000[a]	39.8	2.3	6.0	10.3	14.8	21.7	47.3	31.5
Turkey	2003[a]	43.6	2.0	5.3	9.7	14.2	21.0	49.7	34.1
Turkmenistan	1998[a]	40.8	2.6	6.1	10.2	14.7	21.5	47.5	31.7
Uganda	1999[a]	43.0	2.3	5.9	10.0	14.0	20.3	49.7	34.9
Ukraine	2003[a]	28.1	3.9	9.2	13.6	17.3	22.4	37.5	23.0
United Arab Emirates		..	..	..	..	..	..	..	..
United Kingdom	1999[c]	36.0	2.1	6.1	11.4	16.0	22.5	44.0	28.5
United States	2000[c]	40.8	1.9	5.4	10.7	15.7	22.4	45.8	29.9
Uruguay[b]	2003[c]	44.9	1.9	5.0	9.1	14.0	21.5	50.5	34.0
Uzbekistan	2000[a]	26.8	3.6	9.2	14.1	17.9	22.6	36.3	22.0
Venezuela, RB	2000[c]	44.1	1.6	4.7	9.4	14.5	22.1	49.3	32.8
Vietnam	2002[a]	37.0	3.2	7.5	11.2	14.8	21.1	45.4	29.9
West Bank and Gaza		..	..	..	..	..	..	..	..
Yemen, Rep.	1998[a]	33.4	3.0	7.4	12.2	16.7	22.5	41.2	25.9
Zambia	2002–03[a]	42.1	2.4	6.1	10.2	14.2	20.7	48.8	33.7
Zimbabwe	1995[a]	50.1	1.8	4.6	8.1	12.2	19.3	55.7	40.3

a. Refers to expenditure shares by percentiles of population, ranked by per capita expenditure. b. Urban data. c. Refers to income shares by percentiles of population, ranked by per capita income.

Distribution of income or consumption 2.8

About the data

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

Data on the distribution of income or consumption come from nationally representative household surveys. 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.

For most countries the income distribution indicators are based on the same data used to derive the $1 and $2 a day poverty estimates in table 2.7. This table contains additional countries for which poverty estimates are not provided in table 2.7, either because no reasonable purchasing power parity estimates are available or because the international poverty lines are not relevant for high-income economies.

The distribution data 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 type of data collected, the distribution data 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 *About the data* for table 2.7).

Two sources of noncomparability should be noted in particular. First, the surveys can differ in many respects, including whether they use income or consumption expenditure as the living standard indicator. The distribution of income is typically more unequal than the distribution of consumption. In addition, the definitions of income used differ more often among surveys. Consumption is usually a much better welfare indicator, particularly in developing countries. Second, households differ in size (number of members) and in the extent of income sharing among members. And individuals differ in age and consumption needs. Differences among countries in these respects may bias comparisons of distribution.

World Bank staff have made an effort to ensure that the data are as comparable as possible. Wherever possible, consumption has been used rather than income. Income distribution and Gini indexes for high-income countries are calculated directly from the Luxembourg Income Study database, using an estimation method consistent with that applied for 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 consumption expenditure) 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. 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 0 represents perfect equality, while an index of 100 implies perfect inequality. • **Percentage share of income or consumption** is the share of total income or consumption that accrues to subgroups of population indicated by deciles or quintiles. Percentage shares by quintile may not sum 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 the Luxembourg Income Study database.

2.9 Assessing vulnerability and security

	Urban informal sector employment		Youth unemployment		Female-headed households	Pension contributors		Public expenditure on pensions			
	% of urban employment		Male	Female							
	Male 1995–2003[a]	Female 1995–2003[a]	% of male labor force ages 15–24 2000–04[a]	% of female labor force ages 15–24 2000–04[a]	% of total 1990–2004[a]	Year	% of labor force	Year	% of GDP	Year	Average pension % of per capita income
Afghanistan	..	..	..	..	..		..		..		..
Albania	..	..	42	27	..	2004	40.7	2004	4.6	1995	36.4
Algeria	..	..	..	..	..	2002	38.9	1997	2.1	1991	75.0
Angola	..	..	..	..	..		..		..		..
Argentina	..	..	34	34	..	2004	34.9	1994	6.2		..
Armenia	..	..	..	..	29	1995	66.6	2004	3.4	1996	18.7
Australia	..	..	12	11	..	2003	92.6	1997	5.9	1989	37.3
Austria	..	..	9	10	..	2004	86.8	1995	14.9	1993	69.3
Azerbaijan	..	..	..	..	..	1996	52.0	2003	3.0	1996	51.4
Bangladesh	..	..	11	10	10	1993	3.5	1992	0.0		..
Belarus	..	..	..	..	..	1992	97.0	2004	10.6	1995	31.2
Belgium	..	..	16	20	..	1995	86.2	1997	12.9		..
Benin	50	41	..	..	21	1996	4.8	2003	1.3	1993	189.7
Bolivia	..	..	7	10	20	2002	10.8	2000	4.5		..
Bosnia and Herzegovina	..	..	..	..	..	2004	37.7	2003	7.4		..
Botswana	..	..	34	46	..		..	1996	2.7		..
Brazil	27	27	15	22	20	2004	56.4	1997	9.8		..
Bulgaria	..	..	31	25	..	1994	64.0	2005	8.9	1995	39.3
Burkina Faso	..	..	..	..	9	1993	3.1	1992	0.3	1992	207.3
Burundi	..	..	..	..	..	1993	3.3	1991	0.2	1991	57.4
Cambodia	..	..	..	..	25		..		..		..
Cameroon	..	..	..	..	24	1993	13.7	2004	0.1		..
Canada	..	..	15	12	..	2003	68.3	1997	5.4	1994	54.3
Central African Republic	..	..	..	..	21		..	1990	0.3		..
Chad	..	..	..	..	22	1990	1.1	1997	0.1		..
Chile	..	..	17	23	..	2003	56.2	2001	2.9	1993	56.1
China	..	..	..	..	..	1994	17.6	1996	2.7		..
Hong Kong, China	..	..	19	11	..		..		..		..
Colombia	..	..	..	..	28	1999	20.7	1994	1.1	1989	72.2
Congo, Dem. Rep.	..	..	..	..	..		..		..		..
Congo, Rep.	..	..	..	..	..	1992	5.8	1992	0.9		..
Costa Rica	..	..	13	18	..	2004	62.5	1997	4.2	1993	76.1
Côte d'Ivoire	..	..	..	..	14	1997	9.3	1997	0.3		..
Croatia	..	..	35	40	..	2004	100.0	2005	12.3		..
Cuba	..	..	..	..	..		..	1992	12.6		..
Czech Republic	..	..	21	20	..	1995	85.0	2003	8.5	1996	37.0
Denmark	..	..	9	7	..	2003	91.4	1997	8.8	1994	46.7
Dominican Republic	..	..	16	34	28	2001	26.8	2000	0.8	2000	42.0
Ecuador	..	..	19	25	..	2004	30.9	2002	1.4	2002	55.3
Egypt, Arab Rep.	..	..	19	51	12	2004	65.0	1994	2.5	1994	45.0
El Salvador	..	..	14	8	..	2003	25.1	1997	1.3		..
Eritrea	..	..	..	..	47		..	2001	0.3		..
Estonia	..	..	17	26	..	1995	76.0	2003	6.1	1995	56.7
Ethiopia	39	65	..	..	24		..	2003	0.4	..	..
Finland	..	..	22	19	..	2003	91.2	1997	12.1	1994	57.4
France	..	..	22	24	..	2003	90.1	1997	13.4		..
Gabon	..	..	..	..	26	1995	15.0		..		..
Gambia, The	..	..	..	..	..		..		..		..
Georgia	21	7	20	32	..	2004	25.9	2004	3.0	1996	12.6
Germany	..	..	13	10	..	2003	87.9	1997	12.1	1995	62.8
Ghana	..	..	13	19	34	2003	7.4	2004	0.6		..
Greece	..	..	19	36	..	2002	81.9	1993	11.9	1990	85.6
Guatemala	..	..	..	..	20	2000	16.4	1995	0.7	1995	27.6
Guinea	..	..	..	..	13	1993	1.5		..		..
Guinea-Bissau	..	..	..	..	..		..		..		..
Haiti	..	..	..	..	43		..		..		..

Assessing vulnerability and security

2.9

	Urban informal sector employment		Youth unemployment		Female-headed households	Pension contributors		Public expenditure on pensions			
	% of urban employment		Male % of male labor force ages 15–24	Female % of female labor force ages 15–24	% of total						
	Male 1995–2003[a]	Female 1995–2003[a]	2000–04[a]	2000–04[a]	1990–2004[a]	Year	% of labor force	Year	% of GDP	Year	Average pension % of per capita income
Honduras	..	..	6	12	..	1999	20.6	1994	0.6		..
Hungary	..	..	16	14	..	1996	77.0	2001	11.0	1996	33.6
India	54	41	10	10	10	1992	10.6		..		..
Indonesia	..	..	..	..	12	1995	8.0		..		..
Iran, Islamic Rep.	..	..	..	..	..	2000	35.1	2001	1.5		..
Iraq	..	..	..	..	..	2004	18.4		..		..
Ireland	..	..	9	7	..	2002	100.0	1997	4.6	1993	77.9
Israel	..	..	22	22	..	1992	82.0	1996	5.9	1992	48.1
Italy	..	..	21	27	..	2003	86.0	1997	17.6		..
Jamaica	..	..	22	32	..	1999	44.4	1996	..	1989	25.9
Japan	..	..	11	8	..	2003	92.8	1997	6.9	1989	33.9
Jordan	..	..	..	..	12	2001	36.0	2003	1.9	1995	144.0
Kazakhstan	..	..	13	16	33	2004	35.4	2004	4.9	2001	23.0
Kenya	..	..	..	..	32	1995	18.0	2003	6.4		..
Korea, Dem. Rep.	..	..	..	..	..		..		..		..
Korea, Rep.	..	..	12	9	..	2003	88.7	1997	1.3		..
Kuwait	..	..	..	..	..		..	1990	3.5		..
Kyrgyz Republic	52	48	15	16	33	1997	44.0	1997	6.4	2001	45.0
Lao PDR	..	..	..	..	..		..		..		..
Latvia	..	..	17	20	..	1995	60.5	2002	8.2	1994	47.6
Lebanon	..	..	..	..	..	2003	26.1		..		..
Lesotho	..	..	..	..	..		..		..		..
Liberia	..	..	..	..	..		..		..		..
Libya	..	..	..	..	..	2003	72.8		..		..
Lithuania	50	27	23	28	..	2004	70.7	2003	6.2	1995	21.3
Macedonia, FYR	..	..	65	67	..	1995	49.0	1998	8.7	1996	91.6
Madagascar	..	..	..	..	22	1993	5.4	1990	0.2		..
Malawi	..	..	..	..	27		..		..		..
Malaysia	..	..	8	8	..	1993	48.7	2004	0.7		..
Mali	..	..	..	..	11	1990	2.5	1991	0.4		..
Mauritania	..	..	..	..	29	1995	5.0	1996	0.2		..
Mauritius	..	..	..	..	..	1995	60.0	2002	4.5		..
Mexico	18	22	6	8	..	2002	25.1	2001	7.8		..
Moldova	..	..	17	13	..		..	2003	8.0		..
Mongolia	..	..	20	21	..		..	2004	8.3		..
Morocco	..	..	17	16	17	2003	19.2	2002	2.5	1994	118.0
Mozambique	..	..	..	..	26	1995	2.0	2004	1.4		..
Myanmar	..	..	..	..	..		..		..		..
Namibia	..	..	40	49	42		..		..		..
Nepal	60	76	..	..	16		..		..		..
Netherlands	..	..	8	8	..	2002	100.0	1997	11.1	1989	48.5
New Zealand	..	..	9	10	..	2003	95.7	1997	6.5		..
Nicaragua	..	..	11	16	31	2001	14.9	1996	2.5		..
Niger	..	..	..	..	13	1992	1.3	1992	0.1		..
Nigeria	..	..	..	..	17	1993	1.3	2002	1.5	1991	40.5
Norway	..	..	13	11	..	2003	95.3	1997	8.2	1994	49.9
Oman	..	..	..	..	..		..		..		..
Pakistan	64	61	12	21	7	1993	3.5	2004	0.9		..
Panama	..	..	24	38	..	1998	51.6	1996	4.3		..
Papua New Guinea	..	..	..	..	..		..		..		..
Paraguay	..	..	12	17	17	2004	14.3	2001	0.7[b]		..
Peru	..	..	18	21	20	2003	20.8	2000	2.6		..
Philippines	16	19	24	31	15	1996	28.3	1993	1.0		..
Poland	..	..	39	43	..	1996	68.0	2003	13.9	1995	61.2
Portugal	..	..	14	18	..	2003	94.7	1997	10.0	1989	44.6
Puerto Rico	..	..	24	25	..		..		..		..

2.9 Assessing vulnerability and security

	Urban informal sector employment		Youth unemployment		Female-headed households	Pension contributors		Public expenditure on pensions			
	% of urban employment										
	Male 1995–2003[a]	Female 1995–2003[a]	Male % of male labor force ages 15–24 2000–04[a]	Female % of female labor force ages 15–24 2000–04[a]	% of total 1990–2004[a]	Year	% of labor force	Year	% of GDP	Year	Average pension % of per capita income
Romania	..	..	18	19	..	1994	55.0	2002	7.1	1994	34.1
Russian Federation	10	9	..	..	..		..	2004	5.8	1995	18.3
Rwanda	..	..	..	..	36	1993	9.3		..		..
Saudi Arabia	..	..	..	..	..		..		..		..
Senegal	..	..	..	..	18	2003	4.1	1998	1.5	1997	85.0[b]
Serbia and Montenegro	..	..	..	..	..		..	2004	10.3		..
Sierra Leone	..	..	..	..	..	2004	3.5		..		..
Singapore	..	..	6	10	..	1995	73.0	1999	0.5		..
Slovak Republic	..	..	34	31	..	2000	70.9	2003	7.4	1994	44.5
Slovenia	..	..	13	15	..	1995	86.0	2003	10.1	1996	49.3
Somalia	..	..	..	..	..		..		..		..
South Africa	16	28	56	65	42		..		..		..
Spain	..	..	19	26	..	2003	91.2	1997	10.9	1995	54.1
Sri Lanka	..	..	22	36	..	1992	28.8	2005	1.8		..
Sudan	..	..	..	..	..	1995	12.1		..		..
Swaziland	..	..	..	..	..		..		..		..
Sweden	..	..	18	16	..	2003	87.1	1997	11.1	1994	78.0
Switzerland	..	..	8	7	..	2003	100.0	1997	13.4	1993	44.4
Syrian Arab Republic	..	..	21	39	..		..	1991	0.5		..
Tajikistan	..	..	..	..	..		..	1996	3.0		..
Tanzania	60	85	..	..	23	1996	2.0		..		..
Thailand	..	..	5	4	..	1999	18.0		..		..
Togo	..	..	..	..	24	1997	15.9	1997	0.6	1993	178.8
Trinidad and Tobago	..	..	17	26	..		..	1996	0.6	..	..
Tunisia	..	..	..	..	..	2003	48.2	2000	4.2	1991	89.5
Turkey	10	6	20	19	10	2002	33.2	2002	7.1	1993	56.0
Turkmenistan	..	..	..	..	27		..	1996	2.3		..
Uganda	..	..	..	..	28	1994	8.2	2003	0.3		..
Ukraine	5	5	16	17	..	2005	67.5	2005	15.4	1995	30.9
United Arab Emirates	..	..	..	..	..		..		..		..
United Kingdom	..	..	12	10	..	2003	96.2	1997	10.3		..
United States	..	..	13	11	..	2003	92.2	1997	7.5	1989	33.0
Uruguay	..	..	34	44	..	2004	37.1	1996	15.0	1996	64.1
Uzbekistan	..	..	..	..	22		..	2004	0.1	1995	45.8
Venezuela, RB	..	..	24	35	..	2004	29.3	2001	2.7		..
Vietnam	..	..	4	5	26	1998	8.4	1998	1.6		..
West Bank and Gaza	..	..	43	37	..	2000	18.6		..		..
Yemen, Rep.	..	..	..	..	9	1999	13.5	1994	0.1		..
Zambia	..	..	..	..	23	1994	10.2	1993	0.1		..
Zimbabwe	..	..	28	21	34	1995	12.0		..		..
World			.. w	.. w							
Low income			..	..							
Middle income			..	..							
Lower middle income			..	..							
Upper middle income			19	20							
Low & middle income			..	..							
East Asia & Pacific			..	..							
Europe & Central Asia			..	..							
Latin America & Carib.			12	17							
Middle East & N. Africa			..	..							
South Asia			10	13							
Sub-Saharan Africa			..	..							
High income			14	13							
Europe EMU			18	20							

a. Data are for the most recent year available. b. Refers to system covering private sector workers.

Assessing vulnerability and security 2.9

About the data

As traditionally defined and measured, poverty is a static concept, and vulnerability a dynamic one. Vulnerability reflects a household's resilience in the face of shocks and the likelihood that a shock will lead to a decline in well-being. Thus, it depends primarily on the household's asset endowment and insurance mechanisms. Because poor people have fewer assets and less diversified sources of income than the better-off, fluctuations in income affect them more.

Enhancing security for poor people means reducing their vulnerability to such risks as ill health, providing them the means to manage risk themselves, and strengthening market or public institutions for managing risk. The tools include microfinance programs, old age assistance and pensions, and public provision of education and basic health care (see tables 2.10 and 2.14).

Poor households face many risks, and vulnerability is thus multidimensional. The indicators in the table focus on individual risks—informal sector employment, youth unemployment, female-headed households, income insecurity in old age, and the extent to which publicly provided services may be capable of mitigating some of these risks. Poor people face labor market risks, often having to take up precarious, low-quality jobs in the informal sector and to increase their household's labor market participation by sending their children to work. Income security is a prime concern for the elderly.

For informal sector employment, the data are from labor force and special informal sector surveys, various household surveys, surveys of household industries or economic activities, surveys of small and micro enterprises, and official estimates. The international comparability of the data is affected by differences among countries in definitions and coverage and in the treatment of domestic workers and those who have a secondary job in the informal sector. The data in the table are based on national definitions of urban areas established by countries. For details on these definitions, see *Data sources*.

Youth unemployment is an important policy issue for many economies. Experiencing unemployment may permanently impair a young person's productive potential and future employment opportunities. The table presents unemployment among youth ages 15–24, but the lower age limit for young people in a country could be determined by the minimum age for leaving school, so age groups could differ across countries. Also, since this age group is likely to include school leavers, the level of youth unemployment varies considerably over the year as a result of different school opening and closing dates. The youth unemployment rate shares similar limitations on comparability as the general unemployment rate. For further information, see *About the data* for table 2.5.

The data on female-headed households are from recent Demographic and Health Surveys. The definition and concept of the female-headed household differ greatly across economies, making cross-country comparison difficult. In some cases it is assumed that a woman cannot be the head of any household in which an adult male is present, because of sex-biased stereotype. Users need to be cautious when interpreting the data.

The data on pension contributors come from national sources, the International Labour Organization (ILO), and International Monetary Fund country reports. Coverage by pension schemes may be broad or even universal where eligibility is determined by citizenship, residency, or income status. In contribution-related schemes, however, eligibility is usually restricted to individuals who have made contributions for a minimum number of years. Definitional issues—relating to the labor force, for example—may arise in comparing coverage by contribution-related schemes over time and across countries (for country-specific information, see Palacios and Pallares-Miralles 2000). The share of the labor force covered by a pension scheme may be overstated in countries that do not attempt to count informal sector workers as part of the labor force.

Public interventions and institutions can provide services directly to poor people, although whether these work well for the poor is debated. State action is often ineffective, in part because governments can influence only a few of the many sources of well-being and in part because of difficulties in delivering good and services. The effectiveness of public provision is further constrained by the fiscal resources at governments' disposal and the fact that state institutions may not be responsive to the needs of poor people.

The data on public pension spending are from national sources and cover all government expenditures, including the administrative costs of pension programs. They cover noncontributory pensions or social assistance targeted to the elderly and disabled and spending by social insurance schemes for which contributions had previously been made. The pattern of spending in a country is correlated with its demographic structure—spending increases as the population ages.

Definitions

• **Urban informal sector employment** is broadly characterized as employment in urban areas in units that produce goods or services on a small scale with the primary objective of generating employment and income for those concerned. These units typically operate at a low level of organization, with little or no division between labor and capital as factors of production. Labor relations are based on casual employment, kinship, or social relationships rather than contractual arrangements. • **Youth unemployment** refers to the share of the labor force ages 15–24 without work but available for and seeking employment. Definitions of labor force and unemployment may differ by country (see *About the data*). • **Female-headed households** refer to the percentage of households with a female head. • **Pension contributors** refer to the share of the labor force covered by a pension scheme. • **Public expenditure on pensions** includes all government expenditures on cash transfers to the elderly, the disabled, and survivors and the administrative costs of these programs. • **Average pension** is estimated by dividing total pension expenditure by the number of pensioners.

Data sources

Data on urban informal sector employment and youth unemployment are from the ILO database Key Indicators of the Labour Market, fourth edition. Data on female-headed household are from Demographic and Health Surveys by Macro International. Data on pension contributors and pension spending are from Robert Palacios and Montserrat Pallares-Miralles's "International Patterns of Pension Provision" (2000) and updates. Further updates, notes, and sources will be available under "Knowledge and information" on the World Bank's Web site on pensions (www.worldbank.org/pensions).

2.10 Education inputs

	Public expenditure per student						Public expenditure on education		Trained teachers in primary education	Primary pupil-teacher ratio
	% of GDP per capita									
	Primary[a]		Secondary		Tertiary		% of GDP	% of total government expenditure	% of total	pupils per teacher
	1991	2004[b]	1999	2004[b]	1999	2004[b]	2004[b]	2004[b]	2004[b]	2004[b]
Afghanistan	..	..	..	..	..	..	..	..	..	65
Albania	..	*7.7*	..	*11.9*	..	*36.3*	*2.8*	..	..	*21*
Algeria	..	*11.3*	..	*17.1*	..	..	..	..	98.3	27
Angola	..	..	..	..	..	..	..	..	..	..
Argentina	..	*10.9*	16.4	*14.9*	17.7	*13.1*	*4.0*	*13.8*	..	*17*
Armenia	..	*8.9*	*12.4*	*11.1*	*29.1*	*38.3*	*3.2*	..	66.7	22
Australia	..	*16.4*	14.9	*14.6*	26.3	*22.6*	*4.9*	..	..	..
Austria	18.6	*23.9*	30.7	*28.2*	53.0	*47.0*	*5.7*	..	..	*13*
Azerbaijan	..	*7.6*	17.2	*13.4*	19.3	*12.8*	3.3	*19.2*	99.8	14
Bangladesh	..	7.2	12.7	13.7	47.2	*33.8*	2.2	*15.5*	*51.2*	*54*
Belarus	..	13.7	..	22.9	..	27.6	5.8	13.0	98.5	15
Belgium	16.3	*19.0*	24.4	*25.2*	46.0	*38.6*	*6.3*	..	..	*12*
Benin	..	*12.2*	*26.1*	*22.1*	*202.9*	..	*3.3*	..	72.2	52
Bolivia	..	16.4	11.7	13.0	44.1	35.9	6.4	*18.1*	..	24
Bosnia and Herzegovina	..	..	..	..	..	..	..	..	..	..
Botswana	..	..	*5.6*	..	*92.6*	..	..	..	*89.7*	*26*
Brazil	..	..	10.5	..	63.2	..	..	..	..	*24*
Bulgaria	22.4	*16.2*	*18.8*	*19.0*	*18.0*	*18.7*	*3.6*	..	..	*17*
Burkina Faso	..	..	..	..	..	..	..	..	89.5	49
Burundi	13.4	19.9	..	75.8	1,190.1	442.1	5.2	*13.0*	..	51
Cambodia	..	6.5	*6.8*	..	*46.8*	..	2.0	..	96.5	55
Cameroon	..	..	18.6	..	71.3	75.7	3.8	17.2	68.5	53
Canada	..	..	..	..	49.3	..	..	..	..	*17*
Central African Republic	11.9	..	..	..	..	..	..	..	..	..
Chad	8.0	..	33.6	..	..	..	..	..	..	69
Chile	..	*15.3*	*14.9*	*16.3*	*19.4*	*15.3*	*4.1*	*19.1*	..	*34*
China	..	..	12.7	..	99.2	..	..	..	*96.8*	*21*
Hong Kong, China	..	16.0	*18.2*	22.0	*62.9*	67.9	4.7	23.3	91.8	19
Colombia	..	16.7	17.0	16.0	39.9	26.3	4.9	11.7	..	28
Congo, Dem. Rep.	..	..	..	..	..	..	..	..	..	..
Congo, Rep.	..	*7.9*	..	*18.3*	404.9	*245.9*	*3.2*	..	62.2	83
Costa Rica	7.8	17.1	23.2	19.7	55.0	36.3	4.9	18.5	97.4	22
Côte d'Ivoire	..	..	54.5	..	212.8	..	..	..	*100.0*	*42*
Croatia	..	*24.0*	..	*23.5*	41.3	*34.5*	*4.5*	*10.0*	*100.0*	*18*
Cuba	21.4	..	41.3	..	86.4	..	..	19.4	100.0	10
Czech Republic	..	*12.0*	22.1	*23.0*	34.4	*31.8*	*4.4*	..	..	*17*
Denmark	..	*24.9*	38.3	*36.1*	66.2	*74.6*	*8.5*	..	..	..
Dominican Republic	..	5.0	*2.5*	1.3	..	..	1.1	6.3	79.4	21
Ecuador	..	..	9.6	..	..	..	..	..	70.9	23
Egypt, Arab Rep.	..	..	..	..	..	..	..	..	..	*22*
El Salvador	..	*9.4*	*7.9*	*9.0*	*9.3*	*11.1*	2.8	*20.0*	..	..
Eritrea	..	9.8	*37.2*	17.4	*428.9*	855.5	3.8	..	83.1	47
Estonia	..	*19.8*	28.0	*25.5*	32.7	*24.9*	*5.7*	..	..	*14*
Ethiopia	32.0	..	..	..	..	..	6.1	20.4	..	65
Finland	21.9	*18.3*	26.4	*27.4*	41.3	*38.1*	*6.4*	..	..	*16*
France	12.0	*17.8*	29.0	*28.6*	30.2	*29.3*	*5.6*	..	..	*19*
Gabon	..	..	..	..	..	..	..	..	*100.0*	36
Gambia, The	13.7	7.1	..	8.7	..	229.7	1.9	*8.9*	..	..
Georgia	..	..	..	..	..	..	2.9	13.1	*97.4*	22
Germany	..	*16.7*	20.8	*22.6*	41.1	*43.0*	*4.8*	..	..	*14*
Ghana	..	..	..	..	..	..	..	..	60.7	32
Greece	7.6	*15.6*	17.4	..	29.5	*26.8*	*4.0*	..	..	*12*
Guatemala	..	4.7	*4.2*	3.7	..	..	..	..	..	31
Guinea	..	..	..	..	..	..	..	..	..	45
Guinea-Bissau	..	..	..	..	..	..	..	..	..	..
Haiti	9.1	..	..	..	..	..	..	..	..	..

Education inputs 2.10

	Public expenditure per student						Public expenditure on education		Trained teachers in primary education	Primary pupil-teacher ratio
	% of GDP per capita									
	Primary[a]		Secondary		Tertiary		% of GDP	% of total government expenditure	% of total	pupils per teacher
	1991	2004[b]	1999	2004[b]	1999	2004[b]	2004[b]	2004[b]	2004[b]	2004[b]
Honduras	..	..	..	..	..	..	..	..	87.2	34
Hungary	21.1	*20.8*	19.1	*21.4*	34.3	*36.1*	*5.5*	..	..	*10*
India	..	..	21.6	..	75.7	..	..	..	..	*41*
Indonesia	..	*2.9*	*8.7*	*5.6*	*21.9*	*15.6*	*1.1*	*9.0*	..	*20*
Iran, Islamic Rep.	..	10.5	*10.9*	11.5	*38.4*	26.5	4.8	*17.7*	100.0	20
Iraq	..	..	..	..	..	..	..	..	100.0	21
Ireland	11.6	*12.4*	16.9	*18.1*	28.8	*26.6*	*4.3*	..	..	*19*
Israel	11.9	*23.0*	22.7	*23.5*	32.1	*26.6*	*7.5*	*13.7*	..	*15*
Italy	15.3	*25.4*	26.8	*28.1*	25.6	*27.4*	*4.7*	..	..	*11*
Jamaica	9.9	*15.5*	*25.6*	*24.8*	*85.9*	*44.6*	*5.3*	*9.5*	..	*30*
Japan	..	*22.2*	20.5	*21.7*	14.9	*17.1*	*3.6*	..	..	*20*
Jordan	..	*15.2*	16.4	*18.0*	..	..	..	..	..	*20*
Kazakhstan	..	10.1	..	7.9	..	6.2	2.4	..	..	18
Kenya	13.4	25.2	*18.4*	25.1	*255.5*	409.2	7.0	29.2	98.8	40
Korea, Dem. Rep.	..	..	..	..	..	..	..	..	..	..
Korea, Rep.	11.8	*16.3*	15.6	*23.7*	8.3	*5.0*	*4.2*	*15.5*	..	30
Kuwait	34.8	25.9	..	28.3	..	178.1	8.2	17.4	100.0	13
Kyrgyz Republic	..	*7.7*	11.9	*14.5*	27.7	*21.2*	4.6	23.0	57.9	24
Lao PDR	..	*6.7*	4.3	*8.9*	66.9	*82.4*	2.3	*11.0*	79.4	31
Latvia	..	*22.4*	*23.5*	*25.9*	*23.0*	*19.0*	*5.8*	..	..	*14*
Lebanon	..	..	6.2	..	12.9	14.7	2.6	12.7	13.5	14
Lesotho	..	*20.8*	69.1	*48.6*	1,249.9	*603.3*	*9.0*	..	66.8	44
Liberia	..	..	..	..	..	..	..	..	..	..
Libya	..	..	..	..	23.8	..	..	..	..	..
Lithuania	..	..	..	..	*34.4*	*32.9*	*5.9*	..	..	*16*
Macedonia, FYR	..	*23.6*	..	*7.7*	..	*23.7*	*3.5*	..	..	*20*
Madagascar	..	..	39.9	..	180.9	*184.2*	3.3	18.2	..	52
Malawi	7.4	*14.4*	..	*30.3*	..	..	*6.0*	..	..	..
Malaysia	10.1	*20.2*	*22.3*	*28.3*	*83.3*	*102.4*	*8.1*	*20.3*	..	*19*
Mali	..	..	61.6	..	265.0	..	..	..	..	52
Mauritania	..	..	45.4	..	99.9	..	3.4	..	100.0	45
Mauritius	10.3	*13.6*	*15.6*	*20.3*	*41.2*	45.3	4.7	15.7	100.0	22
Mexico	4.9	*14.4*	14.5	*16.2*	48.8	*49.8*	*5.3*	..	..	*27*
Moldova	..	*17.1*	*21.2*	*26.2*	*19.0*	*20.7*	*4.9*	*21.4*	..	19
Mongolia	..	15.7	*19.5*	14.6	*36.4*	25.0	7.5	19.1	..	35
Morocco	15.8	19.3	51.4	46.9	109.6	87.2	6.3	27.8	..	28
Mozambique	..	..	..	..	..	..	..	..	..	65
Myanmar	..	..	*7.1*	..	*29.0*	..	..	..	*65.0*	*33*
Namibia	..	*21.3*	37.4	*25.5*	161.7	*112.6*	*7.2*	..	*49.5*	*28*
Nepal	..	*12.7*	13.5	*10.7*	*144.9*	*72.7*	*3.4*	*14.9*	*30.5*	*40*
Netherlands	12.6	*18.0*	21.8	*22.9*	44.2	*39.8*	*5.1*	..	..	..
New Zealand	17.2	*18.7*	24.3	*22.2*	41.6	*35.6*	*6.7*	*15.1*	..	*18*
Nicaragua	..	9.1	..	10.7	..	..	*3.1*	*15.0*	74.6	35
Niger	..	*19.0*	*88.4*	*64.3*	*344.8*	*345.1*	2.3	..	75.6	44
Nigeria	..	..	..	..	..	..	..	..	50.7	36
Norway	32.8	*20.5*	27.0	*30.7*	46.3	*48.5*	*7.6*	..	..	*10*
Oman	11.7	*13.1*	22.2	*20.5*	*47.5*	*53.8*	*4.6*	26.1	*99.8*	19
Pakistan	..	..	..	..	..	..	2.0	..	..	47
Panama	11.3	9.9	19.1	12.6	33.6	27.0	3.9	8.9	74.3	24
Papua New Guinea	..	..	..	..	..	..	..	..	..	*35*
Paraguay	..	*12.3*	*17.3*	*13.7*	*55.2*	*28.2*	*4.4*	*11.4*	..	*27*
Peru	..	*6.4*	*9.2*	*8.7*	*21.3*	*14.0*	*3.0*	*17.1*	..	*25*
Philippines	..	*11.1*	*10.7*	*9.2*	*15.0*	*14.5*	*3.2*	*17.8*	..	*35*
Poland	..	*23.5*	*11.6*	*20.8*	21.5	*22.1*	*5.6*	*12.8*	..	*13*
Portugal	17.2	*24.0*	29.1	*31.6*	29.7	*26.0*	*5.8*	..	..	*11*
Puerto Rico	..	..	..	..	..	..	..	..	..	..

2.10 Education inputs

	Public expenditure per student						Public expenditure on education		Trained teachers in primary education	Primary pupil-teacher ratio
	% of GDP per capita									
	Primary[a]		Secondary		Tertiary		% of GDP	% of total government expenditure	% of total	pupils per teacher
	1991	2004[b]	1999	2004[b]	1999	2004[b]	2004[b]	2004[b]	2004[b]	2004[b]
Romania	..	*9.9*	*15.9*	*15.1*	*32.4*	*26.5*	*3.5*	..	..	*17*
Russian Federation	..	..	..	..	..	..	*3.8*	*10.7*	*99.0*	*17*
Rwanda	..	..	*28.4*	..	..	..	..	..	81.7	62
Saudi Arabia	..	..	*31.4*	..	..	..	..	..	..	12
Senegal	19.4	..	..	..	..	..	4.0	..	50.9	43
Serbia and Montenegro	..	..	..	..	..	..	..	..	..	..
Sierra Leone	..	..	..	..	..	..	..	..	..	..
Singapore	..	..	..	..	..	..	..	..	..	..
Slovak Republic	..	*11.3*	18.5	*18.8*	33.0	*31.1*	*4.3*	..	..	*18*
Slovenia	16.8	..	..	..	*28.7*	*26.3*	*6.0*	..	..	*13*
Somalia	..	..	..	..	..	..	..	..	..	..
South Africa	..	13.7	21.5	20.3	65.2	47.1	5.4	18.1	*78.7*	*34*
Spain	11.7	*19.2*	25.3	*24.7*	20.4	*23.1*	*4.5*	..	..	*14*
Sri Lanka	..	..	..	..	..	..	..	..	..	*23*
Sudan	..	..	..	..	..	..	..	..	..	*29*
Swaziland	7.6	*11.0*	26.7	*47.4*	397.3	260.5	6.2	..	*90.6*	*31*
Sweden	46.5	*24.4*	26.4	*26.7*	53.3	*50.6*	*7.7*	..	..	*11*
Switzerland	36.5	*24.3*	27.7	*29.2*	54.5	*59.9*	*5.8*	..	..	..
Syrian Arab Republic	..	*14.5*	22.1	*26.8*	..	..	..	..	..	18
Tajikistan	..	6.7	..	9.2	..	8.8	2.8	16.9	84.1	22
Tanzania	..	..	..	..	..	..	..	..	100.0	58
Thailand	11.6	13.8	*11.5*	13.0	*35.5*	22.7	4.2	27.5	..	*21*
Togo	..	*6.7*	30.9	..	317.9	..	*2.6*	*13.6*	45.0	44
Trinidad and Tobago	..	*16.0*	12.2	..	147.6	..	*4.3*	..	81.0	18
Tunisia	..	*15.5*	*26.7*	*23.6*	*78.7*	*62.8*	*6.4*	..	..	*22*
Turkey	10.9	*13.9*	*14.4*	*9.4*	*46.0*	*50.3*	*3.6*	..	..	..
Turkmenistan	..	..	..	..	..	..	..	..	..	..
Uganda	..	11.6	..	34.9	..	194.1	5.2	18.3	80.4	50
Ukraine	..	10.4	*11.2*	15.7	*36.4*	27.1	4.6	18.3	99.7	19
United Arab Emirates	..	*7.7*	11.6	*13.3*	..	*2.2*	*1.6*	*22.5*	60.9	15
United Kingdom	14.9	*16.4*	15.7	*15.5*	26.2	*28.9*	*5.3*	*11.5*	..	*17*
United States	..	*21.8*	22.7	*25.2*	27.2	*26.2*	*5.7*	..	..	*15*
Uruguay	7.8	*7.9*	*11.4*	*9.0*	*19.3*	*19.0*	*2.6*	*9.6*	..	*21*
Uzbekistan	..	..	..	..	..	..	..	..	..	..
Venezuela, RB	..	..	..	..	..	..	..	..	..	20
Vietnam	..	..	..	..	..	..	*4.4*	17.1	*87.0*	23
West Bank and Gaza	..	..	..	..	..	..	..	..	..	27
Yemen, Rep.	..	..	..	..	..	..	..	..	..	..
Zambia	..	9.3	*19.9*	11.9	*168.2*	..	2.8	14.8	*100.0*	49
Zimbabwe	21.3	..	*20.0*	..	*200.4*	..	..	..	..	*39*
World	**.. m**	***15.2* m**	***20.0* m**	***18.9* m**	***38.5* m**	***34.5* m**	***4.4* m**	**.. m**	**.. m**	***29* m**
Low income	..	..	..	..	..	..	..	..	..	*43*
Middle income	..	*13.1*	*16.3*	*16.3*	*37.8*	*32.5*	*4.4*	..	..	*22*
Lower middle income	..	*11.3*	*14.1*	*13.6*	..	*29.9*	*3.5*	..	..	*22*
Upper middle income	..	*14.4*	*17.8*	*19.6*	33.9	*32.7*	*4.5*	..	..	*22*
Low & middle income	..	*12.4*	..	..	..	..	*4.1*	..	..	*31*
East Asia & Pacific	..	*9.5*	*8.4*	..	*34.3*	..	*3.2*	..	*95.4*	*22*
Europe & Central Asia	..	*12.0*	*16.4*	*16.4*	*31.1*	*25.7*	*4.1*	..	..	*17*
Latin America & Carib.	..	*12.3*	*14.9*	*14.3*	*37.5*	*29.0*	*4.3*	*15.3*	..	*25*
Middle East & N. Africa	..	*14.5*	..	*20.5*	..	..	..	..	..	*24*
South Asia	..	..	13.5	..	*86.7*	..	*2.4*	..	..	*42*
Sub-Saharan Africa	..	..	..	..	..	..	..	..	..	49
High income	16.3	*19.1*	24.3	*24.7*	32.1	*28.9*	*5.6*	..	..	*16*
Europe EMU	14.0	*18.3*	25.3	*26.3*	30.2	*29.3*	*5.1*	..	..	*14*

a. Break in series between 1997 and 1998 due to change from International Standard Classification of Education (ISCED) 1976 to ISCED97. b. Provisional data.

Education inputs 2.10

About the data

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

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

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

The share of public expenditure devoted to education allows an assessment of the priority a government assigns to education relative to other public investments. It also reflects a government's commitment to investing in human capital development. However, returns on investment to education, especially primary and lower secondary education, cannot be understood simply by comparing current education indicators with national income. It takes a long time before currently enrolled children can productively contribute to the national economy (Hanushek 2002).

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

The primary pupil-teacher ratio reflects the average numbers of pupils per teacher. It is different from the average class size because of the different practices countries employ, such as part-time teaching, school shifts, and multigrade classes. The comparability of pupil-teacher ratios across countries is affected by the definition of teachers and by differences in class size by grade and in the number of hours taught, as well as the different practices mentioned above. Moreover, the underlying enrollment levels are subject to a variety of reporting errors (for further discussion of enrollment data, see *About the data* for table 2.11). While the pupil-teacher ratio is often used to compare the quality of schooling across countries, it is often weakly related to the value added of schooling systems (Behrman and Rosenzweig 1994).

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

And in 2006 the UNESCO Institute for Statistics changed its convention for citing the reference year of education data and indicators to the calendar year in which the academic or financial year ends. Data that used to be listed for 2003/04, for example, is now listed for 2004. This change was implemented to present the most recent data available and to align the data reporting with that of other international organizations (in particular the Organisation for Economic Co-operation and Development and Eurostat).

Definitions

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

2.10a

Estimated impact of HIV/AIDS on education in three Sub-Saharan countries, 2005

	Kenya			Tanzania			Zambia		
	Low	Medium	High	Low	Medium	High	Low	Medium	High
Teacher deaths due to AIDS	700	1,620	3,020	605	1,290	2,010	580	1,030	1,500
Share of teacher attrition (%)	7.5	18	29.6	9.3	19.9	31	23.3	40.4	48.8
Teacher-years of absenteeism due to AIDS	690	1,590	2,930	610	1,290	2,200	605	1,090	1,580
Share of total teacher-years (%)	0.4	0.8	1.8	0.5	1.1	2.3	1.3	2.2	3.9

In the best-case scenario (low estimate) Kenya, Tanzania, and Zambia will lose 600–700 teacher-years through absenteeism caused by HIV/AIDS. In the worst-case scenario (high estimate) they will lose 1,200–3,000 teacher-years.

Note: The teacher infection rate is half the general population infection rate for the low estimate, the same as the general population infection rate for the medium estimate, and twice the general population infection rate for the high estimate. All estimates are modeled estimates.

Source: Desai and Jukes 2005 cited in UNESCO 2006 (p.88).

Data sources

Data on education inputs are from the UNESCO Institute for Statistics, which compiles international data on education in cooperation with national commissions and national statistical services. Data for latest years are provisional, as of January 2006.

2.11 Participation in education

	Gross enrollment ratio				Net enrollment ratio				Children out of school	
	% of relevant age group				% of relevant age group				thousand primary-school-age children	
	Preprimary	Primary	Secondary	Tertiary	Primary[a]		Secondary[a]		Male	Female
	2004[b]	2004[b]	2004[b]	2004[b]	1991	2004[b]	1991	2004[b]	2004	2004
Afghanistan	*1*	90	13	1	..	..	..	..	..	..
Albania	*49*	*104*	*78*	*16*	95	*96*	..	*74*	*5*	*6*
Algeria	5	112	81	20	89	97	53	66	0	41
Angola	..	..	..	*1*	50	..	..	..	..	..
Argentina	*62*	*118*	*99*	*61*	..	..	..	*81*	*3*	*11*
Armenia	31	101	91	26	..	97	..	89	3	0
Australia	*100*	*102*	*154*	*74*	99	*95*	79	*85*	*51*	*44*
Austria	*88*	*105*	*100*	*49*	88	..	..	*89*	..	..
Azerbaijan	28	97	83	15	89	84	..	*77*	50	51
Bangladesh	*12*	*106*	*51*	*7*	..	..	..	*48*	..	..
Belarus	100	101	93	61	86	95	..	87	13	19
Belgium	*116*	*105*	*160*	*61*	96	*100*	87	*97*	*4*	*4*
Benin	4	99	26	..	41	83	..	..	..	..
Bolivia	48	113	89	41	..	95	..	74	25	18
Bosnia and Herzegovina	..	..	..	..	..	..	..	..	..	..
Botswana	..	*104*	*74*	6	83	*82*	35	*60*	*29*	*22*
Brazil	*55*	*145*	*110*	*20*	85	*97*	17	*75*	..	..
Bulgaria	*77*	*105*	*99*	*41*	86	*94*	63	*88*	*6*	*7*
Burkina Faso	*1*	53	12	*1*	29	40	..	10	590	681
Burundi	1	80	12	2	53	57	..	8	240	278
Cambodia	9	137	*26*	3	69	98	..	*25*	..	..
Cameroon	20	114	44	5	74	..	..	..	..	..
Canada	*65*	*101*	*105*	*57*	98	..	89	..	..	..
Central African Republic	3	64	*12*	..	52	..	..	..	..	..
Chad	..	71	15	..	35	*57*	..	*11*	*243*	*413*
Chile	*50*	*99*	*88*	*43*	89	*86*	55	*78*	*119*	*124*
China	*36*	*115*	*70*	*15*	97	..	..	..	..	..
Hong Kong, China	70	108	85	32	..	97	..	78	1	12
Colombia	38	111	75	27	69	83	34	55	379	334
Congo, Dem. Rep.	*1*	..	..	..	54	..	..	..	..	..
Congo, Rep.	6	89	*32*	*4*	79	..	..	..	..	..
Costa Rica	64	112	68	*19*	87	92	38	50	22	18
Côte d'Ivoire	*3*	*72*	*25*	..	45	*56*	..	*20*	*519*	*705*
Croatia	*47*	*94*	*88*	*39*	79	*87*	63	*85*	*7*	*7*
Cuba	116	100	93	54	93	96	70	87	9	20
Czech Republic	*104*	*102*	*97*	*37*	87	*87*	..	*90*	*38*	*36*
Denmark	*90*	*103*	*127*	*67*	98	*100*	87	*95*	*0*[c]	*0*
Dominican Republic	32	112	68	33	57	86	..	49	77	63
Ecuador	77	117	61	..	98	99	..	52	11	0
Egypt, Arab Rep.	*14*	*100*	*87*	*29*	84	*94*	..	*79*	*78*	*218*
El Salvador	50	113	60	18	..	91	..	*48*	35	32
Eritrea	7	66	28	1	16	48	..	19	135	156
Estonia	*109*	*100*	*96*	*64*	99	*95*	..	*88*	*1*	*1*
Ethiopia	2	77	28	2	22	46	..	25	..	..
Finland	*57*	*102*	*127*	*87*	98	*100*	93	*94*	*1*	*1*
France	*113*	*105*	*110*	*55*	100	*100*	..	*95*	*7*	*3*
Gabon	*14*	130	*50*	..	85	..	..	..	..	..
Gambia, The	*18*	..	..	1	48	..	..	*33*	..	..
Georgia	49	95	82	41	97	93	..	69	14	14
Germany	*99*	*99*	*100*	*50*	84	..	..	..	..	..
Ghana	46	81	42	3	54	58	..	36	*624*	*597*
Greece	*67*	*100*	*96*	*72*	95	*98*	83	*84*	*2*	*2*
Guatemala	28	113	49	*10*	..	93	..	34	32	80
Guinea	6	79	26	2	27	64	..	21	228	291
Guinea-Bissau	..	..	..	..	38	..	..	..	..	..
Haiti	..	..	..	..	22	..	..	..	..	..

Participation in education 2.11

	Gross enrollment ratio				Net enrollment ratio				Children out of school	
	% of relevant age group				% of relevant age group				thousand primary-school-age children	
	Preprimary	Primary	Secondary	Tertiary	Primary[a]		Secondary[a]		Male	Female
	2004[b]	2004[b]	2004[b]	2004[b]	1991	2004[b]	1991	2004[b]	2004	2004
Honduras	33	118	..	16	89	91	21	..	57	45
Hungary	*79*	*99*	*103*	*52*	91	*89*	75	*92*	*9*	*8*
India	*34*	*107*	*52*	*11*	..	*87*	..	..	..	..
Indonesia	*22*	*116*	*62*	*16*	97	*96*	39	*55*	*0*	*215*
Iran, Islamic Rep.	37	103	82	22	92	89	..	78	400	402
Iraq	6	98	45	15	94	88	..	38	..	..
Ireland	..	*106*	*109*	*55*	90	*96*	80	*85*	*9*	*8*
Israel	*110*	*112*	*93*	*57*	92	*99*	..	*89*	*7*	*6*
Italy	*101*	*101*	*99*	*59*	100	*99*	..	*91*	*4*	*9*
Jamaica	*81*	*93*	*84*	*19*	96	*88*	64	*75*	*20*	*18*
Japan	*84*	*100*	*102*	*52*	100	*100*	97	*100*	*6*	*0*
Jordan	*30*	*100*	*88*	*35*	94	*93*	..	*82*	*18*	*11*
Kazakhstan	31	109	98	48	89	98	..	92	4	6
Kenya	53	111	48	..	..	76	..	..	618	607
Korea, Dem. Rep.	..	..	..	..	..	..	..	..	..	..
Korea, Rep.	87	105	91	89	100	100	86	88	0[c]	9
Kuwait	71	96	90	22	49	86	..	*78*	9	6
Kyrgyz Republic	12	98	88	40	92	90	..	..	10	9
Lao PDR	8	116	46	6	63	84	..	37	50	68
Latvia	*75*	*95*	*95*	*71*	92	*87*	..	*87*	*6*	*6*
Lebanon	74	107	89	48	73	93	..	..	10	10
Lesotho	*31*	131	36	*3*	71	86	15	23	27	18
Liberia	..	..	..	..	..	..	..	..	..	..
Libya	*8*	*112*	*104*	*56*	96	..	..	..	..	..
Lithuania	*62*	*100*	*103*	*69*	..	*92*	..	*94*	*5*	*4*
Macedonia, FYR	*31*	*98*	*84*	*27*	94	*92*	..	*81*	*2*	*1*
Madagascar	10	134	..	3	64	89	..	..	136	136
Malawi	..	125	29	0[c]	48	95	..	25	71	19
Malaysia	*99*	*93*	*70*	*29*	..	*93*	..	*70*	*113*	*107*
Mali	*3*	64	22	2	21	46	5	..	557	615
Mauritania	2	94	20	3	35	74	..	14	58	60
Mauritius	95	103	80	17	91	95	..	75	4	2
Mexico	*81*	*109*	*79*	*22*	98	*100*	44	*62*	*25*	*8*
Moldova	50	85	74	32	89	78	..	69	23	22
Mongolia	33	102	93	39	90	84	..	82	13	11
Morocco	53	106	47	11	56	87	..	*35*	*204*	*302*
Mozambique	..	95	11	1	43	71	..	4	475	614
Myanmar	..	*93*	*38*	*11*	98	*85*	..	*34*	*408*	*374*
Namibia	*29*	*101*	*58*	*6*	..	*74*	..	*37*	*59*	*47*
Nepal	*17*	114	*43*	6	..	..	..	..	..	..
Netherlands	*87*	*108*	*122*	*58*	95	*99*	84	*89*	0[c]	*8*
New Zealand	*90*	*102*	*119*	*72*	98	*100*	85	*92*	*1*	*1*
Nicaragua	35	112	64	*18*	73	88	..	41	25	23
Niger	1	45	8	1	22	39	5	7	609	717
Nigeria	15	99	35	10	..	88	..	*28*	..	..
Norway	*82*	*99*	*114*	*80*	100	*99*	88	*95*	*1*	*1*
Oman	6	87	86	13	69	78	..	75	38	33
Pakistan	45	82	27	3	33	66	..	..	2,294	3,834
Panama	55	112	70	46	..	100	..	64	2	3
Papua New Guinea	*59*	*75*	*26*	..	..	..	..	..	..	..
Paraguay	*30*	*110*	*65*	*26*	94	*89*	26	*51*	*46*	*42*
Peru	*58*	*118*	*90*	..	..	*100*	..	*69*	*3*	*0*
Philippines	*39*	*113*	*84*	*29*	96	*94*	..	*59*	*385*	*269*
Poland	*51*	*100*	*105*	*59*	97	*98*	76	*91*	*33*	*25*
Portugal	*75*	*118*	*109*	*56*	98	..	..	*82*	*2*	*4*
Puerto Rico	..	..	..	..	..	..	..	..	..	..

2.11 Participation in education

	Gross enrollment ratio				Net enrollment ratio				Children out of school	
	% of relevant age group				% of relevant age group				thousand primary-school-age children	
	Preprimary	Primary	Secondary	Tertiary	Primary[a]		Secondary[a]		Male	Female
	2004[b]	2004[b]	2004[b]	2004[b]	1991	2004[b]	1991	2004[b]	2004	2004
Romania	*76*	*100*	*85*	*36*	81	*90*	..	*81*	*33*	*34*
Russian Federation	*67*	*118*	*93*	*65*	99	..	..	..	..	..
Rwanda	*3*	119	14	3	66	73	7	..	205	185
Saudi Arabia	5	67	68	28	59	53	31	52	824	806
Senegal	6	76	19	5	43	66	..	15	296	320
Serbia and Montenegro	..	..	..	..	69	..	62	..	..	..
Sierra Leone	..	..	..	*2*	43	..	..	..	..	..
Singapore	..	..	..	..	..	..	..	..	..	..
Slovak Republic	*88*	*100*	*92*	*34*	..	*85*	..	*88*	*21*	*19*
Slovenia	*68*	*111*	*112*	*70*	96	*96*	..	*95*	*1*	*1*
Somalia	..	..	..	..	9	..	..	..	..	..
South Africa	*33*	*105*	*90*	*15*	90	*89*	45	..	*287*	*200*
Spain	*109*	*107*	*117*	*64*	100	*100*	..	*95*	*2*	*10*
Sri Lanka	..	*102*	*81*	..	..	*99*	..	..	*9*	*13*
Sudan	23	60	33	..	40	..	..	..	..	..
Swaziland	..	*101*	*42*	*4*	75	*77*	30	*29*	*24*	*23*
Sweden	*80*	*109*	*137*	*82*	100	*100*	85	*98*	*1*	*3*
Switzerland	*93*	*103*	*93*	*45*	84	*94*	80	*83*	*5*	*3*
Syrian Arab Republic	10	123	63	..	91	98	43	58	0	32
Tajikistan	9	100	82	16	77	98	..	79	3	17
Tanzania	25	101	..	1	49	86	..	..	465	518
Thailand	92	99	77	41	76	87	..	..	365	433
Togo	2	101	39	..	64	79	15	..	..	..
Trinidad and Tobago	86	102	84	12	91	92	..	72	2	2
Tunisia	*22*	*111*	*77*	*26*	94	*97*	..	*64*	*10*	*9*
Turkey	*7*	*95*	*85*	*28*	89	*89*	42	..	*332*	*548*
Turkmenistan	..	..	..	..	..	..	..	..	..	..
Uganda	*3*	125	19	3	..	98	..	15	..	..
Ukraine	82	95	93	66	80	86	..	84	162	155
United Arab Emirates	64	84	66	*22*	99	71	60	62	41	42
United Kingdom	*77*	*101*	*170*	*63*	98	*100*	81	*95*	*0*[c]	*1*
United States	*60*	*100*	*95*	*83*	97	*94*	85	*89*	*740*	*584*
Uruguay	*64*	*109*	*106*	*38*	91	*90*	..	*73*	*16*	*15*
Uzbekistan	*28*	*100*	*95*	*15*	78	..	..	..	..	..
Venezuela, RB	55	105	72	*39*	87	92	18	61	109	89
Vietnam	47	98	73	*10*	90	*93*	..	..	..	..
West Bank and Gaza	30	93	94	38	..	86	..	89	22	19
Yemen, Rep.	1	87	48	9	51	75	..	..	..	..
Zambia	..	99	26	..	..	80	..	24	221	214
Zimbabwe	*43*	*96*	*36*	*4*	..	*82*	..	*34*	*224*	*206*
World	***37*** **w**	***104*** **w**	***66*** **w**	***24*** **w**	**84 w**	**.. w**	**.. w**	**.. w**	**53,784 s**	**61,590 s**
Low income	*27*	*100*	*46*	*9*	..	*79*	..	..	..	..
Middle income	*38*	*111*	*75*	*24*	92	..	..	..	..	..
Lower middle income	*35*	*112*	*72*	*20*	92	..	..	..	..	..
Upper middle income	*53*	*106*	*87*	*40*	94	..	..	..	..	..
Low & middle income	*32*	*105*	*61*	*17*	82	..	..	..	52,451[d]	60,508[d]
East Asia & Pacific	*36*	*113*	*69*	*17*	96	..	..	..	5,158[d]	4,870[d]
Europe & Central Asia	*45*	*102*	*92*	*47*	90	..	..	..	1,439[d]	1,669[d]
Latin America & Carib.	*57*	*121*	*87*	*26*	85	*96*	30	*65*	1,789[d]	1,497[d]
Middle East & N. Africa	23	104	67	*23*	84	89	..	..	2,585[d]	3,807[d]
South Asia	*33*	*103*	*49*	*10*	..	*88*	..	..	18,742[d]	23,552[d]
Sub-Saharan Africa	*16*	93	30	*5*	47	*64*	..	..	22,738[d]	25,112[d]
High income	*76*	*100*	*105*	*67*	95	*95*	85	*90*	1,333[d]	1,083[d]
Europe EMU	*101*	*104*	*108*	*57*	95	*99*	..	*92*	..	..

a. Break in series between 1997 and 1998 due to change from International Standard Classification of Education (ISCED) 1976 to ISCED97. b. Provisional data. c. Less than 0.5. d. Data are for 2001/02.

Participation in education 2.11

About the data

School enrollment data are reported to the United Nations Educational, Scientific, and Cultural Organization (UNESCO) Institute for Statistics by national education authorities and statistical offices. Enrollment ratios help to monitor two important issues for universal primary education: whether a country is on track to achieve the Millennium Development Goal of universal primary completion by 2015, which implies achieving a net primary enrollment ratio of 100 percent, and whether an education system has sufficient capacity to meet the needs of universal primary education, as indicated in part by its gross enrollment ratios.

Enrollment ratios, while a useful measure of participation in education, also have some limitations. They are based on data collected during annual school surveys, which are typically conducted at the beginning of the school year. They do not reflect actual rates of attendance or dropouts during the school year. And school administrators may report exaggerated enrollments, especially if there is a financial incentive to do so. Often the number of teachers paid by the government is related to the number of pupils enrolled.

Also as international indicators, the gross and net primary enrollment ratios have an inherent weakness: the length of primary education differs significantly across countries, although the International Standard Classification of Education tries to minimize the difference. A relatively short duration for primary education tends to increase the ratio, whereas a relatively long duration tends to decrease it (in part because there are more dropouts among older children).

Overage or underage enrollments frequently 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 be inaccurately estimated or misstated, especially in communities where registration of births is not strictly enforced. Parents who want to enroll an underage child in primary school may do so by overstating the child's age. And in some education systems ages for children repeating a grade may be underreported.

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) aimed at circumventing 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 based on models that may miss important demographic events (see the discussion of demographic data in *About the data* for table 2.1).

In using enrollment data, it is also important to consider repetition rates. These rates 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 indicate the capacity of each level of the education system, but a high ratio does not necessarily mean a successful education system. The net enrollment ratio excludes overage students in an attempt to capture more accurately the system's coverage and internal efficiency. It does not solve the problem completely, however, because some children fall outside the official school age because of late or early entry rather than because of grade repetition. The difference between gross and net enrollment ratios shows the incidence of overage and underage enrollments.

Out of school children are children in the primary school age group who are not enrolled in primary or in secondary education. The data are calculated by the UNESCO Institute for Statistics using administrative data. Children out of school include dropouts and children who never enrolled as well as children of primary age enrolled in pre-primary education. The large number of children out of school creates pressure for the education system to enroll children and to provide classrooms, teachers, and educational materials, a task made difficult in many developing countries by limited education budgets.

In 2006 the UNESCO Institiute for Statistics changed its convention for citing the reference year. For more information, see *About the data* for table 2.10.

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. • **Preprimary education** refers to the initial stage of organized instruction, designed primarily to introduce very young children to a school-type environment. • **Primary education** provides children with basic reading, writing, and mathematics skills along with an elementary understanding of such subjects as history, geography, natural science, social science, art, and music. • **Secondary education** completes the provision of basic education that began at the primary level and aims at laying the foundations for lifelong learning and human development by offering more subject- or skill-oriented instruction using more specialized teachers. • **Tertiary education**, whether or not leading to an advanced research qualification, normally requires, as a minimum condition of admission, the successful completion of education at the secondary level. • **Net enrollment ratio** is the ratio of children of official school age based on the International Standard Classification of Education 1997 who are enrolled in school to the population of the corresponding official school age. • **Children out of school** are the number of primary-school-age children not enrolled in primary or secondary school.

Data sources

Data on gross and net enrollment ratios and out of school children are from the UNESCO Institute for Statistics. Data on gross and net enrollment ratios for latest years are provisional, as of January 2006.

2.12 Education efficiency

	Gross intake rate in grade 1		Share of cohort reaching grade 5				Repeaters in primary school		Transition to secondary education	
	% of relevant age group		% of grade 1 students				% of enrollment		% of enrollment in last year of primary	
	Male	Female	Male[a]		Female[a]		Male	Female	Male	Female
	2004[b]	2004[b]	1991	2003[b]	1991	2003[b]	2004[b]	2004[b]	2004[b]	2004[b]
Afghanistan	..	..	..	..	..	..	..	..	..	..
Albania	*103*	*102*	..	..	..	..	*3*	*2*	*98*	*100*
Algeria	103	100	95	95	94	97	14	9	*76*	*83*
Angola	..	..	..	..	..	..	..	..	..	..
Argentina	*112*	*112*	..	*91*	..	*93*	*7*	*5*	..	..
Armenia	96	101	..	..	..	..	0[c]	0[c]	*99*	*97*
Australia	*106*	*104*	98	*98*	99	*100*	*0*	*0*	*100*	*100*
Austria	..	..	..	..	..	..	..	..	..	..
Azerbaijan	96	93	..	..	..	..	0[c]	0[c]	*99*	*99*
Bangladesh	*134*	*128*	..	*51*	..	*54*	*7*	*7*	*92*	*99*
Belarus	103	102	..	..	..	..	0[c]	0[c]	*100*	*97*
Belgium	*101*	*101*	90	..	92	..	..	..	..	..
Benin	112	94	54	70	56	69	23	23	*51*	*51*
Bolivia	119	120	..	87	..	86	2	1	*92*	*91*
Bosnia and Herzegovina	..	..	..	..	..	..	..	..	..	..
Botswana	*110*	*107*	81	*87*	87	*92*	*6*	*4*	*97*	*97*
Brazil	*127*	*117*	..	..	..	..	..	..	..	..
Bulgaria	*106*	*106*	91	..	90	..	*3*	*2*	*96*	*95*
Burkina Faso	76	66	71	74	68	78	13	13	*42*	*37*
Burundi	95	86	65	64	58	62	28	31	*35*	*33*
Cambodia	154	143	..	58	..	61	12	9	*85*	*80*
Cameroon	115	100	..	*64*	..	*63*	26	25	*47*	*49*
Canada	..	..	95	..	98	..	..	..	..	..
Central African Republic	*75*	*52*	24	..	22	..	..	..	..	..
Chad	98	70	56	51	41	39	24	25	*60*	*46*
Chile	*98*	*96*	94	*100*	91	*98*	*2*	*1*	*95*	*98*
China	*100*	*99*	58	*100*	78	*98*	*0*[c]	*0*[c]	*92*	*92*
Hong Kong, China	101	95	..	100	..	100	1	1	*100*	*100*
Colombia	126	120	..	75	..	80	5	4	*100*	*100*
Congo, Dem. Rep.	..	..	58	..	50	..	..	..	..	..
Congo, Rep.	66	63	56	*65*	65	*67*	25	24	*78*	*78*
Costa Rica	108	107	83	92	85	93	8	6	*93*	*90*
Côte d'Ivoire	*75*	*68*	75	..	70	..	*17*	*18*	..	..
Croatia	*99*	*97*	..	..	..	..	*0*[c]	*0*[c]	*100*	*100*
Cuba	105	103	..	98	..	97	1	0	*98*	*99*
Czech Republic	*94*	*93*	..	*97*	..	*98*	*1*	*1*	*99*	*99*
Denmark	*98*	*98*	94	*100*	94	*99*	..	..	*100*	*99*
Dominican Republic	118	104	..	52	..	70	9	6	*92*	*84*
Ecuador	136	134	..	75	..	77	2	2	*76*	*71*
Egypt, Arab Rep.	*100*	*98*	..	*96*	..	*100*	*6*	*3*	*83*	*86*
El Salvador	134	130	56	67	60	70	*8*	*6*	*94*	*94*
Eritrea	63	52	..	86	..	73	21	22	*85*	*76*
Estonia	*97*	*98*	..	*98*	..	*99*	*3*	*1*	*93*	*98*
Ethiopia	106	93	16	*59*	23	*54*	12	11	90	88
Finland	*100*	*98*	100	*100*	100	*100*	*1*	*0*[c]	*100*	*100*
France	..	..	69	..	95	..	..	..	..	..
Gabon	*94*	*94*	..	*68*	..	*71*	*35*	*34*	..	..
Gambia, The	*95*	*101*	..	..	..	..	..	..	..	..
Georgia	104	102	..	..	..	..	0[c]	0[c]	*98*	*99*
Germany	*101*	*100*	..	..	..	..	*2*	*2*	..	..
Ghana	87	89	81	*62*	79	*65*	6	6	95	100
Greece	..	..	100	..	100	..	..	..	..	..
Guatemala	129	125	..	79	..	76	14	13	*97*	*95*
Guinea	87	79	64	87	48	76	10	11	*49*	*45*
Guinea-Bissau	..	..	..	..	..	..	..	..	..	..
Haiti	..	..	..	..	..	..	..	..	..	..

Education efficiency 2.12

	Gross intake rate in grade 1		Share of cohort reaching grade 5				Repeaters in primary school		Transition to secondary education	
	% of relevant age group		% of grade 1 students				% of enrollment		% of enrollment in last year of primary	
	Male	Female	Male[a]		Female[a]		Male	Female	Male	Female
	2004[b]	2004[b]	1991	2003[b]	1991	2003[b]	2004[b]	2004[b]	2004[b]	2004[b]
Honduras	129	127	..	63	..	69	9	7	..	..
Hungary	*99*	*98*	77	..	98	..	*3*	*2*	*99*	*99*
India	*135*	*129*	..	*60*	..	*64*	*4*	*4*	*85*	*89*
Indonesia	*120*	*120*	34	*88*	78	*90*	*4*	*4*	*80*	*83*
Iran, Islamic Rep.	102	118	91	*94*	89	*94*	3	2	*97*	*95*
Iraq	110	103	..	..	..	..	9	7	..	..
Ireland	*104*	*104*	99	*98*	100	*100*	*1*	*1*	..	..
Israel	*97*	*98*	..	*100*	..	*99*	*2*	*1*	*72*	*73*
Italy	*98*	*97*	..	*96*	..	*97*	*0*[c]	*0*[c]	*100*	*100*
Jamaica	*90*	*88*	..	*88*	..	*93*	*4*	*3*	..	..
Japan	..	..	100	..	100	..	..	..	..	..
Jordan	*99*	*100*	..	*97*	..	*98*	*0*[c]	*0*[c]	*97*	*98*
Kazakhstan	106	105	..	..	..	..	0[c]	0[c]	*100*	*100*
Kenya	122	119	75	78	78	73	11	10	..	..
Korea, Dem. Rep.	..	..	..	..	..	..	..	..	..	..
Korea, Rep.	103	103	99	100	100	100	0	0	*99*	*99*
Kuwait	96	97	..	..	..	..	3	2	*95*	*95*
Kyrgyz Republic	99	97	..	..	..	..	0[c]	0[c]	*98*	*100*
Lao PDR	123	114	..	62	..	63	21	18	*80*	*76*
Latvia	*92*	*90*	..	..	..	..	*2*	*1*	*99*	*99*
Lebanon	100	99	..	95	..	100	12	9	*83*	*89*
Lesotho	144	131	58	58	73	69	21	16	*64*	*62*
Liberia	..	..	..	..	..	..	..	..	..	..
Libya	..	..	..	..	..	..	..	..	..	..
Lithuania	*97*	*97*	..	..	..	..	*1*	*0*[c]	*99*	*99*
Macedonia, FYR	*98*	*96*	..	..	..	..	*0*[c]	*0*[c]	*98*	*97*
Madagascar	168	164	22	56	21	58	31	29	*56*	*55*
Malawi	164	178	71	*50*	57	*38*	18	18	..	..
Malaysia	*93*	*92*	97	*87*	97	*87*	..	..	..	..
Mali	69	58	71	*78*	67	*70*	19	19	*62*	*57*
Mauritania	106	105	76	81	75	83	14	15	*47*	*44*
Mauritius	95	95	97	*98*	98	*100*	6	4	..	..
Mexico	*108*	*107*	35	*92*	71	*94*	*6*	*4*	*94*	*92*
Moldova	89	88	..	..	..	..	0[c]	0[c]	*97*	*99*
Mongolia	113	115	..	..	..	..	1	1	*99*	*99*
Morocco	100	96	75	*82*	76	*80*	*16*	*11*	*78*	*81*
Mozambique	138	129	36	*53*	32	*45*	21	21	..	..
Myanmar	*124*	*125*	..	*64*	..	*66*	*1*	*1*	*74*	*66*
Namibia	*99*	*99*	60	*87*	65	*90*	*15*	*12*	*87*	*88*
Nepal	*115*	*105*	51	*63*	51	*67*	*22*	*22*	*80*	*76*
Netherlands	*98*	*97*	..	*100*	..	*100*	..	..	..	..
New Zealand	..	..	..	..	..	..	..	..	..	..
Nicaragua	144	135	11	52	37	61	12	9	..	..
Niger	68	51	61	75	65	72	5	5	*43*	*41*
Nigeria	120	103	..	33	..	38	3	3	..	..
Norway	*99*	*99*	99	*100*	100	*99*	*0*	*0*	..	..
Oman	74	75	97	97	96	98	1	1	*99*	*99*
Pakistan	126	95	..	..	..	..	..	..	..	..
Panama	121	118	..	82	..	87	6	5	*63*	*65*
Papua New Guinea	*101*	*90*	70	*72*	68	*66*	*0*	*0*	*77*	*77*
Paraguay	*109*	*106*	73	*68*	75	*71*	*9*	*6*	..	..
Peru	*113*	*114*	..	*85*	..	*83*	*10*	*10*	..	..
Philippines	*140*	*130*	..	*72*	..	*80*	*3*	*1*	*98*	*97*
Poland	*97*	*98*	89	..	96	..	..	..	..	..
Portugal	..	..	..	..	..	..	..	..	..	..
Puerto Rico	..	..	..	..	..	..	..	..	..	..

2.12 Education efficiency

	Gross intake rate in grade 1		Share of cohort reaching grade 5				Repeaters in primary school		Transition to secondary education	
	% of relevant age group		% of grade 1 students				% of enrollment		% of enrollment in last year of primary	
	Male	Female	Male[a]		Female[a]		Male	Female	Male	Female
	2004[b]	2004[b]	1991	2003[b]	1991	2003[b]	2004[b]	2004[b]	2004[b]	2004[b]
Romania	*107*	*106*	..	..	..	..	*3*	*2*	*98*	*98*
Russian Federation	..	..	..	..	..	..	..	..	..	..
Rwanda	183	183	61	43	59	49	19	19	..	..
Saudi Arabia	66	66	82	94	84	93	5	3	*100*	*93*
Senegal	89	91	..	79	..	77	13	13	*49*	*45*
Serbia and Montenegro	..	..	..	..	..	..	..	..	..	..
Sierra Leone	..	..	..	..	..	..	..	..	..	..
Singapore	..	..	..	..	..	..	..	..	..	..
Slovak Republic	*96*	*94*	..	..	..	..	*3*	*2*	*98*	*98*
Slovenia	*122*	*120*	..	..	..	..	*1*	*0*[c]	*100*	*99*
Somalia	..	..	..	..	..	..	..	..	..	..
South Africa	*118*	*112*	..	*82*	..	*87*	*6*	*4*	*94*	*96*
Spain	..	..	..	..	..	..	..	..	..	..
Sri Lanka	..	..	92	..	93	..	..	..	*96*	*98*
Sudan	73	62	90	92	99	92	1	4	*88*	*92*
Swaziland	*110*	*104*	74	*74*	80	*80*	*19*	*14*	*76*	*78*
Sweden	*97*	*97*	100	..	100	..	..	..	..	..
Switzerland	*89*	*92*	..	..	..	..	*2*	*2*	*100*	*100*
Syrian Arab Republic	122	118	97	*93*	95	*92*	8	7	*93*	*95*
Tajikistan	98	94	..	..	..	..	0[c]	0[c]	*98*	*97*
Tanzania	118	114	81	86	82	90	5	5	34	33
Thailand	..	..	..	..	..	..	..	..	..	..
Togo	90	82	52	79	42	73	24	24	*67*	*61*
Trinidad and Tobago	97	96	..	*66*	..	*76*	6	4	*96*	*99*
Tunisia	*98*	*100*	94	*96*	77	*97*	*11*	*7*	*86*	*90*
Turkey	..	..	98	..	97	..	..	..	..	..
Turkmenistan	..	..	..	..	..	..	..	..	..	..
Uganda	164	163	..	*63*	..	*64*	14	14	..	..
Ukraine	105	105	..	..	..	..	0[c]	0[c]	..	..
United Arab Emirates	89	88	80	94	80	95	3	2	*96*	*96*
United Kingdom	..	..	..	..	..	..	..	..	..	..
United States	..	..	..	..	..	..	..	..	..	..
Uruguay	*109*	*107*	96	*91*	98	*95*	*10*	*7*	..	..
Uzbekistan	*102*	*102*	..	..	..	..	*0*	*0*	*100*	*99*
Venezuela, RB	103	100	82	89	90	94	9	6	*97*	*100*
Vietnam	*101*	*95*	..	*90*	..	*88*	*3*	*2*	*99*	*100*
West Bank and Gaza	85	84	..	..	..	..	0	0	*100*	*100*
Yemen, Rep.	122	97	..	78	..	67	5	4	..	..
Zambia	110	110	..	..	..	..	7	7	..	..
Zimbabwe	*122*	*118*	72	*68*	81	*71*	..	..	*69*	*70*
World	***116*** **w**	***110*** **w**	**.. w**	**.. w**	**.. w**	**.. w**	***4*** **w**	***4*** **w**	**.. w**	**.. w**
Low income	*125*	*115*	..	*63*	..	*65*	*6*	*6*	*82*	*83*
Middle income	*107*	*106*	61	*93*	81	*93*	*3*	*2*	*91*	*91*
Lower middle income	*107*	*106*	59	*94*	80	*93*	*3*	*2*	*90*	*91*
Upper middle income	..	..	..	..	..	..	..	..	..	..
Low & middle income	*117*	*111*	..	..	..	..	*4*	*4*	*87*	*87*
East Asia & Pacific	*107*	*106*	55	*94*	78	*93*	*1*	*1*	*90*	*90*
Europe & Central Asia	..	..	..	..	..	..	..	..	..	..
Latin America & Carib.	*120*	*115*	..	..	..	..	..	..	..	..
Middle East & N. Africa	106	105	..	*92*	..	*92*	*8*	*5*	*87*	*89*
South Asia	*132*	*122*	..	*59*	..	*63*	*4*	*4*	*86*	*90*
Sub-Saharan Africa	113	104	..	..	..	..	11	11	..	..
High income	..	..	..	..	..	..	..	..	..	..
Europe EMU	..	..	..	..	..	..	..	..	..	..

a. Break in series between 1997 and 1998 due to change from International Standard Classification of Education (ISCED) 1976 to ISCED97. b. Provisional data. c. Less than 0.5.

Education efficiency 2.12

About the data

Indicators of students' progress through school are estimated by the United Nations Educational, Scientific, and Cultural Organization (UNESCO) Institute for Statistics and the World Bank. These indicators measure an education system's success in extending coverage to all students, maintaining the flow of students from one grade to the next, and imparting a particular level of education.

Gross intake rate indicates the general level of access to primary education. It also indicates the capacity of the education system to provide access to primary education. Low gross intake rates in grade 1 reflect the fact that many children do not enter primary school even though school attendance, at least through the primary level, is mandatory in all countries. Because the gross intake rate includes all new entrants regardless of age, it can be more than 100 percent. Once enrolled, students drop out for a variety of reasons, including low quality of schooling, discouragement over poor performance, and the direct and indirect costs of schooling. Students' progress to higher grades may also be limited by the availability of teachers, classrooms, and educational materials.

The share of cohort reaching grade 5 (cohort survival rate) is estimated as the proportion of an entering cohort of grade 1 students that eventually reaches grade 5. It measures the holding power and internal efficiency of an education system. Cohort survival rates approaching 100 percent indicate a high level of retention and a low level of dropout.

Cohort survival rates are typically estimated from data on enrollment and repetition by grade for two consecutive years, in a procedure called the reconstructed cohort method. This 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 (Fredriksen 1993). Given these assumptions, cross-country comparisons should be made with caution, because other flows—caused by new entrants, reentrants, grade skipping, migration, or school transfers during the school year—are not considered.

The UNESCO Institute for Statistics measures the share of cohort reaching grade 5 because research suggests that five to six years of schooling is a critical threshold for the achievement of sustainable basic literacy and numeracy skills. But the indicator only indirectly reflects the quality of schooling, and a high rate does not guarantee these learning outcomes. Measuring actual learning outcomes requires setting curriculum standards and measuring students' learning progress against those standards through standardized assessments or tests.

The data on repeaters are often used to indicate the internal efficiency of the education system. Repeaters not only increase the cost of education for the family and for the school system, but also use limited school resources. Countries have different policies on repetition and promotion; in some cases the number of repeaters is controlled because of limited capacity. Care should be taken in interpreting this indicator.

The transition rate from primary school to secondary school conveys the degree of access or transition between the two levels of education. A low transition rate can signal problems such as an inadequate promotion and examination system or insufficient capacity in secondary schools. The quality of data on the transition rate is affected when new entrants and repeaters are not correctly distinguished in the first grade of secondary school. Students who interrupt their studies for one or more years after completing primary school could also affect the quality of the data.

In 2006 the UNESCO Institiute for Statistics changed its convention for citing the reference year. For more information, see *About the data* for table 2.10.

Definitions

• **Gross intake rate in grade 1** is the number of new entrants in the first grade of primary education regardless of age, expressed as a percentage of the population of the official primary school entrance age. • **Share of cohort reaching grade 5** is the percentage of children enrolled in the first grade of primary school who eventually reach grade 5. The estimate is based on the reconstructed cohort method (see *About the data*). • **Repeaters in primary school** are the number of students enrolled in the same grade as in the previous year, as a percentage of all students enrolled in primary school. • **Transition to secondary education** refers to the number of new entrants to the first grade of secondary school in a given year, as a percentage of the number of students enrolled in the final grade of primary school in the previous year.

Data sources

Data on education efficiency are from the UNESCO Institute for Statistics. Data for latest years are provisional, as of January 2006.

2.13 Education completion and outcomes

	Primary completion rate						Youth literacy rate				Adult literacy rate	
	% of relevant age group						% ages 15–24				% ages 15 and older	
	Total[a]		Male[a]		Female[a]		Male		Female		Male	Female
	1991	2004	1991	2004	1991	2004	1990	2002	1990	2002	2002	2002
Afghanistan	*25*	..	*37*	..	*13*	..	..	..	..	..	..	..
Albania	..	*99*	..	*99*	..	*99*	97	*99*[b]	92	*99*[b]	*99*[b]	*98*[b]
Algeria	79	94	86	94	73	94	86	94[c]	68	86[c]	79[c]	60[c]
Angola	35	..	..	..	..	..	..	*83*[c]	..	*63*[c]	*82*[c]	*54*[c]
Argentina	..	*102*	..	*100*	..	*105*	98	*99*[b]	98	*99*[b]	*97*[b]	*97*[b]
Armenia	*90*	107	..	106	..	108	100	*100*[b]	99	*100*[b]	*100*[b]	*99*[b]
Australia	..	*100*	..	*100*	..	*100*	..	..	..	..	..	..
Austria	..	..	..	..	..	..	..	..	..	..	..	..
Azerbaijan	..	96	..	97	..	95	..	..	..	..	..	..
Bangladesh	*49*	*73*	..	*70*	..	*75*	51	58	33	41	50	31
Belarus	95	101	*95*	103	*96*	99	100	..	100	..	..	..
Belgium	79	..	76	..	82	..	..	..	..	..	..	..
Benin	21	49	28	59	13	38	57	58[b]	25	33[b]	46[b]	23[b]
Bolivia	71	100	78	102	64	98	96	*99*[b]	89	*96*[b]	*93*[b]	*80*[b]
Bosnia and Herzegovina	..	..	..	..	..	..	..	*100*[c]	..	*100*[c]	*98*[c]	*91*[c]
Botswana	79	*92*	71	*89*	87	*94*	79	85	87	93	76	82
Brazil	*93*	*111*	..	*110*	..	*111*	91	*96*[c]	93	*98*[c]	*88*[c]	*89*[c]
Bulgaria	90	*97*	89	*98*	92	*96*	100	*98*[b]	99	*98*[b]	*99*[b]	*98*[b]
Burkina Faso	21	29	26	34	16	25	..	..	..	..	..	..
Burundi	46	33	49	39	43	27	58	*76*[c]	45	*69*[c]	*67*[c]	*52*[c]
Cambodia	..	82	..	85	..	78	81	*88*[c]	66	*79*[c]	*85*[c]	*64*[c]
Cameroon	56	72	60	77	52	66	86	..	76	..	*77*[c]	*60*[c]
Canada	..	..	..	..	..	..	..	..	..	..	..	..
Central African Republic	27	..	35	..	18	..	66	*70*[c]	39	*47*[c]	*65*[c]	*33*[c]
Chad	18	29	30	41	7	18	58	*55*[c]	38	*23*[c]	*41*[c]	*13*[c]
Chile	..	*97*	..	*98*	..	*97*	98	99[b]	98	99[b]	96[b]	96[b]
China	103	*99*	..	*99*	..	*100*	97	*99*[b]	93	*99*[b]	*95*[b]	*87*[b]
Hong Kong, China	102	111	..	113	..	108	..	..	..	..	..	..
Colombia	71	94	60	92	82	96	94	*97*[c]	96	*98*[c]	*94*[c]	*95*[c]
Congo, Dem. Rep.	46	..	58	..	34	..	80	*77*[c]	58	*61*[c]	*80*[c]	*52*[c]
Congo, Rep.	54	66	59	70	49	63	95	98	90	97	89	77
Costa Rica	74	92	77	91	81	94	97	98	98	99	96	96
Côte d'Ivoire	43	*43*	55	*52*	32	*34*	65	*70*[c]	40	*51*[c]	*60*[c]	*38*[c]
Croatia	*85*	*91*	..	*92*	..	*91*	100	*100*[b]	100	*100*[b]	*99*[b]	*97*[b]
Cuba	96	93	..	93	..	92	99	100[b]	99	100[b]	100[b]	100[b]
Czech Republic	..	*102*	..	*103*	..	*101*	..	..	..	..	..	..
Denmark	98	*103*	98	*103*	98	*104*	..	..	..	..	..	..
Dominican Republic	*61*	91	..	88	..	93	87	93[b]	88	95[b]	87[b]	87[b]
Ecuador	*91*	101	*91*	100	*92*	101	96	*96*[b]	95	*96*[b]	*92*[b]	*90*[b]
Egypt, Arab Rep.	..	*93*	..	*95*	..	*91*	71	..	51	..	..	..
El Salvador	41	84	38	84	43	85	85	90	83	88	82	77
Eritrea	*19*	44	*22*	53	*17*	36	73	..	49	..	..	..
Estonia	*93*	*103*	*93*	*105*	*94*	*101*	100	*100*[b]	100	*100*[b]	*100*[b]	*100*[b]
Ethiopia	*21*	51	*26*	58	*16*	43	52	63	34	52	49	34
Finland	97	*102*	98	*102*	97	*102*	..	..	..	..	..	..
France	104	..	..	..	..	..	..	..	..	..	..	..
Gabon	*58*	*66*	*55*	*65*	*61*	*68*	..	..	..	..	..	..
Gambia, The	*44*	..	*55*	..	*33*	..	50	..	34	..	..	..
Georgia	..	86	..	84	..	87	..	..	..	..	..	..
Germany	*100*	*97*	*99*	*97*	*100*	*97*	..	..	..	..	..	..
Ghana	63	65	70	*65*	55	*67*	88	..	75	..	*63*[b]	*46*[b]
Greece	*99*	..	*99*	..	*98*	..	99	*99*[c]	100	*100*[c]	*94*[c]	*88*[c]
Guatemala	..	70	..	75	..	65	80	86[b]	66	78[b]	75[b]	63[b]
Guinea	17	48	24	58	9	39	62	..	26	..	..	..
Guinea-Bissau	..	*27*	..	*35*	..	*19*	..	..	..	..	..	..
Haiti	27	..	29	..	26	..	56	66	54	67	54	50

2.13 Education completion and outcomes

	Primary completion rate						Youth literacy rate				Adult literacy rate	
	% of relevant age group						% ages 15–24				% ages 15 and older	
	Total[a]		Male[a]		Female[a]		Male		Female		Male	Female
	1991	2004	1991	2004	1991	2004	1990	2002	1990	2002	2002	2002
Honduras	65	79	67	77	62	82	78	*87*[b]	81	*91*[b]	*80*[b]	*80*[b]
Hungary	82	*96*	*88*	*97*	*90*	*96*	100	*99*[b]	100	*100*[b]	*99*[b]	*99*[b]
India	..	*84*	..	*88*	..	*79*	73	*84*[b]	54	*68*[b]	*73*[b]	*48*[b]
Indonesia	91	*101*	..	*101*	..	*101*	97	99	93	98	92	83
Iran, Islamic Rep.	91	95	97	92	85	97	92	..	81	..	84[c]	70[c]
Iraq	*59*	74	*64*	85	*53*	63	56	..	25	..	..	..
Ireland	..	*101*	..	*101*	..	*100*	..	..	..	..	..	..
Israel	..	*101*	..	*101*	..	*101*	99	*100*[c]	98	*99*[c]	*98*[c]	*96*[c]
Italy	104	*103*	104	*103*	104	*102*	..	..	..	..	..	..
Jamaica	90	*84*	86	*84*	94	*89*	87	91	95	98	84	91
Japan	101	..	101	..	102	..	..	..	..	..	..	..
Jordan	101	*97*	101	*97*	101	*96*	98	99	95	99	95	85
Kazakhstan	..	110	..	110	..	109	100	..	100	..	..	..
Kenya	..	89	..	90	..	89	93	80	87	81	78	70
Korea, Dem. Rep.	..	..	..	..	..	..	..	..	..	..	..	..
Korea, Rep.	98	105	98	104	98	106	..	..	..	..	..	..
Kuwait	*57*	91	*58*	91	*56*	92	88	92	87	94	85	81
Kyrgyz Republic	..	93	..	93	..	93	..	..	..	..	..	..
Lao PDR	*43*	74	*48*	78	*38*	70	79	*83*[c]	61	*75*[c]	*77*[c]	*61*[c]
Latvia	..	*98*	..	*99*	..	*97*	..	*100*[b]	..	*100*[b]	*100*[b]	*100*[b]
Lebanon	..	94	..	92	..	96	95	..	89	..	..	..
Lesotho	58	71	41	60	75	82	77	..	97	..	*74*[c]	*90*[c]
Liberia	..	..	..	..	..	..	75	86	39	55	72	39
Libya	..	..	..	..	..	..	99	100	83	94	92	71
Lithuania	*89*	*105*	..	*105*	..	*105*	100	*100*[b]	100	*100*[b]	*100*[b]	*100*[b]
Macedonia, FYR	*98*	*97*	..	*97*	..	*97*	..	99[b]	..	98[b]	98[b]	94[b]
Madagascar	33	45	33	45	34	46	78	*72*[c]	67	*68*[c]	*76*[c]	*65*[c]
Malawi	31	58	35	60	28	57	76	..	51	..	..	..
Malaysia	90	*95*	90	*95*	90	*95*	95	*97*[b]	94	*97*[b]	*92*[b]	*85*[b]
Mali	11	44	13	58	9	30	..	..	..	..	..	..
Mauritania	33	43	40	45	26	41	56	*68*[b]	36	*55*[b]	*60*[b]	*31*[b]
Mauritius	102	100	103	98	102	102	91	*94*[b]	91	*95*[b]	*88*[b]	*81*[b]
Mexico	86	*97*	*89*	*97*	*90*	*98*	96	98[c]	94	97[c]	92[c]	89[c]
Moldova	..	83	..	82	..	83	100	*98*[b]	100	*99*[b]	*97*[b]	*95*[b]
Mongolia	..	95	..	95	..	96	..	*97*[b]	..	*98*[b]	*98*[b]	*98*[b]
Morocco	46	*67*	54	*71*	37	*63*	68	77	42	61	63	38
Mozambique	26	29	32	35	21	23	66	77	32	49	62	31
Myanmar	..	*72*	..	*72*	..	*73*	90	*96*[c]	86	*93*[c]	*94*[c]	*86*[c]
Namibia	*78*	*81*	*70*	*76*	*86*	*85*	86	*87*[b]	89	*92*[b]	*81*[b]	*81*[b]
Nepal	51	*71*	*70*	*76*	*41*	*65*	67	*81*[b]	27	*60*[b]	*63*[b]	*35*[b]
Netherlands	..	*100*	..	*101*	..	*99*	..	..	..	..	..	..
New Zealand	100	..	100	..	99	..	..	..	..	..	..	..
Nicaragua	41	73	*43*	70	*59*	77	68	*84*[c]	69	*89*[c]	*77*[c]	*77*[c]
Niger	17	25	21	30	12	20	25	*26*[b]	9	*14*[b]	*20*[b]	*9*[b]
Nigeria	..	76	..	83	..	69	81	91	66	87	74	59
Norway	100	*103*	100	*102*	100	*103*	..	..	..	..	..	..
Oman	*74*	91	*78*	93	*70*	90	95	100	75	97	82	65
Pakistan	..	..	..	..	..	..	63	*75*[c]	31	*54*[c]	*62*[c]	*35*[c]
Panama	*86*	97	*86*	96	*86*	97	96	*97*[b]	95	*96*[b]	*93*[b]	*91*[b]
Papua New Guinea	50	*55*	56	*59*	44	*51*	74	*69*[b]	62	*64*[b]	*63*[b]	*51*[b]
Paraguay	65	*89*	64	*88*	65	*90*	96	*96*[c]	95	*96*[c]	*93*[c]	*90*[c]
Peru	..	*96*	..	*97*	..	*95*	97	*98*[c]	92	*96*[c]	*93*[c]	*82*[c]
Philippines	*86*	*98*	*84*	*94*	*84*	*102*	97	*94*[b]	97	*96*[b]	*93*[b]	*93*[b]
Poland	96	*100*	..	..	..	..	..	..	..	..	..	..
Portugal	95	..	94	..	95	..	..	..	..	..	..	..
Puerto Rico	..	..	..	..	..	..	..	..	..	..	..	..

2.13 Education completion and outcomes

	Primary completion rate						Youth literacy rate				Adult literacy rate	
	% of relevant age group						% ages 15–24				% ages 15 and older	
	Total[a]		Male[a]		Female[a]		Male		Female		Male	Female
	1991	2004	1991	2004	1991	2004	1990	2002	1990	2002	2002	2002
Romania	*96*	*90*	*96*	*90*	*96*	*89*	99	98[b]	99	98[b]	98[b]	96[b]
Russian Federation	*93*	..	*92*	..	*93*	..	100	100[b]	100	100[b]	100[b]	99[b]
Rwanda	47	37	47	38	46	37	78	*77*[c]	67	*76*[c]	*70*[c]	*59*[c]
Saudi Arabia	56	62	60	62	51	61	91	*98*[c]	79	*94*[c]	*87*[c]	*69*[c]
Senegal	*39*	45	*47*	49	*30*	42	50	58[c]	30	41[c]	51[c]	29[c]
Serbia and Montenegro	71	*96*	..	*97*	..	*96*	..	99[b]	..	99[b]	99[b]	94[b]
Sierra Leone	..	..	..	..	..	..	..	*47*[c]	..	*30*[c]	*40*[c]	*21*[c]
Singapore	..	..	..	..	..	..	99	*99*[b]	99	*100*[b]	*97*[b]	*89*[b]
Slovak Republic	*96*	*101*	*95*	*102*	*96*	*100*	..	*100*[b]	..	*100*[b]	*100*[b]	*100*[b]
Slovenia	*95*	*102*	..	*103*	..	*102*	100	100	100	100	100	100
Somalia	..	..	..	..	..	..	..	..	..	..	..	..
South Africa	75	*96*	71	*94*	80	*98*	89	..	88	..	..	..
Spain	..	..	..	..	..	..	..	..	..	..	..	..
Sri Lanka	94	..	94	..	94	..	96	*95*[b]	94	*96*[b]	*92*[b]	*89*[b]
Sudan	40	49	45	53	36	44	76	*82*[c]	54	*69*[c]	*69*[c]	*50*[c]
Swaziland	62	*61*	59	*58*	65	*64*	85	*87*[c]	85	*89*[c]	*80*[c]	*78*[c]
Sweden	96	..	96	..	96	..	..	..	..	..	..	..
Switzerland	53	*96*	53	*95*	54	*97*	..	..	..	..	..	..
Syrian Arab Republic	89	107	94	109	84	104	92	97[c]	67	93[c]	91[c]	74[c]
Tajikistan	..	92	..	94	..	90	100	*100*[b]	100	*100*[b]	*100*[b]	*99*[b]
Tanzania	61	57	60	57	62	56	89	81[b]	77	76[b]	78[b]	62[b]
Thailand	..	..	..	..	..	..	..	*98*[b]	..	*98*[b]	*95*[b]	*91*[b]
Togo	35	66	48	78	22	55	79	*83*[c]	48	*63*[c]	*68*[c]	*38*[c]
Trinidad and Tobago	100	94	97	93	102	95	100	100	100	100	99	98
Tunisia	74	*94*	79	*94*	69	*94*	93	*96*[b]	75	*92*[b]	*83*[b]	*65*[b]
Turkey	90	..	93	..	86	..	97	*98*[c]	88	*95*[c]	*96*[c]	*81*[c]
Turkmenistan	..	..	..	..	..	..	..	..	..	..	..	..
Uganda	..	57	..	61	..	53	80	86	60	74	79	59
Ukraine	92	*91*	98	..	97	..	100	*100*[b]	100	*100*[b]	*100*[b]	*99*[b]
United Arab Emirates	95	75	95	77	94	74	82	88	89	95	76	81
United Kingdom	..	..	..	..	..	..	..	..	..	..	..	..
United States	..	..	..	..	..	..	..	..	..	..	..	..
Uruguay	95	*94*	92	*92*	97	*97*	98	99	99	99	97	98
Uzbekistan	..	*98*	..	*98*	..	*98*	100	100	100	100	100	99
Venezuela, RB	81	89	76	87	86	92	95	*96*[b]	97	*98*[b]	*93*[b]	*93*[b]
Vietnam	..	*101*	..	*104*	..	*98*	94	..	94	..	..	..
West Bank and Gaza	..	98	..	98	..	99	..	*99*[c]	..	*99*[c]	96[c]	87[c]
Yemen, Rep.	..	62	..	78	..	46	74	84	25	51	69	29
Zambia	..	66	..	71	..	61	86	..	76	..	..	..
Zimbabwe	91	*80*	94	*82*	89	*79*	97	99	91	96	94	86
World	.. w	.. w	.. w	.. w	.. w	.. w	.. w	.. w	.. w	.. w	.. w	.. w
Low income	66	74	75	78	59	70	73	81	55	67	73	50
Middle income	92	97	93	97	92	96	95	98	91	97	94	87
Lower middle income	93	98	94	98	92	96	95	98	90	97	93	86
Upper middle income	88	96	88	95	90	96	97	98	95	97	95	94
Low & middle income	81	86	86	88	78	84	86	90	77	83	86	74
East Asia & Pacific	97	99	98	99	96	97	97	98	93	97	95	87
Europe & Central Asia	92	94	92	95	93	94	99	99	97	98	99	99
Latin America & Carib.	86	97	85	96	89	97	93	96	93	97	91	90
Middle East & N. Africa	78	88	83	89	71	86	80	..	59	..	..	..
South Asia	73	82	87	85	65	78	70	82	50	65	72	46
Sub-Saharan Africa	51	62	55	66	47	56	76	..	61	..	..	..
High income	..	..	..	..	..	..	..	..	..	..	..	..
Europe EMU	..	..	..	..	..	..	..	..	..	..	..	..

a. Break in series between 1997 and 1998 due to change from International Standard Classification of Education (ISCED) 1976 to ISCED97. b. Based on census data. c. Based on survey data.

Education completion and outcomes 2.13

About the data

Many governments collect and publish statistics that indicate how their education systems are working and developing—statistics on enrollment and on such efficiency indicators as repetition rates, pupil-teacher ratios, and cohort progression through school.

The World Bank and the United Nations Educational, Scientific, and Cultural Organization (UNESCO) Institute for Statistics worked jointly to develop the primary completion rate indicator. Increasingly used as a core indicator of an education system's performance, it reflects both the coverage of the education system and the educational attainment of students. The indicator is vital as a key measure of educational outcome at the primary level and of progress on the Millennium Development Goals and the Education for All initiative. However, because curricula and standards for school completion vary across countries, a high rate of primary completion does not necessarily mean high levels of student learning.

The primary completion rate reflects the primary cycle as defined by the International Standard Classification of Education (ISCED), ranging from three or four years of primary education (in a very small number of countries) to five or six years (in most countries) and seven (in a small number of countries). For the countries that changed the primary cycle, the most recent ISCED primary cycle is applied consistently to the whole series.

The data in the table are for the proxy primary completion rate, calculated by subtracting the number of students who repeat the final primary grade from the number of students in that grade and dividing the result by the number of children of official graduation age in the population. Data limitations preclude adjusting this number for students who drop out during the final year of primary school. Thus proxy rates should be taken as an upper-bound estimate of the actual primary completion rate.

The numerator may include late entrants and overage children who have repeated one or more grades of primary school but are now graduating as well as children who entered school early. The denominator is the number of children of official graduation age, which could cause the primary completion rate to exceed 100 percent. There are other data limitations that contribute to completion rates exceeding 100 percent, such as the use of estimates for the population, the conduct of school and population surveys at different times of year, and other discrepancies in the numbers used in the calculation.

Basic student outcomes include achievements in reading and mathematics judged against established standards. In many countries national learning assessments are enabling ministries of education to monitor progress in these outcomes. Internationally, the UNESCO Institute for Statistics has established literacy as an outcome indicator based on an internationally agreed definition.

The literacy rate is defined as the percentage of people who can, with understanding, both read and write a short, simple statement about their everyday life. In practice, literacy is difficult to measure. To estimate literacy using such a definition requires census or survey measurements under controlled conditions. Many countries estimate the number of literate people from self-reported data. Some use educational attainment data as a proxy but apply different lengths of school attendance or levels of completion. Because definition and methodologies of data collection differ across countries, data need to be used with caution.

The reported literacy data are compiled by the UNESCO Institute for Statistics based on national censuses and household surveys during 1995–2004. When countries did not report data, the estimates generated in July 2002 by UNESCO Institute for Statistics are used. The data for 1990 are also from the model estimation. The estimation methodology can be reviewed at www.uis.unesco.org.

Literacy statistics for most countries cover the population ages 15 and older, by five-year age groups, but some include younger ages or are confined to age ranges that tend to inflate literacy rates. As an alternative, the UNESCO Institute for Statistics has proposed the narrower age range of 15–24, which better captures the ability of participants in the formal education system. The youth literacy rate reported in the table measures the accumulated outcomes of primary education over the previous 10 years or so by indicating the proportion of people who have passed through the primary education system and acquired basic literacy and numeracy skills.

Definitions

• **Primary completion rate** is the percentage of students completing the last year of primary school. It is calculated by taking the total number of students in the last grade of primary school, minus the number of repeaters in that grade, divided by the total number of children of official graduation age. • **Youth literacy rate** is the percentage of people ages 15–24 who can, with understanding, both read and write a short, simple statement about their everyday life. • **Adult literacy rate** is the literacy rate among people ages 15 and older.

Data sources

Data on the primary completion rate for 1991 and 2004 are primarily from the UNESCO Institiute for Statistics. The data for the latest years are provisional, as of January 2006. Data on literacy rates are from the UNESCO Institiute for Statistics.

2.14 Health expenditure, services, and use

	Health expenditure						Physicians		Health worker density index	Hospital beds	
	Total % of GDP	Public % of GDP	Public % of total	Out of pocket % of private	External resources % of total	Per capita $	per 1,000 people		physicians, nurses, and midwives per 1,000 people	per 1,000 people	
	2003	2003	2003	2003	2003	2003	1990	1997–2004[a]	2000–03[a]	1990	2000–03[a]
Afghanistan	6.5	2.6	39.5	76.5	45.6	11	0.1	0.2	0.4	0.2	0.4
Albania	6.5	2.7	41.7	99.8	3.4	118	1.4	1.3	5.4	4.0	3.1
Algeria	4.1	3.3	80.8	95.3	0.0	89	0.9	1.1	..	2.5	..
Angola	2.8	2.4	84.2	100.0	6.7	26	0.0[b]	0.1	..	1.3	..
Argentina	8.9	4.3	48.6	55.6	0.2	305	2.7	3.0	..	4.6	4.1
Armenia	6.0	1.2	20.2	80.6	17.2	55	3.9	3.6	8.8	9.1	4.4
Australia	9.5	6.4	67.5	67.8	0.0	2,519	*2.3*	2.5	10.8	*9.2*	7.4
Austria	7.5	5.1	67.6	59.2	0.0	2,358	2.2	3.4	9.3	10.2	8.3
Azerbaijan	3.6	0.9	23.8	96.8	1.9	32	3.9	3.5	12.0	10.1	8.3
Bangladesh	3.4	1.1	31.3	85.8	12.4	14	0.2	0.3	0.5	0.3	..
Belarus	6.4	4.9	75.9	80.5	0.1	116	3.6	4.6	17.5	13.2	11.3
Belgium	9.4	6.3	67.2	66.6	0.0	2,796	3.3	3.9	15.6	8.0	6.9
Benin	4.4	1.9	43.1	90.3	11.5	20	0.1	0.0[b]	..	0.8	..
Bolivia	6.7	4.3	64.0	79.3	7.3	61	0.4	1.2	1.1	1.3	1.0
Bosnia and Herzegovina	9.5	4.8	50.7	100.0	1.5	168	1.6	1.3	5.7	4.5	3.1
Botswana	5.6	3.3	58.2	28.8	2.9	232	*0.2*	0.4	..	1.6	..
Brazil	7.6	3.4	45.3	64.2	0.3	212	1.4	2.1	2.6	3.3	2.7
Bulgaria	7.5	4.1	54.5	98.4	1.0	191	3.2	3.6	8.3	9.8	6.3
Burkina Faso	5.6	2.6	46.8	98.1	7.4	19	*0.0*[b]	0.1	0.3	0.3	..
Burundi	3.1	0.7	23.3	100.0	14.1	3	0.1	0.0[b]	0.3	*0.7*	..
Cambodia	10.9	2.1	19.3	86.2	18.5	33	*0.1*	0.2	1.0	2.1	0.5
Cameroon	4.2	1.2	28.9	98.3	3.2	37	0.1	0.2	..	2.6	..
Canada	9.9	6.9	69.9	49.6	0.0	2,669	2.1	2.1	12.2	6.0	3.7
Central African Republic	4.0	1.5	38.6	95.3	2.9	12	0.0[b]	0.1	..	0.9	..
Chad	6.5	2.6	39.9	96.3	11.8	16	*0.0*[b]	0.0[b]	0.2	*0.7*	..
Chile	6.1	3.0	48.8	46.2	0.0	282	1.1	1.1	1.7	3.2	2.6
China	5.6	2.0	36.2	87.6	0.1	61	1.5	1.6	2.7	2.6	2.5
Hong Kong, China	..	..	..	..	..	..	..	..	..	..	..
Colombia	7.6	6.4	84.1	47.2	0.0	138	1.1	1.4	1.9	1.4	1.1
Congo, Dem. Rep.	4.0	0.7	18.3	100.0	15.1	4	0.1	0.1	..	1.4	..
Congo, Rep.	2.0	1.3	64.2	100.0	2.2	19	0.3	0.2	..	3.3	..
Costa Rica	7.3	5.8	78.8	88.7	2.7	305	1.3	1.3	2.4	2.5	1.4
Côte d'Ivoire	3.6	1.0	27.6	90.5	3.4	28	0.1	0.1	..	0.8	..
Croatia	7.8	6.5	83.6	100.0	0.6	494	2.1	2.4	7.7	7.4	5.6
Cuba	7.3	6.3	86.8	75.2	0.2	211	3.6	5.9	13.4	5.4	4.9
Czech Republic	7.5	6.8	90.0	83.9	0.0	667	2.8	3.5	13.4	11.3	8.8
Denmark	9.0	7.5	83.0	92.5	0.0	3,534	3.1	2.9	13.6	5.6	4.0
Dominican Republic	7.0	2.3	33.2	70.8	1.5	132	1.5	1.9	3.7	1.9	2.1
Ecuador	5.1	2.0	38.6	88.1	0.9	109	1.5	1.5	3.1	1.6	1.5
Egypt, Arab Rep.	*5.9*	*2.2*	*37.0*	*99.0*	*0.8*	*64*	0.8	0.5	4.9	2.1	2.2
El Salvador	8.1	3.7	46.1	93.5	1.0	183	0.8	1.2	2.0	1.5	..
Eritrea	4.4	2.0	45.5	100.0	19.6	8	..	0.1	..	..	..
Estonia	5.3	4.1	77.1	88.3	0.1	366	3.5	3.2	9.8	11.6	6.0
Ethiopia	5.9	3.4	58.4	78.7	26.0	5	*0.0*[b]	0.0[b]	0.2	0.2	..
Finland	7.4	5.7	76.5	81.2	0.0	2,307	2.4	2.6	25.6	12.5	7.2
France	10.1	7.7	76.3	42.2	0.0	2,981	2.6	3.4	10.2	9.7	7.7
Gabon	4.4	2.9	66.6	100.0	0.7	196	*0.5*	0.3	..	3.2	..
Gambia, The	8.1	3.2	40.0	67.0	21.8	21	..	0.1[b]	..	0.6	..
Georgia	4.0	1.0	23.9	98.2	5.3	35	4.9	4.1	7.9	9.8	4.2
Germany	11.1	8.7	78.2	47.9	0.0	3,204	3.1	3.4	13.2	10.4	8.9
Ghana	4.5	1.4	31.8	100.0	15.8	16	*0.0*[b]	0.2	0.9	1.5	..
Greece	9.9	5.1	51.3	95.4	..	1,556	3.4	4.4	7.5	5.1	4.7
Guatemala	5.4	2.1	39.7	91.9	3.8	112	0.8	0.9	..	1.1	0.5
Guinea	5.4	0.9	16.6	99.4	7.3	22	0.1	0.1	0.6	0.6	..
Guinea-Bissau	5.6	2.6	45.8	80.2	26.8	9	..	0.1	..	1.5	..
Haiti	7.5	2.9	38.1	69.5	12.4	26	0.1	0.2	..	0.8	0.8

Health expenditure, services, and use

2.14

	Health expenditure						Physicians		Health worker density index	Hospital beds	
	Total % of GDP	Public % of GDP	Public % of total	Out of pocket % of private	External resources % of total	Per capita $	per 1,000 people		physicians, nurses, and midwives per 1,000 people	per 1,000 people	
	2003	2003	2003	2003	2003	2003	1990	1997–2004[a]	2000–03[a]	1990	2000–03[a]
Honduras	7.1	4.0	56.5	85.8	9.3	72	0.7	0.6	..	1.0	1.0
Hungary	8.4	6.1	72.4	88.9	0.4	684	2.9	3.2	11.9	..	7.8
India	4.8	1.2	24.8	97.0	1.6	27	*0.5*	0.6	..	*0.8*	0.9
Indonesia	3.1	1.1	35.9	74.3	1.4	30	0.1	0.1	0.7	0.7	..
Iran, Islamic Rep.	6.5	3.1	47.3	94.8	0.1	131	*0.3*	0.4	..	1.4	1.6
Iraq	2.7	1.4	51.8	100.0	3.8	23	0.6	0.7	3.6	1.7	1.3
Ireland	7.3	5.8	78.9	61.9	0.0	2,860	1.6	2.8	19.0	6.1	4.3
Israel	8.9	6.1	68.2	89.1	3.4	1,514	3.2	3.8	10.3	6.2	6.1
Italy	8.4	6.3	75.1	83.3	0.0	2,139	4.7	4.2	10.5	7.2	4.4
Jamaica	5.3	2.7	50.6	64.7	1.2	164	0.6	0.8	2.5	2.2	1.4
Japan	7.9	6.4	81.0	90.1	0.0	2,662	1.7	2.0	10.4	..	14.3
Jordan	9.4	4.2	45.2	74.0	4.2	177	*1.3*	2.0	4.8	1.8	1.7
Kazakhstan	3.5	2.0	57.3	100.0	1.2	73	4.0	3.5	9.5	13.7	7.7
Kenya	4.3	1.7	38.7	82.6	15.3	20	0.0[b]	0.1	..	1.6	..
Korea, Dem. Rep.	5.8	5.3	91.2	100.0	19.1	1	..	3.3	..	..	..
Korea, Rep.	5.6	2.8	49.4	82.8	0.0	705	0.8	1.6	5.4	3.1	7.1
Kuwait	3.5	2.7	77.5	91.2	0.0	580	0.2	1.5	5.4	*3*	2.2
Kyrgyz Republic	5.0	*2.2*	43.6	..	..	..	3.4	2.5	10.1	12.0	5.3
Lao PDR	3.2	1.2	38.5	75.5	30.0	11	0.2	..	..	2.6	1.2
Latvia	6.4	3.3	51.3	94.3	0.4	301	4.1	3.0	8.2	14.1	7.8
Lebanon	10.2	3.0	29.3	79.4	0.1	573	*1.3*	3.3	4.4	1.7	3.0
Lesotho	5.2	4.1	79.7	18.2	8.2	31	0.0[b]	0.0[b]	..	..	..
Liberia	4.7	2.7	56.7	98.5	32.3	6	..	0.0[b]	..	..	..
Libya	4.1	2.6	62.9	100.0	0.0	171	1.1	1.3	..	4.2	3.9
Lithuania	6.6	5.0	76.0	96.6	1.3	351	4.0	4.0	12.4	12.5	8.7
Macedonia, FYR	7.1	6.0	84.5	100.0	1.7	161	2.2	2.2	8.1	5.9	4.8
Madagascar	2.7	1.7	63.4	91.7	22.0	8	0.1	0.3	0.4	0.9	0.4
Malawi	9.3	3.3	35.2	42.7	25.1	13	0.0[b]	0.0[b]	0.3	1.6	..
Malaysia	3.8	2.2	58.2	73.8	0.1	163	0.4	0.7	2.4	2.1	1.9
Mali	4.8	2.8	57.4	89.3	13.7	16	0.1	0.1	0.2	..	..
Mauritania	4.2	3.2	76.8	100.0	4.7	17	0.1	0.1	..	0.7	..
Mauritius	3.7	2.2	60.8	100.0	1.0	172	0.8	1.1	..	*2.9*	..
Mexico	6.2	2.9	46.4	94.2	0.4	372	1.1	1.5	3.9	1.0	1.0
Moldova	7.2	3.9	54.5	96.1	2.5	34	3.6	2.6	9.2	13.1	6.7
Mongolia	6.7	4.3	63.8	91.1	3.2	33	2.5	2.6	6.0	*11.5*	..
Morocco	5.1	1.7	33.1	76.1	1.0	72	*0.2*	0.5	1.5	1.3	0.8
Mozambique	4.7	2.9	61.7	38.8	40.8	12	0.0[b]	0.0[b]	0.3	0.9	..
Myanmar	2.8	0.5	19.4	99.7	2.2	394	0.1	0.4	0.8	0.6	0.6
Namibia	6.7	4.7	70.0	19.2	5.3	145	*0.2*	0.3	..	..	..
Nepal	5.3	1.5	27.8	92.2	9.9	12	0.1	0.2	0.3	0.2	..
Netherlands	9.8	6.1	62.4	20.8	0.0	3,088	2.5	3.1	16.7	5.8	4.7
New Zealand	8.1	6.3	78.3	72.1	0.0	1,618	1.9	2.2	10.9	8.5	6.1
Nicaragua	7.7	3.7	48.4	95.7	11.2	60	0.7	0.4	1.8	1.8	0.9
Niger	4.7	2.5	53.0	89.2	32.8	9	0.0[b]	0.0[b]	0.3	..	..
Nigeria	5.0	1.3	25.5	91.2	5.3	22	*0.2*	0.3	1.5	1.7	..
Norway	10.3	8.6	83.7	95.4	0.0	4,976	*2.6*	3.1	24.9	4.6	3.8
Oman	3.2	2.7	83.0	56.1	0.0	278	0.6	1.3	4.2	2.1	2.0
Pakistan	2.4	0.7	27.7	98.0	2.5	13	0.5	0.7	1.1	0.6	0.7
Panama	7.6	5.0	66.4	82.2	0.2	315	1.6	1.5	3.2	2.5	2.5
Papua New Guinea	3.4	3.0	88.9	87.2	28.3	23	0.1	0.1	0.6	4.0	..
Paraguay	7.3	2.3	31.5	74.6	1.8	75	0.6	1.1	1.4	0.9	1.2
Peru	4.4	2.1	48.3	79.0	3.2	98	1.1	1.2	..	1.4	1.4
Philippines	3.2	1.4	43.7	78.2	3.8	31	0.1	1.2	7.4	1.4	1.0
Poland	6.5	4.5	69.9	87.8	0.0	354	2.1	2.5	7.7	5.7	5.6
Portugal	9.6	6.7	69.7	95.7	0.0	1,348	2.8	3.3	7.0	4.1	3.6
Puerto Rico	..	..	..	..	..	..	..	..	..	..	..

2.14 Health expenditure, services, and use

	Health expenditure						Physicians		Health worker density index	Hospital beds	
	Total % of GDP	Public % of GDP	Public % of total	Out of pocket % of private	External resources % of total	Per capita $	per 1,000 people		physicians, nurses, and midwives per 1,000 people	per 1,000 people	
	2003	2003	2003	2003	2003	2003	1990	1997–2004[a]	2000–03[a]	1990	2000–03[a]
Romania	6.1	3.8	62.9	90.4	3.8	159	1.8	1.9	6.2	8.9	6.6
Russian Federation	5.6	3.3	59.0	71.1	0.2	167	4.1	4.3	12.5	13.1	10.5
Rwanda	3.7	1.6	43.5	41.7	54.5	7	*0.0*[b]	0.0[b]	0.2	1.7	..
Saudi Arabia	*3.3*	*2.5*	*75.4*	*31.0*	..	*348*	1.4	1.4	4.4	2.5	2.2
Senegal	5.1	2.1	41.8	95.3	15.4	29	0.1	0.1	..	0.7	..
Serbia and Montenegro	9.6	7.2	75.5	85.3	0.5	181	2.0	2.1	..	5.9	6.0
Sierra Leone	3.5	2.0	58.3	100.0	15.5	7	..	0.0[b]	..	..	..
Singapore	4.5	1.6	36.1	97.1	0.0	964	1.3	1.4	5.6	3.6	2.9
Slovak Republic	5.9	5.2	88.3	100.0	0.0	360	2.9	3.1	10.6	7.4	7.2
Slovenia	8.8	6.7	76.3	41.1	0.1	1,218	2.0	2.3	9.4	6.0	5.0
Somalia	*2.6*	*1.2*	*44.6*	*100.0*	*9.3*	*8*	..	0.0[b]	..	0.8	..
South Africa	8.4	3.2	38.6	17.1	0.5	295	*0.6*	0.8	4.6	..	..
Spain	7.7	5.5	71.3	82.0	0.0	1,541	2.3	3.2	6.8	4.6	3.8
Sri Lanka	3.5	1.6	45.0	88.9	2.3	31	*0.1*	0.5	1.2	2.7	..
Sudan	4.3	1.9	43.2	96.3	2.2	21	..	0.2	1.0	1.1	0.7
Swaziland	5.8	3.3	57.3	42.4	5.5	107	0.1	0.2	3.4	..	..
Sweden	9.4	8.0	85.2	92.1	0.0	3,149	2.9	3.3	13.5	12.4	3.6
Switzerland	11.5	6.7	58.5	76.0	0.0	5,035	3.0	3.6	12.1	*19.9*	6.0
Syrian Arab Republic	5.1	2.5	48.2	100.0	0.2	59	0.8	1.4	3.3	1.1	1.5
Tajikistan	4.4	0.9	20.8	100.0	14.9	11	2.6	2.0	7.2	10.7	6.1
Tanzania	4.3	2.4	55.4	81.1	21.9	12	..	0.0[b]	0.4	1.0	..
Thailand	3.3	2.0	61.6	74.8	0.3	76	0.2	0.4	..	1.6	..
Togo	5.6	1.4	24.8	88.0	2.3	16	*0.1*	0.0[b]	0.3	1.5	..
Trinidad and Tobago	3.9	1.5	37.8	88.6	1.4	316	0.7	0.8	..	4.0	3.4
Tunisia	5.6	2.8	50.0	..	..	126	0.5	1.3	..	1.9	1.7
Turkey	7.6	5.4	71.6	69.9	0.0	257	0.9	1.4	4.2	2.4	2.6
Turkmenistan	3.9	2.6	67.4	100.0	0.4	89	3.6	4.2	..	11.5	..
Uganda	7.3	2.2	30.4	52.8	28.5	18	*0.0*[b]	0.1	0.1	*0.9*	..
Ukraine	5.7	3.8	65.9	78.6	0.1	60	4.3	3.0	11.2	13.0	8.8
United Arab Emirates	3.3	2.5	74.7	70.4	0.0	661	0.8	2.0	6.2	2.6	2.2
United Kingdom	8.0	6.9	85.7	76.7	0.0	2,428	1.4	2.2	..	5.9	4.2
United States	15.2	6.8	44.6	24.3	0.0	5,711	2.4	2.3	13.2	4.9	3.3
Uruguay	9.8	2.7	27.2	25.0	0.4	323	3.7	3.7	4.5	4.5	1.9
Uzbekistan	5.5	2.4	43.0	95.5	3.0	21	3.4	2.7	13.7	12.5	5.5
Venezuela, RB	4.5	2.0	44.3	95.5	0.1	146	1.6	1.9	2.6	2.7	0.8
Vietnam	5.4	1.5	27.8	74.2	2.6	26	0.4	0.5	1.3	3.8	2.4
West Bank and Gaza	..	..	..	..	..	..	..	0.8	..	..	..
Yemen, Rep.	5.5	2.2	40.9	95.5	8.8	32	0.0[b]	0.3	0.7	0.8	0.6
Zambia	5.4	2.8	51.4	68.2	44.7	21	0.1	0.1	..	..	..
Zimbabwe	7.9	2.8	35.9	56.7	6.8	40	0.1	0.2	0.6	0.5	..
World	**10.2 w**	**5.9 w**	**60.4 w**	**43.4 w**	**0.1 w**	**588 w**	**1.6 w**	**1.5 w**	**.. w**	**3.7 w**	**.. w**
Low income	4.6	1.3	29.1	95.1	4.4	30	*0.5*	0.4	..	..	..
Middle income	6.0	3.0	49.5	77.5	0.5	116	1.6	1.7	..	3.5	..
Lower middle income	5.6	2.5	43.7	81.4	0.6	77	1.4	1.5	..	2.9	..
Upper middle income	6.5	3.7	57.6	72.0	0.3	280	2.4	2.4	7.6	6.6	5.6
Low & middle income	5.8	2.8	46.4	81.6	1.2	79	1.3	1.1	..	3.1	..
East Asia & Pacific	5.0	1.9	39.0	88.3	0.8	64	1.2	1.3	3.0	2.3	2.4
Europe & Central Asia	6.5	4.5	67.3	79.9	0.5	194	3.2	3.0	10.3	10.2	7.6
Latin America & Carib.	6.8	3.3	48.2	75.3	0.6	222	1.4	1.9	..	2.5	..
Middle East & N. Africa	5.6	2.7	50.9	89.2	0.8	92	..	1.2	..	1.8	..
South Asia	4.4	1.1	26.3	96.2	2.7	24	*0.5*	0.5	..	*0.7*	0.9
Sub-Saharan Africa	6.1	2.4	41.2	47.4	5.5	36	..	0.1	..	1.2	..
High income	11.2	6.7	63.9	37.0	0.0[b]	3,449	2.3	3.7	..	6.2	6.4
Europe EMU	9.6	7.1	74.1	57.6	0.0	2,552	3.1	3.9	12.2	8.1	6.6

a. Data are for the most recent year available. b. Less than 0.05.

Health expenditure, services, and use 2.14

About the data

National health accounts track financial flows in the health sector, including public and private expenditures, by source of funding. In contrast with high-income countries, few developing countries have health accounts that are methodologically consistent with national accounting approaches. The difficulties in creating national health accounts go beyond data collection. To establish a national health accounting system, a country needs to define the boundaries of the health care system and to define a taxonomy of health care delivery institutions. The accounting system should be comprehensive and standardized, providing not only accurate measures of financial flows but also information on the equity and efficiency of health financing to inform health policy.

The absence of consistent national health accounting systems in most developing countries makes cross-country comparisons of health spending difficult. Compiling estimates of public health expenditures is complicated in countries where state or provincial and local governments are involved in financing and delivering health care, because the data on public spending often are not aggregated. There are a number of potential data sources related to external resources for health, including government expenditure accounts, government records on external assistance, routine surveys of external financing assistance, and special surveys. Survey data are the major source of information about out of pocket expenditure on health. The data in the table are the product of an effort by the World Health Organization (WHO), the Organisation for Economic Co-operation and Development (OECD), and the World Bank to collect all available information on health expenditures from national and local government budgets, national accounts, household surveys, insurance publications, international donors, and existing tabulations.

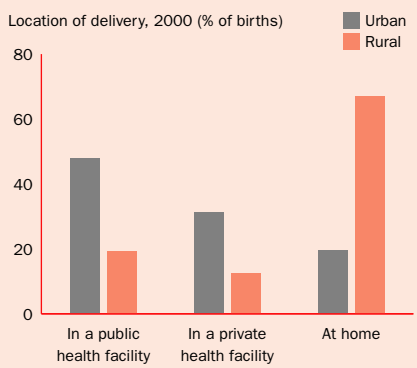
Indicators on health services (physicians, health worker density, and hospital beds per 1,000 people) come from a variety of sources (see *Data sources*). Data are lacking for many countries, and for others comparability is limited by differences in definitions. In estimates of health personnel, for example, some countries incorrectly include retired physicians (because deletions to physician rosters are made only periodically) or those working outside the health sector. There is no universally accepted definition of hospital beds. Moreover, figures on physicians and hospital beds are indicators of availability, not of quality or use. They do not show how well trained the physicians are or how well equipped the hospitals or medical centers are. And physicians and hospital beds tend to be concentrated in urban areas, so these indicators give only a partial view of health services available to the entire population.

The WHO receives data on health professionals from ministries of health through its six regional offices, often in cooperation with national statistical offices. The data are scrutinized using such additional recources as national and international employment surveys, records from professional associations, and other publications. Significant inconsistenties are returned to national authorities for validation and resubmission.

The health worker density index indicates the overall level of health workers (physicians, nurses, and midwives) in the country. Dentists and pharmacists are not included. Comparability of the index across countries is affected by differences in the definition of health workers. Many countries continue to use national definitions and classifications for data collection, and some countries provide information only for public sector workers.

2.14a

In Uganda most births in rural areas take place at home



Rural areas lack accessibile medical facilities, as shown by the low share of births in public or private health facilities

Source: Demographic and Health Survey.

Definitions

• **Total health expenditure** is the sum of public and private health expenditure. 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. • **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. • **Out of pocket health expenditure** is any direct outlay by households, including gratuities and in-kind payments, to health practitioners and suppliers of pharmaceuticals, therapeutic appliances, and other goods and services whose primary intent is to contribute to the restoration or enhancement of the health status of individuals or population groups. It is a part of private health expenditure. • **External resources for health** are funds or services in kind that are provided by entities not part of the country in question. The resources may come from international organizations, other countries through bilateral arrangements, or foreign nongovernmental organizations. These resources are part of total health expenditure. • **Health expenditure per capita** is total health expenditure divided by number of people in the country. • **Physicians** are graduates of any faculty or school of medicine who are working in the country in any medical field (practice, teaching, or research). • **Health worker density index** reflects a combined density of physicians, nurses, and midwives per 1,000 people. • **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.

Data sources

Data on health expenditure come mostly from the WHO's *World Health Report 2006* and from the OECD for its member countries, supplemented by World Bank poverty assessments and country and sector studies. Data are also drawn from World Bank public expenditure reviews, the International Monetary Fund's Government Finance Statistics database, and other studies. Data on out of pocket expenditure in developing countries are drawn largely from household surveys conducted by governments or by statistical or international organizations. Data on physicians are from the WHO's *World Health Report 2006* and Global Atlas of the Health Workforce database, OECD, and TransMONEE, supplemented by country data. Data for the health worker density index are from the Joint Learning Initiative's *Human Resources for Health*. Data on hospital beds are from the WHO's *World Health Statistics 2005*, OECD's *Health Data 2005*, and TransMONEE, supplemented by country data.

2.15 Disease prevention coverage and quality

	Access to an improved water source		Access to improved sanitation facilities		Child immunization rate		Children with acute respiratory infection taken to health provider	Children with diarrhea who received oral rehydration and continued feeding	Children sleeping under treated bednets[a]	Children with fever receiving antimalarial drugs	Tuberculosis treatment success rate	DOTS detection rate
	% of population		% of population		% of children ages 12–23 months[b]		% of children under age 5 with ARI	% of children under age 5 with diarrhea	% of children under age 5	% of children under age 5 with fever	% of registered cases	% of estimated cases
	1990	2002	1990	2002	Measles 2004	DPT 2004	2000–04[c]	1998–2004[c]	2000–04[c]	2000–04[c]	2003	2004
Afghanistan	..	13	..	8	61	66	28	48	..	..	86	19
Albania	97	97	..	89	96	97	83	51	..	..	91	34
Algeria	95	87	88	92	81	86	52	..	..	..	90	105
Angola	32	50	30	30	64	59	58	32	2.3	63.0	68	94
Argentina	94	..	82	..	95	90	..	..	..	..	66	65
Armenia	..	92	..	84	92	91	25	48	..	..	77	44
Australia	100	100	100	100	93	92	..	..	..	..	82	33
Austria	100	100	100	100	74	83	..	..	..	..	68	42
Azerbaijan	66	77	..	55	98	96	36	40	1.4	1.0	70	47
Bangladesh	71	75	23	48	77	85	20	35	..	..	85	44
Belarus	100	100	..	..	99	99	..	..	..	..	73	42
Belgium	..	..	..	..	82	95	..	..	..	..	73	65
Benin	60	68	11	32	85	83	29	42	7.4	60.0	81	82
Bolivia	72	85	33	45	64	81	52	54	..	..	81	71
Bosnia and Herzegovina	98	98	..	93	88	84	80	23	..	..	94	96
Botswana	93	95	38	41	90	97	14	7	..	..	77	67
Brazil	83	89	70	75	99	96	..	..	..	..	83	47
Bulgaria	100	100	100	100	81	90	..	..	..	..	91	104
Burkina Faso	39	51	13	12	78	88	36	..	2.0	50.0	66	18
Burundi	69	79	44	36	75	74	40	16	1.3	31.0	79	29
Cambodia	..	34	..	16	80	85	35	59	..	..	93	61
Cameroon	50	63	21	48	64	73	40	33	1.3	66.1	*70*	91
Canada	100	100	100	100	95	91	..	..	..	..	35	58
Central African Republic	48	75	23	27	35	40	32	47	1.5	69.0	59	4
Chad	20	34	6	8	56	50	12	50	0.6	32.0	78	16
Chile	90	95	85	92	95	94	..	..	..	..	85	114
China	70	77	23	44	84	91	..	..	..	..	94	63
Hong Kong, China	..	..	..	..	..	..	..	..	..	..	78	55
Colombia	92	92	82	86	92	89	51	44	0.7	..	83	17
Congo, Dem. Rep.	43	46	18	29	64	64	36	17	0.7	45.0	83	70
Congo, Rep.	..	46	..	9	65	67	38	..	..	..	69	65
Costa Rica	..	97	..	92	88	90	..	..	..	..	94	153
Côte d'Ivoire	69	84	31	40	49	50	38	34	4.0	57.5	72	38
Croatia	..	..	..	..	96	96	..	..	..	..	..	..
Cuba	..	91	98	98	99	88	..	..	..	..	93	90
Czech Republic	..	..	..	..	97	98	..	..	..	..	79	61
Denmark	100	100	..	..	96	95	..	..	..	..	84	78
Dominican Republic	86	93	48	57	79	71	61	53	..	..	81	71
Ecuador	69	86	56	72	99	90	..	..	..	..	84	42
Egypt, Arab Rep.	94	98	54	68	97	97	70	29	..	..	80	61
El Salvador	67	82	51	63	93	90	62	..	..	..	88	57
Eritrea	40	57	8	9	84	83	44	54	4.2	4.0	85	14
Estonia	..	..	..	..	96	94	..	..	..	..	70	74
Ethiopia	25	22	4	6	71	80	16	38	..	3.0	70	36
Finland	100	100	100	100	97	98	..	..	..	..	..	..
France	..	..	..	..	86	97	..	..	..	..	..	..
Gabon	..	87	..	36	55	38	48	44	..	..	34	81
Gambia, The	..	82	..	53	90	92	75	38	14.7	55.0	75	66
Georgia	..	76	..	83	86	78	99	..	..	..	66	79
Germany	100	100	..	..	92	97	..	..	..	..	71	51
Ghana	54	79	43	58	83	80	44	40	4.0	63.0	66	37
Greece	..	..	..	..	88	88	..	..	..	..	..	..
Guatemala	77	95	50	61	75	84	64	22	..	..	91	55
Guinea	42	51	17	13	73	69	33	44	4.0	56.0	75	52
Guinea-Bissau	..	59	..	34	80	80	64	23	7.4	58.0	80	75
Haiti	53	71	15	34	54	43	26	41	..	12.0	78	49

Disease prevention coverage and quality

2.15

	Access to an improved water source		Access to improved sanitation facilities		Child immunization rate		Children with acute respiratory infection taken to health provider	Children with diarrhea who received oral rehydration and continued feeding	Children sleeping under treated bednets[a]	Children with fever receiving antimalarial drugs	Tuberculosis treatment success rate	DOTS detection rate
	% of population		% of population		% of children ages 12–23 months[b]		% of children under age 5 with ARI	% of children under age 5 with diarrhea	% of children under age 5	% of children under age 5 with fever	% of registered cases	% of estimated cases
	1990	2002	1990	2002	Measles 2004	DPT 2004	2000–04[c]	1998–2004[c]	2000–04[c]	2000–04[c]	2003	2004
Honduras	83	90	49	68	92	89	..	..	..	..	87	83
Hungary	99	99	..	95	99	99	..	..	..	..	48	47
India	68	86	12	30	56	64	..	22	..	..	86	57
Indonesia	71	78	46	52	72	70	61	61	0.1	1.0	87	53
Iran, Islamic Rep.	91	93	83	84	96	99	93	..	..	..	84	58
Iraq	83	81	81	80	90	81	76	..	..	..	85	20
Ireland	..	..	..	..	81	89	..	..	..	..	..	..
Israel	100	100	..	..	96	96	..	..	..	..	80	34
Italy	..	..	..	..	84	96	..	..	..	..	95	58
Jamaica	92	93	75	80	80	77	39	21	..	..	53	79
Japan	100	100	100	100	99	99	..	..	..	..	76	45
Jordan	98	91	..	93	99	95	72	44	..	..	87	79
Kazakhstan	86	86	72	72	99	82	..	22	..	..	75	79
Kenya	45	62	42	48	73	73	46	33	5.0	27.0	80	46
Korea, Dem. Rep.	100	100	..	59	95	72	93	..	..	..	88	103
Korea, Rep.	..	92	..	..	99	88	..	..	..	..	82	21
Kuwait	..	..	..	..	97	98	..	..	..	..	62	83
Kyrgyz Republic	..	76	..	60	99	99	..	..	..	..	84	62
Lao PDR	..	43	..	24	36	45	36	37	18.0	9.0	79	55
Latvia	..	..	..	..	99	98	..	..	..	..	74	83
Lebanon	100	100	..	98	96	92	74	..	..	..	92	82
Lesotho	..	76	37	37	70	78	..	29	..	..	70	86
Liberia	56	62	38	26	42	31	70	..	..	..	73	58
Libya	71	72	97	97	99	97	..	..	..	..	62	169
Lithuania	..	..	..	..	98	94	..	..	..	..	74	89
Macedonia, FYR	..	..	..	..	96	94	..	..	..	..	84	73
Madagascar	40	45	12	33	59	61	48	47	0.2	34.0	71	74
Malawi	41	67	36	46	80	89	27	51	2.9	27.0	73	40
Malaysia	..	95	96	..	95	99	..	..	..	..	72	69
Mali	34	48	36	45	75	76	43	45	8.4	38.0	65	19
Mauritania	41	56	28	42	64	70	39	28	..	33.4	58	43
Mauritius	100	100	99	99	98	98	..	..	..	..	87	33
Mexico	80	91	66	77	96	98	..	..	..	..	83	71
Moldova	..	92	..	68	96	98	78	52	..	..	65	59
Mongolia	62	62	..	59	96	99	78	66	..	..	87	80
Morocco	75	80	57	61	95	97	35	50	..	..	86	80
Mozambique	..	42	..	27	77	72	51	..	..	..	76	46
Myanmar	48	80	21	73	78	82	66	48	..	..	81	83
Namibia	58	80	24	30	70	81	53	39	3.4	14.0	63	88
Nepal	69	84	12	27	73	80	24	43	..	..	87	67
Netherlands	100	100	100	100	96	98	..	..	..	..	86	61
New Zealand	97	..	..	..	85	90	..	..	..	..	36	59
Nicaragua	69	81	47	66	84	79	57	49	..	2.0	84	87
Niger	40	46	7	12	74	62	27	43	5.8	48.0	70	46
Nigeria	49	60	39	38	35	25	31	28	1.0	34.0	59	21
Norway	100	100	..	..	88	91	..	..	..	..	97	46
Oman	77	79	83	89	98	99	..	..	..	..	90	123
Pakistan	83	90	38	54	67	65	..	..	..	..	75	27
Panama	..	91	..	72	99	99	..	..	..	..	74	133
Papua New Guinea	39	39	45	45	44	46	..	..	..	..	58	19
Paraguay	62	83	58	78	89	76	..	..	..	..	85	21
Peru	74	81	52	62	89	87	58	46	..	..	89	83
Philippines	87	85	54	73	80	79	55	76	..	..	88	73
Poland	..	..	..	..	97	99	..	..	..	..	78	56
Portugal	..	..	..	..	95	95	..	..	..	..	84	78
Puerto Rico	..	..	..	..	..	..	..	..	..	..	66	76

2.15 Disease prevention coverage and quality

	Access to an improved water source		Access to improved sanitation facilities		Child immunization rate		Children with acute respiratory infection taken to health provider	Children with diarrhea who received oral rehydration and continued feeding	Children sleeping under treated bednets[a]	Children with fever receiving antimalarial drugs	Tuberculosis treatment success rate	DOTS detection rate
	% of population		% of population		% of children ages 12–23 months[b]		% of children under age 5 with ARI	% of children under age 5 with diarrhea	% of children under age 5	% of children under age 5 with fever	% of registered cases	% of estimated cases
	1990	2002	1990	2002	Measles 2004	DPT 2004	2000–04[c]	1998–2004[c]	2000–04[c]	2000–04[c]	2003	2004
Romania	..	57	..	51	97	97	..	..	31.0	..	80	41
Russian Federation	94	96	87	87	98	97	..	..	..	..	61	13
Rwanda	58	73	37	41	84	89	20	16	5.0	13.0	67	29
Saudi Arabia	90	..	..	..	97	96	..	..	..	..	79	40
Senegal	66	72	35	52	57	87	27	33	1.7	36.0	70	52
Serbia and Montenegro	93	93	87	87	96	97	97	..	..	..	89	32
Sierra Leone	..	57	..	39	64	61	50	39	1.5	61.0	83	36
Singapore	..	..	..	..	94	94	..	..	..	..	77	67
Slovak Republic	100	100	100	100	98	99	..	..	..	..	87	34
Slovenia	..	..	..	..	94	92	..	..	..	..	85	66
Somalia	..	29	..	25	40	30	..	..	..	..	90	44
South Africa	83	87	63	67	81	93	..	37	..	..	67	83
Spain	..	..	..	..	97	96	..	..	..	..	..	..
Sri Lanka	68	78	70	91	96	97	..	..	..	..	81	70
Sudan	64	69	33	34	59	55	57	38	0.4	50.0	82	35
Swaziland	..	52	..	52	70	83	60	24	0.1	26.0	42	38
Sweden	100	100	100	100	94	99	..	..	..	..	83	69
Switzerland	100	100	100	100	82	95	..	..	..	..	..	..
Syrian Arab Republic	79	79	76	77	98	99	66	..	..	..	88	46
Tajikistan	..	58	..	53	89	82	51	29	1.9	69.0	86	12
Tanzania	38	73	47	46	94	95	..	38	10.0	58.0	81	47
Thailand	81	85	80	99	96	98	..	..	..	..	73	71
Togo	49	51	37	34	70	71	30	25	2.0	60.0	63	17
Trinidad and Tobago	92	91	100	100	95	94	74	31	..	..	..	..
Tunisia	77	82	75	80	95	97	43	..	..	..	91	95
Turkey	81	93	84	83	81	85	41	19	..	..	93	3
Turkmenistan	..	71	..	62	97	97	51	..	..	..	82	38
Uganda	44	56	43	41	91	87	67	29	0.2	..	68	43
Ukraine	..	98	99	99	99	99	..	..	..	..	..	..
United Arab Emirates	..	..	100	100	94	94	..	..	..	..	64	17
United Kingdom	..	..	..	..	..	..	..	..	..	..	..	..
United States	100	100	100	100	93	96	..	..	..	..	70	85
Uruguay	..	98	..	94	95	95	..	..	..	..	86	86
Uzbekistan	89	89	58	57	98	99	57	33	..	..	81	28
Venezuela, RB	..	83	..	68	80	86	72	51	..	..	82	77
Vietnam	72	80	32	41	97	96	71	39	15.8	7.0	92	89
West Bank and Gaza	..	94	..	76	..	..	65	..	..	..	80	1
Yemen, Rep.	69	69	21	30	76	78	47	..	..	..	82	40
Zambia	50	55	41	45	84	80	69	48	6.5	52.0	75	54
Zimbabwe	77	83	49	57	80	85	..	80	..	..	66	42
World	**75 w**	**82 w**	**43 w**	**54 w**	**76 w**	**79 w**		**.. w**				**55 w**
Low income	64	75	20	36	64	67		24				47
Middle income	77	83	48	61	87	89		..				68
Lower middle income	75	81	42	57	86	88		..				65
Upper middle income	88	93	80	81	91	93		37				74
Low & middle income	71	79	37	50	74	77		..				55
East Asia & Pacific	71	78	30	49	82	87		..				77
Europe & Central Asia	..	91	86	82	93	93		22				51
Latin America & Carib.	82	89	68	75	92	91		..				62
Middle East & N. Africa	87	88	69	75	92	93		..				50
South Asia	70	84	16	35	61	67		23				42
Sub-Saharan Africa	49	58	32	36	64	64		..				51
High income	..	99	..	..	93	96		..				57
Europe EMU	..	..	..	..	89	96		..				..

a. For malaria prevention only. b. Refers to children who were immunized before 12 months or, in some cases, at any time before the survey (12–23 months). c. Data are for the most recent year available.

Disease prevention coverage and quality 2.15

About the data

The indicators in the table are based on data provided to the World Health Organization (WHO) by member states as part of their efforts to monitor and evaluate progress in implementing national health strategies. Because reliable, observation-based statistical data for these indicators do not exist in some developing countries, some of the data are estimated.

People's health is influenced by the environment in which they live. Lack of clean water and basic sanitation is the main reason diseases transmitted by feces are so common in developing countries. The data on access to an improved water source measure the share of the population with ready access to water for domestic purposes. The data are based on surveys and estimates provided by governments to the Joint Monitoring Programme of the WHO and United Nations Children's Fund (UNICEF). The coverage rates for water and sanitation are based on information from service users on the facilities their households actually use rather than on information from service providers, who may include nonfunctioning systems. Access to drinking water from an improved source does not ensure that the water is safe or adequate, as these characteristics are not tested at the time of the surveys.

Governments in developing countries usually finance immunization against measles and diphtheria, pertussis (whooping cough), and tetanus (DPT) as part of the basic public health package. In many developing countries, lack of precise information on the size of the cohort of one-year-old children makes immunization coverage difficult to estimate from program statistics. The data shown here are based on an assessment of national immunization coverage rates by the WHO and UNICEF. The assessment considered both administrative data from service providers and household survey data on children's immunization histories. Based on the data available, consideration of potential biases, and contributions of local experts, the most likely true level of immunization coverage was determined for each year.

Acute respiratory infection continues to be a leading cause of death among young children, killing about 2 million children under age five in developing countries in 2000. An estimated 60 percent of these deaths can be prevented by the selective use of antibiotics by appropriate health care providers. Data are drawn mostly from household health surveys in which mothers report on number of episodes and treatment for acute respiratory infection.

Since 1990 diarrhea-related deaths among children have declined tremendously. Most diarrhea-related deaths are due to dehydration, and many of these deaths can be prevented with the use of oral rehydration salts at home. However, recommendations for the use of oral rehydration therapy have changed over time based on scientific progress, so it is difficult to accurately compare use rates among countries. Until the current recommended method for home management of diarrhea is adopted and applied in all countries, the data should be used with caution. Also, the prevalence of diarrhea may vary by season. Since country surveys are administered at different times, data comparability is further affected.

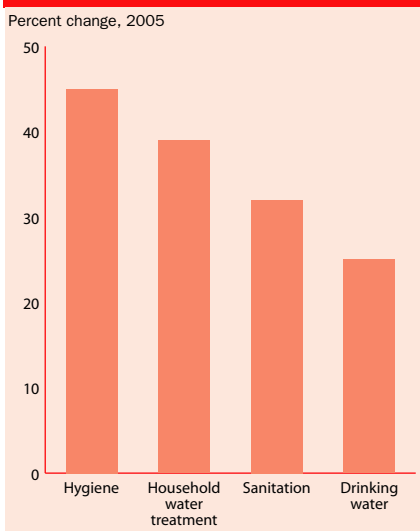
Malaria is endemic to the poorest countries in the world, mainly in tropical and subtropical regions of Africa, Asia, and the Americas. An estimated 300–500 million clinical malaria cases and more than 1 million malaria deaths occur each year—the vast majority in Sub-Saharan Africa and among children under age five. Insecticide-treated bednets, if properly used and maintained, are one of the most important malaria-preventive strategies to limit human-mosquito contact. Studies have emphasized that mortality rates could be reduced by about 25–30 percent if every child under age five in malaria-risk areas such as Africa slept under a treated bednet every night.

Prompt and effective treatment of malaria is a critical elemet of malaria control. It is vital that sufferers, especially children under age five, start treatment within 24 hours of the onset of symptoms, to prevent progression—often rapid—to severe malaria and death.

Data on the success rate of tuberculosis treatment are provided for countries that have implemented the recommended control strategy: directly observed treatment, short course (DOTS). Countries that have not adopted DOTS or have only recently done so are omitted because of lack of data or poor comparability or reliability of reported results. The treatment success rate for tuberculosis provides a useful indicator of the quality of health services. A low rate or no success suggests that infectious patients may not be receiving adequate treatment. An essential complement to the tuberculosis treatment success rate is the DOTS detection rate, which indicates whether there is adequate coverage by the recommended case detection and treatment strategy. A country with a high treatment success rate may still face big challenges if its DOTS detection rate remains low.

2.15a

Deaths from diarrhea can be sharply reduced with improvements in drinking water and sanitation



Source: WHO/UNICEF 2005.

Definitions

• **Access to an improved water source** refers to the percentage of the population with reasonable access to an adequate amount of water from an improved source, such as a household connection, public standpipe, borehole, protected well or spring, or rainwater collection. Unimproved sources include vendors, tanker trucks, and unprotected wells and springs. Reasonable access is defined as the availability of at least 20 liters a person a day from a source within 1 kilometer of the dwelling. • **Access to improved sanitation facilities** refers to the percentage of the population with at least adequate access to excreta disposal facilities that can effectively prevent human, animal, and insect contact with excreta. Improved facilities range from simple but protected pit latrines to flush toilets with a sewerage connection. To be effective, facilities must be correctly constructed and properly maintained. • **Child immunization rate** is the percentage of children ages 12–23 months who received vaccinations before 12 months or at any time before the survey for four diseases—measles and diphtheria, pertussis (whooping cough), and tetanus (DPT). A child is considered adequately immunized against measles after receiving one dose of vaccine and against DPT after receiving three doses. • **Children with acute respiratory infection taken to a health provider** refer to the percentage of children under age five with acute respiratory infection in the two weeks prior to the survey who were taken to an appropriate health provider, including hospital, health center, dispensary, village health worker, clinic, and private physician • **Children with diarrhea who received oral rehydration and continued feeding** refer to the percentage of children under age five with diarrhea in the two weeks prior to the survey who received either oral rehydration therapy or increased fluids, with continued feeding. • **Children sleeping under treated bednets** refer to the percentage of children under age five who slept under an insecticide-treated bednet to prevent malaria. • **Children with fever receiving antimalarial drugs** refer to the percentage of children under age five who were ill with fever in the last two weeks and received any appropriate (locally defined) antimalarial drugs. • **Tuberculosis treatment success rate** is the percentage of new, registered smear-positive (infectious) cases that were cured or in which a full course of treatment was completed. • **DOTS detection** rate is the percentage of estimated new infectious tuberculosis cases detected under the directly observed treatment, short course case detection and treatment strategy.

Data sources

Data on water and sanitation are from the WHO and UNICEF's *Meeting the MDG Drinking Water and Sanitation Target* (www.unicef.org/wes/mdgreport). Data on immunization are from WHO and UNICEF estimates of national immunization coverage. Data on children with acute respiratory infection, children with diarrhea, children sleeping under treated bednets, and children receiving antimalarial drugs are from UNICEF's *State of the World's Children 2006*, Childinfo, and Demographic and Health Surveys by Macro International. Data on tuberculosis are from the WHO's *Global Tuberculosis Control Report 2006*.

2.16 Reproductive health

	Total fertility rate		Adolescent fertility rate	Unmet need for contraception	Contraceptive prevalence rate	Tetanus vaccinations	Births attended by skilled health staff		Maternal mortality ratio	
	births per woman		births per 1,000 women ages 15–19	% of married women ages 15–49	% of women ages 15–49	% of pregnant women	% of total		per 100,000 live births	
	1990	2004	2004	1995–2004[a]	1996–2004[a]	2004	1990–92[a]	2000–04[a]	National estimates 1990–2004[a]	Modeled estimates 2000
Afghanistan	8.0	..	..	..	10	35	..	14	1,600	1,900
Albania	2.9	2.2	16	..	75	..	..	98	23	55
Algeria	4.6	2.5	8	..	57	..	77	96	120	140
Angola	7.1	6.6	141	..	6	75	..	45	..	1,700
Argentina	3.0	2.3	59	..	..	..	96	99	44	82
Armenia	2.5	1.3	30	12	61	..	..	97	9	55
Australia	1.9	1.8	15	..	..	..	100	..	..	8
Austria	1.5	1.4	13	..	51	..	..	..	..	4
Azerbaijan	2.7	2.0	31	..	55	..	..	84	25	94
Bangladesh	4.3	3.0	123	11	59	45	..	13	380	380
Belarus	1.9	1.2	26	..	..	..	..	100	18	35
Belgium	1.6	1.6	8	..	..	..	..	..	..	10
Benin	6.7	5.7	130	27	19	69	..	66	500	850
Bolivia	4.9	3.7	82	23	58	..	..	67	230	420
Bosnia and Herzegovina	1.7	1.3	23	..	48	..	97	100	..	31
Botswana	4.4	3.1	76	..	48	..	..	94	330	100
Brazil	2.8	2.3	89	7	77	..	72	96	64	260
Bulgaria	1.8	1.3	44	..	42	..	..	99	15	32
Burkina Faso	7.3	6.5	159	29	14	65	..	38	480	1,000
Burundi	6.8	6.8	50	..	16	45	..	25	..	1,000
Cambodia	5.5	4.0	48	30	24	51	..	32	440	450
Cameroon	5.9	4.8	114	20	26	60	58	62	..	730
Canada	1.8	1.5	14	..	..	..	..	98	..	6
Central African Republic	5.6	4.8	126	16	28	42	..	44	1,100	1,100
Chad	6.7	6.4	192	10	3	42	..	14	830	1,100
Chile	2.6	2.0	61	..	..	..	..	100	17	31
China	2.1	1.8	5	..	87	..	..	96	51	56
Hong Kong, China	1.3	0.9	5	..	..	..	..	..	..	..
Colombia	3.1	2.4	77	6	77	*86*	82	*91*	78	130
Congo, Dem. Rep.	6.7	6.7	227	..	31	58	..	61	1,300	990
Congo, Rep.	6.3	6.3	145	..	..	65	..	..	..	510
Costa Rica	3.2	2.0	75	..	80	..	98	98	33	43
Côte d'Ivoire	6.5	4.8	123	28	15	75	..	68	600	690
Croatia	1.6	1.4	15	..	..	..	..	100	..	8
Cuba	1.7	1.5	50	..	73	..	..	100	34	33
Czech Republic	1.9	1.2	12	..	72	..	..	100	..	9
Denmark	1.7	1.8	7	..	..	..	..	..	10	5
Dominican Republic	3.3	2.8	91	11	70	..	93	98	180	150
Ecuador	3.6	2.7	84	..	66	..	..	..	80	130
Egypt, Arab Rep.	4.3	3.2	43	11	60	71	41	69	84	84
El Salvador	3.7	2.8	85	..	67	..	..	92	170	150
Eritrea	6.2	5.3	93	27	8	62	..	28	..	630
Estonia	2.0	1.4	23	..	..	..	..	100	46	63
Ethiopia	6.9	5.4	90	35	8	45	..	6	870	850
Finland	1.8	1.8	10	..	..	..	..	100	6	6
France	1.8	1.9	9	..	..	..	..	..	10	17
Gabon	5.3	3.8	106	28	33	45	..	86	520	420
Gambia, The	5.8	4.5	119	..	18	..	44	55	730	540
Georgia	2.1	1.4	33	..	41	..	..	..	52	32
Germany	1.5	1.4	10	..	..	..	..	..	8	8
Ghana	5.7	4.2	64	34	25	70	..	47	..	540
Greece	1.4	1.3	9	..	..	..	..	..	1	9
Guatemala	5.6	4.4	112	23	43	..	..	41	150	240
Guinea	6.5	5.8	191	24	7	77	31	56	530	740
Guinea-Bissau	7.1	7.1	194	..	8	56	..	35	910	1,100
Haiti	5.2	3.8	62	40	27	52	..	24	520	680

2.16 Reproductive health

	Total fertility rate		Adolescent fertility rate	Unmet need for contraception	Contraceptive prevalence rate	Tetanus vaccinations	Births attended by skilled health staff		Maternal mortality ratio	
	births per woman		births per 1,000 women ages 15–19	% of married women ages 15–49	% of women ages 15–49	% of pregnant women	% of total		per 100,000 live births	
	1990	2004	2004	1995–2004[a]	1996–2004[a]	2004	1990–92[a]	2000–04[a]	National estimates 1990–2004[a]	Modeled estimates 2000
Honduras	5.1	3.6	99	..	62	..	45	56	110	110
Hungary	1.8	1.3	21	..	..	..	..	100	..	16
India	3.8	2.9	73	16	47	80	..	43	540	540
Indonesia	3.1	2.3	54	9	57	54	32	72	310	230
Iran, Islamic Rep.	4.8	2.1	20	..	74	..	..	90	37	76
Iraq	5.9	4.6	40	..	44	70	..	72	290	250
Ireland	2.1	2.0	14	..	..	..	..	100	6	5
Israel	2.8	2.9	15	..	..	..	..	..	5	17
Italy	1.3	1.3	7	..	60	..	..	..	7	5
Jamaica	2.9	2.4	79	..	65	..	..	97	110	87
Japan	1.5	1.3	4	..	..	..	100	..	8	10
Jordan	5.4	3.4	26	11	56	..	87	100	41	41
Kazakhstan	2.7	1.8	29	9	66	..	..	..	50	210
Kenya	5.8	5.0	96	25	39	70	..	42	410	1,000
Korea, Dem. Rep.	2.4	2.0	2	..	..	..	..	97	110	67
Korea, Rep.	1.6	1.2	3	..	81	..	98	..	20	20
Kuwait	3.4	2.5	24	..	50	..	..	..	5	5
Kyrgyz Republic	3.7	2.5	33	12	60	..	..	99	..	110
Lao PDR	6.0	4.6	89	..	32	30	..	19	..	650
Latvia	2.0	1.2	17	..	..	..	..	..	25	42
Lebanon	3.1	2.3	26	..	63	..	..	..	..	150
Lesotho	4.8	3.5	37	..	30	..	..	60	..	550
Liberia	6.9	6.8	224	..	10	35	..	51	..	760
Libya	4.7	2.9	7	..	..	..	..	..	..	97
Lithuania	2.0	1.3	21	..	..	..	..	100	13	13
Macedonia, FYR	2.1	1.7	23	..	..	..	..	99	7	23
Madagascar	6.2	5.1	124	24	27	55	57	51	470	550
Malawi	7.0	5.9	158	30	31	70	55	61	1,100	1,800
Malaysia	3.8	2.8	18	..	..	..	..	97	30	41
Mali	7.4	6.8	201	26	8	50	..	41	580	1,200
Mauritania	6.1	5.7	99	32	8	33	40	57	750	1,000
Mauritius	2.3	2.0	32	..	76	..	..	98	22	24
Mexico	3.3	2.2	67	..	73	..	..	95	65	83
Moldova	2.4	1.4	31	..	62	..	..	..	44	36
Mongolia	4.0	2.4	53	..	69	..	..	99	99	110
Morocco	4.0	2.5	*42*	10	63	..	31	63	230	220
Mozambique	6.2	5.4	102	18	17	60	..	48	410	1,000
Myanmar	4.0	2.3	19	..	34	85	..	57	230	360
Namibia	5.9	3.8	53	22	44	67	68	76	270	300
Nepal	5.1	3.5	114	28	38	42	7	15	540	740
Netherlands	1.6	1.7	5	..	75	..	..	..	7	16
New Zealand	2.2	2.0	24	..	..	..	..	..	15	7
Nicaragua	4.8	3.2	120	15	69	..	..	67	83	230
Niger	8.2	7.7	260	17	14	43	15	16	590	1,600
Nigeria	6.7	5.6	142	17	13	51	31	35	..	800
Norway	1.9	1.8	10	..	..	..	..	..	6	16
Oman	6.5	3.6	46	..	32	..	..	95	23	87
Pakistan	5.8	4.3	69	..	28	45	19	23	530	500
Panama	3.0	2.6	86	..	..	..	..	93	70	160
Papua New Guinea	5.1	3.9	60	..	26	10	..	41	..	300
Paraguay	4.7	3.7	65	..	57	..	67	77	180	170
Peru	3.9	2.8	53	10	69	..	..	59	190	410
Philippines	4.3	3.1	36	17	49	70	..	60	170	200
Poland	2.0	1.2	15	..	..	..	..	100	4	13
Portugal	1.4	1.4	19	..	..	..	..	100	8	5
Puerto Rico	2.2	1.9	56	..	..	..	..	..	..	25

2.16 Reproductive health

	Total fertility rate		Adolescent fertility rate	Unmet need for contraception	Contraceptive prevalence rate	Tetanus vaccinations	Births attended by skilled health staff		Maternal mortality ratio	
	births per woman		births per 1,000 women ages 15–19	% of married women ages 15–49	% of women ages 15–49	% of pregnant women	% of total		per 100,000 live births	
	1990	2004	2004	1995–2004[a]	1996–2004[a]	2004	1990–92[a]	2000–04[a]	National estimates 1990–2004[a]	Modeled estimates 2000
Romania	1.8	1.3	35	..	64	..	..	99	31	49
Russian Federation	1.9	1.3	29	..	..	..	..	99	..	67
Rwanda	7.4	5.5	47	36	13	76	26	31	1,100	1,400
Saudi Arabia	5.9	4.0	33	..	21	..	..	..	..	23
Senegal	6.4	4.8	82	35	11	85	..	58	560	690
Serbia and Montenegro	2.1	1.7	23	..	58	..	..	93	7	11
Sierra Leone	6.5	6.5	179	..	4	76	..	42	1,800	2,000
Singapore	1.9	1.2	5	..	..	..	..	..	6	30
Slovak Republic	2.1	1.3	21	..	..	..	..	99	16	3
Slovenia	1.5	1.2	6	..	..	..	100	100	17	17
Somalia	6.8	6.3	69	..	..	60	..	25	..	1,100
South Africa	3.3	2.7	67	15	56	61	..	..	150	230
Spain	1.3	1.3	9	..	..	..	..	..	6	4
Sri Lanka	2.5	1.9	19	..	70	..	..	96	92	92
Sudan	5.6	4.2	52	..	7	37	69	87	..	590
Swaziland	5.3	4.0	37	..	48	..	..	74	230	370
Sweden	2.1	1.8	7	..	..	..	..	..	5	2
Switzerland	1.6	1.4	5	..	..	..	..	..	5	7
Syrian Arab Republic	5.2	3.3	34	..	48	..	..	..	65	160
Tajikistan	5.1	3.6	30	..	34	..	..	71	45	100
Tanzania	6.1	4.8	110	22	25	90	44	46	580	1,500
Thailand	2.2	1.9	48	..	72	..	..	99	24	44
Togo	6.4	5.1	98	32	26	61	..	61	480	570
Trinidad and Tobago	2.4	1.6	36	..	38	..	..	96	45	160
Tunisia	3.5	2.0	7	..	66	..	..	90	69	120
Turkey	3.0	2.2	41	10	71	41	..	83	..	70
Turkmenistan	4.2	2.7	16	10	62	..	..	97	14	31
Uganda	7.2	7.1	208	35	23	53	..	39	510	880
Ukraine	1.8	1.2	29	..	89	..	..	100	13	35
United Arab Emirates	4.3	2.2	20	..	..	..	..	..	3	54
United Kingdom	1.8	1.7	26	..	..	..	..	..	7	13
United States	2.1	2.0	50	..	64	..	..	..	8	17
Uruguay	2.5	2.1	69	..	..	..	..	..	26	27
Uzbekistan	4.1	2.4	36	14	68	..	..	96	34	24
Venezuela, RB	3.4	2.7	91	..	77	..	..	94	68	96
Vietnam	3.6	1.8	20	5	79	85	..	90	170	130
West Bank and Gaza	*6.3*	4.9	..	..	42	..	..	97	..	..
Yemen, Rep.	7.5	5.9	93	39	23	21	16	27	370	570
Zambia	6.5	5.5	128	27	34	83	51	43	730	750
Zimbabwe	5.2	3.4	92	13	54	70	..	..	700	1,100
World	**3.1 w**	**2.6 w**	**58 w**		**60 w**		**.. w**	**60 w**		**410 w**
Low income	4.7	3.7	95		40		..	40		682
Middle income	2.6	2.1	32		76		..	87		142
Lower middle income	2.6	2.1	28		76		..	86		153
Upper middle income	2.7	2.0	47		69		..	95		92
Low & middle income	3.4	2.8	62		60		..	60		450
East Asia & Pacific	2.5	2.0	16		78		..	86		117
Europe & Central Asia	2.3	1.6	30		69		..	94		58
Latin America & Carib.	3.2	2.5	78		72		77	87		194
Middle East & N. Africa	4.8	3.0	33		59		42	72		183
South Asia	4.1	3.1	80		46		..	36		564
Sub-Saharan Africa	6.2	5.3	135		22		..	42		921
High income	1.8	1.7	25		64		41	..		14
Europe EMU	1.5	1.5	9		..		..	..		10

a. Data are for the most recent year available.

Reproductive health 2.16

About the data

Reproductive health is a state of physical and mental well-being in relation to the reproductive system and its functions and processes. Means of achieving reproductive health include education and services during pregnancy and childbirth, provision of safe and effective contraception, and prevention and treatment of sexually transmitted diseases. Complications of pregnancy and childbirth are the leading cause of death and disability among women of reproductive age in developing countries. Reproductive health services will need to expand rapidly over the next two decades, when the number of women and men of reproductive age is projected to increase by about 500 million.

Total and adolescent fertility rates are based on data on registered live births from vital registration systems or, in the absence of such systems, from censuses or sample surveys. As long as the surveys are fairly recent, the estimated rates are generally considered reliable measures of fertility in the recent past. Where no empirical information on age-specific fertility rates is available, a model is used to estimate the share of births to adolescents. For countries without vital registration systems, fertility rates are generally based on extrapolations from trends observed in censuses or surveys from earlier years.

An increasing number of couples in the developing world want to limit or postpone childbearing but are not using effective contraceptive methods. These couples have an unmet need for contraception, shown in the table as the percentage of married women of reproductive age who do not want to become pregnant but are not using contraception (Bulatao 1998). Information on this indicator is collected through surveys and excludes women not exposed to the risk of unintended pregnancy because of menopause, infertility, or postpartum anovulation. Common reasons for not using contraception are lack of knowledge about contraceptive methods and concerns about possible health side-effects.

Contraceptive prevalence reflects all methods—ineffective traditional methods as well as highly effective modern methods. Contraceptive prevalence rates are obtained mainly from household surveys, including Demographic and Health Surveys, Multiple Indicator Cluster Surveys, and contraceptive prevalence surveys (see *Primary data documentation* for the most recent survey year). Unmarried women are often excluded from such surveys, which may bias the estimates.

Neonatal tetanus is an important cause of infant mortality in some developing countries. It can be prevented through immunization of the mother during pregnancy. Recommended doses for full protection are generally two tetanus shots during the first pregnancy and one booster shot during each subsequent pregnancy, with five doses considered adequate for lifetime protection. Information on tetanus shots during pregnancy is collected through surveys in which pregnant respondents are asked to show antenatal cards on which tetanus shots have been recorded. Because not all women have antenatal cards, respondents are also asked about their receipt of these injections. Poor recall may result in a downward bias in estimates of the share of births protected. But in settings where receiving injections is common, respondents may erroneously report having received tetanus shots.

The share of births attended by skilled health staff is an indicator of a health system's ability to provide adequate care for pregnant women. Good antenatal and postnatal care improve maternal health and reduce maternal and infant mortality. But data may not reflect such improvements because health information systems are often weak, maternal deaths are underreported, and rates of maternal mortality are difficult to measure.

Maternal mortality ratios are generally of unknown reliability, as are many other cause-specific mortality indicators. Household surveys such as the Demographic and Health Surveys attempt to measure maternal mortality by asking respondents about survivorship of sisters. The main disadvantage of this method is that the estimates of maternal mortality that it produces pertain to 12 years or so before the survey, making them unsuitable for monitoring recent changes or observing the impact of interventions. In addition, measurement of maternal mortality is subject to many types of errors. Even in high-income countries with vital registration systems, misclassification of maternal deaths has been found to lead to serious underestimation.

The maternal mortality ratios shown in the table as national estimates are based on national surveys, vital registration, or surveillance or are derived from community and hospital records. Those shown as modeled estimates are based on an exercise by the World Health Organization (WHO), United Nations Children's Fund (UNICEF), and United Nations Population Fund (UNFPA). For countries with national data reported maternal mortality was adjusted by a factor of under- or over-estimation and misclassification. For countries with no national data maternal mortality was estimated with a regression model using information on fertility, birth attendants, and GDP. Neither set of ratios can be assumed to provide an accurate estimate of maternal mortality for any of the countries in the table.

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 per 1,000 women ages 15–19. • **Unmet need for contraception** is the percentage of fertile, married women of reproductive age who do not want to become pregnant and are not using contraception. • **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 ages 15–49 only. • **Tetanus vaccinations** refer to the percentage of pregnant women who receive two tetanus toxoid injections during their first pregnancy and one booster shot during each subsequent pregnancy, with five doses considered adequate for a lifetime. • **Births attended by skilled health staff** are 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 from pregnancy-related causes during pregnancy and childbirth, per 100,000 live births.

Data sources

Data on fertility rates are compiled and estimated by the World Bank's Development Data Group. Important inputs come from the following sources: the United Nations Population Division's *World Population Prospects: The 2004 Revision*; census reports and other statistical publications from national statistical offices; and household surveys such as Demographic and Health Surveys. Data on women with unmet need for contraception and contraceptive prevalence rates are from household surveys, including Demographic and Health Surveys by Macro International and Multiple Indicator Cluster Surveys by UNICEF. Data on tetanus vaccinations and births attended by skilled health staff and national estimates of maternal mortality ratios are from UNICEF's *State of the World's Children 2006* and Childinfo, and Demographic and Health Surveys by Macro International. Modeled estimates for maternal mortality ratios are from Carla AbouZahr and Tessa Wardlaw's "Maternal Mortality in 2000: Estimates Developed by WHO, UNICEF, and UNFPA" (2003).

2.17 Nutrition

	Prevalence of undernourishment		Prevalence of child malnutrition		Prevalence of overweight children	Low-birthweight babies	Exclusive breastfeeding	Consumption of iodized salt	Vitamin A supplementation
	% of population		% of children under age 5		% of children under age 5	% of births	% of children under 6 months	% of households	% of children 6–59 months
	1990–92	2001–03	Underweight 1995–2004[a]	Stunting 1995–2004[a]	1995–2004[a]	1998–2004[a]	1998–2004[a]	1998–2004[a]	2003
Afghanistan	..	..	39.3	47.6	4.0	..	..	28	86
Albania	5[b]	6	14.0	35.1	22.4	3	6	62	..
Algeria	5	5	10.4	19.1	10.1	7	13	69	..
Angola	58	38	30.5	45.2	0.5	12	11	35	68
Argentina	<3	<3	5.4	12.4	9.2	8	..	..	..
Armenia	52[b]	29	2.6	12.9	10.4	7	30	84	..
Australia	..	..	0.0	0.0	5.2	7	..	..	..
Austria	..	..	..	..	..	7	..	..	..
Azerbaijan	34[b]	10	6.8	13.3	2.6	11	7	26	..
Bangladesh	35	30	47.5	43.0	0.8	36	36	70	87
Belarus	<3[b]	3	..	..	..	5	..	55	..
Belgium	..	..	..	..	..	..	..	..	..
Benin	20	14	22.9	30.7	1.8	16	38	72	98
Bolivia	28	23	7.6	26.7	5.6	7	54	90	38
Bosnia and Herzegovina	9[b]	9	4.1	9.7	13.2	4	6	77	..
Botswana	23	30	12.5	23.1	6.9	10	34	66	*85*
Brazil	12	8	5.7	10.5	4.9	..	..	88	..
Bulgaria	8[b]	9	..	..	..	10	..	98	..
Burkina Faso	21	17	37.7	38.7	2.9	19	19	45	95
Burundi	48	67	45.1	56.8	0.7	16	62	96	95
Cambodia	43	33	45.2	44.6	2.0	11	12	14	47
Cameroon	33	25	18.1	31.7	5.2	11	21	61	86
Canada	..	..	..	..	..	6	..	..	..
Central African Republic	50	45	24.3	28.4	0.8	14	17	86	84
Chad	58	33	36.7	40.9	1.5	31	2	58	*85*
Chile	8	4	0.7	1.4	8.1	5	63	100	..
China	16	12	7.8	14.2	2.6	4	51	93	..
Hong Kong, China	..	..	..	..	..	5	..	..	..
Colombia	17	14	*7.0*	*12.0*	3.7	*6*	26	*43*	..
Congo, Dem. Rep.	31	72	31.0	38.1	3.9	12	24	72	80
Congo, Rep.	54	34	13.0	..	..	..	4[c]	..	89
Costa Rica	6	4	5.1	6.1	6.2	7	..	..	..
Côte d'Ivoire	18	14	17.2	25.1	2.5	17	5	31	*97*
Croatia	16[b]	7	0.6	0.8	5.9	6	..	90	..
Cuba	8	<3	3.9	4.6	..	6	41	88	..
Czech Republic	<3[b]	<3	..	..	..	7	..	..	..
Denmark	..	..	..	..	..	5	..	..	..
Dominican Republic	27	27	5.3	8.9	6.5	11	10	18	40
Ecuador	8	5	11.6	26.4	..	16	35	99	*50*
Egypt, Arab Rep.	4	3	8.6	15.6	6.7	12	30	56	..
El Salvador	12	11	10.3	18.9	3.6	7	24	..	..
Eritrea	..	73	39.6	37.6	0.7	..	52	68	52
Estonia	9[b]	3	..	..	..	4	..	..	..
Ethiopia	..	46	47.2	51.5	1.2	15	55	28	65
Finland	..	..	..	..	..	4	..	..	..
France	..	..	..	..	..	7	..	..	..
Gabon	10	5	11.9	20.7	3.7	14	6	36	30
Gambia, The	22	27	17.2	19.2	1.5	17	26	8	91
Georgia	44[b]	13	3.1	11.7	12.7	7	18[c]	68	..
Germany	..	..	..	..	..	7	..	..	..
Ghana	37	12	22.1	29.9	2.9	16	53	28	78
Greece	..	..	..	..	..	8	..	..	..
Guatemala	16	23	22.7	49.3	5.4	12	51	67	*33*
Guinea	39	24	32.7	26.1	2.7	16	23	68	98
Guinea-Bissau	24	37	25.0	30.5	3.3	22	37	2	*80*
Haiti	65	47	17.2	22.7	2.0	21	24	11	25

Nutrition 2.17

	Prevalence of undernourishment		Prevalence of child malnutrition		Prevalence of overweight children	Low-birthweight babies	Exclusive breastfeeding	Consumption of iodized salt	Vitamin A supplementation
	% of population		% of children under age 5		% of children under age 5	% of births	% of children under 6 months	% of households	% of children 6–59 months
	1990–92	2001–03	Underweight 1995–2004[a]	Stunting 1995–2004[a]	1995–2004[a]	1998–2004[a]	1998–2004[a]	1998–2004[a]	2003
Honduras	23	22	16.6	29.2	2.2	14	35	80	35
Hungary	<3[b]	<3	..	..	..	9	..	..	..
India	25	20	46.7	44.9	2.2	30	37[c]	50	45[d]
Indonesia	9	6	28.2	42.2	4.0	9	40	73	62
Iran, Islamic Rep.	4	4	10.9	15.4	4.3	..	44	94	..
Iraq	..	..	15.9	22.1	3.0	15	12	40	..
Ireland	..	..	..	..	..	6	..	..	..
Israel	..	..	..	..	..	8	..	..	..
Italy	..	..	..	..	..	6	..	..	..
Jamaica	14	10	3.6	4.4	3.8	10	..	100	..
Japan	..	..	..	..	..	8	..	..	..
Jordan	4	7	4.4	8.5	3.5	..	27	88	..
Kazakhstan	<3[b]	8	4.2	9.7	3.0	8	36	83	..
Kenya	39	31	19.9	30.3	3.7	10	13	91	33
Korea, Dem. Rep.	18	35	23.9	38.6	0.6	7	65	40	95
Korea, Rep.	<3	<3	..	..	..	4	..	..	..
Kuwait	24	5	1.7	3.2	5.7	7	..[c]	..	..
Kyrgyz Republic	21[b]	4	6.7	24.8	6.3	..	..	42	..
Lao PDR	29	21	40.4	42.4	1.2	14	23	75	64
Latvia	3[b]	3	..	..	..	5	..	..	..
Lebanon	<3	3	3.0	12.2	..	6	27[c]	87	..
Lesotho	17	12	18.0	46.1	12.1	14	15	69	75
Liberia	34	49	26.5	39.5	2.3	..	35	..	*40*
Libya	<3	<3	4.7	15.1	..	..	..	..	..
Lithuania	4[b]	<3	..	..	..	4	..	..	..
Macedonia, FYR	15[b]	7	5.9	6.9	4.9	6	99	80	95
Madagascar	35	38	41.9	47.7	2.0	17	67	75	91
Malawi	50	34	21.9	49.0	4.3	16	44	49	92
Malaysia	3	3	10.6	15.6	3.3	9	..[c]	..	..
Mali	29	28	33.2	38.2	1.5	23	25	74	61
Mauritania	15	10	31.8	34.5	..	..	20	2	*89*
Mauritius	6	6	14.9	9.7	4.0	14	21[c]	..	..
Mexico	5	5	7.5	17.7	5.3	8	..	91	..
Moldova	5[b]	11	3.2	..	..	5	..	33	..
Mongolia	34	28	12.7	24.6	4.8	7	51	75	87
Morocco	6	6	10.2	18.1	9.2	..	31	41	..
Mozambique	66	45	23.7	41.0	3.0	15	30	54	50
Myanmar	10	5	31.8	32.2	1.6	15	15[c]	60	87
Namibia	34	23	24.0	23.6	2.2	14	19	63	93
Nepal	20	17	48.3	50.5	0.2	21	68	63	96
Netherlands	..	..	..	..	..	..	..	..	..
New Zealand	..	..	..	..	..	6	..	83	..
Nicaragua	30	27	9.6	20.2	4.7	12	31	97	91
Niger	41	32	40.1	39.7	0.8	13	1	15	95
Nigeria	13	9	28.7	38.3	3.6	14	17	97	27
Norway	..	..	..	..	..	5	..	..	..
Oman	..	..	17.8	10.4	1.0	8	..	61	*97*
Pakistan	24	23	37.8	36.8	2.1	..	..	17	95
Panama	21	25	8.1	18.2	4.2	10	..	95	..
Papua New Guinea	15	13	..	..	..	..	..	..	1
Paraguay	18	15	4.6	..	..	..	22	88	..
Peru	42	12	7.1	25.4	7.6	..	67	..	*6*
Philippines	26	19	27.6	32.1	1.0	20	34	56	76
Poland	<3[b]	<3	..	..	..	6	..	..	..
Portugal	..	..	..	..	..	8	..	..	..
Puerto Rico	..	..	..	..	..	14	..	..	..

2.17 Nutrition

	Prevalence of undernourishment		Prevalence of child malnutrition		Prevalence of overweight children	Low-birthweight babies	Exclusive breastfeeding	Consumption of iodized salt	Vitamin A supplementation
	% of population		% of children under age 5		% of children under age 5	% of births	% of children under 6 months	% of households	% of children 6–59 months
	1990–92	2001–03	Underweight 1995–2004[a]	Stunting 1995–2004[a]	1995–2004[a]	1998–2004[a]	1998–2004[a]	1998–2004[a]	2003
Romania	<3[b]	<3	3.2	10.1	5.5	9	..	53	..
Russian Federation	4[b]	3	5.5	10.6	..	6	..	35	..
Rwanda	43	36	24.3	42.6	4.0	9	84	90	86
Saudi Arabia	4	4	14.3	..	..	..	..[c]	..	..
Senegal	23	23	22.7	25.4	2.2	18	24[c]	16	*83*
Serbia and Montenegro	5[b]	10	1.9	5.1	12.9	4	11[c]	73	..
Sierra Leone	46	50	27.2	33.8	..	23	4	23	84
Singapore	..	..	3.4	2.2	2.2	8	..	..	..
Slovak Republic	4[b]	6	..	..	..	7	..	..	..
Slovenia	3[b]	3	..	..	..	6	..	..	..
Somalia	..	..	25.8	23.3	..	..	9	..	*60*
South Africa	..	..	11.5	24.9	6.2	15	7	62	..
Spain	..	..	..	..	..	..	..	..	..
Sri Lanka	28	22	29.7	13.9	..	22	84	88	..
Sudan	31	27	40.7	43.3	3.4	31	16	1	34
Swaziland	14	19	10.3	30.2	..	9	24	59	80
Sweden	..	..	..	..	..	4	..	..	..
Switzerland	..	..	..	..	..	6	..	..	..
Syrian Arab Republic	5	4	6.9	18.8	..	6	81[c]	79	..
Tajikistan	22[b]	61	..	36.2	..	15	50	28	..
Tanzania	37	44	29.4	43.8	1.7	13	41	67	91
Thailand	30	21	17.6	13.4	2.8	9	..	63	..
Togo	33	25	25.1	21.7	1.5	18	18	67	84
Trinidad and Tobago	13	11	5.9	3.6	..	23	2	1	..
Tunisia	<3	<3	4.0	12.3	4.5	7	47	97	..
Turkey	<3	3	3.9	16.0	2.2	16	21	64	..
Turkmenistan	12[b]	8	12.0	22.3	..	6	13	100	..
Uganda	24	19	22.9	39.1	2.6	12	63	95	*46*
Ukraine	<3[b]	3	1.0	2.7	20.1	5	22	32	..
United Arab Emirates	4	<3	7.0	..	..	..	..	..	..
United Kingdom	..	..	..	..	..	8	..	..	..
United States	..	..	1.6	1.1	5.6	8	..	..	..
Uruguay	7	3	4.5	..	..	8	..	..	..
Uzbekistan	8[b]	26	7.9	21.1	14.4	7	19	19	93
Venezuela, RB	11	18	4.4	12.8	3.2	9	7[c]	90	..
Vietnam	31	17	28.4	36.5	2.7	9	15	83	99[d]
West Bank and Gaza	..	16	4.1	7.3	2.3	..	..	..	..
Yemen, Rep.	34	37	45.6	51.7	1.9	..	12	30	36
Zambia	48	47	23.0	46.8	3.0	12	40	77	73
Zimbabwe	45	45	13.0	26.5	7.0	11	33	93	46
World	**20 w**	**16 w**	**.. w**	**.. w**		**.. w**	**.. w**	**.. w**	**.. w**
Low income	27	24	43.4	43.1		22	33	..	61
Middle income	14	10	11.1	26.9		..	..	..	..
Lower middle income	15	11	11.2	15.1		..	43	70	..
Upper middle income	..	4	..	..		10	18	..	..
Low & middle income	20	16	..	..		..	36	62	..
East Asia & Pacific	17	12	11.5	17.1		11	..	..	..
Europe & Central Asia	6[b]	6	..	..		..	22	..	..
Latin America & Carib.	13	10	9.1	19.1		11	..	..	..
Middle East & N. Africa	6	7	14.7	20.0		..	31	67	..
South Asia	26	21	48.5	46.1		..	38	..	58
Sub-Saharan Africa	31	32	..	..		25	28	56	62
High income	..	..	..	..		..	12	..	..
Europe EMU	..	..	..	..		..	..	..	..

a. Data are for the most recent year available. b. Data are for 1993–95. c. Refers to exclusive breastfeeding for less than four months. d. Country's vitamin A supplementation programs do not target children all the way up to 59 months of age.

About the data

Data on undernourishment are produced by the Food and Agriculture Organization (FAO) of the United Nations based on the calories available from local food production, trade, and stocks; the number of calories needed by different age and gender groups; the proportion of the population represented by each age group; and a coefficient of distribution to take account of inequality in access to food (FAO 2000). From a policy and program standpoint, however, this measure has its limits. First, food insecurity exists even where food availability is not a problem because of inadequate access of poor households to food. Second, food insecurity is an individual or household phenomenon, and the average food available to each person, even corrected for possible effects of low income, is not a good predictor of food insecurity among the population. And third, nutrition security is determined not only by food security but also by the quality of care of mothers and children and the quality of the household's health environment (Smith and Haddad 2000).

Estimates of child malnutrition, based on weight for age (underweight) and height for age (stunting), are from national survey data. The proportion of children who are underweight is the most common indicator of malnutrition. Being underweight, even mildly, increases the risk of death and inhibits cognitive development in children. Moreover, it perpetuates the problem from one generation to the next, as malnourished women are more likely to have low-birthweight babies. Height for age reflects linear growth achieved pre- and post-natally, and a deficit indicates long-term, cumulative effects of inadequacies of health, diet, or care. It is often argued that stunting is a proxy for multifaceted deprivation and is a better indicator of long-term changes in malnutrition.

Estimates of children who are overweight are also from national survey data. Overweight in children has become a growing concern in developing countries. Researchers show an association between obesity in childhood and a high prevalence of diabetes, respiratory disease, high blood pressure, and psychosocial and orthopedic disorders (de Onis and Blossner 2000). The survey data were analyzed in a standardized way by the World Health Organization (WHO) to allow comparisons across countries.

Low birthweight, which is associated with maternal malnutrition, raises the risk of infant mortality and stunts growth in infancy and childhood. There is also emerging evidence that low-birthweight babies are more prone to noncommunicable diseases such as diabetes and cardiovascular heart diseases. Estimates of low-birthweight infants are drawn mostly from hospital records and household surveys. Many births in developing countries take place at home, and these births are seldom recorded. A hospital birth may indicate higher income and therefore better nutrition, or it could indicate a higher-risk birth, possibly skewing the data on birthweights downward. The data should therefore be treated with caution.

It is estimated that improved breastfeeding practice can save some 1.5 million children a year. Breast milk alone contains all the nutrients, antibodies, hormones, and antioxidants an infant needs to thrive. It protects babies from diarrhea and acute respiratory infections, stimulates their immune systems and response to vaccination, and according to some studies confers cognitive benefits as well. The data on breastfeeding are derived from national surveys.

Iodine deficiency is the single most important cause of preventable mental retardation, and it contributes significantly to the risk of stillbirth and miscarriage. Iodized salt is the best source of iodine, and a global campaign to iodize edible salt is significantly reducing the risks (UNICEF, *State of the World's Children 1999*).

Vitamin A is essential for the functioning of the immune system. A child deficient in vitamin A faces a 25 percent greater risk of dying from a range of childhood ailments such as measles, malaria, and diarrhea. Improving the vitamin A status of pregnant women helps reduce anemia, improves their resistance to infection, and may reduce their risk of dying during pregnancy and childbirth. Giving vitamin A to new mothers who are breastfeeding helps to protect their children during the first months of life. Food fortification with vitamin A is being introduced in many developing countries.

Definitions

• **Prevalence of undernourishment** is the percentage of the population that is undernourished. • **Prevalence of child malnutrition** is the percentage of children under age five whose weight for age (underweight) or height for age (stunting) is more than two standard deviations below the median for the international reference population ages 0–59 months. For children up to two years old height is measured by recumbent length. For older children height is measured by stature while standing. The reference population, adopted by the WHO in 1983, is based on children from the United States, who are assumed to be well nourished. • **Prevalence of overweight children** is the percentage of children under age five whose weight for height is more than two standard deviations above the median for the international reference population of the corresponding age, established by the U.S. National Center for Health Statistics and the WHO. • **Low-birthweight babies** are the percentage of newborns weighing less than 2,500 grams, with the measurement taken within the first hours of life, before significant postnatal weight loss has occurred. • **Exclusive breastfeeding** refers to the percentage of children less than six months old who are fed breast milk alone (no other liquids). • **Consumption of iodized salt** refers to the percentage of households that use edible salt fortified with iodine. • **Vitamin A supplementation** refers to the percentage of children ages 6–59 months old who received at least one high-dose vitamin A capsule in the previous six months.

Data sources

Data on undernourishment are from www.fao.org/faostat/foodsecurity/index_en.htm. Data on malnutrition and overweight are from WHO's *Global Database on Child Growth and Malnutrition*. Data on low-birthweight babies, breastfeeding, iodized salt consumption, and vitamin A supplementation are from the WHO's *World Health Report 2004* and the United Nations Children's Fund's *State of the World's Children 2006*.

2.18 Health risk factors and public health challenges

	Prevalence of smoking		Incidence of tuberculosis	Prevalence of diabetes	Mortality caused by road traffic injury	Prevalence of HIV			
	% of adults		per 100,000 people	% of population ages 20–79	per 100,000 people	Total % of population ages 15–49		Female % of population with HIV	
	Male 2000–05[a]	Female 2000–05[a]	2004	2003	1998–2003[a]	2001	2003	2001	2003
Afghanistan	..	..	333	8.2	..	..	..	..	..
Albania	60	18	22	3.8	11.1	..	..	..	..
Algeria	32	0[b]	54	4.1	..	<0.1	0.1	11.8	15.6
Angola	..	..	259	2.7	..	3.7	3.9	55.0	59.1
Argentina	32	25	43	5.4	..	0.7	0.7	19.2	20.0
Armenia	62	2	78	8.1	5.6	0.1	0.1	35.0	36.0
Australia	19	16	6	6.2	8.2	0.1	0.1	6.7	7.1
Austria	..	..	14	9.6	11.5	0.2	0.3	22.2	22.0
Azerbaijan	..	1	75	6.9	6.9	..	<0.1	..	..
Bangladesh	55	27	229	3.9	..	..	..	..	..
Belarus	53	7	60	6.9	14.3	..	..	..	..
Belgium	30	25	13	4.2	13.1	0.2	0.2	35.8	35.0
Benin	..	..	87	2.1	..	1.9	1.9	57.6	56.5
Bolivia	..	..	217	4.8	..	0.1	0.1	27.5	27.1
Bosnia and Herzegovina	49	30	53	9.6	..	..	<0.1	..	..
Botswana	..	..	670	3.6	..	38.0	37.3	57.6	57.6
Brazil	22	14	60	5.2	..	0.6	0.7	37.1	36.9
Bulgaria	44	23	36	10.0	10.2	..	0.1	..	..
Burkina Faso	..	..	191	2.7	..	4.2	1.8[c]	56.0	55.6
Burundi	..	..	343	1.3	..	6.2	6.0	54.5	59.1
Cambodia	..	..	510	2.0	..	2.7	2.6	30.0	30.0
Cameroon	..	..	179	0.8	..	7.0	5.5[d]	56.0	55.8
Canada	22	17	5	9.0	8.7	0.3	0.3	25.0	23.6
Central African Republic	..	..	322	2.3	..	13.5	13.5	56.5	54.2
Chad	..	..	279	2.7	..	4.9	4.8	57.1	55.6
Chile	48	37	16	5.6	10.7	0.3	0.3	32.0	33.5
China	67	4	101	2.7	19.0	0.1	0.1	20.0	22.9
Hong Kong, China	22	4	75	8.8	..	0.1	0.1	30.8	34.6
Colombia	..	..	50	4.3	24.2	0.5	0.7	33.3	34.4
Congo, Dem. Rep.	..	..	366	2.5	..	4.2	4.2	56.8	57.0
Congo, Rep.	..	..	377	2.6	..	5.3	4.9	56.3	56.3
Costa Rica	29	10	14	6.9	20.1	0.6	0.6	31.8	33.3
Côte d'Ivoire	..	..	393	2.3	..	6.7	7.0	56.3	56.6
Croatia	34	27	41	5.8	11.4	..	<0.1	..	..
Cuba	..	..	10	13.2	13.9	0.1	0.1	31.3	33.3
Czech Republic	31	20	11	9.5	14.2	<0.1	0.1	35.7	32.0
Denmark	31	25	8	6.9	8.0	0.2	0.2	17.4	18.0
Dominican Republic	16	11	91	10.0	41.1	1.8	1.0[e]	26.4	27.1
Ecuador	..	..	131	4.8	16.9	0.3	0.3	32.6	34.0
Egypt, Arab Rep.	40	18	27	9.8	7.5	<0.1	<0.1	10.9	13.3
El Salvador	42	15	54	6.2	41.7	0.6	0.7	32.1	34.3
Eritrea	..	..	271	1.9	..	2.8	2.7	56.4	56.4
Estonia	45	18	46	9.7	14.8	0.7	1.1	32.0	33.8
Ethiopia	6	0[b]	353	1.9	..	4.1	4.4	55.8	55.0
Finland	26	19	9	7.2	7.3	0.1	0.1	..	..
France	30	21	12	6.2	10.2	0.4	0.4	27.3	26.7
Gabon	..	..	280	2.9	..	6.9	8.1	56.8	57.8
Gambia, The	..	..	233	2.2	..	1.2	1.2	55.6	57.1
Georgia	53	6	82	9.0	6.2	<0.1	0.1	..	33.3
Germany	37	28	8	10.2	8.0	0.1	0.1	19.8	22.1
Ghana	7	1	206	3.3	..	3.1	2.2[c]	54.8	56.3
Greece	47	29	19	6.1	19.3	0.2	0.2	20.5	20.0
Guatemala	21	2	77	5.5	..	1.1	1.1	41.5	41.9
Guinea	..	..	240	2.0	..	2.8	3.2	59.0	55.4
Guinea-Bissau	..	..	199	2.0	..	..	..	..	..
Haiti	15	6	306	5.7	..	5.5	5.6	58.3	57.7

Health risk factors and public health challenges

2.18

	Prevalence of smoking		Incidence of tuberculosis	Prevalence of diabetes	Mortality caused by road traffic injury	Prevalence of HIV			
	% of adults		per 100,000 people	% of population ages 20–79	per 100,000 people	Total % of population ages 15–49		Female % of population with HIV	
	Male 2000–05[a]	Female 2000–05[a]	2004	2003	1998–2003[a]	2001	2003	2001	2003
Honduras	..	..	77	5.7	..	1.6	1.8	56.3	55.9
Hungary	41	28	26	9.7	13.1	..	0.1	..	..
India	47	17	168	5.9	..	0.8	0.9	39.5	38.0
Indonesia	58	3	245	1.9	..	0.1	0.1	12.1	13.6
Iran, Islamic Rep.	22	2	27	3.6	..	0.1	0.1	10.6	12.3
Iraq	..	..	132	7.7	8.4	..	<0.1	..	..
Ireland	28	26	11	3.4	10.1	0.1	0.1	31.8	30.8
Israel	32	18	9	7.1	5.9	..	0.1	..	..
Italy	31	17	7	6.6	10.5	0.5	0.5	32.3	32.1
Jamaica	..	..	7	7.2	..	0.8	1.2	51.4	47.6
Japan	47	15	30	6.9	7.0	<0.1	<0.1	22.5	24.2
Jordan	51	8	5	7.0	..	<0.1	<0.1	..	..
Kazakhstan	65	9	151	5.5	..	0.1	0.2	34.0	33.5
Kenya	21	1	619	2.5	..	8.0	6.7[c]	62.5	65.5
Korea, Dem. Rep.	..	..	178	5.2	..	..	..	..	..
Korea, Rep.	..	..	90	6.4	15.1	<0.1	<0.1	10.7	10.8
Kuwait	..	..	26	12.8	23.7	..	..	..	..
Kyrgyz Republic	51	5	122	4.3	12.9	<0.1	0.1	..	..
Lao PDR	59	13	156	1.1	..	<0.1	0.1	..	..
Latvia	51	19	68	9.9	22.7	0.5	0.6	32.2	33.3
Lebanon	42	31	11	6.4	..	0.1	0.1	..	..
Lesotho	..	..	696	3.1	..	29.6	28.9	56.7	56.7
Liberia	..	..	310	2.0	..	5.1	5.9	56.3	56.3
Libya	..	..	20	3.7	..	..	0.3	..	..
Lithuania	44	13	63	9.4	19.3	0.1	0.1	..	..
Macedonia, FYR	..	..	30	4.9	5.1	<0.1	<0.1	..	..
Madagascar	..	..	218	2.5	..	1.3	1.7	56.1	58.5
Malawi	21	5	413	1.7	..	14.3	14.2	57.1	56.8
Malaysia	43	2	103	9.4	..	0.4	0.4	15.4	16.7
Mali	..	..	281	2.0	..	1.8[f]	1.9	54.2	59.2
Mauritania	..	..	287	3.5	..	0.5	0.6	55.9	57.3
Mauritius	32	1	64	10.7	14.7	..	..	..	..
Mexico	13	5	32	7.4	11.8	0.3	0.3	32.7	33.1
Moldova	34	2	138	9.3	14.1	..	0.2	..	..
Mongolia	68	26	192	1.4	..	<0.1	<0.1	..	..
Morocco	29	0[b]	110	4.2	..	..	0.1	..	..
Mozambique	..	..	460	3.1	..	12.1	12.2	58.2	55.8
Myanmar	36	12	171	1.1	..	1.0	1.2	28.9	30.3
Namibia	23	10	717	3.1	..	21.3	21.3	52.6	55.0
Nepal	49	24	184	4.1	..	0.4	0.5	20.7	26.7
Netherlands	36	28	8	3.7	6.4	0.2	0.2	19.4	20.0
New Zealand	24	22	11	7.6	11.5	0.1	0.1	..	..
Nicaragua	..	5	63	6.1	20.1	0.2	0.2	32.7	33.9
Niger	..	..	157	3.1	..	1.1	1.2	56.9	56.3
Nigeria	..	1	290	2.2	..	5.5	5.4	58.1	57.6
Norway	27	25	5	6.7	6.1	0.1	0.1	..	..
Oman	..	..	11	11.4	..	0.1	0.1	..	..
Pakistan	..	..	181	8.5	..	0.1	0.1	6.9	12.2
Panama	..	..	45	7.3	16.4	0.7	0.9	37.3	41.3
Papua New Guinea	..	..	233	1.9	..	0.4	0.6	29.0	30.0
Paraguay	23	7	71	3.9	..	0.4	0.5	27.0	26.0
Peru	..	..	178	5.1	17.6	0.4	0.5	31.4	33.8
Philippines	41	8	293	2.4	..	<0.1	<0.1	20.9	22.5
Poland	40	25	29	9.0	14.8	..	0.1	..	..
Portugal	..	..	42	7.8	14.8	0.4	0.4	20.0	19.5
Puerto Rico	17	10	5	13.2	..	..	..	..	..

2.18 Health risk factors and public health challenges

	Prevalence of smoking		Incidence of tuberculosis	Prevalence of diabetes	Mortality caused by road traffic injury	Prevalence of HIV			
	% of adults		per 100,000 people	% of population ages 20–79	per 100,000 people	Total % of population ages 15–49		Female % of population with HIV	
	Male 2000–05[a]	Female 2000–05[a]	2004	2003	1998–2003[a]	2001	2003	2001	2003
Romania	32	10	146	9.3	16.8	..	<0.1	..	..
Russian Federation	60	16	115	9.2	19.4	0.7	1.1	32.1	33.7
Rwanda	..	..	371	1.1	..	5.1	5.1	54.5	56.5
Saudi Arabia	19	8	40	9.4	..	..	..	..	..
Senegal	..	..	245	2.3	..	0.8	0.8	55.3	56.1
Serbia and Montenegro	48	34	33	5.6	..	0.2	0.2	20.0	20.0
Sierra Leone	..	..	443	2.2	..	..	..	..	..
Singapore	24	4	40	12.3	5.2	0.2	0.2	23.5	24.4
Slovak Republic	..	..	19	8.7	11.3	..	<0.1	..	..
Slovenia	28	20	15	9.6	12.1	<0.1	<0.1	..	..
Somalia	..	..	411	2.3	..	..	..	..	..
South Africa	23	8	718	3.4	..	20.9	15.6[e]	56.3	56.9
Spain	39	25	25	9.9	12.8	0.6	0.7	20.0	20.8
Sri Lanka	23	2	60	2.1	..	<0.1	<0.1	..	17.1
Sudan	..	..	220	3.2	..	1.9	2.3	56.7	57.9
Swaziland	11	3	1,226	3.0	..	38.2	38.8	57.9	55.0
Sweden	17	18	4	7.3	5.9	0.1	0.1	27.3	25.7
Switzerland	27	23	7	9.5	7.5	0.4	0.4	30.0	30.0
Syrian Arab Republic	..	..	41	6.2	..	..	<0.1	..	..
Tajikistan	..	..	177	3.7	5.6	..	<0.1	..	..
Tanzania	..	..	347	2.3	..	9.0	7.0[d]	58.6	56.0
Thailand	49	3	142	2.1	..	1.7	1.5	32.3	35.7
Togo	..	..	355	2.1	..	4.3	4.1	56.4	56.3
Trinidad and Tobago	..	..	9	7.9	..	3.0	3.2	50.0	50.0
Tunisia	50	2	22	4.6	..	<0.1	<0.1	..	..
Turkey	49	18	28	7.0	..	..	..	..	..
Turkmenistan	..	..	65	4.0	10.3	..	<0.1	..	..
Uganda	25	3	402	1.5	..	5.1	4.1	59.6	60.0
Ukraine	53	11	101	9.7	10.8	1.2	1.4	32.0	33.3
United Arab Emirates	17	1	17	20.1	..	..	..	..	..
United Kingdom	27	25	12	3.9	6.1	0.2	0.2	28.2	29.8
United States	24	19	5	8.0	14.7	0.6	0.6	20.2	25.5
Uruguay	35	24	28	6.8	10.0	0.3	0.3	32.7	32.8
Uzbekistan	24	1	117	4.0	9.8	<0.1	0.1	33.3	33.6
Venezuela, RB	..	..	42	5.2	23.1	0.6	0.7	32.4	32.0
Vietnam	35	2	176	1.0	..	0.3	0.4	27.3	32.5
West Bank and Gaza	..	..	23	..	..	..	..	..	..
Yemen, Rep.	..	..	89	7.7	..	..	0.1	..	..
Zambia	16	1	680	3.0	..	16.7	15.6[g]	56.3	56.6
Zimbabwe	20	2	674	2.6	..	24.9	24.6	56.3	58.1
World	.. w	.. w	139 w	5.1 w	.. w	1.1 w	1.1 w	29.4 w	30.8 w
Low income	..	15	224	4.7	..	2.1	2.1	41.2	41.1
Middle income	..	..	114	4.4	..	0.7	0.7	23.7	25.7
Lower middle income	..	..	114	3.6	..	0.3	0.3	21.9	24.1
Upper middle income	..	..	112	7.6	..	2.7	2.6	33.3	34.2
Low & middle income	..	..	162	4.5	..	1.2	1.2	30.8	32.0
East Asia & Pacific	67	4	138	2.6	19.0	0.2	0.2	20.2	22.9
Europe & Central Asia	..	..	83	8.3	..	..	0.7	..	..
Latin America & Carib.	..	..	64	5.9	..	0.6	0.7	34.0	34.5
Middle East & N. Africa	..	..	54	6.2	..	..	0.1	..	..
South Asia	47	18	177	5.9	..	0.7	0.8	35.5	34.5
Sub-Saharan Africa	..	..	363	2.4	..	7.3	7.2	57.1	57.3
High income	..	..	17	7.6	10.9	0.3	0.4	22.0	24.2
Europe EMU	..	..	13	7.8	9.9	0.3	0.3	24.5	25.0

a. Data are for the most recent year available. b. Less than 0.5. c. Survey data, 2003. d. Survey data, 2004. e. Survey data, 2002. f. Survey data, 2001. g. Survey data, 2001/02.

Health risk factors and public health challenges 2.18

About the data

The limited availability of data on health status is a major constraint in assessing the health situation in developing countries. Surveillance data are lacking for many major public health concerns. Estimates of prevalence and incidence are available for some diseases but are often unreliable and incomplete. National health authorities differ widely in their capacity and willingness to collect or report information. To compensate for the paucity of data and ensure reasonable reliability and international comparability, the World Health Organization (WHO) prepares estimates in accordance with epidemiological models and statistical standards.

Smoking is the most common form of tobacco use in many countries, and the prevalence of smoking is therefore a good measure of the extent of the tobacco epidemic (Corrao and others 2000). While the prevalence of smoking has been declining in some high-income countries, it has been increasing in many developing countries. Tobacco use causes heart and other vascular diseases and cancers of the lung and other organs. Given the long delay between starting to smoke and the onset of disease, the health impact of smoking in developing countries will increase rapidly in the next few decades. Because the data present a one-time estimate, with no information on the intensity or duration of smoking, and because the definition of adult varies across countries, the data should be interpreted with caution.

Tuberculosis is one of the main causes of death from a single infectious agent among adults in developing countries. In high-income countries tuberculosis has reemerged largely as a result of cases among immigrants. The estimates of tuberculosis incidence in the table are based on a new approach in which reported cases are adjusted using the ratio of case notifications to the estimated share of cases detected by panels of 80 epidemiologists convened by the WHO.

Diabetes, an important cause of ill health and a risk factor for other diseases in developed countries, is spreading rapidly in developing countries. While diabetes is most common among the elderly, prevalence rates are rising among younger and productive populations in developing countries. Economic development has led to the greater adoption of Western lifestyles and diet in developing countries, resulting in a substantial increase in diabetes. Without effective prevention and control programs, diabetes will likely continue to increase. Data are based on sample surveys.

Data for mortality caused by road traffic injury are collected by the WHO based on vital registries. There is considerable difference in completeness of the vital registry data. In some countries the vital registry system covers only part of the country. In some, not all deaths are registered. In addition, mortality from different causes is difficult to measure. For countries with incomplete vital registry systems, the WHO has used demographic techniques to estimate deaths.

Adult HIV prevalence rates reflect the rate of HIV infection in each country's population. Low national prevalence rates can be very misleading, however. They often disguise serious epidemics that are initially concentrated in certain localities or among specific population groups and threaten to spill over into the wider population. In many parts of the developing world most new infections occur in young adults, with young women especially vulnerable.

Estimates from recent Demographic and Health Surveys that have collected data on HIV/AIDS differ from those of the Joint United Nations Programme on HIV/AIDS (UNAIDS) and the WHO, which are based on surveillance systems that focus on pregnant women who attend sentinel antenatal clinics. There are reasons to be cautious about comparing the two sets of estimates. Demographic and Health Survey is a household survey that uses a representative sample from the whole population, whereas surveillance data from antenatal clinics is limited to pregnant women. Representative household surveys also frequently provide better coverage of rural populations. However, the fact that some respondents refuse to participate or are absent from the household adds considerable uncertainty to survey-based HIV estimates, because the possible association of absence or refusal with higher HIV prevalence is unknown. UNAIDS and WHO estimates are generally based on surveillance systems that focus on pregnant women who attend sentinel antenatal clinics. UNAIDS and the WHO use a methodology to estimate HIV prevalence for the adult population (ages 15–49) that assumes that prevalence among pregnant women is a good approximation of prevalence among men and women. However, this assumption might not apply to all countries or over time. There are also other potential biases associated with the use of antenatal clinic data, such as differences among women who attend antenatal clinics and those who do not.

Definitions

• **Prevalence of smoking** is the percentage of men and women who smoke cigarettes. The age range varies, but in most countries is 18 and older or 15 and older. • Incidence of tuberculosis is the estimated number of new tuberculosis cases (pulmonary, smear positive, extrapulmonary). • **Incidence of tuberculosis** is the estimated number of new pulmonary, smear positive, and extrapulmonary tuberculosis cases. • **Prevalence of diabetes** refers to the percentage of people ages 20–79 who have type 1 or type 2 diabetes. • **Mortality caused by road traffic injury** refers to the number of deaths per 100,000 people caused by road traffic injury. • **Prevalence of HIV** is the percentage of people who are infected with HIV.

Data sources

Data on smoking are from the American Cancer Society's *Tobacco Atlas*, 2nd edition. Data on tuberculosis are from the WHO's *Global Tuberculosis Control Report 2006*. Data on diabetes are from the International Diabetes Federation's e-Atlas. Data on mortality caused by road traffic injury are from the WHO and the World Bank's *World Report on Road Traffic Injury Prevention* and the Organisation for Economic Co-operation and Development. Data on HIV are from UNAIDS and the WHO's *2004 Report on the Global AIDS Epidemic*.

2.19 Mortality

	Life expectancy at birth		Infant mortality rate		Under-five mortality rate		Child mortality rate		Adult mortality rate		Survival to age 65	
	years		per 1,000 live births		per 1,000		per 1,000 Male	per 1,000 Female	per 1,000 Male	per 1,000 Female	% of cohort Male	% of cohort Female
	1990	2004	1990	2004	1990	2004	1997–2004[a]	1997–2004[a]	2002–04[a]	2002–04[a]	2003	2003
Afghanistan	45	..	168	..	260	..	..	..	..	..	..	..
Albania	72	74	37	17	45	19	..	..	99	56	77	85
Algeria	67	71	54	35	69	40	..	..	138	121	74	79
Angola	40	41	154	154	260	260	..	..	512	462	34	39
Argentina	72	75	26	16	29	18	..	..	180	92	75	87
Armenia	68	71	52	29	60	32	5	3	209	95	71	84
Australia	77	80	8	5	10	6	..	..	89	50	85	92
Austria	76	79	8	5	10	5	..	..	120	59	83	92
Azerbaijan	71	72	84	75	105	90	..	..	230	107	59	72
Bangladesh	55	63	100	56	149	77	24	29	252	220	59	62
Belarus	71	68	13	9	17	11	..	..	366	131	55	81
Belgium	76	79	8	4	10	5	..	..	125	67	82	91
Benin	53	55	111	90	185	152	72	79	325	292	43	50
Bolivia	59	65	89	54	125	69	25	29	262	199	61	69
Bosnia and Herzegovina	72	74	18	13	22	15	..	..	159	82	75	86
Botswana	64	35	45	84	58	116	..	..	823	793	13	18
Brazil	66	71	50	32	60	34	..	..	268	139	62	79
Bulgaria	72	72	15	12	19	15	..	..	216	91	69	84
Burkina Faso	48	48	113	97	210	192	110	113	427	400	28	32
Burundi	44	44	114	114	190	190	..	..	534	513	25	28
Cambodia	54	57	80	97	115	141	34	30	391	214	42	49
Cameroon	52	46	85	87	139	149	73	72	513	493	35	40
Canada	77	80	7	5	8	6	..	..	97	60	84	92
Central African Republic	48	39	102	115	168	193	..	..	658	649	24	29
Chad	46	44	117	117	203	200	106	99	500	471	39	44
Chile	74	78	17	8	21	8	..	..	136	68	79	89
China	69	71	38	26	49	31	..	..	145	91	73	79
Hong Kong, China	77	82	..	..	..	..	..	..	83	36	85	92
Colombia	68	73	30	18	36	21	4	3	191	108	71	84
Congo, Dem. Rep.	46	44	129	129	205	205	..	..	497	471	32	36
Congo, Rep.	54	52	83	81	110	108	..	..	469	444	36	45
Costa Rica	77	79	16	11	18	13	..	..	121	68	82	90
Côte d'Ivoire	52	46	103	117	157	194	83	58	475	457	31	34
Croatia	72	75	11	6	12	7	..	..	173	70	71	87
Cuba	75	77	11	6	13	7	..	..	132	86	81	88
Czech Republic	71	76	11	4	13	4	..	..	167	74	76	88
Denmark	75	77	8	4	9	5	..	..	121	74	80	88
Dominican Republic	66	68	50	27	65	32	9	9	280	151	63	76
Ecuador	69	75	43	23	57	26	..	..	188	109	70	81
Egypt, Arab Rep.	63	70	76	26	104	36	15	16	181	113	70	76
El Salvador	66	71	47	24	60	28	..	..	227	142	69	81
Eritrea	48	54	88	52	147	82	55	50	482	405	37	43
Estonia	69	72	12	6	16	8	..	..	310	101	60	85
Ethiopia	45	42	131	110	204	166	83	86	453	420	26	31
Finland	75	79	6	3	7	4	..	..	133	61	80	91
France	77	80	7	4	9	5	..	..	137	61	83	92
Gabon	60	54	60	60	92	91	31	33	418	397	46	51
Gambia, The	50	56	103	89	154	122	..	..	335	290	41	47
Georgia	70	71	43	41	47	45	..	..	219	84	72	87
Germany	75	78	7	4	9	5	..	..	119	61	82	91
Ghana	56	57	75	68	122	112	44	52	351	334	48	52
Greece	77	79	10	4	11	5	..	..	115	51	83	91
Guatemala	62	68	60	33	82	45	15	18	304	175	59	72
Guinea	47	54	145	101	240	155	101	98	316	285	32	33
Guinea-Bissau	42	45	153	126	253	203	..	..	464	411	34	39
Haiti	49	52	102	74	150	117	52	54	477	460	38	48

Mortality 2.19

	Life expectancy at birth		Infant mortality rate		Under-five mortality rate		Child mortality rate		Adult mortality rate		Survival to age 65	
	years		per 1,000 live births		per 1,000		per 1,000 Male	per 1,000 Female	per 1,000 Male	per 1,000 Female	% of cohort Male	% of cohort Female
	1990	2004	1990	2004	1990	2004	1997–2004[a]	1997–2004[a]	2002–04[a]	2002–04[a]	2003	2003
Honduras	65	68	44	31	59	41	..	..	259	214	59	73
Hungary	69	73	15	7	17	8	..	..	253	108	67	85
India	59	63	80	62	123	85	25	37	241	161	62	65
Indonesia	62	67	60	30	91	38	13	11	221	167	64	72
Iran, Islamic Rep.	65	71	54	32	72	38	..	..	166	114	72	76
Iraq	62	..	40	..	50	..	..	..	..	..	..	..
Ireland	75	78	8	5	9	6	..	..	100	59	80	89
Israel	76	79	10	5	12	6	..	..	91	49	84	90
Italy	77	80	8	4	9	5	..	..	96	49	82	91
Jamaica	71	71	17	17	20	20	..	..	241	194	81	87
Japan	79	82	5	3	6	4	..	..	95	45	86	94
Jordan	68	72	33	23	40	27	5	5	175	134	75	81
Kazakhstan	68	65	53	63	63	73	11	6	351	158	48	71
Kenya	58	48	64	79	97	120	42	39	522	587	28	32
Korea, Dem. Rep.	65	64	42	42	55	55	..	..	320	219	55	63
Korea, Rep.	71	77	8	5	9	6	..	..	152	59	73	87
Kuwait	75	77	14	10	16	12	..	..	91	60	82	88
Kyrgyz Republic	68	68	68	58	80	68	10	11	273	129	57	76
Lao PDR	50	55	120	65	163	83	..	..	330	280	45	51
Latvia	69	71	14	10	18	12	..	..	300	116	61	85
Lebanon	69	72	32	27	37	31	..	..	160	107	71	79
Lesotho	57	36	74	80	104	112	..	..	837	758	15	19
Liberia	43	42	157	157	235	235	..	..	528	477	33	37
Libya	68	74	35	18	41	20	..	..	146	100	73	83
Lithuania	71	72	10	8	13	8	..	..	303	106	67	87
Macedonia, FYR	72	74	33	13	38	14	..	..	145	84	75	85
Madagascar	51	56	103	76	168	123	45	45	335	286	49	55
Malawi	46	40	146	110	241	175	101	102	651	652	19	23
Malaysia	70	73	16	10	22	12	..	..	164	94	72	83
Mali	46	48	140	121	250	219	132	125	366	329	25	29
Mauritania	49	53	85	78	133	125	38	38	353	295	43	49
Mauritius	69	73	20	14	23	15	..	..	218	115	71	85
Mexico	71	75	37	23	46	28	..	..	164	91	75	86
Moldova	68	68	30	23	40	28	..	..	302	154	59	76
Mongolia	62	65	78	41	108	52	..	..	252	178	66	72
Morocco	64	70	69	38	89	43	9	11	170	117	68	76
Mozambique	43	42	158	104	235	152	61	64	591	558	25	30
Myanmar	56	61	91	76	130	106	..	..	305	208	47	58
Namibia	62	47	60	47	86	63	22	20	600	560	21	25
Nepal	55	62	100	59	145	76	28	40	261	237	58	57
Netherlands	77	79	7	5	9	6	..	..	94	66	84	90
New Zealand	75	79	8	5	11	7	..	..	99	65	83	90
Nicaragua	64	70	52	31	68	38	10	9	230	155	67	77
Niger	40	45	191	152	320	259	184	202	368	337	30	37
Nigeria	46	44	120	101	230	197	120	123	504	494	32	36
Norway	77	80	7	4	9	4	..	..	99	59	84	91
Oman	70	75	25	10	32	13	..	..	121	91	79	85
Pakistan	59	65	100	80	130	101	..	..	191	162	65	71
Panama	72	75	27	19	34	24	..	..	156	87	79	86
Papua New Guinea	52	56	74	68	101	93	..	..	406	367	49	53
Paraguay	68	71	33	21	41	24	..	..	165	111	70	80
Peru	66	70	60	24	80	29	19	17	193	127	69	79
Philippines	66	71	41	26	62	34	14	9	179	126	70	78
Poland	71	74	19	7	18	8	..	..	201	78	72	87
Portugal	74	77	11	4	14	5	..	..	130	60	78	89
Puerto Rico	75	77	..	..	..	..	..	..	198	73	77	91

2.19 Mortality

	Life expectancy at birth		Infant mortality rate		Under-five mortality rate		Child mortality rate		Adult mortality rate		Survival to age 65	
	years		per 1,000 live births		per 1,000		per 1,000 Male	per 1,000 Female	per 1,000 Male	per 1,000 Female	% of cohort Male	% of cohort Female
	1990	2004	1990	2004	1990	2004	1997–2004[a]	1997–2004[a]	2002–04[a]	2002–04[a]	2003	2003
Romania	70	71	27	17	31	20	..	..	234	101	65	81
Russian Federation	69	65	23	17	29	21	..	..	450	166	49	77
Rwanda	31	44	103	118	173	203	105	97	522	462	23	25
Saudi Arabia	68	72	35	21	44	27	..	..	157	110	76	83
Senegal	53	56	90	78	148	137	76	74	319	271	38	47
Serbia and Montenegro	72	73	24	13	28	15	..	..	172	94	73	83
Sierra Leone	39	41	175	165	302	283	..	..	442	387	25	29
Singapore	74	79	7	3	8	3	..	..	90	53	83	90
Slovak Republic	71	74	12	6	14	9	..	..	209	79	70	86
Slovenia	73	77	8	4	10	4	..	..	151	66	77	89
Somalia	42	47	133	133	225	225	..	..	409	357	38	45
South Africa	62	45	45	54	60	67	18	13	615	542	26	33
Spain	77	80	8	3	9	5	..	..	117	49	83	93
Sri Lanka	71	74	26	12	32	14	..	..	139	82	77	85
Sudan	53	57	74	63	120	91	..	..	335	288	53	58
Swaziland	57	42	78	108	110	156	..	..	862	837	25	29
Sweden	78	80	6	3	7	4	..	..	82	52	86	92
Switzerland	77	81	7	5	9	5	..	..	87	47	85	93
Syrian Arab Republic	68	74	35	15	44	16	..	..	138	97	69	79
Tajikistan	63	64	92	75	119	93	..	..	223	149	62	75
Tanzania	53	46	102	78	161	126	61	58	517	516	27	30
Thailand	68	71	31	18	37	21	..	..	258	129	67	78
Togo	57	55	88	78	152	140	73	65	388	316	38	43
Trinidad and Tobago	71	70	28	18	33	20	..	..	268	175	74	82
Tunisia	70	73	41	21	52	25	..	..	141	82	76	83
Turkey	66	70	67	28	82	32	10	13	193	121	69	79
Turkmenistan	63	63	80	80	97	103	19	17	311	161	57	73
Uganda	46	49	93	80	160	138	78	70	527	528	25	28
Ukraine	70	68	19	14	26	18	..	..	421	161	57	81
United Arab Emirates	73	79	12	7	14	8	..	..	83	55	80	86
United Kingdom	76	79	8	5	10	6	..	..	101	63	82	90
United States	75	77	9	7	11	8	..	..	144	84	81	90
Uruguay	73	75	20	15	25	17	..	..	169	87	74	88
Uzbekistan	69	67	65	57	79	69	..	..	252	149	63	77
Venezuela, RB	71	74	24	16	27	19	..	..	192	98	75	86
Vietnam	65	70	38	17	53	23	10	7	182	130	68	78
West Bank and Gaza	*69*	73	..	..	..	..	..	..	146	109	74	84
Yemen, Rep.	55	61	98	82	142	111	33	36	282	237	50	53
Zambia	46	38	101	102	180	182	89	74	690	728	16	21
Zimbabwe	59	37	53	79	80	129	35	31	780	796	18	20
World	**65 w**	**67 w**	**64 w**	**54 w**	**95 w**	**79 w**			**222 w**	**153 w**	**66 w**	**73 w**
Low income	56	59	94	79	147	122			300	246	54	58
Middle income	68	70	43	30	57	37			202	121	68	78
Lower middle income	67	70	45	32	61	40			182	114	70	78
Upper middle income	69	69	34	23	42	28			289	152	63	78
Low & middle income	63	65	69	59	103	86			241	171	62	70
East Asia & Pacific	67	70	43	29	59	37			169	111	70	77
Europe & Central Asia	69	69	40	28	49	34			316	134	60	80
Latin America & Carib.	68	72	43	27	54	31			219	124	69	82
Middle East & N. Africa	64	69	60	44	81	55			179	128	69	75
South Asia	59	63	86	66	129	92			237	169	61	65
Sub-Saharan Africa	49	46	111	100	185	168			489	467	32	36
High income	76	79	9	6	11	7			122	65	82	91
Europe EMU	76	79	8	4	9	5			117	57	82	91

a. Data are for the most recent year available.

Mortality 2.19

About the data

Mortality rates for different age groups (infants, children, and adults) and overall indicators of mortality (life expectancy at birth or survival to a given age) are important indicators of health status in a country. Because data on the incidence and prevalence of diseases (morbidity data) are frequently unavailable, mortality rates are often used to identify vulnerable populations. And they are among the indicators most frequently used to compare levels of socioeconomic development across countries.

The main sources of mortality data are vital registration systems and direct or indirect estimates based on sample surveys or censuses. A "complete" vital registration system—one covering at least 90 percent of vital events in the population—is the best source of age-specific mortality data. But such systems 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 surveys estimating infant deaths require large samples because households in which a birth or an infant death has occurred during a given year cannot ordinarily be preselected for sampling. Indirect estimates rely on estimated actuarial "life" tables that may be inappropriate for the population concerned. Because life expectancy at birth is constructed using infant mortality data and model life tables, similar reliability issues arise for this indicator.

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

To produce harmonized estimates of infant and under-five mortality rates that make use of all available information in a transparent way, the United Nations Children's Fund (UNICEF) and the World Bank developed and adopted a methodology that fits a regression line to the relationship between mortality rates and their reference dates using weighted least squares. (For further discussion of methodology for childhood mortality estimates, see Hill and others 1999.)

Infant and child mortality rates are higher for boys than for girls in countries in which parental gender preferences are insignificant. Child mortality captures the effect of gender discrimination better than does infant mortality, as malnutrition and medical interventions are more important in this age group. Where female child mortality is higher, as in some countries in South Asia, girls probably have unequal access to resources.

Adult mortality rates have increased in many countries in Sub-Saharan Africa and Europe and Central Asia. In Sub-Saharan Africa the increase stems from AIDS-related mortality and affects both men and women. In Europe and Central Asia the causes are more diverse and affect men more. They include a high prevalence of smoking, a high-fat diet, excessive alcohol use, and stressful conditions related to the economic transition.

The percentage of a cohort surviving to age 65 reflects both child and adult mortality rates. Like life expectancy, it is a synthetic measure based on current age-specific mortality rates and used in the construction of life tables. It shows that even in countries where mortality is high, a certain share of the current birth cohort will live well beyond the life expectancy at birth, while in low-mortality countries close to 90 percent will reach at least age 65.

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 dying 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 five, if subject to current age-specific mortality rates. The probability is expressed as a rate per 1,000. • **Child mortality rate** is the probability of dying between the ages of one and five, if subject to current age-specific mortality rates. The probability is expressed as a rate per 1,000. • **Adult mortality rate** is the probability of dying between the ages of 15 and 60—that is, the probability of a 15-year-old dying before reaching age 60—if subject to current age-specific mortality rates between those ages. • **Survival to age 65** refers to the percentage of a cohort of newborn infants that would survive to age 65, if subject to current age-specific mortality rates.

Data sources

Data on infant and under-five mortality are the harmonized estimates of the World Health Organization, UNICEF, and the World Bank, based mainly on household surveys, censuses, and vital registration, supplemented by the World Bank's estimates based on household surveys and vital registration. Other estimates are compiled and produced by the World Bank's Human Development Network and Development Data Group in consultation with its operational staff and country offices. Important inputs to the World Bank's demographic work come from the United Nations Population Division's *World Population Prospects: The 2004 Revision*, census reports and other statistical publications from national statistical offices, and Demographic and Health Surveys by Macro International.