



PEOPLE

Toward  
a measure for  
gender equality

The three key elements of the World Bank's long-term strategy to promote gender equality and strengthen countries' abilities to attack poverty:

Establish a policy and institutional environment that provides for equal rights and opportunities for women and men.

Foster economic development that strengthens incentives for more equal allocation of resources.

Take active measures to redress persistent inequalities in society.

Source: World Bank 2001.

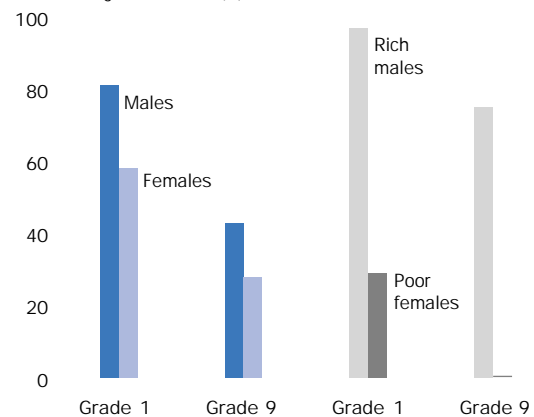


The status of women has improved considerably in most developing countries in the past quarter century. Yet in no region do women enjoy equal legal, social, and economic rights. Women have fewer resources than men, and more limited economic opportunities and political participation. Women and girls bear the most direct cost of these inequalities—but the harm ultimately extends to everyone. Because gender gaps are often largest and most costly among the poor, gender equality is a core development issue.

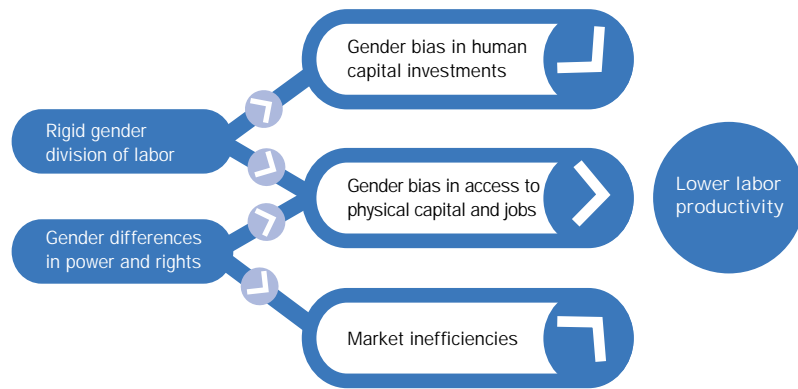
Gender inequalities persist because they are supported by social norms and legal institutions, by the choices and behaviors of households, and by regulations and incentives that affect the way economies function. A strategy to reduce gender inequalities must address these factors.

Income disparities compound gender disparities

Share of 15- to 19-year-olds who have completed each grade in India (%), 1992-93



Source: Filmer 1999.



Gender inequalities hinder productivity, efficiency, and economic progress. By hampering the accumulation of human capital in the

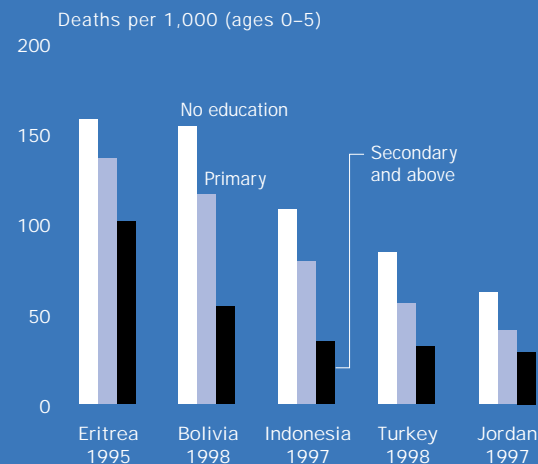
home and the labor market and systematically excluding women from access to resources, public services, and certain productive

activities, gender discrimination diminishes an economy's capacity to prosper and to provide for its people.

## The great costs of gender inequality

Foremost among the costs of gender inequality is its toll on the quality of human lives. Evidence suggests that societies with large and persistent gender inequalities pay the price of more poverty, illness, malnutrition, and other deprivations, even death. This makes a compelling case for public and private action to eliminate inequality. Public action is particularly important, since many social, legal, and economic institutions that perpetuate gender inequalities are extremely difficult for individuals to change.

Childhood mortality declines as mothers' education increases



Source: Demographic and Health Survey data.

Public policy can:

- Establish an enabling policy and institutional environment that provides for equal rights and opportunities for women and men.
- Foster economic development that strengthens incentives for more equal allocation of resources.
- Take active measures to redress persistent inequalities in society.

These are the three key elements of the World Bank's long-term strategy to promote gender equality and strengthen countries' abilities to eliminate gender disparities and attack poverty.

## Q: Why is there a paucity of data disaggregated by gender?

### A: Resource constraints

Constraints of time, money, and technical expertise limit data collection to aggregate statistics.

### A: Assumptions in the design and implementation of policy

Policymakers often believe that the benefits of economic growth will accrue equally to all people, although empirical evidence does not always bear out this altruistic model. If it is recognized, as it increasingly now is, that men and women have differing needs and benefit differently from programs, policies, and projects, the case for collecting data for both men and women separately becomes stronger.

### A: Agencies' priorities and conventional wisdom

Data collection and indicators often reflect the policy thrust of particular agencies and the conventional wisdom that gender matters only in certain sectors. Thus indicators disaggregated by gender exist for primary education and basic health, but not for rural development and infrastructure.

## Monitoring gender equality—and measuring it

### How do countries know how they are doing with respect to gender equality?

The first step toward incorporating gender issues in policymaking, and determining appropriate measures for strengthening women's participation, is to obtain good information—on gender roles, existing institutions, and the constraints operating against women. This requires a combination of administrative data, qualitative social assessments, and quantitative and

time use surveys. But there is no single accepted set of indicators for monitoring progress toward gender equality, and the methodological quest for specific sets of relevant indicators is often complicated by the lack of data disaggregated by gender and the lack of conceptual clarity.

Nevertheless, progress can be measured by monitoring trends in the public and private dimensions of women's lives. These dimensions are identified in the Bank's strategy to promote gender equality. But the relevance of many measures of gender inequality varies by cultural context.

### REFORM INSTITUTIONS

p. 38 >

- > Legal frameworks
- > Markets and institutions

### FOSTER ECONOMIC DEVELOPMENT

p. 40 >

- > Education
- > Health and reproductive health
- > Infrastructure

### REDRESS INEQUALITIES

p. 42 >

- > Employment and earnings
- > Political participation
- > Gender and violence

## Reform institutions

Gender equality in legal, political, and economic rights provides a supportive institutional environment in which women can be as productive in society as men. It also enhances their ability to participate in and benefit from the development process.

More equal rights, more equal resources and voice  
Female-to-male ratio in low-income countries, 1995



Note: A value of 1.0 indicates equal outcomes for females and males.  
Source: World Bank 2001.

But discrimination against women is still widely embodied in both laws and customs. Even where supportive legislation exists, legal rights may be weakly enforced or overridden by customary law. In South Africa, for example, reproductive rights are guaranteed in the constitution, but their exercise has been restricted by appeals to customary law (UNFPA 2000). In many regions girls do not attend school because traveling without chaperones violates social norms (Narayan, Patel, Schafft, Rademacher, and Koch-Schulte 2000).

## A foundation of equal rights . . .

### Legal frameworks

A fundamental step is to establish equal rights for women, especially in family law, property rights, political rights, and protection against gender-related violence. Where these rights exist, judicial and administrative enforcement should be strengthened. Equally important is extending legal aid to women. Sustained efforts to provide legal assistance, legal literacy training, and improved access to justice at the local level are necessary for women to have the confidence to claim their rights or seek redress. An independent, well-trained, well-equipped, and gender-sensitive judiciary, with female judges especially at local levels, can improve the enforcement of laws.

#### Law and reality

	Legal area	Law	Reality
Bulgaria	Domestic violence	Punishable under general law	Only recently being addressed
Estonia	Equal pay legislation	Equal pay for equal work	Women's wages 25 percent lower than men's
Kyrgyz Republic	Property	Both sexes can own property	Men usually inherit property
Lithuania	Divorce	Equal rights	Alimony difficult to obtain
Slovenia	Social protection	Young families given priority in public housing	Female-headed families not included in priority list

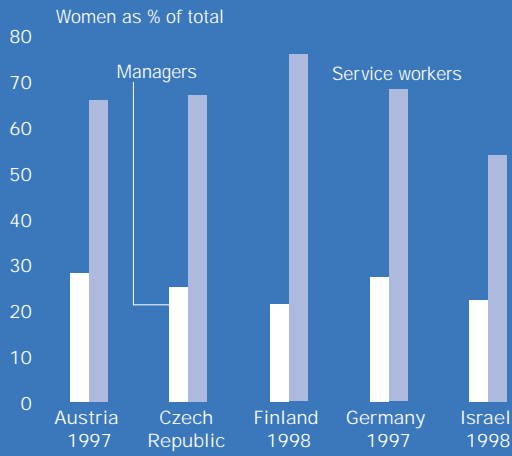
Source: International Helsinki Federation for Human Rights 2000.

## Markets and institutions

The structure of economic institutions can promote or impede gender equality, thereby affecting a country's long-run prospects for economic growth. Markets embody incentives that influence decisions to work, save, and consume. Thus the structure of markets largely determines women's lower wages and their segregation in a narrow range of activities (Anker 1998).

Women are clustered in lower-paying, lower-status occupations, primarily in the service sectors, and in such professions as teaching and registered nursing.

Women are clustered in low-paying service jobs



Source: UNECE 2000.

This clustering implies that factors other than efficiency determine labor supply and demand in an economy. Overcoming occupational segregation could be an important step in ensuring an efficient allocation of resources. And by ensuring that competent women are not overlooked, it will create a more flexible and responsive labor market.

## ... and labor market opportunities empowers women

Developing countries tend to have limited job creation in the formal sector and uneven development of local industries and of services for reducing unemployment. Thus women, especially those in rural areas, see self-employment or entrepreneurship as a way out of poverty. Access to microcredit programs that finance income generating activities can help them become self-employed. More important, an increase in assets and cash income may empower women within the household, helping to increase their consumption and that of their children and contributing to other measures of welfare.

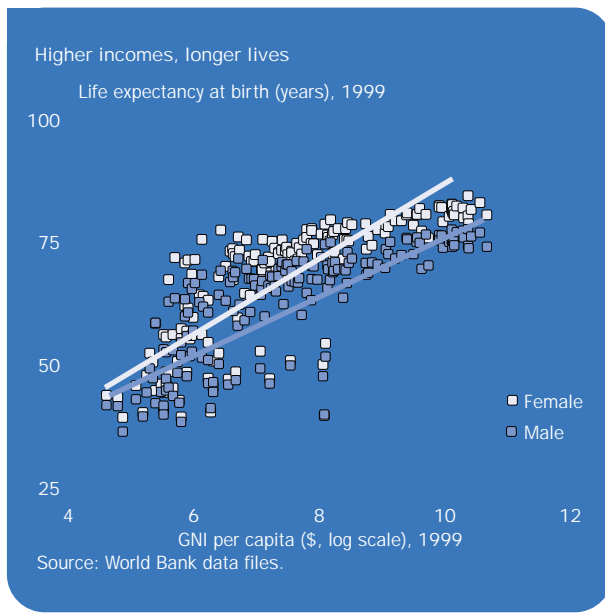
Grameen Bank loans to women in Bangladesh tend to boost welfare more

Welfare change	Effect of	
	Male borrowing	Female borrowing
Increase in boys' schooling	7.2	6.1
Increase in girls' schooling	3.0	4.7
Increase in per capita spending	1.8	4.3
Reduction in recent fertility	7.4	3.5
Increase in women's labor supply in cash income earning activities	0.0	10.4
Increase in women's nonland assets	0.0	19.9

Source: World Bank 1995b.

## ➤ Foster economic development

In most settings economic development is associated with improved circumstances for women and girls and with greater gender equality, primarily through the investments in basic services and infrastructure that accompany development. Cross-country analysis supports the conclusion that economic development provides an enabling environment for gender equality—though its effects are not immediate or without short-term costs (World Bank 2001). For example, economic development may not benefit all women and men, and it may



actually harm some. But countries with higher per capita incomes have better health, education, and related outcomes than countries with lower per capita incomes.

Data from 127 countries over four periods show that income growth leads to greater gender equality in life expectancy, political representation, and secondary school attainment. But the relationship is nonlinear: improvement is slow at low per capita incomes, but increases rapidly once countries reach middle-income status. For many poor countries the salutary effects of income growth on gender equality may take a long time to realize (World Bank 2001).

## A more vibrant economy can increase gender equality. . .

### Education

Enrollment has improved more for girls than for boys, narrowing the gender gap in primary and secondary school enrollment (see table 1.2). These improvements in enrollment over the years have raised literacy rates among younger women (see table 2.14). But a gender gap in favor of boys continues to disadvantage girls in South Asia and the Middle East and North Africa (Filmer 1999). In these regions girls' access to primary and secondary education is still limited in rural areas, and girls are more likely than boys to drop out of school. Beyond improving supply, special measures may be needed to encourage girls' enrollment, including

Literacy gaps between men and women are narrowing  
Percentage point difference between male and female adult literacy rates

	1980	1999
East Asia and Pacific	23	14
Europe and Central Asia	5	3
Latin America and the Caribbean	5	2
Middle East and North Africa	31	22
South Asia	27	24
Sub-Saharan Africa	21	16

Source: UNESCO data.

providing subsidies and other financial inducements, improving the relevance of education (and thereby increasing returns to families), and enacting supportive national policies.

## Health and reproductive health

Globally, girls have a greater chance of surviving childhood than boys—except where sex discrimination is greatest. Among young children in developing countries, female disadvantage in access to health services is small and diminishing, but the female disadvantage in morbidity and mortality is carried into adolescent and reproductive years. Serious health risks arise for adolescents when they become sexually active. One of the most important concerns is the prevalence of sexually transmitted diseases, including HIV. It is

More boys than girls get treatment for respiratory infection or fever

Share receiving treatment (%)	Year	Boys	Girls
Cameroon	1991	53	42
	1998	31	36
Egypt, Arab Rep.	1992	66	56
	1995	68	61

Source: Demographic and Health Survey data.

Virtually all maternal deaths occur in developing countries

Maternal deaths, 1995	
East Asia and Pacific	48,000
Europe and Central Asia	3,000
Latin America and the Caribbean	22,000
Middle East and North Africa	20,000
South Asia	155,000
Sub-Saharan Africa	265,000
High-income countries	1,000

Source: WHO and UNICEF, preliminary estimates.

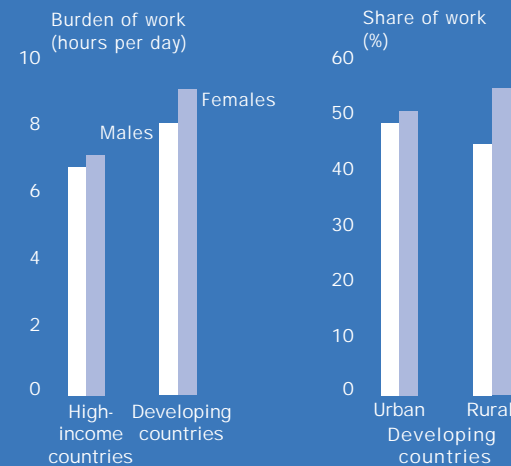
estimated that half of all new HIV infections in 1996 occurred in the age group 15–24, and in some countries the rate of infection in this age group is higher among women than men (see table 1.3). In high-income countries women's access to reproductive health care is universal, especially during pregnancy and childbirth, but in developing countries many women receive little or no skilled prenatal or delivery care (see tables 1.3 and 2.17). This results in preventable deaths and injuries during pregnancy and childbirth: 99 percent of all maternal deaths occur in developing countries.

## ... through many pathways

### Infrastructure

Investments in certain types of infrastructure can be important in facilitating greater gender equality in access to resources and in economic participation. While infrastructure investments generally benefit both females and males, they often benefit them differently. In poor rural areas lack of water and energy infrastructure can mean long hours for women and girls collecting water and fuel. A study of Indian villages showed that in resource-depleted areas women spend an average of four to five hours a day collecting household fuel (World Bank 1991b). And girls in several countries identified the

Women and girls carry a greater load



Note: Data on share of work are from a sample of 13 surveys. Source: UNDP 1995.

need to help out at home as one of the main reasons for dropping out of school (Gardner 1998).

Women in all countries work more unvalued hours—in the home and community—than men, though this gap is smaller in high-income countries. A 1990 survey in the Republic of Korea showed that married women spent an average of more than five hours a day on household chores and childcare, compared with an average of 37 minutes for men (World Bank 2001). Investments in water, energy, and transport infrastructure can substantially reduce the time women and girls devote to household maintenance, freeing them to participate in other activities.



## ➤ Redress inequalities

The combined effects of institutional reform and economic development take time to become apparent, and active measures are needed to redress disparities in command of resources and political voice. Because active measures have real resource costs, policymakers will need to be selective about which measures to undertake, focusing strategically on areas where government intervention has the largest benefits.

In almost all societies women and girls have primary responsibility for housework and childcare activities. Several types of interventions can reduce the personal costs of household roles to women and girls:

- Interventions that increase education, wages, and labor force participation, coupled with access to reproductive health services, can strengthen women's role in reproductive decisions.
- Providing support for childcare services can allow greater economic participation for women.
- Selected investments in water, fuel, and transport can reduce women's and girls' domestic workloads.

- Protective labor legislation that spreads the cost of maternity and related benefits across employers, workers, and the state can help to avoid bias against hiring women.

## Sometimes active measures are needed

### Employment and earnings

Women's employment in the formal sector has increased considerably in many countries in recent years (see table 2.2). But women still face formidable barriers to obtaining skilled employment in the formal sector.

A larger share of women than men are classified as contributing family workers in all regions for which data are reported (United Nations 2000b). Where women do participate in the formal sector, they face discriminatory practices relating to pay and benefits,

Female-to-male pay ratios—still too low, but rising  
Female monthly wages as % of male wages

	Year	Ratio
Czech Republic	1987	66
	1992	73
	1996	81
Hungary	1986	74
	1992	81
	1997	78
Russian Federation	1989	71
	1992	69
	1996	70

Source: UNICEF 1999.

especially maternity benefits (see table 1.3). This discrimination constrains their income earning capacity and imposes a cost on economic growth. Data from Latin America and the Caribbean suggest that if female and male wages were equal, output would be 6 percent higher (World Bank 2001). Women spend considerably more time on unpaid work, but less on paid work, and their unemployment rates are higher than men's (see table 2.4). Legislating against discriminatory labor practices and enforcing these laws is likely to result in productivity gains to firms and to countries as a whole.

## Political participation

Women's participation and voice in politics, government, and policymaking remain limited in all regions, making it difficult for women to influence policy. Except in Western Europe, women make up less than 15 percent of national parliaments on average, and they are largely excluded from executive branches of government.

Women are underrepresented in national parliaments  
Parliamentary seats held by women (%)

	1987	1995	1999
World average	9	9	11
Northern Africa	3	4	3
Southern Africa	7	9	10
Caribbean	9	11	13
Central America	8	10	13
South America	7	9	13
Eastern Asia	18	12	13
Southern Asia	5	5	5
Central Asia	..	8	8
Western Asia	4	4	4
Eastern Europe	26	9	10
Western Europe	14	18	21

Source: United Nations 2000b.

Proactive measures to increase women's participation in politics and decisionmaking in the short run include "reservations," which guarantee a share of political positions for women. Like any form of affirmative action, political reservations are not without their detractors. Nevertheless, even critics acknowledge that female representation in electoral bodies has expanded in countries that have reservations.

It is essential to design, implement, and monitor with the full participation of women . . .

Beijing Declaration, 1995

## Gender and violence

Women are more likely than men to be victims of violence perpetrated by family members, and abuse by a husband or intimate partner is the most common form of violence against women. Many cultures condone or at least tolerate a certain amount of violence against women.

In parts of Asia and Africa men are seen as having a right to discipline their wives as they see fit. In many countries laws that ostensibly protect women from gender-based violence contain biases against victims. The first goal of

Many women have been physically abused by an intimate partner  
Women physically assaulted (%), various years, 1991–99

	In past 12 months	Ever (in any relationship)
Australia	3	23
Canada	3 <sup>a</sup>	29 <sup>a</sup>
Colombia	..	19 <sup>b,c</sup>
Egypt, Arab Rep.	..	34
Nicaragua	12	28
Puerto Rico	..	48 <sup>c</sup>
South Africa	6	16
Switzerland	6	13
United States	1 <sup>a</sup>	22 <sup>a</sup>

a. Physical or sexual contact. b. In current relationship only. c. Sample group included women who had never been in a relationship and therefore were not exposed.  
Source: United Nations 2000b.

legal reform should be to correct gender biases in existing laws.

The root cause of violence against women is poorly understood, and efforts to address violence are often reactive and fragmented. Insufficient resources have been allocated for anti-violence measures, and conflicting values and beliefs about women and their place in society undermine the development and implementation of such measures. The paucity of data and statistics on the various forms of violence against women is another obstacle to its eradication.



## 2.1 Population dynamics

	Total population			Average annual population growth rate					Crude death rate	Crude birth rate	Age dependency ratio	
	1980	millions 1999	2015	Total %		Ages 0-14 %	Ages 15-64 %	Ages 65+ %	per 1,000 people	per 1,000 people	dependents as proportion of working-age population	
				1980-99	1999-2015	1999-2015	1999-2015	1999-2015	1999	1999	1980	1999
Albania	2.7	3.4	3.9	1.2	1.0	-0.7	1.4	2.6	5	16	0.7	0.6
Algeria	18.7	30.0	39.1	2.5	1.7	-0.2	2.5	2.9	6	25	1.0	0.7
Angola	7.0	12.4	19.0	3.0	2.7	2.6	3.1	2.1	19	48	0.9	1.0
Argentina	28.1	36.6	42.8	1.4	1.0	-0.1	1.3	1.6	8	19	0.6	0.6
Armenia	3.1	3.8	4.1	1.1	0.4	-2.0	0.9	1.8	6	11	0.6	0.5
Australia	14.7	19.0	21.5	1.3	0.8	-0.2	0.8	2.4	7	13	0.5	0.5
Austria	7.6	8.1	8.0	0.4	-0.1	-1.7	-0.1	1.5	10	10	0.6	0.5
Azerbaijan	6.2	8.0	9.3	1.4	0.9	-0.4	1.7	1.8	6	15	0.7	0.6
Bangladesh	86.7	127.7	166.1	2.0	1.6	-0.2	2.3	2.8	9	28	1.0	0.7
Belarus	9.6	10.0	9.3	0.2	-0.4	-2.0	-0.1	-0.4	14	9	0.5	0.5
Belgium	9.8	10.2	10.3	0.2	0.0	-1.0	0.0	1.1	10	11	0.5	0.5
Benin	3.5	6.1	9.0	3.0	2.4	1.6	3.2	2.0	13	40	1.0	1.0
Bolivia	5.4	8.1	10.9	2.2	1.8	0.5	2.6	2.8	9	32	0.9	0.8
Bosnia and Herzegovina	4.1	3.9	4.3	-0.3	0.6	1.9	3.1	6.0	7	13	0.5	0.4
Botswana	0.9	1.6	1.7	3.0	0.6	-0.4	1.8	-0.6	18	33	1.0	0.8
Brazil	121.7	168.0	199.8	1.7	1.1	0.0	1.4	2.9	7	20	0.7	0.5
Bulgaria	8.9	8.2	7.3	-0.4	-0.7	-2.2	-0.6	0.5	14	8	0.5	0.5
Burkina Faso	7.0	11.0	15.5	2.4	2.1	1.8	2.8	1.0	19	44	1.0	1.0
Burundi	4.1	6.7	8.8	2.5	1.7	1.1	2.6	0.4	20	41	0.9	0.9
Cambodia	6.8	11.8	14.8	2.9	1.4	0.1	2.8	3.3	12	32	0.7	0.8
Cameroon	8.7	14.7	19.4	2.8	1.8	1.0	2.7	1.9	13	38	0.9	0.9
Canada	24.6	30.5	33.5	1.1	0.6	-0.6	0.5	2.1	7	11	0.5	0.5
Central African Republic	2.3	3.5	4.5	2.2	1.4	1.0	2.1	-0.4	19	36	0.8	0.9
Chad	4.5	7.5	11.7	2.7	2.8	2.0	3.6	0.6	16	45	0.8	1.2
Chile	11.1	15.0	17.7	1.6	1.0	-0.5	1.4	3.1	5	18	0.6	0.6
China	981.2	1,253.6	1,393.7	1.3	0.7	-0.9	1.0	2.3	7	16	0.7	0.5
Hong Kong, China	5.0	6.7	7.5	1.5	0.7	-0.4	1.0	2.4	5	8	0.5	0.4
Colombia	28.4	41.5	51.4	2.0	1.3	-0.3	2.0	2.9	6	23	0.8	0.6
Congo, Dem. Rep.	27.0	49.8	75.0	3.2	2.6	2.4	3.3	2.6	15	45	1.0	1.0
Congo, Rep.	1.7	2.9	4.3	2.8	2.6	2.2	3.0	1.1	16	43	0.9	1.0
Costa Rica	2.3	3.6	4.4	2.4	1.3	-0.8	1.9	3.8	4	21	0.7	0.6
Côte d'Ivoire	8.2	15.5	20.4	3.4	1.7	0.8	2.3	0.8	17	37	1.0	0.9
Croatia	4.6	4.5	4.3	-0.1	-0.2	-1.7	-0.7	0.8	12	10	0.5	0.5
Cuba	9.7	11.2	11.7	0.7	0.3	-1.7	0.3	2.8	7	13	0.7	0.4
Czech Republic	10.2	10.3	9.9	0.0	-0.2	-1.9	-0.3	1.7	11	9	0.6	0.4
Denmark	5.1	5.3	5.4	0.2	0.0	-0.8	-0.2	1.7	11	12	0.5	0.5
Dominican Republic	5.7	8.4	10.4	2.0	1.3	-0.5	2.0	3.2	5	24	0.8	0.6
Ecuador	8.0	12.4	15.8	2.3	1.5	-0.3	2.1	3.0	6	24	0.9	0.6
Egypt, Arab Rep.	40.9	62.7	80.0	2.2	1.5	-0.1	2.1	2.7	7	26	0.8	0.7
El Salvador	4.6	6.2	7.9	1.5	1.6	0.2	2.3	2.1	6	27	0.9	0.7
Eritrea	2.4	4.0	5.6	2.7	2.2	1.6	2.8	2.6	13	39	..	0.9
Estonia	1.5	1.4	1.3	-0.1	-0.5	-2.1	-0.3	0.7	13	9	0.5	0.5
Ethiopia	37.7	62.8	88.1	2.7	2.1	1.6	2.6	0.5	20	44	0.9	1.0
Finland	4.8	5.2	5.3	0.4	0.1	-0.8	-0.2	2.1	10	11	0.5	0.5
France	53.9	58.6	61.1	0.4	0.3	-0.4	0.2	1.2	9	13	0.6	0.5
Gabon	0.7	1.2	1.7	2.9	2.1	2.0	2.3	1.2	16	36	0.7	0.8
Gambia, The	0.6	1.3	1.8	3.5	2.2	1.6	2.6	3.0	13	41	0.8	0.8
Georgia	5.1	5.5	5.3	0.4	-0.1	-2.6	0.4	1.0	8	9	0.5	0.5
Germany	78.3	82.1	79.4	0.2	-0.2	-1.6	-0.4	1.3	10	9	0.5	0.5
Ghana	10.7	18.8	24.5	2.9	1.7	1.0	2.9	2.9	10	30	0.9	0.9
Greece	9.6	10.5	10.3	0.5	-0.1	-1.1	-0.3	1.1	10	9	0.6	0.5
Guatemala	6.8	11.1	16.4	2.6	2.4	0.6	3.1	2.1	7	34	1.0	0.9
Guinea	4.5	7.3	9.8	2.6	1.9	1.1	2.7	2.1	17	40	0.9	0.9
Guinea-Bissau	0.8	1.2	1.6	2.1	1.8	1.3	2.3	1.0	21	41	0.8	0.9
Haiti	5.4	7.8	10.0	2.0	1.6	0.3	2.4	1.8	13	31	0.9	0.8
Honduras	3.6	6.3	8.9	3.0	2.1	0.4	3.1	2.8	5	32	1.0	0.8



## Population dynamics 2.1

	Total population			Average annual population growth rate					Crude death rate	Crude birth rate	Age dependency ratio	
	millions			Total %	Ages 0-14 %	Ages 15-64 %	Ages 65+ %	per 1,000 people	per 1,000 people	dependents as proportion of working-age population		
	1980	1999	2015							1980-99	1999-2015	1999-2015
Hungary	10.7	10.1	9.4	-0.3	-0.4	-1.6	-0.4	0.7	14	9	0.5	0.5
India	687.3	997.5	1,221.9	2.0	1.3	-0.1	1.9	2.3	9	26	0.7	0.6
Indonesia	148.3	207.0	250.5	1.8	1.2	-0.2	1.6	3.0	7	22	0.8	0.6
Iran, Islamic Rep.	39.1	63.0	82.1	2.5	1.7	0.1	2.4	2.1	6	21	0.9	0.7
Iraq	13.0	22.8	31.3	3.0	2.0	0.5	2.8	3.9	10	32	0.9	0.8
Ireland	3.4	3.8	4.3	0.5	0.8	0.0	0.7	1.8	9	14	0.7	0.5
Israel	3.9	6.1	7.9	2.4	1.6	0.2	1.7	2.3	6	21	0.7	0.6
Italy	56.4	57.6	54.8	0.1	-0.3	-1.6	-0.6	1.3	10	9	0.5	0.5
Jamaica	2.1	2.6	3.0	1.0	0.9	-0.9	1.5	1.6	6	22	0.9	0.6
Japan	116.8	126.6	124.3	0.4	-0.1	-0.9	-0.7	2.4	8	10	0.5	0.5
Jordan	2.2	4.7	6.8	4.1	2.3	1.0	2.9	4.3	4	30	1.1	0.7
Kazakhstan	14.9	14.9	15.2	0.0	0.1	-0.8	0.5	1.1	10	14	0.6	0.5
Kenya	16.6	29.4	37.5	3.0	1.5	0.4	2.6	0.0	13	35	1.1	0.9
Korea, Dem. Rep.	17.7	23.4	25.6	1.5	0.6	-0.9	1.1	3.0	10	20	0.8	0.5
Korea, Rep.	38.1	46.9	51.1	1.1	0.5	-0.9	0.6	3.8	6	14	0.6	0.4
Kuwait	1.4	1.9	2.9	1.8	2.5	0.5	3.2	8.4	2	22	0.7	0.6
Kyrgyz Republic	3.6	4.9	5.8	1.5	1.1	-0.9	2.1	0.6	7	21	0.8	0.7
Lao PDR	3.2	5.1	7.2	2.4	2.2	1.3	2.8	1.7	13	37	0.8	0.9
Latvia	2.5	2.4	2.2	-0.2	-0.7	-2.8	-0.6	0.7	14	8	0.5	0.5
Lebanon	3.0	4.3	5.2	1.9	1.2	-0.6	2.0	1.3	6	21	0.8	0.6
Lesotho	1.3	2.1	2.5	2.4	0.9	0.3	2.3	2.4	13	34	0.9	0.8
Libya	3.0	5.4	7.4	3.0	2.0	0.4	2.5	4.9	4	28	1.0	0.7
Lithuania	3.4	3.7	3.6	0.4	-0.1	-1.7	0.0	1.1	11	10	0.5	0.5
Macedonia, FYR	1.9	2.0	2.2	0.4	0.4	-0.8	0.6	2.1	8	14	0.6	0.5
Madagascar	8.9	15.1	22.5	2.8	2.5	1.7	3.3	3.7	12	41	0.9	0.9
Malawi	6.2	10.8	14.3	2.9	1.8	1.6	2.7	2.1	24	46	1.0	0.9
Malaysia	13.8	22.7	29.3	2.6	1.6	0.0	2.2	4.1	4	24	0.8	0.6
Mali	6.6	10.6	15.0	2.5	2.2	2.1	3.2	1.7	19	46	1.0	1.0
Mauritania	1.6	2.6	3.7	2.7	2.2	1.3	2.9	2.4	13	39	0.9	0.9
Mauritius	1.0	1.2	1.4	1.0	0.9	-0.1	1.0	3.0	7	17	0.6	0.5
Mexico	67.6	96.6	118.3	1.9	1.3	-0.2	1.9	3.2	5	27	1.0	0.6
Moldova	4.0	4.3	4.2	0.4	-0.2	-1.5	0.2	0.4	11	12	0.5	0.5
Mongolia	1.7	2.4	3.0	1.9	1.5	-0.4	2.3	2.2	6	21	0.9	0.6
Morocco	19.4	28.2	35.3	2.0	1.4	-0.1	1.9	2.6	7	25	0.9	0.6
Mozambique	12.1	17.3	22.6	1.9	1.7	1.3	2.7	1.0	20	40	0.9	0.9
Myanmar	33.8	45.0	53.8	1.5	1.1	0.9	1.2	1.8	10	26	0.8	0.5
Namibia	1.0	1.7	2.0	2.6	1.1	0.8	2.4	1.0	15	35	0.9	0.8
Nepal	14.5	23.4	32.5	2.5	2.1	1.1	2.7	2.7	10	34	0.8	0.8
Netherlands	14.2	15.8	16.8	0.6	0.4	-0.9	0.1	1.9	9	13	0.5	0.5
New Zealand	3.1	3.8	4.2	1.1	0.6	-0.4	0.6	2.2	7	15	0.6	0.5
Nicaragua	2.9	4.9	6.9	2.7	2.1	0.4	3.2	3.1	5	30	1.0	0.8
Niger	5.6	10.5	16.8	3.3	3.0	2.7	3.3	2.1	18	51	1.0	1.1
Nigeria	71.1	123.9	169.4	2.9	2.0	2.0	2.8	3.2	16	40	1.0	0.9
Norway	4.1	4.5	4.7	0.5	0.4	-0.7	0.3	1.3	10	13	0.6	0.5
Oman	1.1	2.3	3.3	4.0	2.2	0.2	3.1	5.7	3	28	0.9	0.8
Pakistan	82.7	134.8	192.9	2.6	2.2	1.1	3.1	3.3	8	34	0.9	0.8
Panama	2.0	2.8	3.4	1.9	1.2	-0.6	1.8	3.2	5	21	0.8	0.6
Papua New Guinea	3.1	4.7	6.2	2.2	1.7	0.8	2.3	3.2	10	31	0.8	0.7
Paraguay	3.1	5.4	7.5	2.9	2.1	0.2	2.9	3.1	5	30	0.9	0.8
Peru	17.3	25.2	31.8	2.0	1.4	0.0	2.0	2.8	6	24	0.8	0.6
Philippines	48.3	74.3	96.5	2.3	1.6	0.1	2.3	3.9	6	27	0.8	0.7
Poland	35.6	38.7	38.8	0.4	0.0	-1.5	0.2	1.3	10	10	0.5	0.5
Portugal	9.8	10.0	9.9	0.1	0.0	-0.8	0.1	0.2	11	12	0.6	0.5
Puerto Rico	3.2	3.9	4.4	1.0	0.7	-0.3	0.9	2.4	8	16	0.7	0.5
Romania	22.2	22.5	21.3	0.1	-0.3	-1.8	-0.1	0.5	12	10	0.6	0.5
Russian Federation	139.0	146.2	134.5	0.3	-0.5	-1.8	-0.2	0.2	14	9	0.5	0.4



## 2.1 Population dynamics

	Total population			Average annual population growth rate					Crude death rate	Crude birth rate	Age dependency ratio	
	1980	millions 1999	2015	Total %		Ages 0-14 %	Ages 15-64 %	Ages 65+ %	per 1,000 people 1999	per 1,000 people 1999	dependents as proportion of working-age population	
				1980-99	1999-2015	1999-2015	1999-2015	1999-2015			1980	1999
Rwanda	5.2	8.3	11.1	2.5	1.8	1.9	2.7	2.5	22	45	1.0	0.9
Saudi Arabia	9.4	20.2	32.1	4.0	2.9	2.2	3.0	5.5	4	34	0.9	0.8
Senegal	5.5	9.3	13.3	2.7	2.3	1.6	2.8	2.2	13	38	0.9	0.9
Sierra Leone	3.2	4.9	6.7	2.2	1.9	1.2	2.6	2.4	25	45	0.9	0.9
Singapore	2.4	4.0	4.9	2.6	1.4	-1.1	1.1	4.3	5	13	0.5	0.4
Slovak Republic	5.0	5.4	5.4	0.4	0.0	-1.3	0.3	1.2	10	10	0.6	0.5
Slovenia	1.9	2.0	1.9	0.2	-0.2	-1.6	-0.3	1.7	10	9	0.5	0.4
South Africa	27.6	42.1	45.8	2.2	0.5	0.1	1.5	1.0	14	26	0.7	0.6
Spain	37.4	39.4	38.1	0.3	-0.2	-0.9	-0.2	0.6	10	9	0.6	0.5
Sri Lanka	14.7	19.0	22.6	1.3	1.1	0.3	1.2	3.4	6	17	0.7	0.5
Sudan	18.7	29.0	40.6	2.3	2.1	1.8	2.3	2.5	11	33	0.9	0.7
Sweden	8.3	8.9	8.7	0.3	-0.1	-2.0	-0.2	1.4	11	10	0.6	0.6
Switzerland	6.3	7.1	7.1	0.6	0.0	-1.8	-0.2	2.0	9	11	0.5	0.5
Syrian Arab Republic	8.7	15.7	21.9	3.1	2.1	0.3	3.1	3.0	5	29	1.1	0.8
Tajikistan	4.0	6.2	7.9	2.4	1.5	-0.8	2.8	1.0	5	22	0.9	0.8
Tanzania	18.6	32.9	43.8	3.0	1.8	1.2	2.6	0.8	17	40	1.0	0.9
Thailand	46.7	60.2	68.7	1.3	0.8	-0.2	1.1	3.3	7	17	0.8	0.5
Togo	2.6	4.6	6.3	2.9	2.0	1.0	2.8	1.0	15	38	0.9	0.9
Trinidad and Tobago	1.1	1.3	1.5	0.9	0.7	-0.9	0.9	2.6	7	15	0.7	0.5
Tunisia	6.4	9.5	11.5	2.1	1.2	-0.5	1.8	2.0	6	17	0.8	0.6
Turkey	44.5	64.4	77.8	1.9	1.2	0.0	1.4	2.4	6	21	0.8	0.5
Turkmenistan	2.9	4.8	5.8	2.7	1.2	-0.7	2.4	1.5	6	21	0.8	0.7
Uganda	12.8	21.5	31.4	2.7	2.4	1.6	2.9	-0.3	19	46	1.0	1.0
Ukraine	50.0	50.0	44.0	0.0	-0.8	-2.1	-0.6	-0.4	15	9	0.5	0.5
United Arab Emirates	1.0	2.8	3.8	5.2	1.9	0.3	1.9	10.3	3	18	0.4	0.4
United Kingdom	56.3	59.5	59.8	0.3	0.0	-1.0	0.0	1.1	11	12	0.6	0.5
United States	227.2	278.2	316.4	1.1	0.8	-0.1	0.7	2.1	9	15	0.5	0.5
Uruguay	2.9	3.3	3.7	0.7	0.6	-0.2	0.8	0.7	10	16	0.6	0.6
Uzbekistan	16.0	24.4	30.2	2.2	1.3	-1.2	2.5	1.6	6	23	0.9	0.7
Venezuela, RB	15.1	23.7	30.2	2.4	1.5	-0.2	2.1	3.9	4	24	0.8	0.6
Vietnam	53.7	77.5	94.4	1.9	1.2	-0.8	2.1	1.0	6	20	0.9	0.6
West Bank and Gaza	..	2.8	5.0	..	3.5	2.8	4.5	2.4	4	41	..	1.0
Yemen, Rep.	8.5	17.0	26.5	3.6	2.8	2.1	3.5	1.4	12	40	1.1	1.0
Yugoslavia, FR (Serb./Mont.)	9.8	10.6	10.7	0.4	0.1	-0.8	0.2	0.6	11	12	0.5	0.5
Zambia	5.7	9.9	12.2	2.9	1.3	0.7	2.5	0.9	21	41	1.1	0.9
Zimbabwe	7.0	11.9	13.1	2.8	0.6	-0.6	2.1	0.1	16	30	1.0	0.8
<b>World</b>	<b>4,430.1 s</b>	<b>5,978.0 s</b>	<b>7,084.3 s</b>	<b>1.6 w</b>	<b>1.1 w</b>	<b>0.1 w</b>	<b>1.4 w</b>	<b>2.1 w</b>	<b>9 w</b>	<b>22 w</b>	<b>0.7 w</b>	<b>0.6 w</b>
<b>Low income</b>	1,612.9	2,417.1	3,086.1	2.1	1.5	0.6	2.1	2.2	11	29	0.8	0.7
<b>Middle income</b>	2,028.1	2,664.5	3,055.0	1.4	0.9	-0.5	1.2	2.2	8	18	0.7	0.5
Lower middle income	1,607.9	2,093.0	2,382.8	1.4	0.8	-0.6	1.2	2.1	8	17	0.7	0.5
Upper middle income	420.2	571.5	672.2	1.6	1.0	-0.1	1.4	2.5	7	21	0.7	0.6
<b>Low &amp; middle income</b>	<b>3,641.0</b>	<b>5,081.6</b>	<b>6,141.1</b>	<b>1.8</b>	<b>1.2</b>	<b>0.1</b>	<b>1.6</b>	<b>2.2</b>	<b>9</b>	<b>24</b>	<b>0.8</b>	<b>0.6</b>
East Asia & Pacific	1,397.8	1,836.6	2,097.3	1.4	0.8	-0.6	1.2	2.5	7	18	0.7	0.5
Europe & Central Asia	425.8	474.4	478.1	0.6	0.0	-1.2	0.4	0.7	11	12	0.6	0.5
Latin America & Carib.	360.0	508.2	621.6	1.8	1.3	-0.1	1.7	2.8	7	23	0.8	0.6
Middle East & N. Africa	174.4	290.3	389.7	2.7	1.8	0.5	2.5	2.8	7	26	0.9	0.7
South Asia	902.6	1,329.3	1,676.3	2.0	1.4	0.1	2.0	2.5	9	27	0.8	0.7
Sub-Saharan Africa	380.5	642.8	878.1	2.8	1.9	1.6	2.7	1.8	16	40	0.9	0.9
<b>High income</b>	<b>789.1</b>	<b>896.3</b>	<b>943.2</b>	<b>0.7</b>	<b>0.3</b>	<b>-0.6</b>	<b>0.2</b>	<b>1.8</b>	<b>9</b>	<b>12</b>	<b>0.5</b>	<b>0.5</b>
Europe EMU	277.0	292.8	290.1	0.3	-0.1	-1.1	-0.2	1.2	10	10	0.5	0.5



## Population dynamics 2.1

### 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. Pre- and postcensus estimates are interpolations or extrapolations based on demographic models. Errors and undercounting occur even in high-income countries; in developing countries such errors may be substantial because of limits in the transport, communications, and other resources required to conduct 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 148 economies listed in the table, 117 (about 80 percent) conducted a census between 1990 and 2000. The currentness of a census, along with the availability of complementary data from surveys or registration systems, is one of many objective ways to judge the quality of demographic data. In some European countries registration systems offer complete information on population in the absence of a census. See *Primary data documentation* for the most recent census or survey year and for registration completeness.

Current population estimates for developing countries that lack recent census-based data, and pre- and postcensus estimates for countries with census data, are provided by national statistical offices, the United Nations Population Division, 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 15 was earlier growing rapidly, but is now starting to shrink. Previously high fertility rates and declining mortality rates are now reflected in rapid growth of the working-age population.

The vital rates shown in the table are based on data derived from birth and death registration systems, cen-

suses, and sample surveys conducted by national statistical offices, United Nations agencies, and other organizations. The estimates for 1999 for many countries are 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 geographic coverage or coverage of events. Many developing countries carry out specialized 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 52 percent in 1999. 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 vital events worldwide are thought to be recorded.

International migration is the only other factor besides birth and death rates that directly determines a country's population growth. In the high-income countries about 40 percent of annual population growth in 1990–95 was due to migration, while in the developing countries migration reduced population growth by about 3 percent. 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 who are present regardless of legal status or citizenship—except for refugees not permanently settled in the country of asylum, who are generally considered part of the population of their country of origin. The indicators shown are midyear estimates for 1980 and 1999 and projections for 2015.
- **Average annual population growth rate** is the exponential change for the period indicated. See *Statistical methods* for more information.
- **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.
- **Age dependency ratio** is the ratio of dependents—people younger than 15 and older than 64—to the working-age population—those ages 15–64.

### Data sources

The World Bank's population estimates are 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 following sources: census reports and other statistical publications from national statistical offices; Demographic and Health Surveys conducted by national agencies, Macro International, and the U.S. Centers for Disease Control and Prevention; United Nations Statistics Division, *Population and Vital Statistics Report* (quarterly); United Nations Population Division, *World Population Prospects: The 1998 Revision*; 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

	Population ages 15-64			Labor force						
	millions		Total millions	Average annual growth rate %		Female % of labor force				
	1980	1999		1980	1999	2010	1980-99	1999-2010	1980	1999
Albania	2	2	1	2	2	1.7	1.5	38.8	41.2	
Algeria	9	18	5	10	15	3.8	3.5	21.4	27.0	
Angola	4	6	3	6	8	2.6	3.0	47.0	46.3	
Argentina	17	23	11	15	18	1.7	2.1	27.6	32.7	
Armenia	2	3	1	2	2	1.4	1.3	47.9	48.5	
Australia	10	13	7	10	11	1.9	0.8	36.8	43.5	
Austria	5	6	3	4	4	0.6	0.0	40.5	40.3	
Azerbaijan	4	5	3	4	4	1.4	1.9	47.5	44.4	
Bangladesh	44	74	41	67	86	2.6	2.3	42.3	42.3	
Belarus	6	7	5	5	5	0.2	0.1	49.9	48.9	
Belgium	6	7	4	4	4	0.4	-0.2	33.9	40.8	
Benin	2	3	2	3	4	2.7	2.8	47.0	48.3	
Bolivia	3	5	2	3	4	2.6	2.5	33.3	37.7	
Bosnia and Herzegovina	3	2	2	2	2	0.6	0.9	32.8	38.1	
Botswana	0	1	0	1	1	3.0	1.0	50.1	45.4	
Brazil	70	110	48	78	89	2.6	1.2	28.4	35.4	
Bulgaria	6	6	5	4	4	-0.5	-0.8	45.3	48.2	
Burkina Faso	3	6	4	5	7	1.9	1.8	47.6	46.5	
Burundi	2	3	2	4	5	2.5	2.2	50.2	48.8	
Cambodia	4	6	4	6	8	2.7	2.2	55.4	51.8	
Cameroon	5	8	4	6	8	2.6	2.1	36.8	37.9	
Canada	17	21	12	16	17	1.5	0.6	39.5	45.6	
Central African Republic	1	2	..	..	..	..	..	..	..	
Chad	2	3	2	4	5	2.5	2.9	43.4	44.6	
Chile	7	10	4	6	8	2.5	1.9	26.3	33.2	
China	586	844	539	751	819	1.7	0.8	43.2	45.2	
Hong Kong, China	3	5	2	4	4	1.9	0.9	34.3	37.0	
Colombia	16	26	9	18	23	3.4	2.2	26.2	38.4	
Congo, Dem. Rep.	14	25	12	21	28	2.8	2.8	44.5	43.4	
Congo, Rep.	1	1	1	1	2	2.7	2.8	42.4	43.5	
Costa Rica	1	2	1	1	2	3.1	1.9	20.8	30.8	
Côte d'Ivoire	4	8	3	6	8	3.4	1.7	32.2	33.3	
Croatia	3	3	2	2	2	-0.2	-0.2	40.2	44.1	
Cuba	6	8	4	6	6	2.1	0.7	31.4	39.2	
Czech Republic	6	7	5	6	6	0.4	-0.4	47.1	47.3	
Denmark	3	4	3	3	3	0.4	-0.5	44.0	46.4	
Dominican Republic	3	5	2	4	5	2.9	2.2	24.7	30.4	
Ecuador	4	8	3	5	6	3.3	2.7	20.1	27.7	
Egypt, Arab Rep.	23	38	14	24	32	2.7	2.7	26.5	30.1	
El Salvador	2	4	2	3	4	2.8	2.8	26.5	36.0	
Eritrea	..	2	1	2	3	2.6	2.5	47.4	47.4	
Estonia	1	1	1	1	1	-0.1	-0.2	50.6	49.0	
Ethiopia	20	32	17	27	35	2.5	2.2	42.3	40.9	
Finland	3	3	2	3	2	0.4	-0.5	46.5	48.0	
France	34	39	24	26	27	0.6	0.3	40.1	44.9	
Gabon	0	1	0	1	1	2.2	1.8	45.0	44.6	
Gambia, The	0	1	0	1	1	3.4	2.4	44.8	45.0	
Georgia	3	4	3	3	3	0.3	0.3	49.3	46.7	
Germany	52	56	37	41	41	0.5	-0.1	40.1	42.2	
Ghana	6	10	5	9	11	2.9	2.0	51.0	50.5	
Greece	6	7	4	5	5	1.0	0.1	27.9	37.6	
Guatemala	3	6	2	4	6	2.9	3.6	22.4	28.4	
Guinea	2	4	2	3	4	2.1	2.0	47.1	47.2	
Guinea-Bissau	0	1	0	1	1	1.8	1.9	39.9	40.5	
Haiti	3	4	3	3	4	1.6	1.6	44.6	42.9	
Honduras	2	3	1	2	3	3.6	3.5	25.2	31.4	



# Labor force structure 2.2

	Population ages 15-64			Labor force						
	millions		1980	Total millions			Average annual growth rate %		Female % of labor force	
	1980	1999		1980	1999	2010	1980-99	1999-2010	1980	1999
Hungary	7	7	5	5	5	-0.3	-0.5	43.3	44.7	
India	394	609	300	441	541	2.0	1.9	33.7	32.2	
Indonesia	83	133	59	99	124	2.8	2.0	35.2	40.6	
Iran, Islamic Rep.	20	38	12	19	28	2.6	3.4	20.4	26.5	
Iraq	7	13	4	6	9	3.0	2.8	17.3	19.4	
Ireland	2	2	1	2	2	1.2	1.4	28.1	34.2	
Israel	2	4	1	3	3	3.1	2.6	33.7	40.9	
Italy	36	39	23	26	25	0.7	-0.3	32.9	38.3	
Jamaica	1	2	1	1	2	1.8	1.4	46.3	46.2	
Japan	79	87	57	68	66	0.9	-0.3	37.9	41.3	
Jordan	1	3	1	1	2	5.2	3.5	14.7	23.9	
Kazakhstan	9	10	7	7	8	0.2	0.5	47.6	46.9	
Kenya	8	16	8	15	19	3.4	2.1	46.0	46.1	
Korea, Dem. Rep.	10	16	8	12	13	2.5	0.5	44.8	43.3	
Korea, Rep.	24	33	16	24	27	2.2	1.1	38.7	41.2	
Kuwait	1	1	0	1	1	2.3	4.4	13.1	31.3	
Kyrgyz Republic	2	3	2	2	3	1.6	2.0	47.5	47.2	
Lao PDR	2	3	2	2	3	2.0	2.5	..	..	
Latvia	2	2	1	1	1	-0.4	-0.4	50.8	50.4	
Lebanon	2	3	1	1	2	2.9	2.6	22.6	29.3	
Lesotho	1	1	1	1	1	2.3	1.3	37.9	36.9	
Libya	2	3	1	2	2	2.6	2.4	18.6	22.6	
Lithuania	2	2	2	2	2	0.3	0.2	49.7	48.0	
Macedonia, FYR	1	1	1	1	1	0.8	0.6	36.1	41.5	
Madagascar	5	8	4	7	10	2.6	2.9	45.2	44.7	
Malawi	3	6	3	5	6	2.7	1.8	50.6	48.7	
Malaysia	8	14	5	9	13	3.0	2.8	33.7	37.7	
Mali	3	5	3	5	7	2.2	2.2	46.7	46.2	
Mauritania	1	1	1	1	2	2.5	2.5	45.0	43.7	
Mauritius	1	1	0	1	1	2.0	1.1	25.7	32.4	
Mexico	35	60	22	39	50	3.1	2.2	26.9	32.9	
Moldova	3	3	2	2	2	0.1	0.2	50.3	48.6	
Mongolia	1	2	1	1	2	2.2	2.3	45.7	46.9	
Morocco	10	18	7	11	15	2.5	2.5	33.5	34.7	
Mozambique	6	9	7	9	11	1.5	1.9	49.0	48.4	
Myanmar	19	30	17	24	28	1.7	1.6	43.7	43.4	
Namibia	1	1	0	1	1	2.4	1.3	40.1	40.9	
Nepal	8	13	7	11	14	2.3	2.5	38.8	40.5	
Netherlands	9	11	6	7	8	1.4	0.2	31.5	40.4	
New Zealand	2	2	1	2	2	1.9	0.7	34.3	44.8	
Nicaragua	1	3	1	2	3	3.6	3.4	27.6	35.5	
Niger	3	5	3	5	7	3.0	3.2	44.6	44.3	
Nigeria	36	66	30	49	63	2.7	2.3	36.2	36.4	
Norway	3	3	2	2	2	0.9	0.3	40.5	46.3	
Oman	1	1	0	1	1	3.4	2.6	6.2	16.4	
Pakistan	44	74	29	50	71	2.8	3.2	22.7	28.1	
Panama	1	2	1	1	1	2.9	1.9	29.9	35.0	
Papua New Guinea	2	3	2	2	3	2.2	2.1	41.7	42.1	
Paraguay	2	3	1	2	3	2.9	2.9	26.7	29.8	
Peru	9	15	5	9	13	2.9	2.7	23.9	31.0	
Philippines	27	46	19	31	41	2.6	2.5	35.0	37.7	
Poland	23	26	19	20	20	0.3	0.2	45.3	46.3	
Portugal	6	7	5	5	5	0.5	0.0	38.7	43.9	
Puerto Rico	2	3	1	1	2	1.9	1.2	31.8	36.9	
Romania	14	15	11	11	11	-0.1	-0.1	45.8	44.5	
Russian Federation	95	101	76	78	77	0.1	-0.1	49.4	49.0	





## 2.2 Labor force structure

	Population ages 15-64			Labor force						
	millions		1980	Total millions			Average annual growth rate %		Female % of labor force	
	1980	1999		1980	1999	2010	1980-99	1999-2010	1980	1999
Rwanda	3	4	3	4	6	2.8	2.3	49.1	48.8	
Saudi Arabia	5	12	3	7	10	4.6	3.3	7.6	15.5	
Senegal	3	5	3	4	5	2.6	2.5	42.2	42.6	
Sierra Leone	2	3	1	2	2	2.0	2.2	35.5	36.7	
Singapore	2	2	1	2	2	2.9	1.3	34.6	39.1	
Slovak Republic	3	4	2	3	3	0.9	0.2	45.3	47.8	
Slovenia	1	1	1	1	1	0.3	-0.3	45.8	46.5	
South Africa	16	26	10	17	18	2.5	0.9	35.1	37.7	
Spain	23	27	14	17	17	1.1	0.0	28.3	37.0	
Sri Lanka	9	13	5	8	10	2.2	1.7	26.9	36.4	
Sudan	10	17	7	12	15	2.7	2.7	26.9	29.3	
Sweden	5	6	4	5	5	0.7	-0.4	43.8	48.0	
Switzerland	4	5	3	4	4	1.2	0.1	36.7	40.3	
Syrian Arab Republic	4	9	2	5	7	3.6	3.8	23.5	26.7	
Tajikistan	2	3	2	2	3	2.4	2.9	46.9	44.6	
Tanzania	9	17	10	17	21	3.0	2.0	49.8	49.2	
Thailand	26	42	24	36	41	2.1	1.0	47.4	46.3	
Togo	1	2	1	2	2	2.7	2.2	39.3	40.0	
Trinidad and Tobago	1	1	0	1	1	1.6	1.6	31.4	34.0	
Tunisia	3	6	2	4	5	2.8	2.3	28.9	31.4	
Turkey	25	43	19	31	37	2.6	1.8	35.5	37.3	
Turkmenistan	2	3	1	2	3	2.9	2.2	47.0	45.8	
Uganda	6	11	7	11	14	2.5	2.5	47.9	47.6	
Ukraine	33	34	26	25	24	-0.2	-0.4	50.2	48.8	
United Arab Emirates	1	2	1	1	2	4.8	2.0	5.1	14.5	
United Kingdom	36	39	27	30	30	0.5	0.0	38.9	43.9	
United States	151	179	110	143	157	1.4	0.9	41.0	45.8	
Uruguay	2	2	1	2	2	1.4	1.0	30.8	41.5	
Uzbekistan	9	14	6	10	13	2.4	2.4	48.0	46.8	
Venezuela, RB	8	15	5	10	13	3.3	2.6	26.7	34.5	
Vietnam	28	48	26	40	48	2.3	1.7	48.1	49.0	
West Bank and Gaza	..	1	..	..	..	..	..	..	..	
Yemen, Rep.	4	8	2	5	8	4.1	3.1	32.5	28.0	
Yugoslavia, FR (Serb./Mont.)	6	7	5	5	5	0.6	0.3	38.7	42.8	
Zambia	3	5	2	4	5	2.9	1.9	45.4	44.9	
Zimbabwe	3	7	3	5	6	2.9	1.0	44.4	44.5	
<b>World</b>	<b>2,595 s</b>	<b>3,761 s</b>	<b>2,036 s</b>	<b>2,895 s</b>	<b>3,373 s</b>	<b>1.9 w</b>	<b>1.4 w</b>	<b>39.1 w</b>	<b>40.6 w</b>	
<b>Low income</b>	890	1,417	709	1,090	1,364	2.3	2.0	37.9	37.8	
<b>Middle income</b>	1,200	1,749	969	1,370	1,556	1.8	1.2	40.2	42.0	
Lower middle income	955	1,379	804	1,119	1,261	1.7	1.1	41.7	43.2	
Upper middle income	245	369	165	251	295	2.2	1.5	32.7	36.5	
<b>Low &amp; middle income</b>	<b>2,090</b>	<b>3,166</b>	<b>1,678</b>	<b>2,460</b>	<b>2,920</b>	<b>2.0</b>	<b>1.6</b>	<b>39.2</b>	<b>40.1</b>	
East Asia & Pacific	820	1,220	720	1,039	1,171	1.9	1.1	42.5	44.4	
Europe & Central Asia	274	318	214	237	249	0.5	0.4	46.7	46.2	
Latin America & Carib.	201	319	130	217	268	2.7	1.9	27.8	34.6	
Middle East & N. Africa	92	172	54	97	135	3.0	3.0	23.8	27.3	
South Asia	508	797	389	588	738	2.2	2.1	33.8	33.3	
Sub-Saharan Africa	195	340	170	282	360	2.6	2.2	42.3	42.2	
<b>High income</b>	<b>505</b>	<b>595</b>	<b>358</b>	<b>435</b>	<b>453</b>	<b>1.0</b>	<b>0.4</b>	<b>38.4</b>	<b>43.1</b>	
Europe EMU	179	198	120	136	136	0.7	0.0	36.7	41.2	



## 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 censuses or labor force surveys. For international comparisons the most comprehensive source is labor force surveys. Despite the ILO's efforts to encourage the use of international standards, labor force data are not fully comparable because of differences among countries, and sometimes within countries, in their scope and coverage. In some countries data on the labor force refer to people above a specific age, while in others there is no specific age provision. The reference period of the census or survey is another important source of differences: in some countries data refer to 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 (ILO, *Yearbook of Labour Statistics 1997*).

The labor force estimates in the table were calculated by World Bank staff by applying economic activity rates from the ILO database to World Bank 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 population ages 15–64 is often used to provide a rough estimate of the potential labor force. But in many developing countries children under 15 work full or part time. And in some high-income countries many workers postpone retirement past age 65. As a result, labor force participation rates calculated in this way may systematically over- or underestimate 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 personal 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.

Table 2.2a

Change in female employment and labor force participation in selected countries in Europe and Central Asia, 1989–97  
Percentage points

	Labor force participation rate	Employment rate
Estonia	-21	-27
Hungary	-27	-33
Latvia	-22	-34
Poland	-10	-10

Source: UNICEF 1999.

**In some countries in Europe and Central Asia female employment has dropped more than female labor force participation. Since 1989 women have been laid off either in big waves, as in Central Europe, or gradually. Many women opted out of the labor force, but others remained active by looking for work, swelling the ranks of the unemployed. This rising unemployment among women has tempered the decline in their labor force participation.**

### Definitions

- **Population ages 15–64** is the number of people who could potentially be economically active.
- **Total labor force** comprises people who meet the ILO definition of the economically active population: all people who supply labor for the production of goods and services during a specified period. It includes both the employed and the unemployed. While national practices vary in the treatment of such groups as the armed forces and seasonal or part-time workers, 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 population estimates are from the World Bank's population database. The economic activity rates are from the ILO database Estimates and Projections of the Economically Active Population, 1950–2010. The ILO publishes estimates of the economically active population in its *Yearbook of Labour Statistics*.



## 2.3 Employment by economic activity

	Agriculture				Industry				Services			
	Male % of male labor force		Female % of female labor force		Male % of male labor force		Female % of female labor force		Male % of male labor force		Female % of female labor force	
	1980	1996-98 <sup>a</sup>	1980	1996-98 <sup>a</sup>	1980	1996-98 <sup>a</sup>	1980	1996-98 <sup>a</sup>	1980	1996-98 <sup>a</sup>	1980	1996-98 <sup>a</sup>
Albania	54	..	62	..	28	..	17	..	18	..	21	..
Algeria	27	..	69	..	33	..	6	..	40	..	25	..
Angola	67	..	87	..	13	..	1	..	20	..	11	..
Argentina	17	2	3	0 <sup>b</sup>	40	33	18	12	44	65	79	88
Armenia	21	..	21	..	48	..	38	..	31	..	41	..
Australia	8	6	4	4	39	31	16	11	53	64	79	86
Austria	..	6	..	7	..	42	..	14	..	52	..	78
Azerbaijan	28	..	42	..	36	..	20	..	36	..	38	..
Bangladesh	67	54	81	78	5	11	14	8	29	34	5	11
Belarus	29	..	23	..	44	..	33	..	28	..	44	..
Belgium	..	..	..	..	..	..	..	..	..	..	..	..
Benin	66	..	69	..	10	..	4	..	24	..	27	..
Bolivia	52	58 <sup>c</sup>	28	2 <sup>c</sup>	21	40 <sup>c</sup>	19	16 <sup>c</sup>	27	58 <sup>c</sup>	53	82 <sup>c</sup>
Bosnia and Herzegovina	26	..	38	..	45	..	24	..	30	..	39	..
Botswana	6	..	3	..	41	..	8	..	53	..	89	..
Brazil	34	27	25	20	30	27	13	10	36	46	67	70
Bulgaria	..	..	..	..	..	..	..	..	..	..	..	..
Burkina Faso	92	..	93	..	3	..	2	..	5	..	5	..
Burundi	88	..	98	..	4	..	1	..	9	..	1	..
Cambodia	70	..	80	..	7	..	7	..	23	..	14	..
Cameroon	65	..	87	..	11	..	2	..	24	..	11	..
Canada	7	5	3	2	37	32	16	11	56	63	81	87
Central African Republic	79	..	90	..	5	..	1	..	15	..	9	..
Chad	82	..	95	..	6	..	0 <sup>b</sup>	..	12	..	4	..
Chile	22	19	3	5	27	31	16	14	51	49	81	82
China	..	..	..	..	..	..	..	..	..	..	..	..
Hong Kong, China	2	0 <sup>b</sup>	1	0 <sup>b</sup>	47	29	56	13	52	70	43	87
Colombia	2	1	1	1	39	31	26	21	59	68	74	78
Congo, Dem. Rep.	62	..	84	..	18	..	4	..	20	..	12	..
Congo, Rep.	42	..	81	..	20	..	2	..	38	..	17	..
Costa Rica	34	27	6	6	25	25	20	18	40	47	74	76
Côte d'Ivoire	60	..	75	..	10	..	5	..	30	..	20	..
Croatia	..	16	..	17	..	36	..	22	..	47	..	61
Cuba	30	..	10	..	32	..	22	..	39	..	68	..
Czech Republic	13	7	11	4	57	50	39	29	30	43	50	66
Denmark	11	5	4	2	41	37	16	15	48	58	80	83
Dominican Republic	40	27	11	2	26	27	16	21	34	46	73	77
Ecuador	44	11	22	2	21	26	15	14	34	63	63	84
Egypt, Arab Rep.	45	..	10	..	21	..	13	..	33	..	69	..
El Salvador	51	38	10	7	21	25	21	21	28	37	69	72
Eritrea	79	..	88	..	7	..	2	..	14	..	11	..
Estonia	19	12	12	6	50	42	36	24	31	46	52	69
Ethiopia	90	..	89	..	2	..	2	..	8	..	10	..
Finland	15	8	12	5	44	39	23	14	41	53	65	81
France	9	..	7	..	44	..	22	..	47	..	71	..
Gabon	59	..	74	..	18	..	6	..	24	..	21	..
Gambia, The	78	..	93	..	10	..	3	..	13	..	5	..
Georgia	31	..	34	..	33	..	21	..	..	..	45	..
Germany	..	3	..	3	..	45	..	19	..	52	..	79
Ghana	66	..	57	..	12	..	14	..	22	..	29	..
Greece	26	18	42	23	34	28	18	13	40	54	40	64
Guatemala	64	..	17	..	17	..	27	..	19	..	56	..
Guinea	86	..	97	..	2	..	1	..	12	..	3	..
Guinea-Bissau	81	..	98	..	3	..	0 <sup>b</sup>	..	17	..	3	..
Haiti	81	..	53	..	8	..	8	..	11	..	39	..
Honduras	63	49	40	8	17	21	9	27	20	30	51	66



# Employment by economic activity 2.3

	Agriculture				Industry				Services			
	Male % of male labor force		Female % of female labor force		Male % of male labor force		Female % of female labor force		Male % of male labor force		Female % of female labor force	
	1980	1996-98 <sup>a</sup>	1980	1996-98 <sup>a</sup>	1980	1996-98 <sup>a</sup>	1980	1996-98 <sup>a</sup>	1980	1996-98 <sup>a</sup>	1980	1996-98 <sup>a</sup>
Hungary	24	10	19	4	45	41	36	26	31	48	45	70
India	63	..	83	..	15	..	9	..	22	..	8	..
Indonesia	57	41	54	42	13	21	13	16	29	39	33	42
Iran, Islamic Rep.	36	..	50	..	28	..	17	..	35	..	33	..
Iraq	21	..	62	..	24	..	11	..	55	..	28	..
Ireland	..	13	..	3	..	38	..	17	..	48	..	80
Israel	8	3	4	1	39	36	16	13	52	60	79	85
Italy	13	7	16	7	42	38	28	22	45	55	56	72
Jamaica	47	29	23	10	20	25	8	9	33	46	69	82
Japan	9	5	13	6	40	39	28	23	51	56	58	71
Jordan	..	..	..	..	24	..	7	..	76	..	93	..
Kazakhstan	28	..	20	..	38	..	25	..	34	..	55	..
Kenya	23	..	25	..	24	..	9	..	53	..	65	..
Korea, Dem. Rep.	39	..	52	..	37	..	20	..	24	..	28	..
Korea, Rep.	31	11	39	14	32	34	24	19	37	55	37	67
Kuwait	2	..	0 <sup>b</sup>	..	36	..	3	..	62	..	97	..
Kyrgyz Republic	35	49	33	49	34	11	23	7	32	32	44	38
Lao PDR	77	..	82	..	7	..	4	..	16	..	13	..
Latvia	18	21	14	16	49	33	35	19	32	46	50	65
Lebanon	13	..	20	..	29	..	21	..	58	..	59	..
Lesotho	26	..	64	..	52	..	5	..	22	..	31	..
Libya	16	..	63	..	29	..	3	..	55	..	34	..
Lithuania	26	21	29	16	47	35	30	22	27	43	41	62
Macedonia, FYR	30	..	47	..	38	..	23	..	32	..	30	..
Madagascar	73	77 <sup>d</sup>	93	76 <sup>d</sup>	9	6 <sup>d</sup>	2	4 <sup>d</sup>	19	16 <sup>d</sup>	5	20 <sup>d</sup>
Malawi	78	..	96	..	10	..	1	..	12	..	3	..
Malaysia	34	21	44	15	26	34	20	28	40	46	36	57
Mali	86	..	92	..	2	..	1	..	12	..	7	..
Mauritania	65	..	79	..	11	..	2	..	24	..	19	..
Mauritius	29	..	30	..	19	..	40	..	47	..	31	..
Mexico	..	26	..	9	..	27	..	20	..	47	..	71
Moldova	49	..	38	..	32	..	21	..	19	..	41	..
Mongolia	43	..	36	..	21	..	21	..	36	..	43	..
Morocco	48	..	72	..	23	..	14	..	29	..	14	..
Mozambique	72	..	97	..	14	..	1	..	14	..	2	..
Myanmar	..	..	..	..	..	..	..	..	..	..	..	..
Namibia	52	..	42	..	22	..	10	..	27	..	47	..
Nepal	91	..	98	..	1	..	0 <sup>b</sup>	..	8	..	2	..
Netherlands	7	4	3	2	39	31	13	9	54	63	84	86
New Zealand	..	11	..	6	..	33	..	13	..	56	..	81
Nicaragua	..	..	..	..	..	..	..	..	..	..	..	..
Niger	7	..	6	..	69	..	29	..	25	..	66	..
Nigeria	52	..	57	..	10	..	5	..	38	..	38	..
Norway	10	6	6	3	40	35	13	10	50	59	80	87
Oman	52	..	24	..	21	..	33	..	27	..	43	..
Pakistan	..	41	..	66	..	20	..	11	..	39	..	23
Panama	37	28	6	2	21	22	12	11	39	50	81	87
Papua New Guinea	76	..	92	..	8	..	2	..	16	..	6	..
Paraguay	58	7	9	3	20	31	22	10	22	62	70	87
Peru	45	7	25	3	20	27	14	11	35	66	61	86
Philippines	60	47	37	27	16	18	15	12	25	35	48	61
Poland	..	19	..	19	..	41	..	21	..	39	..	60
Portugal	22	12	35	15	44	45	25	25	34	43	40	60
Puerto Rico	8	4	0 <sup>b</sup>	0 <sup>b</sup>	27	27	24	14	65	69	75	86
Romania	22	37	39	44	52	34	34	24	26	29	27	33
Russian Federation	19	..	13	..	50	..	37	..	31	..	50	..



## 2.3 Employment by economic activity

	Agriculture				Industry				Services			
	Male % of male labor force		Female % of female labor force		Male % of male labor force		Female % of female labor force		Male % of male labor force		Female % of female labor force	
	1980	1996-98 <sup>a</sup>	1980	1996-98 <sup>a</sup>	1980	1996-98 <sup>a</sup>	1980	1996-98 <sup>a</sup>	1980	1996-98 <sup>a</sup>	1980	1996-98 <sup>a</sup>
Rwanda	88	..	98	..	5	..	1	..	7	..	1	..
Saudi Arabia	45	..	25	..	17	..	5	..	39	..	70	..
Senegal	74	..	90	..	9	..	2	..	17	..	8	..
Sierra Leone	63	..	82	..	20	..	4	..	17	..	14	..
Singapore	2	0 <sup>b</sup>	1	0 <sup>b</sup>	33	34	40	23	65	66	59	77
Slovak Republic	15	10	13	5	38	49	34	27	48	41	54	68
Slovenia	14	12	17	12	49	47	37	30	38	41	46	58
South Africa	18	..	16	..	45	..	16	..	37	..	68	..
Spain	20	9	18	6	42	40	21	14	39	51	60	81
Sri Lanka	44	38	51	49	19	23	18	22	30	37	28	27
Sudan	66	..	88	..	9	..	4	..	24	..	8	..
Sweden	8	4	3	1	45	38	16	12	47	58	81	87
Switzerland	8	5	5	4	47	35	23	14	46	59	72	83
Syrian Arab Republic	..	..	..	..	..	..	..	..	..	..	..	..
Tajikistan	36	..	54	..	29	..	16	..	35	..	30	..
Tanzania	80	..	92	..	7	..	2	..	13	..	7	..
Thailand	68	52	74	50	13	19	8	16	20	29	18	34
Togo	70	..	67	..	12	..	7	..	19	..	26	..
Trinidad and Tobago	11	11	9	3	44	37	21	13	45	52	70	83
Tunisia	33	..	53	..	30	..	32	..	37	..	16	..
Turkey	45	33	88	70	22	27	5	11	33	40	8	19
Turkmenistan	33	..	46	..	32	..	16	..	36	..	38	..
Uganda	84	..	91	..	6	..	2	..	10	..	8	..
Ukraine	26	..	24	..	46	..	33	..	28	..	44	..
United Arab Emirates	5	..	0 <sup>b</sup>	..	40	..	7	..	55	..	93	..
United Kingdom	4	2	1	1	48	38	23	13	49	60	76	86
United States	5	4	2	1	40	33	19	13	55	63	80	86
Uruguay	..	6	..	2	..	33	..	14	..	62	..	84
Uzbekistan	35	..	46	..	34	..	19	..	32	..	36	..
Venezuela, RB	20	16	2	2	31	29	18	13	49	55	79	85
Vietnam	71	70	75	71	16	12	10	9	13	18	15	20
West Bank and Gaza	..	..	..	..	..	..	..	..	..	..	..	..
Yemen, Rep.	60	..	98	..	19	..	1	..	21	..	1	..
Yugoslavia, FR (Serb./Mont.)	..	..	..	..	..	..	..	..	..	..	..	..
Zambia	69	..	85	..	13	..	3	..	19	..	13	..
Zimbabwe	29	..	50	..	31	..	8	..	40	..	42	..
<b>World</b>	.. w	.. w	47 w	.. w	.. w	.. w	.. w	.. w	.. w	.. w	.. w	.. w
<b>Low income</b>	62	..	74	..	15	..	10	..	23	..	16	..
<b>Middle income</b>	..	..	..	..	..	..	..	..	..	..	..	..
Lower middle income	..	..	..	..	..	..	..	..	..	..	..	..
Upper middle income	..	23	22	15	..	31	..	17	..	47	..	68
<b>Low &amp; middle income</b>	..	..	..	..	..	..	..	..	..	..	..	..
East Asia & Pacific	..	..	..	..	..	..	..	..	..	..	..	..
Europe & Central Asia	26	..	27	..	44	..	31	..	31	..	42	..
Latin America & Carib.	..	23	17	13	..	27	..	14	..	50	..	73
Middle East & N. Africa	39	..	46	..	25	..	13	..	37	..	38	..
South Asia	64	..	83	..	14	..	10	..	23	..	8	..
Sub-Saharan Africa	62	..	74	..	14	..	5	..	24	..	22	..
<b>High income</b>	8	4	7	3	41	37	22	15	51	59	71	82
Europe EMU	..	6	..	5	..	41	..	18	..	53	..	77

a. Data are for the most recent year available. b. Less than 0.5. c. Break in series between 1980 and 1990. d. Data refer to 1999.



## Employment by economic activity 2.3

### About the data

The International Labour Organization (ILO) classifies economic activity on the basis of the International Standard Industrial Classification (ISIC) of All Economic Activities. Because this classification is based on where work is performed (industry) rather than on 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 people who are not classifiable by economic activity.

Data on employment are drawn from labor force 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, however, many differences in how countries define and measure employment status, particularly for part-time workers, students, members of the armed forces, and household or contributing family workers. 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 underreported. Countries also take very different approaches to the treatment of unemployed people. In most countries unemployed people with previous job experience are classified according to their last job. 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 (ILO, *Yearbook of Labour Statistics 1996*, p. 64).

The ILO's *Yearbook of Labour Statistics* reports data by major divisions of the ISIC revision 2 or ISIC revision

3. In this table the reported divisions or categories are aggregated into three broad groups: agriculture, industry, and services. An increasing number of countries report economic activity according to the ISIC. Where data are supplied according to national classifications, however, industry definitions and descriptions may differ. In addition, classification into broad groups may obscure fundamental differences in countries' industrial patterns.

The distribution of economic activity by gender reveals some interesting patterns. Agriculture accounts for the largest share of female employment in much of Africa and Asia. Services account for much of the increase in women's labor force participation in North Africa, Latin America and the Caribbean, and high-income economies. Worldwide, women are underrepresented in 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 not clear whether this is a cause or an effect.

### Definitions

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

### Data sources

The employment data are from the ILO database Key Indicators of the Labour Market (2000 issue).

Table 2.3a

Share of nonagricultural labor force in self-employment, 1970 and 1990

%

	Total nonagricultural labor force		Female nonagricultural labor force	
	1970	1990	1970	1990
North Africa	12	34	15	26
South America	29	41	28	36
South Asia	33	44	31	35
Eastern Europe	8	8	4	6
Northern and Western Europe	11	10	9	7

Source: United Nations 2000b.

**Women's self-employment has increased where the number of self-employed workers has grown as a share of the nonagricultural labor force.**



## 2.4 Unemployment

	Unemployment						Long-term unemployment			Unemployment by level of educational attainment		
	Male % of male labor force		Female % of female labor force		Total % of total labor force		% of total unemployment			% of total unemployment		
	1980-82	1996-98 <sup>a</sup>	1980-82	1996-98 <sup>a</sup>	1980-82	1996-98 <sup>a</sup>	1996-98 <sup>a</sup>	1996-98 <sup>a</sup>	1996-98 <sup>a</sup>	Primary 1996-98 <sup>a</sup>	Secondary 1996-98 <sup>a</sup>	Tertiary 1996-98 <sup>a</sup>
Albania	..	..	..	..	5.6	..	..	..	..	..	..	..
Algeria	..	26.9	..	24.0	..	28.7	..	..	..	..	..	..
Angola	..	..	..	..	..	..	..	..	..	..	..	..
Argentina	..	15.4	..	17.6	2.3	16.3	..	..	..	55.7	28.7	4.8
Armenia	..	4.9	..	15.0	..	9.3	..	..	..	..	..	..
Australia	5.1	8.2	7.9	7.7	6.1	8.0	33.1	27.5	30.8	53.3	32.1	11.8
Austria	1.6	4.0	2.3	4.6	1.9	4.2	28.9	28.4	28.7	37.0	59.1	3.9
Azerbaijan	..	0.9	..	1.4	..	1.1	..	..	..	2.1	50.7	47.2
Bangladesh	..	2.7	..	2.3	..	2.5	..	..	..	47.4	28.4	9.9
Belarus	..	..	..	..	..	2.3	..	..	..	8.0	16.8	75.2
Belgium	5.5	7.3	15.0	11.4	9.1	9.1	59.4	61.5	60.5	52.8	35.3	11.9
Benin	..	..	..	..	..	..	..	..	..	..	..	..
Bolivia	..	3.7	..	4.5	..	4.2	..	..	..	24.1	42.3	29.0
Bosnia and Herzegovina	..	..	..	..	..	..	..	..	..	..	..	..
Botswana	..	..	..	..	..	..	..	..	..	..	..	..
Brazil	2.8	6.4	2.8	10.0	2.8	7.8	..	..	..	..	..	..
Bulgaria	..	14.3	..	14.4	..	14.4	59.4	61.7	60.4	..	52.7	7.3
Burkina Faso	..	..	..	..	..	..	..	..	..	..	..	..
Burundi	..	..	..	..	..	..	..	..	..	..	..	..
Cambodia	..	..	..	..	..	..	..	..	..	..	..	..
Cameroon	..	..	..	..	..	..	..	..	..	..	..	..
Canada	6.9	8.5	8.4	8.1	7.5	8.3	14.5	10.2	12.5	33.5	31.2	35.3
Central African Republic	..	..	..	..	..	..	..	..	..	..	..	..
Chad	..	..	..	..	..	..	..	..	..	..	..	..
Chile	10.6	7.0	10.0	7.6	10.4	7.2	..	..	..	28.5	56.2	14.6
China	..	..	..	..	4.9	3.1	..	..	..	..	..	..
Hong Kong, China	3.9	5.1	3.4	4.0	3.8	4.7	..	..	..	..	..	..
Colombia	7.5	12.5	11.5	18.0	9.1	15.0	..	..	..	22.0	57.5	18.9
Congo, Dem. Rep.	..	..	..	..	..	..	..	..	..	..	..	..
Congo, Rep.	..	..	..	..	..	..	..	..	..	..	..	..
Costa Rica	5.3	4.4	7.8	8.0	5.9	5.6	..	..	..	70.7	16.2	9.8
Côte d'Ivoire	..	..	..	..	..	..	..	..	..	..	..	..
Croatia	3.4	11.9	8.2	12.1	5.3	11.4	..	..	..	21.7	69.3	8.3
Cuba	..	..	..	..	..	..	..	..	..	..	..	..
Czech Republic	..	3.8	..	5.8	..	4.7	31.3	29.9	30.5	24.8	71.4	3.7
Denmark	6.5	4.5	7.6	6.6	7.0	5.5	26.3	27.9	27.2	34.6	47.7	16.7
Dominican Republic	..	9.5	..	28.6	..	15.9	..	..	..	50.4	31.1	9.6
Ecuador	..	8.4	..	16.0	..	11.5	..	..	..	..	..	..
Egypt, Arab Rep.	3.9	..	19.2	..	5.2	..	..	..	..	..	..	..
El Salvador	..	9.5	..	5.3	12.9	8.0	..	..	..	53.9	18.8	8.3
Eritrea	..	..	..	..	..	..	..	..	..	..	..	..
Estonia	..	10.4	..	8.6	..	9.6	..	..	..	21.8	54.6	23.4
Ethiopia	..	..	..	..	..	..	..	..	..	..	..	..
Finland	4.7	10.7	4.7	11.9	4.7	11.3	33.9	28.9	31.4	38.9	51.6	9.9
France	4.3	10.2	9.5	13.8	6.4	11.8	39.1	43.3	41.2	..	..	..
Gabon	..	..	..	..	..	..	..	..	..	..	..	..
Gambia, The	..	..	..	..	..	..	..	..	..	..	..	..
Georgia	..	..	..	..	..	..	..	..	..	5.8	33.9	60.3
Germany	..	9.2	..	10.4	..	9.7	44.5	51.7	47.8	22.9	60.4	13.3
Ghana	..	..	..	..	..	..	..	..	..	..	..	..
Greece	3.3	6.6	5.7	15.9	2.4	10.3	45.8	62.2	55.7	35.2	40.5	23.2
Guatemala	..	..	..	..	..	..	..	..	..	..	..	..
Guinea	..	..	..	..	..	..	..	..	..	..	..	..
Guinea-Bissau	..	..	..	..	..	..	..	..	..	..	..	..
Haiti	..	..	..	..	..	..	..	..	..	..	..	..
Honduras	8.6	3.8	6.0	4.2	7.3	3.9	..	..	..	63.2	22.4	5.8



## Unemployment 2.4

	Unemployment						Long-term unemployment			Unemployment by level of educational attainment		
	Male % of male labor force		Female % of female labor force		Total % of total labor force		% of total unemployment			% of total unemployment		
	1980-82	1996-98 <sup>a</sup>	1980-82	1996-98 <sup>a</sup>	1980-82	1996-98 <sup>a</sup>	1996-98 <sup>a</sup>	1996-98 <sup>a</sup>	1996-98 <sup>a</sup>	Primary 1996-98 <sup>a</sup>	Secondary 1996-98 <sup>a</sup>	Tertiary 1996-98 <sup>a</sup>
Hungary	..	8.5	..	7.0	..	7.8	52.6	49.2	51.3	39.0	57.2	3.7
India	..	..	..	..	..	..	..	..	..	..	..	..
Indonesia	..	3.3	..	5.1	..	5.5	..	..	..	37.4	49.0	8.5
Iran, Islamic Rep.	..	..	..	..	..	..	..	..	..	49.0	24.9	4.0
Iraq	..	..	..	..	..	..	..	..	..	..	..	..
Ireland	..	8.1	..	7.4	..	7.8	63.3	46.9	57.0	64.5	23.9	10.9
Israel	4.1	8.1	6.0	9.2	4.8	8.6	..	..	..	26.2	41.7	31.2
Italy	4.8	9.5	13.1	16.8	7.6	12.3	66.5	66.2	66.3	60.3	31.7	6.4
Jamaica	16.3	9.9	39.5	23.0	27.3	16.0	18.3	29.3	25.6	..	..	..
Japan	2.0	4.2	2.0	4.0	2.0	4.1	28.8	11.8	21.8	23.9	50.0	25.2
Jordan	..	..	..	..	..	..	..	..	..	50.2	14.8	32.4
Kazakhstan	..	..	..	..	..	13.7	..	..	..	..	..	..
Kenya	..	..	..	..	..	..	..	..	..	..	..	..
Korea, Dem. Rep.	..	..	..	..	..	..	..	..	..	..	..	..
Korea, Rep.	6.2	7.7	3.5	5.6	5.2	6.8	3.5	0.9	2.5	28.0	52.4	19.5
Kuwait	..	..	..	..	..	..	..	..	..	..	..	..
Kyrgyz Republic	..	..	..	..	..	..	..	..	..	34.9	55.5	9.6
Lao PDR	..	..	..	..	..	..	..	..	..	..	..	..
Latvia	..	13.5	..	14.1	..	13.8	63.1	63.0	63.0	..	72.2	7.9
Lebanon	..	..	..	..	..	..	..	..	..	..	..	..
Lesotho	..	..	..	..	..	..	..	..	..	..	..	..
Libya	..	..	..	..	..	..	..	..	..	..	..	..
Lithuania	..	14.5	..	12.4	..	13.5	..	..	..	16.7	55.9	27.3
Macedonia, FYR	15.6	35.0	32.8	44.5	22.0	38.8	..	..	..	..	..	..
Madagascar	..	..	..	..	..	..	..	..	..	..	..	..
Malawi	..	..	..	..	..	..	..	..	..	..	..	..
Malaysia	..	..	..	..	..	2.5	..	..	..	..	..	..
Mali	..	..	..	..	..	..	..	..	..	..	..	..
Mauritania	..	..	..	..	..	..	..	..	..	..	..	..
Mauritius	..	..	..	..	..	..	..	..	..	33.6	65.6	..
Mexico	..	2.0	..	2.8	..	2.3	2.1	2.6	2.3	18.4	52.7	18.5
Moldova	..	..	..	..	..	..	..	..	..	..	..	..
Mongolia	..	5.2	..	6.3	..	5.7	..	..	..	47.9	24.1	17.3
Morocco	..	15.8	..	23.0	..	17.8	..	..	..	..	..	..
Mozambique	..	..	..	..	..	..	..	..	..	..	..	..
Myanmar	..	..	..	..	..	..	..	..	..	..	..	..
Namibia	..	..	..	..	..	..	..	..	..	..	..	..
Nepal	..	..	..	..	..	..	..	..	..	..	..	..
Netherlands	4.4	3.5	5.2	5.5	4.6	4.4	49.9	48.5	49.1	30.3	32.9	14.2
New Zealand	..	7.6	..	7.4	..	7.5	22.2	16.1	19.5	18.7	3.9	35.0
Nicaragua	..	8.8	..	14.5	..	13.3	..	..	..	..	..	..
Niger	..	..	..	..	..	..	..	..	..	..	..	..
Nigeria	..	..	..	..	..	..	..	..	..	..	..	..
Norway	1.3	4.0	2.3	4.2	1.7	4.1	13.0	7.7	10.6	28.0	52.0	17.3
Oman	..	..	..	..	..	..	..	..	..	..	..	..
Pakistan	3.0	4.2	7.5	16.8	3.6	6.1	..	..	..	..	..	..
Panama	6.3	10.7	13.3	19.7	8.4	13.9	..	..	..	..	..	..
Papua New Guinea	..	..	..	..	..	..	..	..	..	..	..	..
Paraguay	3.8	7.8	4.8	8.6	4.1	8.2	..	..	..	..	..	..
Peru	..	6.5	..	9.3	..	7.7	..	..	..	15.2	55.9	27.9
Philippines	3.2	9.5	7.5	9.8	4.8	9.6	..	..	..	..	..	..
Poland	..	9.1	..	12.3	..	10.5	33.5	41.9	38.0	24.1	70.1	5.9
Portugal	4.1	3.9	13.0	6.2	7.8	5.0	53.4	57.7	55.6	73.9	14.9	5.8
Puerto Rico	19.5	14.4	12.3	11.8	17.1	13.3	..	..	..	..	..	..
Romania	..	6.5	..	6.1	..	6.3	44.1	50.1	47.0	21.3	72.1	5.9
Russian Federation	..	13.6	..	13.0	..	13.3	29.5	36.8	32.8	17.3	41.9	40.8





## 2.4 Unemployment

	Unemployment						Long-term unemployment			Unemployment by level of educational attainment		
	Male % of male labor force		Female % of female labor force		Total % of total labor force		% of total unemployment			% of total unemployment		
	1980-82	1996-98 <sup>a</sup>	1980-82	1996-98 <sup>a</sup>	1980-82	1996-98 <sup>a</sup>	1996-98 <sup>a</sup>	1996-98 <sup>a</sup>	1996-98 <sup>a</sup>	1996-98 <sup>a</sup>	1996-98 <sup>a</sup>	1996-98 <sup>a</sup>
Rwanda	..	..	..	..	..	..	..	..	..	..	..	..
Saudi Arabia	..	..	..	..	..	..	..	..	..	..	..	..
Senegal	..	..	..	..	..	..	..	..	..	..	..	..
Sierra Leone	..	..	..	..	..	..	..	..	..	..	..	..
Singapore	2.9	3.2	3.4	3.3	3.0	3.2	..	..	..	27.1	25.8	31.2
Slovak Republic	..	11.4	..	12.6	..	11.9	49.2	52.5	50.3	..	70.4	3.5
Slovenia	..	7.6	..	7.7	..	7.7	61.1	50.0	55.1	30.7	64.0	4.0
South Africa	..	..	..	..	..	5.1	..	..	..	..	..	..
Spain	10.8	13.8	12.8	26.6	11.4	18.8	49.9	60.4	55.5	54.1	18.6	20.6
Sri Lanka	..	7.1	..	16.2	..	10.6	..	..	..	51.8	..	48.0
Sudan	..	..	..	..	..	..	..	..	..	..	..	..
Sweden	1.7	6.9	2.3	6.0	2.0	6.5	31.8	26.9	29.6	30.4	53.3	14.9
Switzerland	0.2	3.2	0.3	4.1	0.2	3.6	25.5	32.8	28.5	..	..	..
Syrian Arab Republic	3.8	..	3.8	..	3.9	..	..	..	..	..	..	..
Tajikistan	..	2.4	..	2.9	..	2.7	..	..	..	10.6	83.2	6.3
Tanzania	..	..	..	..	..	..	..	..	..	..	..	..
Thailand	1.0	3.4	0.7	3.4	0.8	3.4	..	..	..	67.0	12.9	16.8
Togo	..	..	..	..	..	..	..	..	..	..	..	..
Trinidad and Tobago	8.0	11.3	14.0	18.9	10.0	14.2	24.0	39.9	31.7	40.5	57.5	1.3
Tunisia	..	..	..	..	..	..	..	..	..	..	..	..
Turkey	9.0	6.3	23.0	6.1	10.9	6.2	38.1	49.0	41.6	..	..	..
Turkmenistan	..	..	..	..	..	..	..	..	..	..	..	..
Uganda	..	..	..	..	..	..	..	..	..	..	..	..
Ukraine	..	11.9	..	10.8	..	11.3	..	..	..	5.4	28.7	65.9
United Arab Emirates	..	..	..	..	..	..	..	..	..	..	..	..
United Kingdom	8.3	6.8	4.8	5.3	6.8	6.1	44.9	27.8	38.6	26.2	30.5	36.3
United States	6.8	4.4	7.4	4.6	7.0	4.5	9.4	8.0	8.7	22.6	37.9	39.4
Uruguay	..	7.8	..	13.0	..	10.1	..	..	..	..	..	..
Uzbekistan	..	..	..	..	..	..	..	..	..	..	..	..
Venezuela, RB	..	9.8	..	14.2	5.9	11.4	..	..	..	60.0	22.6	13.1
Vietnam	..	..	..	..	..	..	..	..	..	..	..	..
West Bank and Gaza	..	..	..	..	..	..	..	..	..	..	..	..
Yemen, Rep.	..	..	..	..	..	..	..	..	..	..	..	..
Yugoslavia, FR (Serb./Mont.)	..	..	..	..	..	..	..	..	..	..	..	..
Zambia	..	..	..	..	..	..	..	..	..	..	..	..
Zimbabwe	..	..	..	..	..	..	..	..	..	41.1	52.7	0.1

a. Data are for the most recent year available.



## Unemployment 2.4

### About the data

Unemployment and total employment in a country 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, 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—particularly people seeking work for the first time—not covered in other unemployment statistics. 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.

In contrast, the quality and completeness of data obtained 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 economies that offer more or longer unemployment benefits.

Long-term unemployment is measured in terms of duration, that is, 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 a person has been unemployed is difficult to measure, because the ability to recall the length of 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. Such women 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.

No data are given in the table for economies for which unemployment data are not consistently available or are deemed unreliable.

### 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 level of 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 United Nations Educational, Cultural, and Scientific Organization's (UNESCO) International Standard Classification of Education.

### Data sources

The unemployment data are from the ILO database Key Indicators of the Labour Market (2000 issue).



## 2.5 Wages and productivity

	Average hours worked per week		Minimum wage		Agricultural wage		Labor cost per worker in manufacturing		Value added per worker in manufacturing	
	1980-84	1995-99 <sup>a</sup>	\$ per year		\$ per year		\$ per year		\$ per year	
			1980-84	1995-99 <sup>a</sup>	1980-84	1995-99 <sup>a</sup>	1980-84	1995-99 <sup>a</sup>	1980-84	1995-99 <sup>a</sup>
Albania	..	..	..	..	..	..	..	..	..	..
Algeria	..	..	..	1,340	..	..	6,242	..	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	..	<sup>b</sup>	..	..	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	13,539	7,886	19,533
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	40	..	..	2,277	1,885	2,306	1,876	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	..	<sup>b</sup>	..	..	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	..	<sup>b</sup>	..	..	15,708	33,226	34,945	79,616
Ghana	..	..	..	..	1,470	..	2,306	..	12,130	..
Greece	..	41	..	5,246	..	..	6,461	15,899	14,561	30,429
Guatemala	..	..	..	459	..	..	2,605	1,802	11,144	9,235
Guinea	40	..	..	..	..	..	..	..	..	..
Guinea-Bissau	48	..	..	..	..	..	..	..	..	..
Haiti	..	..	..	..	..	..	..	..	..	..
Honduras	..	44	..	..	1,623	..	2,949	2,658	7,458	7,427



## Wages and productivity 2.5

	Average hours worked per week		Minimum wage		Agricultural wage		Labor cost per worker in manufacturing		Value added per worker in manufacturing	
	1980-84	1995-99 <sup>a</sup>	\$ per year		\$ per year		\$ per year		\$ per year	
			1980-84	1995-99 <sup>a</sup>	1980-84	1995-99 <sup>a</sup>	1980-84	1995-99 <sup>a</sup>	1980-84	1995-99 <sup>a</sup>
Hungary	35	33	..	1,132	1,186	1,766	1,410	2,777	4,307	6,106
India	46	..	..	408	205	245	1,035	1,192	2,108	3,118
Indonesia	..	..	..	241	..	..	898	1,008	3,807	5,139
Iran, Islamic Rep.	..	..	..	..	..	..	9,737	30,652	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	26,635	23,459	35,526
Italy	..	32	..	<sup>b</sup>	..	..	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	<sup>b</sup>	<sup>b</sup>	..	..	4,643	2,082	16,337	11,906
Kazakhstan	..	..	..	..	..	..	..	..	..	..
Kenya	41	39	..	..	508	568	104	94	234	228
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	..
Libya	..	..	..	..	..	..	8,648	..	21,119	..
Lithuania	..	..	..	..	..	..	..	..	..	..
Macedonia, FYR	..	..	..	..	..	..	..	..	..	..
Madagascar	..	40	..	..	..	..	1,575	..	3,542	..
Malawi	..	..	..	..	..	..	..	..	..	..
Malaysia	..	..	..	<sup>b</sup>	..	..	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	23,767	16,835	32,723
Nicaragua	..	44	..	..	..	..	..	..	..	..
Niger	40	..	..	..	..	..	4,074	..	22,477	..
Nigeria	..	..	..	300	..	..	4,812	..	20,000	..
Norway	35	35	..	<sup>b</sup>	..	..	14,935	38,415	24,905	51,510
Oman	..	..	..	..	..	..	..	3,099	..	61,422
Pakistan	48	..	..	600	..	..	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	7,577	7,161	17,273
Puerto Rico	..	..	..	..	..	..	..	..	..	..
Romania	..	40	..	..	1,669	1,864	1,739	1,190	..	3,482
Russian Federation	..	..	863	297	2,417	659	2,524	1,528	..	..



## 2.5 Wages and productivity

	Average hours worked per week		Minimum wage		Agricultural wage		Labor cost per worker in manufacturing		Value added per worker in manufacturing	
	1980-84	1995-99 <sup>a</sup>	\$ per year		\$ per year		\$ per year		\$ per year	
			1980-84	1995-99 <sup>a</sup>	1980-84	1995-99 <sup>a</sup>	1980-84	1995-99 <sup>a</sup>	1980-84	1995-99 <sup>a</sup>
Rwanda	..	..	..	..	..	..	1,871	..	9,835	..
Saudi Arabia	..	..	..	..	..	..	9,814	..	..	..
Senegal	..	..	993	848	..	..	2,828	7,754	6,415	..
Sierra Leone	44	..	..	..	..	..	1,624	317	7,807	..
Singapore	46	47	..	..	..	4,856	5,576	21,317	16,442	40,674
Slovak Republic	..	..	..	..	..	..	..	..	..	..
Slovenia	..	..	..	..	..	..	..	9,632	..	12,536
South Africa	42	41	..	<sup>b</sup>	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	..	..	..	..	..	..	..	..	..	..
Sweden	36	37	..	..	9,576	27,098	13,038	26,601	32,308	56,675
Switzerland	44	42	..	<sup>b</sup>	..	..	..	..	..	61,848
Syrian Arab Republic	..	..	..	..	..	..	2,844	4,338	9,607	9,918
Tajikistan	..	..	..	..	..	..	..	..	..	..
Tanzania	..	..	..	..	..	..	1,123	..	3,339	..
Thailand	48	..	..	1,083	..	..	2,305	2,705	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	..	<sup>b</sup>	..	..	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
Yugoslavia, FR (Serb./Mont.)	..	..	..	..	..	..	..	..	..	..
Zambia	..	45	..	..	..	..	3,183	4,292	11,753	16,615
Zimbabwe	..	..	..	..	1,065	..	4,097	3,422	9,625	11,944

a. Figures in italics refer to 1990-94. b. Country has sectoral minimum wages but no minimum wage policy.



## Wages and productivity 2.5

### About the data

Much of the available 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 in an effort to provide a set of uniform and representative labor market indicators. Nevertheless, many differences in reporting practices persist, some of which are described below.

Analyses of labor force participation, employment, and underemployment often rely on the number of hours of work per week. The indicator reported in the table 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, or time spent on short periods of rest. Hours paid for but not spent at the place of work—such as paid annual and sick leave, paid holidays, paid meal breaks, and time spent in commuting between home and workplace—are not included. When this information is not available, the table reports the number of hours paid for, comprising the hours actually worked plus the hours paid for but not spent in the workplace. Data on hours worked are influenced by differences in methods of compilation and coverage as well as by national practices relating to the 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 employers' 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 set 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 are subject to greater reservations 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, and other remuneration paid directly by employers plus 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 the labor laws and collective bargaining agreements in force.

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-level 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.

The data in the table are period averages and refer to workers of both sexes.

### Definitions

- **Average hours worked per week** refer to all workers (male and female) in nonagricultural activities or, if unavailable, in manufacturing. The data correspond to hours actually worked, to hours paid for, or to statutory hours of work in a normal workweek.
- **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 based on daily wages in agriculture.
- **Labor cost per worker in manufacturing** is obtained by dividing the total payroll by the number of employees, or the number of people engaged, in manufacturing establishments.
- **Value added per worker in manufacturing** is obtained by dividing the value added of manufacturing establishments by the number of employees, or the number of people engaged, in those establishments.

### Data sources

The data in the table are drawn from Martin Rama and Raquel Artecona's "Database of Labor Market Indicators across Countries" (1999).



## 2.6 Poverty

	National poverty line								International poverty line				
	Survey year	Population below the poverty line			Survey year	Population below the poverty line			Survey year	Population below \$1 a day	Poverty gap at \$1 a day	Population below \$2 a day	Poverty gap at \$2 a day
		Rural %	Urban %	National %		Rural %	Urban %	National %		%	%	%	%
Albania		..	..	..		..	..	..		..	..	..	..
Algeria	1988	16.6	7.3	12.2	1995	30.3	14.7	22.6	1995	<2	<0.5	15.1	3.6
Angola		..	..	..		..	..	..		..	..	..	..
Argentina	1991	..	..	25.5	1993	..	..	17.6		..	..	..	..
Armenia		..	..	..		..	..	..	1996	7.8	1.7	34.0	11.3
Australia		..	..	..		..	..	..		..	..	..	..
Austria		..	..	..		..	..	..		..	..	..	..
Azerbaijan	1995	..	..	68.1		..	..	..	1995	<2	<0.5	9.6	2.3
Bangladesh	1991-92	46.0	23.3	42.7	1995-96	39.8	14.3	35.6	1996	29.1	5.9	77.8	31.8
Belarus	1995	..	..	22.5		..	..	..	1998	<2	<0.5	<2	0.1
Belgium		..	..	..		..	..	..		..	..	..	..
Benin	1995	..	..	33.0		..	..	..		..	..	..	..
Bolivia	1993	..	29.3	..	1995	79.1	..	..	1997	29.4	15.2	51.4	27.8
Bosnia and Herzegovina		..	..	..		..	..	..		..	..	..	..
Botswana		..	..	..		..	..	..	1985-86	33.3	12.5	61.4	30.7
Brazil	1996	54.0	15.3	23.9	1998	51.4	13.7	22.0	1997	9.0	2.1	25.4	9.8
Bulgaria		..	..	..		..	..	..	1997	<2	<0.5	21.9	4.2
Burkina Faso		..	..	..		..	..	..	1994	61.2	25.5	85.8	50.9
Burundi	1990	..	..	36.2		..	..	..		..	..	..	..
Cambodia	1993-94	43.1	24.8	39.0	1997	40.1	21.1	36.1		..	..	..	..
Cameroon	1984	32.4	44.4	40.0		..	..	..		..	..	..	..
Canada		..	..	..		..	..	..		..	..	..	..
Central African Republic		..	..	..		..	..	..	1993	66.6	38.1	84.0	58.4
Chad	1995-96	67.0	63.0	64.0		..	..	..		..	..	..	..
Chile	1992	..	..	21.6	1994	..	..	20.5	1996	<2	<0.5	18.4	4.8
China	1996	7.9	<2	6.0	1998	4.6	<2	4.6	1998	18.5	4.2	53.7	21.0
Hong Kong, China		..	..	..		..	..	..		..	..	..	..
Colombia	1991	29.0	7.8	16.9	1992	31.2	8.0	17.7	1996	11.0	3.2	28.7	11.6
Congo, Dem. Rep.		..	..	..		..	..	..		..	..	..	..
Congo, Rep.		..	..	..		..	..	..		..	..	..	..
Costa Rica		..	..	..		..	..	..	1997	6.9	2.0	23.3	8.5
Côte d'Ivoire		..	..	..		..	..	..	1995	12.3	2.4	49.4	16.8
Croatia		..	..	..		..	..	..	1998	<2	<0.5	0.4	0.2
Cuba		..	..	..		..	..	..		..	..	..	..
Czech Republic		..	..	..		..	..	..	1996	<2	<0.5	<2	<0.5
Denmark		..	..	..		..	..	..		..	..	..	..
Dominican Republic	1989	27.4	23.3	24.5	1992	29.8	10.9	20.6	1996	3.2	0.7	16.0	5.0
Ecuador	1994	47.0	25.0	35.0		..	..	..	1995	20.2	5.8	52.3	21.2
Egypt, Arab Rep.	1995-96	23.3	22.5	22.9		..	..	..	1995	3.1	0.3	52.7	13.9
El Salvador	1992	55.7	43.1	48.3		..	..	..	1997	26.0	9.7	54.0	25.3
Eritrea		..	..	..		..	..	..		..	..	..	..
Estonia	1995	14.7	6.8	8.9		..	..	..	1998	<2	<0.5	5.2	0.8
Ethiopia		..	..	..		..	..	..	1995	31.3	8.0	76.4	32.9
Finland		..	..	..		..	..	..		..	..	..	..
France		..	..	..		..	..	..		..	..	..	..
Gabon		..	..	..		..	..	..		..	..	..	..
Gambia, The	1992	..	..	64.0		..	..	..	1992	53.7	23.3	84.0	47.5
Georgia	1997	9.9	12.1	11.1		..	..	..	1996	<2	<0.5	<2	<0.5
Germany		..	..	..		..	..	..		..	..	..	..
Ghana	1992	34.3	26.7	31.4		..	..	..	1998	38.8	3.4	74.6	16.1
Greece		..	..	..		..	..	..		..	..	..	..
Guatemala	1989	71.9	33.7	57.9		..	..	..	1998	10.0	2.2	33.8	11.8
Guinea	1994	..	..	40.0		..	..	..		..	..	..	..
Guinea-Bissau		..	..	..		..	..	..		..	..	..	..
Haiti	1987	..	..	65.0	1995	66.0	..	..		..	..	..	..
Honduras	1992	46.0	56.0	50.0	1993	51.0	57.0	53.0	1996	40.5	17.5	68.8	36.9



## Poverty 2.6

	National poverty line								International poverty line				
	Survey year	Population below the poverty line			Survey year	Population below the poverty line			Survey year	Population below \$1 a day %	Poverty gap at \$1 a day %	Population below \$2 a day %	Poverty gap at \$2 a day %
		Rural %	Urban %	National %		Rural %	Urban %	National %					
Hungary	1989	..	..	1.6	1993	..	..	8.6	1998	<2	<0.5	7.3	1.7
India	1992	43.5	33.7	40.9	1994	36.7	30.5	35.0	1997	44.2	12.0	86.2	41.4
Indonesia	1996	..	..	15.7	1999	..	..	27.1	1999	7.7	1.0	55.3	16.5
Iran, Islamic Rep.	..	..	..	..	..	..	..	..	..	..	..	..	..
Iraq	..	..	..	..	..	..	..	..	..	..	..	..	..
Ireland	..	..	..	..	..	..	..	..	..	..	..	..	..
Israel	..	..	..	..	..	..	..	..	..	..	..	..	..
Italy	..	..	..	..	..	..	..	..	..	..	..	..	..
Jamaica	1992	..	..	34.2	..	..	..	..	1996	3.2	0.7	25.2	6.9
Japan	..	..	..	..	..	..	..	..	..	..	..	..	..
Jordan	1991	..	..	15.0	1997	..	..	11.7	1997	<2	<0.5	7.4	1.4
Kazakhstan	1996	39.0	30.0	34.6	..	..	..	..	1996	1.5	0.3	15.3	3.9
Kenya	1992	46.4	29.3	42.0	..	..	..	..	1994	26.5	9.0	62.3	27.5
Korea, Dem. Rep.	..	..	..	..	..	..	..	..	..	..	..	..	..
Korea, Rep.	..	..	..	..	..	..	..	..	1993	<2	<0.5	<2	<0.5
Kuwait	..	..	..	..	..	..	..	..	..	..	..	..	..
Kyrgyz Republic	1993	48.1	28.7	40.0	1997	64.5	28.5	51.0	..	..	..	..	..
Lao PDR	1993	53.0	24.0	46.1	..	..	..	..	1997	26.3	6.3	73.2	29.6
Latvia	..	..	..	..	..	..	..	..	1998	<2	<0.5	8.3	2.0
Lebanon	..	..	..	..	..	..	..	..	..	..	..	..	..
Lesotho	1993	53.9	27.8	49.2	..	..	..	..	1993	43.1	20.3	65.7	38.1
Libya	..	..	..	..	..	..	..	..	..	..	..	..	..
Lithuania	..	..	..	..	..	..	..	..	1996	<2	<0.5	7.8	2.0
Macedonia, FYR	..	..	..	..	..	..	..	..	..	..	..	..	..
Madagascar	1993-94	77.0	47.0	70.0	..	..	..	..	1997	63.4	26.9	89.0	53.2
Malawi	1990-91	..	..	54.0	..	..	..	..	..	..	..	..	..
Malaysia	1989	..	..	15.5	..	..	..	..	..	..	..	..	..
Mali	..	..	..	..	..	..	..	..	1994	72.8	37.4	90.6	60.5
Mauritania	1989-90	..	..	57.0	..	..	..	..	1995	28.6	9.1	68.7	29.6
Mauritius	1992	..	..	10.6	..	..	..	..	..	..	..	..	..
Mexico	1988	..	..	10.1	..	..	..	..	1996	12.2	3.5	34.8	13.2
Moldova	1997	26.7	..	23.3	..	..	..	..	1997	11.3	3.0	38.4	14.0
Mongolia	1995	33.1	38.5	36.3	..	..	..	..	1995	13.9	3.1	50.0	17.5
Morocco	1990-91	18.0	7.6	13.1	1998-99	27.2	12.0	19.0	1990-91	<2	<0.5	7.5	1.3
Mozambique	..	..	..	..	..	..	..	..	1996	37.9	12.0	78.4	36.8
Myanmar	..	..	..	..	..	..	..	..	..	..	..	..	..
Namibia	..	..	..	..	..	..	..	..	1993	34.9	14.0	55.8	30.4
Nepal	1995-96	44.0	23.0	42.0	..	..	..	..	1995	37.7	9.7	82.5	37.5
Netherlands	..	..	..	..	..	..	..	..	..	..	..	..	..
New Zealand	..	..	..	..	..	..	..	..	..	..	..	..	..
Nicaragua	1993	76.1	31.9	50.3	..	..	..	..	..	..	..	..	..
Niger	1989-93	66.0	52.0	63.0	..	..	..	..	1995	61.4	33.9	85.3	54.8
Nigeria	1985	49.5	31.7	43.0	1992-93	36.4	30.4	34.1	1997	70.2	34.9	90.8	59.0
Norway	..	..	..	..	..	..	..	..	..	..	..	..	..
Oman	..	..	..	..	..	..	..	..	..	..	..	..	..
Pakistan	1991	36.9	28.0	34.0	..	..	..	..	1996	31.0	6.2	84.7	35.0
Panama	1997	64.9	15.3	37.3	..	..	..	..	1997	10.3	3.2	25.1	10.2
Papua New Guinea	..	..	..	..	..	..	..	..	..	..	..	..	..
Paraguay	1991	28.5	19.7	21.8	..	..	..	..	1998	19.5	9.8	49.3	26.3
Peru	1994	67.0	46.1	53.5	1997	64.7	40.4	49.0	1996	15.5	5.4	41.4	17.1
Philippines	1994	53.1	28.0	40.6	1997	50.7	21.5	36.8	..	..	..	..	..
Poland	1993	..	..	23.8	..	..	..	..	1998	<2	<0.5	<2	<0.5
Portugal	..	..	..	..	..	..	..	..	1994	<2	<0.5	0.0	0.0
Puerto Rico	..	..	..	..	..	..	..	..	..	..	..	..	..
Romania	1994	27.9	20.4	21.5	..	..	..	..	1994	2.8	0.8	27.5	6.9
Russian Federation	1994	..	..	30.9	..	..	..	..	1998	7.1	1.4	25.1	8.7





## 2.6 Poverty

	National poverty line								International poverty line				
	Survey year	Population below the poverty line			Survey year	Population below the poverty line			Survey year	Population below \$1 a day	Poverty gap at \$1 a day	Population below \$2 a day	Poverty gap at \$2 a day
		Rural %	Urban %	National %		Rural %	Urban %	National %		%	%	%	%
Rwanda	1993	..	..	51.2	..	..	..	..	1983-85	35.7	7.7	84.6	36.7
Saudi Arabia	..	..	..	..	..	..	..	..	..	..	..	..	..
Senegal	..	..	..	..	..	..	..	..	1995	26.3	7.0	67.8	28.2
Sierra Leone	1989	76.0	53.0	68.0	..	..	..	..	1989	57.0	39.5	74.5	51.8
Singapore	..	..	..	..	..	..	..	..	..	..	..	..	..
Slovak Republic	..	..	..	..	..	..	..	..	1992	<2	<0.5	1.7	0.1
Slovenia	..	..	..	..	..	..	..	..	1998	<2	<0.5	<2	<0.5
South Africa	..	..	..	..	..	..	..	..	1993	11.5	1.8	35.8	13.4
Spain	..	..	..	..	..	..	..	..	..	..	..	..	..
Sri Lanka	1990-91	22.0	15.0	20.0	1995-96	27.0	15.0	25.0	1995	6.6	1.0	45.4	13.5
Sudan	..	..	..	..	..	..	..	..	..	..	..	..	..
Sweden	..	..	..	..	..	..	..	..	..	..	..	..	..
Switzerland	..	..	..	..	..	..	..	..	..	..	..	..	..
Syrian Arab Republic	..	..	..	..	..	..	..	..	..	..	..	..	..
Tajikistan	..	..	..	..	..	..	..	..	..	..	..	..	..
Tanzania	1991	..	..	51.1	..	..	..	..	1993	19.9	4.8	59.7	23.0
Thailand	1990	..	..	18.0	1992	15.5	10.2	13.1	1998	<2	<0.5	28.2	7.1
Togo	1987-89	..	..	32.3	..	..	..	..	..	..	..	..	..
Trinidad and Tobago	1992	20.0	24.0	21.0	..	..	..	..	1992	12.4	3.5	39.0	14.6
Tunisia	1985	29.2	12.0	19.9	1990	21.6	8.9	14.1	1995	<2	<0.5	10.0	2.3
Turkey	..	..	..	..	..	..	..	..	1994	2.4	0.5	18.0	5.0
Turkmenistan	..	..	..	..	..	..	..	..	1993	20.9	5.7	59.0	23.3
Uganda	1997-98	16.7	48.7	44.4	1999-2000	10.3	39.1	35.2	..	..	..	..	..
Ukraine	1995	..	..	31.7	..	..	..	..	1999	2.9	0.6	45.7	16.3
United Arab Emirates	..	..	..	..	..	..	..	..	..	..	..	..	..
United Kingdom	..	..	..	..	..	..	..	..	..	..	..	..	..
United States	..	..	..	..	..	..	..	..	..	..	..	..	..
Uruguay	..	..	..	..	..	..	..	..	1989	<2	<0.5	6.6	1.9
Uzbekistan	..	..	..	..	..	..	..	..	1993	3.3	0.5	26.5	7.3
Venezuela, RB	1989	..	..	31.3	..	..	..	..	1997	18.7	6.5	44.6	19.0
Vietnam	1993	57.2	25.9	50.9	..	..	..	..	..	..	..	..	..
West Bank and Gaza	..	..	..	..	..	..	..	..	..	..	..	..	..
Yemen, Rep.	1992	19.2	18.6	19.1	..	..	..	..	1998	15.7	4.5	45.2	15.0
Yugoslavia, FR (Serb./Mont.)	..	..	..	..	..	..	..	..	..	..	..	..	..
Zambia	1991	88.0	46.0	68.0	1993	..	..	86.0	1998	63.7	32.7	87.4	55.4
Zimbabwe	1990-91	31.0	10.0	25.5	..	..	..	..	1990-91	36.0	9.6	64.2	29.4



## Poverty 2.6

### About the data

International comparisons of poverty data entail both conceptual and practical problems. Different countries have different definitions of poverty, and consistent comparisons between countries can be difficult. Local poverty lines tend to have higher purchasing power in rich countries, where more generous standards are used than in poor countries. Is it reasonable to treat two people with the same standard of living—in terms of their command over commodities—differently because one happens to live in a better-off country? Can we hold the real value of the poverty line constant across countries, just as we do when making comparisons over time?

Poverty measures based on an international poverty line attempt to do this. The commonly used \$1 a day standard, measured in 1985 international prices and adjusted to local currency using purchasing power parities (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 not for making international poverty comparisons but for comparing aggregates from national accounts. As a result, there is no certainty that an international poverty line measures the same degree of need or deprivation across countries.

Past editions of the *World Development Indicators* used PPPs from the Penn World Tables. Because the Penn World Tables updated to 1993 are not yet available, this year's edition (like last year's) uses 1993 consumption PPP estimates produced by the World Bank. The international poverty line, set at \$1 a day in 1985 PPP terms, has been recalculated in 1993 PPP terms at 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.

Problems also exist in comparing poverty measures within countries. For example, the cost of living is typically higher in urban than in rural areas. (Food staples, for example, tend to be more expensive in urban areas.) So the urban monetary poverty line should be higher than the rural poverty line. But it is not always clear that the difference between urban and rural poverty lines found in practice properly reflects the difference 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 adjust-

ments are made only for differences in the cost of living. As with international comparisons, when the real value of the poverty line varies, it is not clear how meaningful such urban-rural comparisons are.

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

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

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

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

### Definitions

- **Survey year** is the year in which the underlying data were collected.
- **Rural poverty rate** is the percentage of the rural population living below the national rural poverty line.
- **Urban poverty rate** is the percentage of the urban population living below the national urban poverty line.
- **National poverty rate** is the percentage of the population living below the 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 (equivalent to \$1 and \$2 in 1985 prices, adjusted for purchasing power parity). Poverty rates are comparable across countries, but as a result of revisions in PPP exchange rates, they cannot be compared with poverty rates reported in previous editions for individual countries.
- **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 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 country departments. The World Bank has prepared an annual review of poverty work in the Bank since 1993. The most recent is *Poverty Reduction and the World Bank: Progress in Fiscal 1999*.



## 2.7 Social indicators of poverty

	Survey year	Infant mortality rate		Child immunization rate		Prevalence of child malnutrition		Low mother's body mass index		Total fertility rate	
		per 1,000 live births		% of children 12–23 months		% of children under five		% of women		births per woman	
		Poorest quintile	Richest quintile	Poorest quintile	Richest quintile	Poorest quintile	Richest quintile	Poorest quintile	Richest quintile	Poorest quintile	Richest quintile
Bangladesh	1996–97	96	57	47	67	60	28	64.4	32.6	3.8	2.2
Benin	1996	119	63	38	74	37	19	21.0	7.0	7.3	3.8
Bolivia	1998	107	26	22	31	17	3	0.5	2.2	7.4	2.1
Brazil	1996	83	29	57	74	12	3	8.8	5.4	4.8	1.7
Burkina Faso	1992–93	114	80	18	59	36	22	15.7	10.2	7.5	4.6
Cameroon	1991	104	51	27	64	25	6	..	..	6.2	4.8
Central African Republic	1994–95	132	54	18	64	37	20	16.3	11.2	5.1	4.9
Chad	1996–97	80	89	4	23	50	29	27.5	21.0	7.1	6.2
Colombia	1995	41	16	54	74	15	3	5.9	1.2	5.2	1.7
Côte d'Ivoire	1994	117	63	16	64	31 <sup>a</sup>	13	11.0	5.7	6.4	3.7
Dominican Republic	1996	67	23	28	52	13	1	8.9	3.0	5.1	2.1
Egypt, Arab Rep.	1995–96	110	32	65	93	17	8	2.9	0.4	4.4	2.7
Ghana	1993	78	46	38	79	33	13	11.3	7.2	6.7	3.4
Guatemala	1995	57	35	41	43	35	7	4.2	2.0	8.0	2.4
Haiti	1994–95	94	74	19	44	39	10	24.9	9.3	7.0	2.3
India	1992–93	109	44	17	65	60	34	..	..	4.1	2.1
Indonesia	1997	78	23	43	72	..	..	..	..	3.3	2.0
Kazakhstan	1995	35	29	19	31	11	3	7.9	3.8	3.2	1.3
Kenya	1998	103	50	46	61	32	10	17.6	6.0	6.6	3.0
Kyrgyz Republic	1997	83	46	69	73	13	8	5.6	3.7	4.6	2.0
Madagascar	1997	119	58	22	66	45	32	24.3	15.1	8.1	3.4
Malawi	1992	141	106	73	89	34	17	14.1	6.0	7.2	6.1
Mali	1995–96	151	93	16	56	47	28	15.9	12.2	6.9	5.1
Morocco	1993	80	35	54	95	17	2	6.2	1.8	6.7	2.3
Mozambique	1997	188	95	20	85	37	14	17.2	4.2	5.2	4.4
Namibia	1992	64	57	54	63	36	13	19.3	5.3	6.9	3.6
Nepal	1996	96	64	32	71	53	28	25.7	21.4	6.2	2.9
Nicaragua	1997–98	51	26	61	73	18	4	4.0	4.1	6.6	1.9
Niger	1998	131	86	5	51	52	37	26.7	12.8	8.4	5.7
Nigeria	1990	102	69	14	58	40	22	..	..	6.6	4.7
Pakistan	1990–91	89	63	23	55	54	26	..	..	5.1	4.0
Paraguay	1990	43	16	20	53	6	1	..	..	7.9	2.7
Peru	1996	78	20	55	66	17	1	1.3	1.1	6.6	1.7
Philippines	1998	49	21	60	87	..	..	..	..	6.5	2.1
Senegal	1997	85	45	..	..	..	..	..	..	7.4	3.6
Tanzania	1996	87	65	57	83	40	18	12.2	7.1	7.8	3.9
Togo	1998	84	66	22	52	32	12	13.3	7.9	7.3	2.9
Turkey	1993	100	25	41	82	22	3	2.7	3.2	3.7	1.5
Uganda	1995	109	63	34	63	31	16	12.7	5.8	7.5	5.4
Uzbekistan	1996	50	47	83	77	25	12	11.4	5.7	4.4	2.1
Vietnam	1997	43	17	42	60	..	..	..	..	3.1	1.6
Zambia	1996	124	70	71	86	32	13	10.2	7.9	7.4	4.4
Zimbabwe	1994	52	42	72	86	19	9	5.7	1.2	6.2	2.8

a. The data contain large sampling errors because of the small number of cases.



## Social indicators of poverty 2.7

### About the data

The data in the table describe the health status of individuals in different socioeconomic groups within countries. The data are from Demographic and Health Surveys conducted by Macro International with the support of the U.S. Agency for International Development. These large-scale household sample surveys, conducted periodically in about 50 developing countries, collect information on a large number of health, nutrition, and population measures as well as on respondents' social, demographic, and economic characteristics using a standard set of questionnaires.

In the table socioeconomic status is defined in terms of household assets, including ownership of consumer items, characteristics of the household's dwelling, and other characteristics related to wealth. Each household asset for which information was collected was assigned a weight generated through principal component analysis. The resulting scores were standardized and then used to create break points defining wealth quintiles, expressed as quintiles of individuals.

The choice of the asset index for defining socioeconomic status was based on pragmatic rather than conceptual considerations: Demographic and Health Surveys do not provide income or consumption data but do have detailed information on household ownership of consumer goods and access to a variety of goods and services. Like income or consumption, the asset index defines disparities in primarily economic terms. It therefore excludes other possibilities of disparities among groups, such as those based on gender, education, ethnic background, or other facets of social exclusion. To that extent the index provides only a partial view of the multidimensional concepts of poverty, inequality, and inequity.

The analysis has been carried out for 44 countries, with the results issued in country reports. The table shows the estimates for the poorest and richest quintiles only; the full set of estimates for more than 20 indicators is available in the country reports (see *Data sources*).

### Definitions

- **Survey year** is the year in which the underlying data were collected.
- **Infant mortality rate** is the number of infants dying before reaching one year of age, per 1,000 live births. The estimates are based on births in the 10 years preceding the survey and may therefore differ from the estimates in table 2.19.
- **Child immunization rate** is the percentage of surviving children ages 12–23 months who received all the following vaccinations: one dose of measles and three doses of DPT (diphtheria, pertussis, and tetanus), BCG (Bacillus Camille Guerin), and OPV (oral polio vaccine).
- **Prevalence of child malnutrition** is the percentage of children whose weight is more than two standard deviations below the median reference standard for their age as established by the U.S. National Center for Health Statistics, the U.S. Centers for Disease Control and Prevention, and the World Health Organization. The data are based on a sample of children who survived to age three, four, or five years, depending on the country.
- **Low mother's body mass index** refers to the percentage of women whose body mass index (BMI) is less than 18.5, a cut-off point indicating acute malnutrition. The BMI is the weight in kilograms divided by the square of the height in meters.
- **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. The estimates are based on births during the three years preceding the survey and may therefore differ from those in table 2.17.

### Data sources

Data are from an analysis of Demographic and Health Surveys by the World Bank and Macro International. Country reports are available at [www.worldbank.org/poverty/health/data/index.htm](http://www.worldbank.org/poverty/health/data/index.htm).



## 2.8 Distribution of income or consumption

	Survey year	Gini index	Percentage share of income or consumption						
			Lowest 10%	Lowest 20%	Second 20%	Third 20%	Fourth 20%	Highest 20%	Highest 10%
Albania		..	..	..	..	..	..	..	..
Algeria	1995 <sup>a,b</sup>	35.3	2.8	7.0	11.6	16.1	22.7	42.6	26.8
Angola		..	..	..	..	..	..	..	..
Argentina		..	..	..	..	..	..	..	..
Armenia	1996 <sup>a,b</sup>	44.4	2.3	5.5	9.4	13.9	20.6	50.6	35.2
Australia	1994 <sup>c,d</sup>	35.2	2.0	5.9	12.0	17.2	23.6	41.3	25.4
Austria	1987 <sup>c,d</sup>	23.1	4.4	10.4	14.8	18.5	22.9	33.3	19.3
Azerbaijan	1995 <sup>c,d</sup>	36.0	2.8	6.9	11.5	16.1	22.3	43.3	27.8
Bangladesh	1995-96 <sup>a,b</sup>	33.6	3.9	8.7	12.0	15.7	20.8	42.8	28.6
Belarus	1998 <sup>a,b</sup>	21.7	5.1	11.4	15.2	18.2	21.9	33.3	20.0
Belgium	1992 <sup>c,d</sup>	25.0	3.7	9.5	14.6	18.4	23.0	34.5	20.2
Benin		..	..	..	..	..	..	..	..
Bolivia	1997 <sup>c,d</sup>	58.9	0.5	1.9	5.9	11.1	19.3	61.8	45.7
Bosnia and Herzegovina		..	..	..	..	..	..	..	..
Botswana		..	..	..	..	..	..	..	..
Brazil	1997 <sup>c,d</sup>	59.1	1.0	2.6	5.7	10.3	18.5	63.0	46.7
Bulgaria	1997 <sup>c,d</sup>	26.4	4.5	10.1	13.9	17.4	21.9	36.8	22.8
Burkina Faso	1994 <sup>a,b</sup>	48.2	2.2	5.5	8.7	12.0	18.7	55.0	39.5
Burundi	1992 <sup>a,b</sup>	33.3	3.4	7.9	12.1	16.3	22.1	41.6	26.6
Cambodia	1997 <sup>a,b</sup>	40.4	2.9	6.9	10.7	14.7	20.1	47.6	33.8
Cameroon		..	..	..	..	..	..	..	..
Canada	1994 <sup>c,d</sup>	31.5	2.8	7.5	12.9	17.2	23.0	39.3	23.8
Central African Republic	1993 <sup>a,b</sup>	61.3	0.7	2.0	4.9	9.6	18.5	65.0	47.7
Chad		..	..	..	..	..	..	..	..
Chile	1996 <sup>c,d</sup>	57.5	1.4	3.4	6.3	10.5	17.9	62.0	46.9
China	1998 <sup>c,d</sup>	40.3	2.4	5.9	10.2	15.1	22.2	46.6	30.4
Hong Kong, China		..	..	..	..	..	..	..	..
Colombia	1996 <sup>c,d</sup>	57.1	1.1	3.0	6.6	11.1	18.4	60.9	46.1
Congo, Dem. Rep.		..	..	..	..	..	..	..	..
Congo, Rep.		..	..	..	..	..	..	..	..
Costa Rica	1997 <sup>c,d</sup>	45.9	1.7	4.5	8.9	14.1	21.6	51.0	34.6
Côte d'Ivoire	1995 <sup>a,b</sup>	36.7	3.1	7.1	11.2	15.6	21.9	44.3	28.8
Croatia	1998 <sup>c,d</sup>	29.0	3.7	8.8	13.3	17.4	22.6	38.0	23.3
Cuba		..	..	..	..	..	..	..	..
Czech Republic	1996 <sup>c,d</sup>	25.4	4.3	10.3	14.5	17.7	21.7	35.9	22.4
Denmark	1992 <sup>c,d</sup>	24.7	3.6	9.6	14.9	18.3	22.7	34.5	20.5
Dominican Republic	1998 <sup>c,d</sup>	47.4	2.1	5.1	8.6	13.0	20.0	53.3	37.9
Ecuador	1995 <sup>a,b</sup>	43.7	2.2	5.4	9.4	14.2	21.3	49.7	33.8
Egypt, Arab Rep.	1995 <sup>a,b</sup>	28.9	4.4	9.8	13.2	16.6	21.4	39.0	25.0
El Salvador	1997 <sup>c,d</sup>	50.8	1.4	3.7	7.8	12.8	20.4	55.3	39.3
Eritrea		..	..	..	..	..	..	..	..
Estonia	1998 <sup>c,d</sup>	37.6	3.0	7.0	11.0	15.3	21.6	45.1	29.8
Ethiopia	1995 <sup>a,b</sup>	40.0	3.0	7.1	10.9	14.5	19.8	47.7	33.7
Finland	1991 <sup>c,d</sup>	25.6	4.2	10.0	14.2	17.6	22.3	35.8	21.6
France	1995 <sup>c,d</sup>	32.7	2.8	7.2	12.6	17.2	22.8	40.2	25.1
Gabon		..	..	..	..	..	..	..	..
Gambia, The	1992 <sup>a,b</sup>	47.8	1.5	4.4	9.0	13.5	20.4	52.8	37.6
Georgia	1996 <sup>c,d</sup>	37.1	2.3	6.1	11.4	16.3	22.7	43.6	27.9
Germany	1994 <sup>c,d</sup>	30.0	3.3	8.2	13.2	17.5	22.7	38.5	23.7
Ghana	1998 <sup>a,b</sup>	39.6	2.4	5.9	10.4	15.3	22.5	45.9	29.5
Greece	1993 <sup>c,d</sup>	32.7	3.0	7.5	12.4	16.9	22.8	40.3	25.3
Guatemala	1998 <sup>c,d</sup>	55.8	1.6	3.8	6.8	10.9	17.9	60.6	46.0
Guinea	1994 <sup>a,b</sup>	40.3	2.6	6.4	10.4	14.8	21.2	47.2	32.0
Guinea-Bissau	1991 <sup>a,b</sup>	56.2	0.5	2.1	6.5	12.0	20.6	58.9	42.4
Guyana	1993 <sup>a,b</sup>	40.2	2.4	6.3	10.7	15.0	21.2	46.9	32.0
Haiti		..	..	..	..	..	..	..	..
Honduras	1997 <sup>c,d</sup>	59.0	0.4	1.6	5.6	11.0	20.1	61.8	44.3



# 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%
Hungary	1998 <sup>a,b</sup>	24.4	4.1	10.0	14.7	18.3	22.7	34.4	20.5
India	1997 <sup>a,b</sup>	37.8	3.5	8.1	11.6	15.0	19.3	46.1	33.5
Indonesia	1999 <sup>a,b</sup>	31.7	4.0	9.0	12.5	16.1	21.3	41.1	26.7
Iran, Islamic Rep.		..	..	..	..	..	..	..	..
Iraq		..	..	..	..	..	..	..	..
Ireland	1987 <sup>c,d</sup>	35.9	2.5	6.7	11.6	16.4	22.4	42.9	27.4
Israel	1992 <sup>c,d</sup>	35.5	2.8	6.9	11.4	16.3	22.9	42.5	26.9
Italy	1995 <sup>c,d</sup>	27.3	3.5	8.7	14.0	18.1	22.9	36.3	21.8
Jamaica	1996 <sup>a,b</sup>	36.4	2.9	7.0	11.5	15.8	21.8	43.9	28.9
Japan	1993 <sup>c,d</sup>	24.9	4.8	10.6	14.2	17.6	22.0	35.7	21.7
Jordan	1997 <sup>a,b</sup>	36.4	3.3	7.6	11.4	15.5	21.1	44.4	29.8
Kazakhstan	1996 <sup>a,b</sup>	35.4	2.7	6.7	11.5	16.4	23.1	42.3	26.3
Kenya	1994 <sup>a,b</sup>	44.5	1.8	5.0	9.7	14.2	20.9	50.2	34.9
Korea, Dem. Rep.		..	..	..	..	..	..	..	..
Korea, Rep.	1993 <sup>a,b</sup>	31.6	2.9	7.5	12.9	17.4	22.9	39.3	24.3
Kuwait		..	..	..	..	..	..	..	..
Kyrgyz Republic	1997 <sup>c,d</sup>	40.5	2.7	6.3	10.2	14.7	21.4	47.4	31.7
Lao PDR	1997 <sup>a,b</sup>	37.0	3.2	7.6	11.4	15.3	20.8	45.0	30.6
Latvia	1998 <sup>c,d</sup>	32.4	2.9	7.6	12.9	17.1	22.1	40.3	25.9
Lebanon		..	..	..	..	..	..	..	..
Lesotho	1986-87 <sup>a,b</sup>	56.0	0.9	2.8	6.5	11.2	19.4	60.1	43.4
Libya		..	..	..	..	..	..	..	..
Lithuania	1996 <sup>a,b</sup>	32.4	3.1	7.8	12.6	16.8	22.4	40.3	25.6
Luxembourg	1994 <sup>c,d</sup>	26.9	4.0	9.4	13.8	17.7	22.6	36.5	22.0
Macedonia, FYR		..	..	..	..	..	..	..	..
Madagascar	1997 <sup>a,b</sup>	46.0	2.2	5.4	9.2	13.4	19.9	52.0	37.3
Malawi		..	..	..	..	..	..	..	..
Malaysia	1997 <sup>c,d</sup>	49.2	1.7	4.4	8.1	12.9	20.3	54.3	38.4
Mali	1994 <sup>a,b</sup>	50.5	1.8	4.6	8.0	11.9	19.3	56.2	40.4
Mauritania	1995 <sup>a,b</sup>	37.3	2.5	6.4	11.2	16.0	22.4	44.1	28.4
Mauritius		..	..	..	..	..	..	..	..
Mexico	1996 <sup>c,d</sup>	51.9	1.6	4.0	7.6	12.2	19.6	56.7	41.1
Moldova	1997 <sup>c,d</sup>	40.6	2.2	5.6	10.2	15.2	22.2	46.8	30.7
Mongolia	1995 <sup>a,b</sup>	33.2	2.9	7.3	12.2	16.6	23.0	40.9	24.5
Morocco	1998-99 <sup>a,b</sup>	39.5	2.6	6.5	10.6	14.8	21.3	46.6	30.9
Mozambique	1996-97 <sup>a,b</sup>	39.6	2.5	6.5	10.8	15.1	21.1	46.5	31.7
Myanmar		..	..	..	..	..	..	..	..
Namibia		..	..	..	..	..	..	..	..
Nepal	1995-96 <sup>a,b</sup>	36.7	3.2	7.6	11.5	15.1	21.0	44.8	29.8
Netherlands	1994 <sup>c,d</sup>	32.6	2.8	7.3	12.7	17.2	22.8	40.1	25.1
New Zealand		..	..	..	..	..	..	..	..
Nicaragua	1998 <sup>a,b</sup>	60.3	0.7	2.3	5.9	10.4	17.9	63.6	48.8
Niger	1995 <sup>a,b</sup>	50.5	0.8	2.6	7.1	13.9	23.1	53.3	35.4
Nigeria	1996-97 <sup>a,b</sup>	50.6	1.6	4.4	8.2	12.5	19.3	55.7	40.8
Norway	1995 <sup>c,d</sup>	25.8	4.1	9.7	14.3	17.9	22.2	35.8	21.8
Oman		..	..	..	..	..	..	..	..
Pakistan	1996-97 <sup>a,b</sup>	31.2	4.1	9.5	12.9	16.0	20.5	41.1	27.6
Panama	1997 <sup>a,b</sup>	48.5	1.2	3.6	8.1	13.6	21.9	52.8	35.7
Papua New Guinea	1996 <sup>a,b</sup>	50.9	1.7	4.5	7.9	11.9	19.2	56.5	40.5
Paraguay	1998 <sup>c,d</sup>	57.7	0.5	1.9	6.0	11.4	20.1	60.7	43.8
Peru	1996 <sup>c,d</sup>	46.2	1.6	4.4	9.1	14.1	21.3	51.2	35.4
Philippines	1997 <sup>a,b</sup>	46.2	2.3	5.4	8.8	13.2	20.3	52.3	36.6
Poland	1998 <sup>a,b</sup>	31.6	3.2	7.8	12.8	17.1	22.6	39.7	24.7
Portugal	1994-95 <sup>c,d</sup>	35.6	3.1	7.3	11.6	15.9	21.8	43.4	28.4
Puerto Rico		..	..	..	..	..	..	..	..
Romania	1994 <sup>c,d</sup>	28.2	3.7	8.9	13.6	17.6	22.6	37.3	22.7
Russian Federation	1998 <sup>a,b</sup>	48.7	1.7	4.4	8.6	13.3	20.1	53.7	38.7



## 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%
Rwanda	1983–85 <sup>a,b</sup>	28.9	4.2	9.7	13.2	16.5	21.6	39.1	24.2
Saudi Arabia		..	..	..	..	..	..	..	..
Senegal	1995 <sup>a,b</sup>	41.3	2.6	6.4	10.3	14.5	20.6	48.2	33.5
Sierra Leone	1989 <sup>a,b</sup>	62.9	0.5	1.1	2.0	9.8	23.7	63.4	43.6
Singapore		..	..	..	..	..	..	..	..
Slovak Republic	1992 <sup>c,d</sup>	19.5	5.1	11.9	15.8	18.8	22.2	31.4	18.2
Slovenia	1998 <sup>c,d</sup>	28.4	3.9	9.1	13.4	17.3	22.5	37.7	23.0
South Africa	1993–94 <sup>a,b</sup>	59.3	1.1	2.9	5.5	9.2	17.7	64.8	45.9
Spain	1990 <sup>c,d</sup>	32.5	2.8	7.5	12.6	17.0	22.6	40.3	25.2
Sri Lanka	1995 <sup>a,b</sup>	34.4	3.5	8.0	11.8	15.8	21.5	42.8	28.0
St. Lucia	1995 <sup>c,d</sup>	42.6	2.0	5.2	9.9	14.8	21.8	48.3	32.5
Sudan		..	..	..	..	..	..	..	..
Swaziland	1994 <sup>c,d</sup>	60.9	1.0	2.7	5.8	10.0	17.1	64.4	50.2
Sweden	1992 <sup>c,d</sup>	25.0	3.7	9.6	14.5	18.1	23.2	34.5	20.1
Switzerland	1992 <sup>c,d</sup>	33.1	2.6	6.9	12.7	17.3	22.9	40.3	25.2
Syrian Arab Republic		..	..	..	..	..	..	..	..
Tajikistan		..	..	..	..	..	..	..	..
Tanzania	1993 <sup>a,b</sup>	38.2	2.8	6.8	11.0	15.1	21.6	45.5	30.1
Thailand	1998 <sup>a,b</sup>	41.4	2.8	6.4	9.8	14.2	21.2	48.4	32.4
Togo		..	..	..	..	..	..	..	..
Trinidad and Tobago	1992 <sup>c,d</sup>	40.3	2.1	5.5	10.3	15.5	22.7	45.9	29.9
Tunisia	1995 <sup>a,b</sup>	41.7	2.3	5.7	9.9	14.7	21.8	47.9	31.8
Turkey	1994 <sup>a,b</sup>	41.5	2.3	5.8	10.2	14.8	21.6	47.7	32.3
Turkmenistan	1998 <sup>a,b</sup>	40.8	2.6	6.1	10.2	14.7	21.5	47.5	31.7
Uganda	1996 <sup>a,b</sup>	37.4	3.0	7.1	11.1	15.4	21.5	44.9	29.8
Ukraine	1999 <sup>a,b</sup>	29.0	3.7	8.8	13.3	17.4	22.7	37.8	23.2
United Arab Emirates		..	..	..	..	..	..	..	..
United Kingdom	1991 <sup>c,d</sup>	36.1	2.6	6.6	11.5	16.3	22.7	43.0	27.3
United States	1997 <sup>c,d</sup>	40.8	1.8	5.2	10.5	15.6	22.4	46.4	30.5
Uruguay	1989 <sup>c,d</sup>	42.3	2.1	5.4	10.0	14.8	21.5	48.3	32.7
Uzbekistan	1993 <sup>c,d</sup>	33.3	3.1	7.4	12.0	16.7	23.0	40.9	25.2
Venezuela, RB	1997 <sup>a,b</sup>	48.8	1.6	4.1	8.3	13.2	20.7	53.7	37.6
Vietnam	1998 <sup>a,b</sup>	36.1	3.6	8.0	11.4	15.2	20.9	44.5	29.9
West Bank and Gaza		..	..	..	..	..	..	..	..
Yemen, Rep.	1998 <sup>a,b</sup>	33.4	3.0	7.4	12.2	16.7	22.5	41.2	25.9
Yugoslavia, FR (Serb./Mont.)		..	..	..	..	..	..	..	..
Zambia	1998 <sup>a,b</sup>	52.6	1.1	3.3	7.6	12.5	20.0	56.6	41.0
Zimbabwe	1990–91 <sup>a,b</sup>	56.8	1.8	4.0	6.3	10.0	17.4	62.3	46.9

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



## Distribution of income or consumption | 2.8

### About the data

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

Data on personal or household income or consumption come from nationally representative household surveys. The data in the table refer to different years between 1985 and 1999. Footnotes to the survey year indicate whether the rankings are based on per capita income or consumption. Each distribution is based on percentiles of population—rather than of households—with households ranked by income or expenditure per person.

Where the original data from the household survey were available, they have been used to directly calculate the income (or consumption) shares by quintile. Otherwise, shares have been estimated from the best available grouped data.

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

Because the underlying household surveys differ in method and in the type of data collected, the distribution indicators are not strictly comparable across countries. These problems are diminishing as survey methods improve and become more standardized, but achieving strict comparability is still impossible (see *About the data* for table 2.6).

Two sources of noncomparability should be noted. First, the surveys can differ in many respects, including whether they use income or consumption expenditure as the living standard indicator. The distribution of income is typically more unequal than the distribution of consumption. In addition, the definitions of income used usually differ 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. Whenever possible, consumption has been used rather than income.

The 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, in some cases, 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 or household. The Gini index measures the area between the Lorenz curve and a hypothetical line of absolute equality, expressed as a percentage of the maximum area under the line. Thus a Gini index of zero represents perfect equality, while an index of 100 implies perfect inequality.
- **Percentage share of income or consumption** is the share that accrues to subgroups of population indicated by deciles or quintiles. Percentage shares by quintile may not sum to 100 because of rounding.

### Data sources

The 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. The data for high-income economies are from the Luxembourg Income Study database.





## 2.9 Assessing vulnerability

	Urban informal sector employment			Children 10-14 in the labor force		Pension contributors			Local health expenditure	
	% of urban employment			% of age group		Year	% of labor force	% of working-age population	Period	% of total health expenditure
	Male 1993-98 <sup>a</sup>	Female 1993-98 <sup>a</sup>	Total 1993-98 <sup>a</sup>	1980	1999					
Albania	..	..	..	4	0	1995	32.0	31.0	..	..
Algeria	..	..	..	7	0	1997	31.0	23.0	1989-90	63.0
Angola	..	..	..	30	26	..	..	..	..	..
Argentina	..	..	46	8	3	1995	53.0	39.0	..	..
Armenia	..	..	..	0	0	1995	66.6	49.4	..	..
Australia	..	..	..	0	0	..	..	..	1986-88	36.2
Austria	..	..	..	0	0	1993	95.8	76.6	..	..
Azerbaijan	..	..	..	0	0	1996	52.0	46.0	..	..
Bangladesh	10	16	10	35	28	1993	3.5	2.6	1994-97	53.5
Belarus	..	..	..	0	0	1992	97.0	94.0	..	..
Belgium	..	..	..	0	0	1995	86.2	65.9	..	..
Benin	..	..	..	30	27	1996	4.8	..	1991-93	1.3
Bolivia	54	64	59	19	12	1999	14.8	13.3	1994-97	30.0
Bosnia and Herzegovina	..	..	..	1	..	..	..	..	..	..
Botswana	12	28	19	26	15	..	..	..	1994-97	20.3
Brazil	..	..	48	19	15	1996	36.0	31.0	..	..
Bulgaria	..	..	..	0	0	1994	64.0	63.0	1986-88	79.8
Burkina Faso	..	..	..	71	45	1993	3.1	3.0	1989-90	50.0
Burundi	..	..	..	50	49	1993	3.3	3.0	1989-90	74.0
Cambodia	..	..	..	27	24	..	..	..	1991-93	51.0
Cameroon	..	..	57	34	23	1993	13.7	11.5	1980-82	8.0
Canada	..	..	..	0	0	1992	91.9	80.2	..	..
Central African Republic	..	..	..	..	..	..	..	..	1989-90	21.0
Chad	..	..	..	42	37	1990	1.1	1.0	1989-90	24.0
Chile	32	27	30	0	0	1995	70.0	43.0	1983-85	55.9
China	..	..	..	30	9	1994	17.6	17.4	1983-85	40.0
Hong Kong, China	..	..	..	6	0	..	..	..	..	..
Colombia	54	53	53	12	6	1999	35.0	29.3	1989-90	14.4
Congo, Dem. Rep.	..	..	..	33	29	..	..	..	..	..
Congo, Rep.	..	..	..	27	26	1992	5.8	5.6	..	..
Costa Rica	..	..	40	10	4	1998	50.6	38.5	1989-90	1.7
Côte d'Ivoire	37	73	53	28	19	1997	9.3	9.1	1989-90	40.0
Croatia	6	7	6	0	0	1997	66.0	57.0	..	..
Cuba	..	..	..	0	0	..	..	..	1989-90	31.0
Czech Republic	..	..	..	0	0	1995	85.0	67.2	..	..
Denmark	..	..	..	0	0	1993	89.6	88.0	1986-88	27.5
Dominican Republic	..	..	..	25	14	1999	14.4	12.4	1994-97	16.0
Ecuador	39	42	40	9	5	1999	43.1	33.8	..	..
Egypt, Arab Rep.	..	..	..	18	10	1994	50.0	34.2	1994-97	64.0
El Salvador	..	..	..	17	14	1996	26.2	25.0	1994-97	88.0
Eritrea	..	..	..	44	39	..	..	..	..	..
Estonia	..	..	..	0	0	1995	76.0	67.0	..	..
Ethiopia	19	53	33	46	41	..	..	..	1989-90	60.0
Finland	..	..	..	0	0	1993	90.3	83.6	1983-85	25.8
France	..	..	..	0	0	1993	88.4	74.6	1986-88	51.4
Gabon	..	..	..	29	15	1991	7.3	7.0	1994-97	20.2
Gambia, The	66	83	72	44	34	..	..	..	1989-90	51.6
Georgia	..	..	..	0	0	1996	77.0	72.0	..	..
Germany	..	..	..	0	0	1995	94.2	82.3	..	..
Ghana	..	..	79	16	12	1993	7.2	9.0	1994-97	42.7
Greece	..	..	..	5	0	1996	88.0	73.0	1980-82	17.0
Guatemala	..	..	..	19	15	1999	22.8	19.3	1994-97	43.8
Guinea	..	..	..	41	32	1993	1.5	1.8	1994-97	66.0
Guinea-Bissau	..	..	..	43	37	..	..	..	1994-97	26.0
Haiti	..	..	..	33	23	..	..	..	1994-97	9.7
Honduras	..	..	49	14	7	1999	20.6	17.7	1989-90	40.6



## Assessing vulnerability 2.9

	Urban informal sector employment			Children 10–14 in the labor force		Pension contributors			Local health expenditure	
	% of urban employment			% of age group		Year	% of labor force	% of working-age population	Period	% of total health expenditure
	Male 1993–98 <sup>a</sup>	Female 1993–98 <sup>a</sup>	Total 1993–98 <sup>a</sup>	1980	1999					
Hungary	..	..	..	0	0	1996	77.0	65.0	1983–85	40.0
India	..	..	44	21	13	1992	10.6	7.9	1991–93	39.0
Indonesia	19	23	21	13	8	1995	8.0	7.0	1994–97	62.5
Iran, Islamic Rep.	3	90	18	14	3	1994	29.8	..	1994–97	37.0
Iraq	..	..	..	11	2	..	..	..	1983–85	40.0
Ireland	..	..	..	1	0	1992	79.3	64.7	..	..
Israel	..	..	..	0	0	1992	82.0	63.0	1986–88	49.0
Italy	..	..	..	2	0	1997	87.0	68.0	1983–85	31.0
Jamaica	26	21	24	0	0	1999	44.4	45.8	1994–97	20.0
Japan	..	..	..	0	..	1994	97.5	92.3	..	..
Jordan	..	..	..	4	0	1995	40.0	25.0	1994–97	9.0
Kazakhstan	..	..	17	0	0	1997	51.0	44.0	..	..
Kenya	..	..	58	45	40	1995	18.0	24.0	1991–93	21.0
Korea, Dem. Rep.	..	..	..	3	0	..	..	..	..	..
Korea, Rep.	..	..	..	0	0	1996	58.0	43.0	1994–97	100.0
Kuwait	..	..	..	0	0	..	..	..	1994–97	21.0
Kyrgyz Republic	..	..	12	0	0	1997	44.0	42.0	..	..
Lao PDR	..	..	..	31	26	..	..	..	1986–88	29.0
Latvia	..	..	9	0	0	1995	60.5	52.3	..	..
Lebanon	..	..	..	5	0	..	..	..	1980–82	4.0
Lesotho	..	..	..	28	21	..	..	..	1994–97	97.6
Libya	..	..	..	9	0	..	..	..	1994–97	37.0
Lithuania	12	5	9	0	0	..	..	..	..	..
Macedonia, FYR	..	..	..	1	0	1995	49.0	47.0	..	..
Madagascar	..	..	58	40	34	1993	5.4	4.8	1991–93	47.7
Malawi	..	..	..	45	32	..	..	..	1994–97	40.0
Malaysia	..	..	..	8	3	1993	48.7	37.8	1991–93	28.8
Mali	..	..	71	61	52	1990	2.5	2.0	1989–90	31.8
Mauritania	..	..	..	30	22	..	..	..	1994–97	32.5
Mauritius	..	..	..	5	2	..	..	..	1991–93	10.0
Mexico	28	26	27	9	5	1997	30.0	31.0	..	..
Moldova	..	..	..	3	0	..	..	..	..	..
Mongolia	..	..	..	4	1	..	..	..	1983–85	40.0
Morocco	..	..	..	21	2	1994	20.9	17.8	1991–93	23.1
Mozambique	..	..	..	39	33	..	..	..	1991–93	41.0
Myanmar	53	57	54	28	23	..	..	..	1986–88	35.0
Namibia	..	..	..	34	18	..	..	..	1991–93	35.0
Nepal	..	..	..	56	43	..	..	..	1994–97	21.4
Netherlands	..	..	..	0	0	1993	91.7	75.4	1989–90	8.3
New Zealand	..	..	..	0	0	..	..	..	1994–97	33.4
Nicaragua	..	..	..	19	12	1999	14.3	13.3	1994–97	37.3
Niger	..	..	..	48	44	1992	1.3	1.5	1986–88	56.0
Nigeria	..	..	..	29	24	1993	1.3	1.3	1988–92	14.8
Norway	..	..	..	0	0	1993	94.0	85.8	1983–85	10.4
Oman	..	..	..	6	0	..	..	..	1994–97	73.0
Pakistan	..	..	..	23	16	1993	3.5	2.1	1994–97	59.0
Panama	..	..	34	6	3	1998	51.6	40.7	1989–90	11.0
Papua New Guinea	..	..	..	28	18	..	..	..	1991–93	51.0
Paraguay	47	46	46	15	6	1997	31.0	29.0	1986–88	4.6
Peru	48	54	51	4	2	1997	20.0	16.0	1983–85	8.1
Philippines	16	19	17	14	6	1996	28.3	13.6	1989–90	72.3
Poland	14	11	13	0	0	1996	68.0	64.0	1986–88	15.2
Portugal	..	..	..	8	1	1996	84.3	80.0	1983–85	50.3
Puerto Rico	..	..	..	0	0	..	..	..	..	..
Romania	..	..	..	0	0	1994	55.0	48.0	..	..
Russian Federation	..	..	..	0	0	..	..	..	..	..



## 2.9 Assessing vulnerability

	Urban informal sector employment			Children 10-14 in the labor force		Pension contributors			Local health expenditure	
	% of urban employment			% of age group		Year	% of labor force	% of working-age population	Period	% of total health expenditure
	Male 1993-98 <sup>a</sup>	Female 1993-98 <sup>a</sup>	Total 1993-98 <sup>a</sup>	1980	1999					
Rwanda	..	..	..	43	41	1993	9.3	13.3	1989-90	89.7
Saudi Arabia	..	..	..	5	0	..	..	..	1989-90	24.0
Senegal	..	..	..	43	28	1998	4.3	4.7	1989-90	41.0
Sierra Leone	..	..	..	19	14	..	..	..	1989-90	60.0
Singapore	..	..	..	2	0	1995	73.0	56.0	1991-93	13.7
Slovak Republic	25	11	19	0	0	1996	73.0	72.0	..	..
Slovenia	..	..	..	0	0	1995	86.0	68.7	..	..
South Africa	11	26	17	1	0	..	..	..	1994-97	1.5
Spain	..	..	..	0	0	1994	85.3	61.4	..	..
Sri Lanka	..	..	..	4	2	1992	28.8	20.8	1991-93	51.3
Sudan	..	..	..	33	28	1996	3.9	..	1994-97	50.0
Sweden	..	..	..	0	0	1994	91.1	88.9	1986-88	29.0
Switzerland	..	..	..	0	0	1994	98.1	96.8	..	..
Syrian Arab Republic	..	..	..	14	3	..	..	..	1986-88	47.0
Tajikistan	..	..	..	0	0	..	..	..	..	..
Tanzania	60	85	67	43	37	1996	2.0	2.0	1991-93	37.0
Thailand	75	79	6	25	13	1999	18.0	17.0	1991-93	35.6
Togo	..	..	..	36	27	1997	6.0	3.0	1991-93	49.0
Trinidad and Tobago	..	..	..	1	0	..	..	..	1994-97	34.5
Tunisia	..	..	..	6	0	1991	39.4	27.2	1991-93	30.0
Turkey	..	..	15	21	9	1990	34.6	..	1986-88	26.8
Turkmenistan	..	..	..	0	0	..	..	..	..	..
Uganda	68	81	84	49	44	1994	8.2	..	1994-97	60.0
Ukraine	5	5	5	0	0	1995	69.8	66.1	..	..
United Arab Emirates	..	..	..	0	0	..	..	..	..	..
United Kingdom	..	..	..	0	0	1994	89.7	84.5	1983-85	30.0
United States	..	..	..	0	0	1993	94.0	91.9	1986-88	39.0
Uruguay	33	27	30	4	1	1995	82.0	78.0	..	..
Uzbekistan	..	..	..	0	0	..	..	..	..	..
Venezuela, RB	44	40	42	4	0	1999	23.6	18.2	..	..
Vietnam	..	..	..	22	6	1998	8.4	10.0	1994-97	50.1
West Bank and Gaza	..	..	..	..	..	..	..	..	..	..
Yemen, Rep.	..	..	..	26	19	..	..	..	1994-97	17.0
Yugoslavia, FR (Serb./Mont.)	..	..	..	0	0	..	..	..	..	..
Zambia	..	..	81	19	16	1994	10.2	7.9	1994-97	12.0
Zimbabwe	..	..	..	37	28	..	..	..	1994-97	51.2
<b>World</b>				<b>20 w</b>	<b>12 w</b>					
<b>Low income</b>				24	19					
<b>Middle income</b>				21	7					
Lower middle income				24	7					
Upper middle income				9	6					
<b>Low &amp; middle income</b>				23	13					
East Asia & Pacific				26	9					
Europe & Central Asia				3	1					
Latin America & Carib.				13	9					
Middle East & N. Africa				14	5					
South Asia				23	15					
Sub-Saharan Africa				35	29					
<b>High income</b>				0	0					
Europe EMU				1	0					

a. Data are for the most recent year available.



## Assessing vulnerability 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. It is therefore primarily a function of a 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.

Poor households face many risks, and vulnerability is thus multidimensional. The indicators in the table focus on individual risks—informal sector employment, child labor, 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 through their children. Income security is a prime concern for the elderly. And affordable access to health care is a primary concern for all poor people, for whom illness and injury have both direct and opportunity costs.

For informal sector employment the most common sources of data are labor force and special informal sector surveys, based on a mixed household and enterprise survey approach or an economic or establishment census approach. Other sources include multipurpose household surveys, household income and expenditure surveys, surveys of household industries or economic activities, small and micro enterprise surveys, 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 country definitions see the notes in the data source.

Reliable estimates of child labor are hard to obtain. In many countries child labor is officially presumed not to exist and so is not included in surveys or in official data. Underreporting also occurs because data exclude children engaged in agricultural or household activities with their families. Most child workers are in Asia. But the share of children working is highest in Africa, where, on average, one in three children ages 10–14 is engaged in some form of economic activity, mostly in agriculture (Fallon and Tzannatos 1998). Available statistics suggest that more boys than girls work. But the number of girls working is often underestimated because surveys exclude those working as unregistered

domestic help or doing full-time household work to enable their parents to work outside the home.

Data on pension contributors come from national sources, the International Labour Organization, 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). Coverage may be overstated in countries that do not attempt to count informal sector workers as part of the labor force.

Data on the share of national health expenditure devoted to local primary health care are reported to the World Health Organization by member states, primarily by ministries of health, finance, or regional development. Countries can achieve significant progress in health by providing universal access to affordable primary health care. The share of national health expenditure devoted to local health care represents the effort made to finance essential and accessible health care. The indicator does not take into account primary health care delivered by hospitals or central and regional activities to support and guide local health care. Nor does it indicate the quality or efficiency of health activities and services. Because each country defines local health care in the context of its own system, the data cannot be compared across countries.

### Definitions

- **Urban informal sector employment** is broadly characterized as employment in units in urban areas 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.
- **Children 10–14 in the labor force** refer to the share of that age group active in the labor force.
- **Pension contributors** refer to the share of the labor force or working-age population (here defined as ages 20–59) covered by a pension scheme.
- **Local health expenditure** is the share of national health expenditure devoted to local primary health care. The data refer to first-level contact and include community health care, health center care, and dispensary care but not hospital care.

### Data sources

The data on urban informal sector employment are from the International Labour Organization (ILO) database Key Indicators of the Labour Market (2000 issue). The child labor force participation rates are from the ILO database Estimates and Projections of the Economically Active Population, 1950–2010. The data on pension contributors are drawn from Robert Palacios and Montserrat Pallares-Miralles's "International Patterns of Pension Provision" (2000). For updates and further notes and sources go to the World Bank's Web site on pensions ([www.worldbank.org/pensions](http://www.worldbank.org/pensions)). The data on local health expenditure are from the World Health Organization's statistical information system.



## 2.10 Enhancing security

	Public expenditure on pensions				Public expenditure on health			Public expenditure on education	
	Year	% of GDP	Year	Average pension % of per capita income	Year	% of GDP	Per capita PPP \$	% of GNI 1994-97 <sup>a</sup>	Per student % of GNI per capita 1994-97 <sup>a</sup>
Albania	1995	5.1	..	..	1998	3.5	102	3.1	..
Algeria	1997	2.1	1991	75.0	1998	2.6	155	5.1	21.9
Angola	..	..	..	..	1991	3.9	66	..	..
Argentina	1994	6.2	..	..	1998	4.9	614	3.5	15.1
Armenia	1996	3.1	1996	18.7	1998	3.1	70	2.0	11.3
Australia	1995	4.6	1989	37.3	1998	5.9	1,372	5.4	19.8
Austria	1995	14.9	1993	69.3	1999	6.0	1,503	5.4	31.0
Azerbaijan	1996	2.5	1996	51.4	1997	1.2	27	3.0	13.6
Bangladesh	1992	0.0	..	..	1998	1.7	24	2.2	..
Belarus	1997	7.7	1995	31.2	1998	4.9	317	5.9	29.9
Belgium	1995	12.0	..	..	1998	7.9	1,933	3.1	14.5
Benin	1993	0.4	1993	189.7	1998	1.6	14	3.2	..
Bolivia	1995	2.5	..	..	1998	4.1	95	4.9	..
Bosnia and Herzegovina	..	..	..	..	..	..	..	..	..
Botswana	..	..	..	..	1998	2.5	165	8.6	29.0
Brazil	1996	4.9	..	..	1999	2.9	206	5.1	24.7
Bulgaria	1996	7.3	1995	39.3	1998	3.8	190	3.2	18.6
Burkina Faso	1992	0.3	1992	207.3	1999	1.4	14	1.5	..
Burundi	1991	0.2	1991	57.4	1998	0.6	4	4.0	..
Cambodia	..	..	..	..	1998	0.6	8	2.9	..
Cameroon	1993	0.4	..	..	1998	1.0	16	..	..
Canada	1995	5.4	1994	54.3	1999	6.3	1,663	6.9	30.2
Central African Republic	1990	0.3	..	..	1998	2.0	22	..	..
Chad	1997	0.1	..	..	1998	2.3	20	1.7	..
Chile	1993	5.8	1993	56.1	1998	2.7	238	3.6	14.6
China	1996	2.7	..	..	1997	2.0	62	2.3	13.8
Hong Kong, China	..	..	..	..	1996	2.1	494	2.9	..
Colombia	1994	1.1	1989	72.2	1998	5.2	305	4.1	18.4
Congo, Dem. Rep.	..	..	..	..	..	..	..	..	..
Congo, Rep.	1992	0.9	..	..	1998	2.0	16	6.1	..
Costa Rica	1996	3.8	1993	76.1	1998	5.2	394	5.4	..
Côte d'Ivoire	1997	0.3	..	..	1998	1.2	20	5.0	..
Croatia	1997	11.6	..	..	1997	8.1	555	5.3	26.3
Cuba	1992	12.6	..	..	1994	8.2	..	6.7	39.0
Czech Republic	1996	9.0	1996	37.0	1999	7.0	917	5.1	29.2
Denmark	1996	9.6	1994	46.7	1999	6.7	1,747	8.1	42.9
Dominican Republic	..	..	..	..	1998	1.9	196	2.3	8.4
Ecuador	1997	1.0	..	..	1998	1.7	53	3.5	14.1
Egypt, Arab Rep.	1994	2.5	1994	45.0	1997	1.8	57	4.8	..
El Salvador	1996	1.3	..	..	1998	2.6	107	2.5	9.7
Eritrea	..	..	..	..	1997	2.9	24	1.8	..
Estonia	1995	7.0	1995	56.7	1997	5.5	445	7.2	36.7
Ethiopia	1993	0.9	..	..	1998	1.7	10	4.0	63.1
Finland	1995	12.9	1994	57.4	1998	5.2	1,146	7.5	35.4
France	1995	13.3	..	..	1998	7.3	1,607	6.0	28.9
Gabon	..	..	..	..	1998	2.1	132	2.9	..
Gambia, The	..	..	..	..	1998	1.9	28	4.9	41.5
Georgia	1996	1.7	1996	12.6	1998	0.5	17	5.2	30.8
Germany	1995	12.0	1995	62.8	1999	7.9	1,872	4.8	27.5
Ghana	1993	0.1	..	..	1998	1.8	33	4.2	..
Greece	1993	11.9	1990	85.6	1998	4.7	686	3.1	17.5
Guatemala	1995	0.7	1995	27.6	1998	2.1	73	1.7	8.8
Guinea	..	..	..	..	1998	2.2	41	1.9	16.0
Guinea-Bissau	..	..	..	..	1994	1.1	585	..	..
Haiti	..	..	..	..	1998	1.4	21	..	..
Honduras	1994	0.6	..	..	1998	3.9	96	3.6	..



## Enhancing security 2.10

	Public expenditure on pensions				Public expenditure on health			Public expenditure on education	
	Year	% of GDP	Year	Average pension % of per capita income	Year	% of GDP	Per capita PPP \$	% of GNI 1994-97 <sup>a</sup>	Per student % of GNI per capita 1994-97 <sup>a</sup>
Hungary	1996	9.7	1996	33.6	1998	5.2	562	4.6	25.8
India	..	..	..	..	1997	0.8	12	3.2	16.3
Indonesia	..	..	..	..	1999	0.7	21	1.4	6.0
Iran, Islamic Rep.	1994	1.5	..	..	1998	1.7	93	4.0	14.7
Iraq	..	..	..	..	1990	3.8	..	..	..
Ireland	1996	5.1	1993	77.9	1999	4.5	1,160	6.0	24.3
Israel	1996	5.9	1992	48.1	1998	6.0	1,083	7.6	27.2
Italy	1995	15.0	..	..	1999	5.6	1,245	4.9	30.0
Jamaica	1996	0.3	1989	25.9	1998	3.2	112	7.4	..
Japan	1995	6.6	1989	33.9	1998	5.9	1,444	3.6	19.9
Jordan	1995	4.2	1995	144.0	1998	5.3	139	6.8	25.7
Kazakhstan	1997	5.0	1996	18.8	1998	3.5	161	4.4	..
Kenya	1993	0.5	..	..	1998	2.4	24	6.5	..
Korea, Dem. Rep.	..	..	..	..	..	..	..	..	..
Korea, Rep.	1995	1.4	..	..	1998	2.3	330	3.7	..
Kuwait	1990	3.5	..	..	1997	2.9	697	5.0	21.2
Kyrgyz Republic	1997	6.4	1994	35.0	1998	2.9	70	5.3	31.7
Lao PDR	..	..	..	..	1998	1.2	17	2.1	12.1
Latvia	1995	10.2	1994	47.6	1999	4.3	269	6.3	35.9
Lebanon	..	..	..	..	1998	2.2	129	2.5	..
Lesotho	..	..	..	..	1995	3.4	52	8.4	37.1
Libya	..	..	..	..	..	..	..	..	..
Lithuania	1996	6.2	1995	21.3	1998	4.8	325	5.4	29.5
Macedonia, FYR	1998	8.7	1996	91.6	1998	5.5	244	5.1	..
Madagascar	1990	0.2	..	..	1998	1.1	9	1.9	..
Malawi	..	..	..	..	1998	2.8	16	5.4	17.4
Malaysia	1990	1.0	..	..	1998	1.4	109	4.9	20.7
Mali	1991	0.4	..	..	1998	5.1	15	2.2	25.2
Mauritania	1992	0.2	..	..	1998	1.4	21	5.1	35.8
Mauritius	1999	4.4	..	..	1998	1.8	162	4.6	22.9
Mexico	1996	0.4	..	..	1997	2.8	222	4.9	18.7
Moldova	1996	7.5	..	..	1998	6.4	134	10.6	53.5
Mongolia	..	..	..	..	1995	4.3	64	5.7	27.3
Morocco	1994	1.8	1994	118.0	1998	1.2	43	5.0	28.2
Mozambique	1996	0.0	..	..	1998	2.8	23	..	..
Myanmar	..	..	..	..	1998	0.2	..	1.2	6.5
Namibia	..	..	..	..	1998	4.1	218	9.1	27.1
Nepal	..	..	..	..	1998	1.3	15	3.2	14.5
Netherlands	1996	11.5	1989	48.5	1998	6.0	1,390	5.1	25.5
New Zealand	1995	6.5	..	..	1998	6.2	1,122	7.3	28.9
Nicaragua	1996	4.3	..	..	1998	8.3	180	3.9	15.2
Niger	1992	0.1	..	..	1998	1.2	9	2.3	..
Nigeria	1991	0.1	1991	40.5	1998	0.8	7	0.7	..
Norway	1995	8.9	1994	49.9	1998	7.4	2,043	7.4	38.6
Oman	..	..	..	..	1998	2.9	..	4.5	19.0
Pakistan	1993	0.9	..	..	1998	0.9	17	2.7	..
Panama	1996	4.3	..	..	1998	4.9	277	5.1	21.2
Papua New Guinea	..	..	..	..	1998	2.5	59	..	..
Paraguay	..	..	..	..	1998	1.7	75	4.0	15.9
Peru	1996	1.2	..	..	1998	2.4	108	2.9	..
Philippines	1993	1.0	..	..	1998	1.7	62	3.4	11.4
Poland	1995	14.4	1995	61.2	1999	4.5	374	7.5	32.6
Portugal	1995	9.9	1989	44.6	1998	5.2	793	5.8	24.1
Puerto Rico	..	..	..	..	..	..	..	..	..
Romania	1996	5.1	1994	34.1	1997	2.6	167	3.6	20.3
Russian Federation	1996	5.7	1995	18.3	1997	4.6	328	3.5	..



## 2.10 Enhancing security

	Public expenditure on pensions				Public expenditure on health			Public expenditure on education	
	Year	% of GDP	Year	Average pension % of per capita income	Year	% of GDP	Per capita PPP \$	% of GNI 1994-97 <sup>a</sup>	Per student % of GNI per capita 1994-97 <sup>a</sup>
Rwanda	..	..	..	..	1998	2.0	17	..	..
Saudi Arabia	..	..	..	..	1997	6.4	712	7.5	34.0
Senegal	1998	1.5	..	..	1998	2.6	36	3.7	..
Sierra Leone	..	..	..	..	1998	0.9	4	..	..
Singapore	1996	1.4	..	..	1998	1.2	279	3.0	..
Slovak Republic	1994	9.1	1994	44.5	1998	5.7	574	5.0	..
Slovenia	1996	13.6	1996	49.3	1998	6.6	991	5.7	13.7
South Africa	..	..	..	..	1998	3.3	290	7.9	23.0
Spain	1995	10.6	1995	54.1	1998	5.4	924	5.0	23.6
Sri Lanka	1996	2.4	..	..	1998	1.4	44	3.4	12.7
Sudan	..	..	..	..	1997	0.7	10	0.9	10.5
Sweden	1995	11.4	1994	78.0	1998	6.7	1,431	8.3	41.4
Switzerland	1995	12.6	1993	44.4	1998	7.6	2,011	5.4	32.5
Syrian Arab Republic	1991	0.5	..	..	1998	0.8	32	3.1	14.0
Tajikistan	1996	3.0	..	..	1998	5.2	54	2.2	..
Tanzania	..	..	..	..	1998	1.3	6	..	..
Thailand	..	..	..	..	1998	1.9	109	4.8	25.3
Togo	1997	0.6	1993	178.8	1998	1.3	18	4.5	..
Trinidad and Tobago	1996	0.6	..	..	1998	2.5	186	3.6	..
Tunisia	1991	2.6	1991	89.5	1998	2.2	125	7.7	27.5
Turkey	1995	3.7	1993	112.7	1997	2.9	193	2.2	16.4
Turkmenistan	1996	2.3	..	..	1998	4.1	115	..	..
Uganda	1997	0.8	..	..	1998	1.9	20	2.6	..
Ukraine	1996	8.6	1995	30.9	1998	3.6	120	7.3	..
United Arab Emirates	..	..	..	..	1998	0.8	145	1.8	..
United Kingdom	1995	10.2	..	..	1999	5.9	1,290	5.3	22.8
United States	1995	7.2	1989	33.0	1999	5.8	1,849	5.4	23.9
Uruguay	1996	15.0	1996	64.1	1998	1.9	169	3.3	15.5
Uzbekistan	1995	5.3	1995	45.8	1998	3.4	73	7.7	..
Venezuela, RB	1990	0.5	..	..	1998	2.6	153	5.2	..
Vietnam	1998	1.6	..	..	1998	0.8	13	3.0	12.8
West Bank and Gaza	..	..	..	..	1996	4.9	..	..	..
Yemen, Rep.	1994	0.1	..	..	1998	4.8	14	7.0	..
Yugoslavia, FR (Serb./Mont.)	..	..	..	..	..	..	..	..	..
Zambia	1993	0.1	..	..	1998	3.6	27	2.2	..
Zimbabwe	..	..	..	..	1997	2.9	81	..	..
<b>World</b>						<b>2.6 w</b>	<b>317 w</b>	<b>4.6 m</b>	<b>23.3 m</b>
<b>Low income</b>						1.2	20	3.2	16.3
<b>Middle income</b>						2.6	144	4.6	21.2
Lower middle income						2.4	101	4.1	18.5
Upper middle income						3.3	303	5.0	23.0
<b>Low &amp; middle income</b>						2.0	87	4.0	20.5
East Asia & Pacific						1.7	64	3.0	12.8
Europe & Central Asia						4.0	262	5.1	29.3
Latin America & Carib.						3.3	226	3.9	15.4
Middle East & N. Africa						2.5	128	5.0	23.8
South Asia						0.9	15	3.2	14.5
Sub-Saharan Africa						1.8	40	4.0	26.2
<b>High income</b>						6.1	1,582	5.4	26.4
Europe EMU						6.6	1,473	5.3	26.5

a. Data are for the most recent year available.



## Enhancing security 2.10

### About the data

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 basic health care and education.

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 goods 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.

Data on public pension spending are from national sources and include 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.

The lack 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 health care financing and delivery because the data on public spending often are not aggregated. The data in the table are the product of an effort 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.

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, local authorities, and so on). The share of gross national income (GNI) devoted to education can be interpreted as reflecting a country's effort in education. It often bears a weak relationship to measures of output of the education system, as reflected in educational attainment. The pattern in this relationship suggests wide variations across countries in the efficiency with which the government's resources are translated into education outcomes.

### Definitions

- **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.
- **Public expenditure on health** 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.
- **Public expenditure on education** consists of public spending on public education plus subsidies to private education at the primary, secondary, and tertiary levels.

### Data sources

The data on pension spending are drawn from Robert Palacios and Montserrat Pallares-Miralles's "International Patterns of Pension Provision" (2000). For updates and further notes and sources go to the World Bank's Web site on pensions ([www.worldbank.org/pensions](http://www.worldbank.org/pensions)). The estimates of health expenditure come from the World Health Organization's *World Health Report 2000* and subsequent updates and from the Organisation for Economic Co-operation and Development for its member countries, supplemented by World Bank country and sector studies, including the Human Development Network's *Sector Strategy: Health, Nutrition, and Population* (World Bank 1997e). Data are also drawn from World Bank public expenditure reviews, the International Monetary Fund's Government Finance Statistics database, and other studies. The data on education expenditure were compiled using an electronic database of the United Nations Educational, Scientific, and Cultural Organization (UNESCO).

Table 2.10a

Access to prescribed medicines in the Russian Federation, 1994–96  
% of people

	1994	1995	1996
Able to fill prescriptions	62	70	45
Unable to fill prescriptions	38	30	55
Because medicine was unavailable	76	59	45
Because medicine was too costly	23	32	48
For other reasons (such as lack of time)	2	9	8

Source: UNICEF 1999.

In many countries poverty and economic hardship have reduced people's access to health care services, often because of a decline in public health spending. Data from a large household survey in Russia show that lack of money is becoming the main obstacle to acquiring medicines.





## 2.11 Education inputs

	Expenditure per student						Expenditure on teachers' compensation		Primary teachers with required academic qualifications	Primary pupil-teacher ratio
	Primary		Secondary		Tertiary		% of total current education expenditure		%	pupils per teacher
	1980	1997	1980	1997	1980	1997	1980	1997	1992-98 <sup>a</sup>	1997
Albania	..	9.7	..	19.9	..	..	..	..	..	18
Algeria	8.9	..	23.9	..	..	..	63.6	74.3 <sup>b</sup>	93	27
Angola	..	..	..	..	..	..	..	..	..	29
Argentina	..	8.3	..	15.0	30.0	19.9	..	84.1	..	17
Armenia	..	..	..	..	..	25.8	..	..	89	19
Australia	..	14.9	44.5	16.8	51.1	29.7	..	54.1 <sup>c</sup>	..	18
Austria	15.7	21.7	..	24.7	37.4	35.3	53.1	61.7	..	12
Azerbaijan	..	20.6	..	..	..	15.3	..	..	100	20
Bangladesh	..	..	10.4	..	34.9	..	33.5	..	68	..
Belarus	..	46.8	..	30.1	..	18.6	..	..	100	19
Belgium	..	8.8	33.8	13.4	51.0	17.5	73.0	73.6 <sup>d</sup>	..	12
Benin	..	12.6	..	..	..	249.0	..	..	100	50
Bolivia	..	..	..	..	..	53.6	..	48.5	64	..
Bosnia and Herzegovina	..	..	..	..	..	..	..	..	84	..
Botswana	12.5	..	..	..	614.9	..	54.9	..	..	28
Brazil	9.6	11.1	11.0	..	58.7	..	..	..	83	24
Bulgaria	17.5	30.7	..	..	51.3	17.4	..	..	99	17
Burkina Faso	..	19.7	87.5	..	2,957.9	590.6	61.0	67.8	100	47
Burundi	..	..	222.2	..	1,479.9	..	74.3	..	..	42
Cambodia	..	..	..	..	..	..	..	..	91	44
Cameroon	..	..	..	..	401.2	..	65.4	..	90	49
Canada	..	..	..	..	38.7	39.8	52.2	57.3	..	16
Central African Republic	..	..	..	..	936.1	..	..	..	..	..
Chad	..	7.3	..	24.0	..	234.5	..	64.4	..	67
Chile	9.6	10.9	16.8	11.8	112.0	20.6	76.8	..	96	30
China	3.8	6.8	..	11.7	246.2	66.3	..	..	95	24
Hong Kong, China	7.7	..	8.2	..	4.2	..	72.9	..	..	..
Colombia	5.3	..	..	12.0	43.8	35.4	93.4	82.0 <sup>e</sup>	90	25
Congo, Dem. Rep.	..	..	..	..	747.9	..	..	..	..	45
Congo, Rep.	..	14.8	..	8.2	369.3	..	70.8	..	100	70
Costa Rica	..	..	25.7	23.2	75.8	..	50.2	..	86	29
Côte d'Ivoire	..	..	..	..	375.7	215.3	..	..	..	41
Croatia	..	..	..	..	..	..	..	..	94	19
Cuba	10.4	16.6	..	34.0	28.5	98.1	38.8	..	100	12
Czech Republic	..	16.4	..	21.5	..	34.9	..	44.4	..	18
Denmark	..	26.5	11.2	34.5	50.0	49.6	49.3	43.1	..	10
Dominican Republic	..	..	..	4.9	..	9.7	62.2	..	..	28
Ecuador	..	..	..	16.1	24.2	37.1	77.4	..	83	25
Egypt, Arab Rep.	..	..	..	..	57.7	..	..	..	100	23
El Salvador	..	7.1	..	5.5	141.7	7.7	..	..	..	33
Eritrea	..	9.2	..	9.9	..	..	..	..	..	44
Estonia	..	..	..	45.4	..	38.4	..	..	..	17
Ethiopia	18.6	31.6	..	71.9	1,118.6	869.0	68.4	..	..	43
Finland	20.4	22.8	..	27.5	37.3	45.6	50.5	47.7	..	18
France	12.0	15.8	20.2	26.8	29.3	28.0	68.1	..	..	19
Gabon	..	..	..	..	..	..	..	..	56	56
Gambia, The	18.7	15.9	..	29.2	..	268.5	..	..	100	30
Georgia	..	..	..	..	..	25.5	..	..	94	18
Germany	..	..	..	..	..	37.8	..	..	..	17
Ghana	..	..	..	..	26.7	..	60.0	..	..	33
Greece	7.0	..	9.5	15.1	30.1	22.3	84.8	..	..	14
Guatemala	4.8	6.2	10.4	5.2	..	31.1	..	62.8	..	35
Guinea	..	..	..	29.4	..	444.8	..	..	89	49
Guinea-Bissau	20.9	..	69.8	..	..	..	73.5	..	..	..
Haiti	6.5	..	..	..	130.0	..	66.9	..	86	35
Honduras	..	..	..	..	77.4	68.7	71.1	67.8	100	35



## Education inputs 2.11

	Expenditure per student						Expenditure on teachers' compensation		Primary teachers with required academic qualifications	Primary pupil-teacher ratio
	Primary % of GNI per capita		Secondary % of GNI per capita		Tertiary % of GNI per capita		% of total current education expenditure		%	pupils per teacher
	1980	1997	1980	1997	1980	1997	1980	1997	1992-98 <sup>a</sup>	1997
Hungary	14.0	18.4	..	18.2	85.3	31.4	45.2	..	..	12
India	..	9.2	..	17.7	88.2	99.8	..	..	88	62
Indonesia	..	..	..	..	..	12.9	..	..	94	22
Iran, Islamic Rep.	16.2	..	..	11.0	..	67.5	..	47.4 <sup>f</sup>	38	30
Iraq	..	..	6.5	..	87.5	..	..	..	..	20
Ireland	11.6	13.7	24.3	21.9	60.1	36.3	67.6	73.6 <sup>g</sup>	100	22
Israel	16.2	16.3	..	21.8	74.1	37.1	51.2	..	..	14
Italy	..	22.3	..	28.5	..	21.2	..	67.3 <sup>g</sup>	..	11
Jamaica	13.9	13.7	22.0	..	202.8	..	65.6	64.1	100	31
Japan	14.8	18.9	16.6	19.0	21.0	13.9	49.8	..	..	19
Jordan	..	9.1	..	..	60.0	81.2	70.5	70.4	47	21
Kazakhstan	..	..	..	..	..	21.5	..	..	98	18
Kenya	15.4	..	..	..	928.1	..	..	..	..	31
Korea, Dem. Rep.	..	..	..	..	..	..	..	..	100	..
Korea, Rep.	11.7	17.9	9.3	12.9	16.1	6.0	69.2	..	100	31
Kuwait	13.2	21.5	..	5.5	37.4	87.9	46.5	..	100	14
Kyrgyz Republic	..	..	..	40.9	..	49.6	..	..	95	20
Lao PDR	..	5.0	..	12.9	..	63.8	..	67.1	87	30
Latvia	..	..	..	51.1	13.6	32.8	..	40.5	80	13
Lebanon	..	..	..	..	..	22.3	..	..	..	..
Lesotho	8.6	13.8	72.5	53.7	1,013.2	779.3	60.9	57.6	79	46
Libya	..	..	..	..	..	..	..	..	..	..
Lithuania	..	..	..	27.8	..	42.1	..	..	..	16
Macedonia, FYR	..	..	..	..	..	..	..	..	100	..
Madagascar	..	..	..	25.3	402.5	184.5	81.8	..	..	47
Malawi	7.6	8.9	..	27.1	1,833.7	1,593.3	43.4	..	..	59
Malaysia	..	9.8	..	18.4	148.9	57.3	57.5	58.6	..	19
Mali	31.8	15.2	..	29.2	3,631.8	379.3	51.0	..	..	80
Mauritania	30.4	12.0	..	60.4	..	205.9	..	..	..	50
Mauritius	..	10.3	..	15.9	344.1	62.8	31.4	..	100	24
Mexico	4.4	11.9	..	17.9	26.4	46.8	..	..	84	28
Moldova	..	..	..	..	..	63.2	..	..	..	23
Mongolia	..	..	..	..	..	37.8	..	..	97	31
Morocco	..	..	54.9	44.4	155.3	69.5	..	78.0	..	28
Mozambique	..	..	..	..	..	..	..	..	..	58
Myanmar	..	3.2	..	9.1	..	19.0	..	..	..	46
Namibia	..	20.9	..	36.1	..	101.7	..	..	25	..
Nepal	..	9.7	..	12.6	272.0	115.3	59.2	..	96	39
Netherlands	13.8	14.8	23.3	21.2	73.3	47.3	73.5	..	..	14
New Zealand	15.1	17.9	13.7	23.8	59.9	45.7	82.7	..	..	18
Nicaragua	9.5	14.5	10.7	7.6	42.3	..	66.7	..	63	36
Niger	..	29.3	..	74.4	1,538.5	..	..	..	..	41
Nigeria	4.7	..	..	..	529.6	..	..	..	90	34
Norway	..	30.6	14.9	17.8	38.2	46.7	..	..	..	7
Oman	..	13.3	..	22.0	..	26.7	..	..	..	26
Pakistan	..	..	..	..	..	..	..	..	99	40
Panama	..	..	11.5	11.5	29.8	40.2	65.3	51.2	100	..
Papua New Guinea	..	..	..	..	..	..	..	..	100	38
Paraguay	..	10.9	..	12.0	..	90.9	..	..	59	21
Peru	7.2	4.5	11.3	6.8	5.2	15.4	59.4	40.1	74	27
Philippines	..	9.8	4.3	9.4	13.8	14.4	..	..	100	35
Poland	8.1	17.6	14.8	17.1	47.3	27.2	..	..	..	15
Portugal	14.8	19.3	..	21.5	36.3	24.5	..	..	98	12
Puerto Rico	..	..	..	..	..	..	..	..	..	..
Romania	..	20.3	..	8.8	..	31.8	..	..	23	20
Russian Federation	..	..	..	..	..	..	..	..	..	20



## 2.11 Education inputs

	Expenditure per student						Expenditure on teachers' compensation		Primary teachers with required academic qualifications	Primary pupil-teacher ratio
	Primary % of GNI per capita		Secondary % of GNI per capita		Tertiary % of GNI per capita		% of total current education expenditure		%	pupils per teacher
	1980	1997	1980	1997	1980	1997	1980	1997	1992-98 <sup>a</sup>	1997
Rwanda	11.1	..	..	..	901.8	..	74.8	..	47	..
Saudi Arabia	..	..	..	..	109.2	72.3	..	..	100	13
Senegal	..	..	..	63.6	447.5	..	..	..	99	58
Sierra Leone	..	..	..	..	..	..	..	..	..	..
Singapore	..	..	..	..	40.6	28.0	47.5	..	..	25
Slovak Republic	..	22.3	..	..	..	30.8	..	37.9	79	20
Slovenia	..	20.1	..	7.5	..	37.5	..	62.2	..	14
South Africa	..	..	..	..	..	..	..	64.5 <sup>b</sup>	..	45
Spain	..	16.8	..	22.5	..	17.8	..	..	..	15
Sri Lanka	..	..	..	..	65.6	85.0	..	..	100	28
Sudan	..	5.0	..	4.1	527.9	..	..	..	..	29
Sweden	43.0	29.5	15.8	34.1	35.0	72.4	46.4	..	..	12
Switzerland	..	19.3	29.9	29.0	58.5	45.4	61.0	59.9	..	12
Syrian Arab Republic	..	..	15.1	16.6	74.7	..	57.8	..	..	23
Tajikistan	..	..	..	..	..	..	..	..	..	24
Tanzania	..	..	..	..	..	..	..	..	..	37
Thailand	8.8	12.2	..	10.9	60.1	26.2	80.3	56.8 <sup>f</sup>	84	..
Togo	8.3	9.9	..	26.7	891.5	495.2	68.3	74.2	..	46
Trinidad and Tobago	..	10.5	20.4	..	59.4	..	73.2	..	100	25
Tunisia	..	..	37.7	24.4	194.6	74.2	81.3	77.0	..	24
Turkey	..	9.0	..	9.2	95.0	51.1	..	..	100	24
Turkmenistan	..	..	..	..	..	..	..	..	..	..
Uganda	4.3	7.8	..	..	1,029.7	..	..	69.9	..	35
Ukraine	21.2	47.3	..	..	20.2	22.7	..	..	..	21
United Arab Emirates	..	..	..	..	..	..	..	30.2	..	16
United Kingdom	..	17.8	22.1	20.5	79.8	40.7	52.1	41.0 <sup>h</sup>	..	19
United States	..	19.1	..	23.9	48.2	24.7	..	51.7	..	16
Uruguay	11.1	..	..	10.6	28.1	24.2	56.9	41.5	100	20
Uzbekistan	..	..	..	..	..	..	..	..	..	21
Venezuela, RB	5.7	2.1	23.1	4.8	71.1	..	68.8	21.4	..	21
Vietnam	..	7.7	..	8.0	..	77.9	..	66.0	77	33
West Bank and Gaza	..	..	..	..	..	..	..	..	..	..
Yemen, Rep.	..	..	..	..	..	..	..	..	74	30
Yugoslavia, FR (Serb./Mont.)	..	..	..	..	..	..	..	..	..	..
Zambia	10.6	5.0	..	..	605.5	356.2	52.6	..	71	39
Zimbabwe	19.4	19.4	..	34.8	324.5	340.3	75.2	91.1	100	39
<b>World</b>	.. m	.. m	.. m	.. m	60.1 m	.. m	64.5 m	62.0 m	89 m	34 w
<b>Low income</b>	..	..	..	..	..	..	66.7	67.5	88	50
<b>Middle income</b>	..	..	..	..	60.0	..	65.3	58.6	91	25
Lower middle income	..	..	..	..	67.4	..	65.6	64.1	91	24
Upper middle income	..	..	..	..	58.7	38.6	61.4	47.8	87	25
<b>Low &amp; middle income</b>	..	..	..	..	..	..	65.5	64.4	89	36
East Asia & Pacific	..	8.9	..	..	..	41.7	69.2	62.3	94	25
Europe & Central Asia	..	..	..	..	..	..	45.2	40.5	..	20
Latin America & Carib.	..	..	..	9.9	51.3	..	66.7	57.0	84	25
Middle East & N. Africa	..	..	..	..	87.5	..	67.1	74.3	76	26
South Asia	..	..	..	..	88.2	85.0	46.4	..	87	59
Sub-Saharan Africa	..	..	..	..	915.3	..	65.4	67.8	..	40
<b>High income</b>	..	19.3	..	21.9	44.4	37.5	52.6	57.3	..	17
Europe EMU	..	16.8	..	24.7	37.4	35.8	67.9	67.4	..	16

a. Data are for the most recent year available. b. Not including tertiary education. c. Not including preprimary education. d. Flemish community only. e. Ministry of Education only. f. Not including expenditure on universities. g. Data refer to expenditure on public institutions only. h. Not including expenditure on independent private institutions.



## Education inputs 2.11

### About the data

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

The data on education spending in the table refer solely to public spending—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, local authorities, and so on).

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

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

The share of teachers with required academic qualifications measures the quality of the teaching staff available in primary schools. 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, all of which may affect the quality

of teaching. The qualifications are specified by the national authorities of each country and may not relate specifically to teaching. Since the indicator is based on minimum national qualifications, which may vary greatly, care should be taken in comparing across countries.

The comparability of pupil-teacher ratios across countries is affected by the definition of teachers, by whether teachers are assigned nonteaching duties, and by differences in class size by grade and in the number of hours taught. Moreover, the underlying enrollment levels are subject to a variety of reporting errors (for further discussion of enrollment data see *About the data* for table 2.12). While the pupil-teacher ratio is often used to compare the quality of schooling across countries, it is often only weakly related to the value added of schooling systems (Behrman and Rosenzweig 1994).

Table 2.11a

Reported deaths of teachers in Zambia and Zimbabwe, selected years, 1996–99

	1996	1998	1999
Zambia	680	1,331	..
Zimbabwe	950	1,250	1,403

Source: World Bank 2000a.

**HIV/AIDS will affect the supply of education services in some countries through its effects on mortality rates. In Zambia the mortality rate among teachers in 1996–99 was more than 70 percent higher than the rate among the general adult population. In Zimbabwe it was similar to that for the general adult population.**

### Definitions

- **Expenditure per student** is the public current spending on education divided by the total number of students by level, as a percentage of gross national income (GNI) per capita.
- **Expenditure on teachers' compensation** is the public expenditure on teachers' gross salaries and other benefits as a percentage of the total public current spending on education.
- **Primary teachers with required academic qualifications** refer to the percentage of primary school teachers with at least the minimum academic qualifications required by national public authorities for teaching in primary education.
- **Primary pupil-teacher ratio** is the number of pupils enrolled in primary school divided by the number of primary school teachers (regardless of their teaching assignment).

### Data sources

International data on education are compiled by UNESCO's Institute for Statistics in cooperation with national commissions and national statistical services. Data on qualified teachers come from UNESCO's special data collection for the Education for All initiative. The remaining data in the table were compiled using an electronic database maintained by UNESCO.



## 2.12 Participation in education

	Gross enrollment ratio							Net enrollment ratio <sup>a</sup>			
	Preprimary % of relevant age group 1997	Primary % of relevant age group		Secondary % of relevant age group		Tertiary % of relevant age group		Primary % of relevant age group		Secondary % of relevant age group	
		1980	1997	1980	1997	1980	1997	1980	1997	1980	1997
Albania	40	113	107	67	38	5	12	..	102	..	..
Algeria	2	95	108	33	63	6	12	81	94	31	56
Angola	..	175	..	21	..	0 <sup>b</sup>	..	..	..	..	..
Argentina	56	106	111	56	73	22	36	..	104	..	..
Armenia	26	..	87	..	90	..	12	..	..	..	..
Australia	80	112	101	71	153 <sup>c</sup>	25	80	102	95	70	89
Austria	81	99	100	93	103	22	48	87	88	..	88
Azerbaijan	19	115	106	95	77	24	17	..	..	..	..
Bangladesh	..	61	..	18	..	3	..	..	..	..	..
Belarus	82	104	98	98	93	39	44	..	85	..	..
Belgium	118	104	103	91	146 <sup>c</sup>	26	56	97	98	..	88
Benin	3	67	78	16	18	1	3	..	63	..	..
Bolivia	..	87	..	37	..	15	..	79	..	16	..
Bosnia and Herzegovina	..	..	..	..	..	..	..	..	..	..	..
Botswana	..	91	108	19	65	1	6	76	81	14	45
Brazil	59	98	125	34	62	11	15	80	90	14	20
Bulgaria	63	98	99	85	77	16	41	96	92	73	74
Burkina Faso	2	18	40	3	..	0 <sup>b</sup>	1	15	31	..	..
Burundi	..	26	51	3	7	1	..	20	..	..	..
Cambodia	5	139	113	..	24	0 <sup>b</sup>	1	..	100	..	..
Cameroon	10	98	85	18	27	2	..	..	..	15	..
Canada	64	99	102	88	105	57	88	..	95	..	91
Central African Republic	..	71	..	14	..	1	..	56	..	..	..
Chad	1	..	58	..	10	..	1	..	46	..	6
Chile	98	109	101	53	75	12	32	..	89	..	58
China	29	113	123	46	70	2	6	..	102	..	..
Hong Kong, China	83	107	94	64	73	10	..	95	90	61	69
Colombia	33	112	113	39	67	9	17	..	85	..	46
Congo, Dem. Rep.	..	92	72	24	26	1	2	..	61	..	23
Congo, Rep.	..	141	114	74	53	5	..	96	..	..	..
Costa Rica	74	105	104	48	48	21	30	89	89	39	40
Côte d'Ivoire	3	75	71	19	25	3	6	..	55	..	..
Croatia	40	..	87	77	82	19	28	..	82	..	66
Cuba	88	106	106	81	81	17	12	95	101	..	..
Czech Republic	88	96	104	99	99	17	24	..	87	..	87
Denmark	83	96	102	105	121	28	48	96	99	88	88
Dominican Republic	33	118	94	42	54	..	23	..	..	..	22
Ecuador	59	118	127	53	50	35	..	..	97	..	..
Egypt, Arab Rep.	9	73	101	51	78	16	20	..	93	..	68
El Salvador	40	75	97	24	37	9	18	..	78	..	22
Eritrea	4	..	53	..	20	..	1	..	30	..	16
Estonia	68	103	94	127	104	25	42	..	87	..	83
Ethiopia	1	37	43	9	12	0 <sup>b</sup>	1	..	32	..	..
Finland	45	96	99	100	118	32	74	..	98	..	93
France	83	111	105	85	111	25	51	100	100	79	95
Gabon	..	174	162	34	56	..	8	..	..	..	..
Gambia, The	..	53	77	11	25	..	2	50	65	..	..
Georgia	30	93	88	109	77	30	42	..	87	..	74
Germany	89	..	104	..	104	..	47	..	86	..	88
Ghana	..	79	79	41	..	2	..	..	..	..	..
Greece	64	103	93	81	95	17	47	96	90	..	87
Guatemala	35	71	88	19	26	8	9	59	73	13	..
Guinea	5	36	54	17	14	5	1	..	42	..	..
Guinea-Bissau	..	68	62	6	..	..	..	47	..	3	..
Haiti	..	77	..	14	..	1	..	38	..	..	..
Honduras	14	98	111	30	..	8	10	78	..	..	..



## Participation in education 2.12

	Gross enrollment ratio							Net enrollment ratio <sup>a</sup>			
	Preprimary % of relevant age group	Primary % of relevant age group		Secondary % of relevant age group		Tertiary % of relevant age group		Primary % of relevant age group		Secondary % of relevant age group	
		1997	1980	1997	1980	1997	1980	1997	1980	1997	1980
Hungary	109	96	103	70	98	14	24	95	97	..	86
India	5	83	100	30	49	5	7	..	..	..	..
Indonesia	19	107	113	29	56	4	11	88	95	..	42
Iran, Islamic Rep.	11	87	98	42	77	..	18	..	90	..	71
Iraq	7	113	85	57	42	9	..	99	76	47	..
Ireland	114	100	105	90	118	18	41	90	92	78	86
Israel	71	95	98	73	88	29	41	..	..	..	..
Italy	95	100	101	72	95	27	47	..	100	..	..
Jamaica	..	103	100	67	..	7	8	96	..	64	..
Japan	50	101	101	93	103	31	41	101	103	93	99
Jordan	19	82	71	59	57	13	18	73	68	53	41
Kazakhstan	29	85	98	93	87	34	33	..	..	..	..
Kenya	35	115	85	20	24	1	..	91	..	..	..
Korea, Dem. Rep.	..	..	..	..	..	..	..	..	..	..	..
Korea, Rep.	88	110	94	78	102	15	68	104	93	70	97
Kuwait	63	102	77	80	65	11	19	85	62	..	61
Kyrgyz Republic	7	116	104	110	79	16	12	..	95	..	..
Lao PDR	8	114	112	21	29	0 <sup>b</sup>	3	..	72	..	22
Latvia	47	102	96	99	84	24	33	..	90	..	79
Lebanon	75	111	111	59	81	30	27	..	76	..	..
Lesotho	..	104	108	18	31	1	2	67	70	13	18
Libya	..	125	..	76	..	8	..	..	..	62	..
Lithuania	40	79	98	114	86	35	31	..	..	..	81
Macedonia, FYR	26	100	99	61	63	28	20	..	95	..	56
Madagascar	5	130	92	..	16	3	2	..	61	..	..
Malawi	..	60	134	5	17	1	1	43	103	..	..
Malaysia	42	93	101	48	64	4	12	..	102	..	..
Mali	2	26	49	8	13	1	1	20	31	..	..
Mauritania	..	37	79	11	16	..	4	..	57	..	..
Mauritius	104	93	106	50	65	1	6	79	98	..	..
Mexico	73	120	114	49	64	14	16	..	101	..	51
Moldova	45	83	97	78	81	30	27	..	..	..	..
Mongolia	25	107	88	92	56	22	17	..	81	..	53
Morocco	68	83	86	26	39	6	11	62	74	20	..
Mozambique	..	99	60	5	7	0 <sup>b</sup>	1	36	40	..	6
Myanmar	..	91	121	22	30	5	5	..	..	..	..
Namibia	11	..	131	..	62	..	8	..	91	..	36
Nepal	..	86	113	22	42	3	5	..	..	..	..
Netherlands	100	100	108	93	132 <sup>c</sup>	29	47	93	100	81	91
New Zealand	76	111	101	83	113	27	63	..	100	81	90
Nicaragua	23	94	102	41	55	12	12	70	77	22	..
Niger	1	25	29	5	7	0 <sup>b</sup>	..	21	25	4	6
Nigeria	..	109	98	18	33	3	..	..	..	..	..
Norway	103	100	100	94	119	26	62	98	100	84	97
Oman	5	51	76	12	67	0 <sup>b</sup>	8	43	69	10	..
Pakistan	..	40	..	14	..	..	..	..	..	..	..
Panama	76	107	106	61	69	21	32	89	..	46	..
Papua New Guinea	1	59	80	12	14	2	3	..	..	..	..
Paraguay	61	106	111	27	47	9	10	89	91	..	38
Peru	40	114	123	59	73	17	26	86	91	..	55
Philippines	11	112	117	64	78	24	29	94	101	45	59
Poland	46	100	96	77	98	18	25	98	95	71	85
Portugal	61	123	128	37	111 <sup>c</sup>	11	39	99	..	..	78
Puerto Rico	..	..	..	..	..	42	..	..	..	..	..
Romania	53	104	104	94	78	12	23	..	95	..	73
Russian Federation	..	102	107	96	..	46	43	..	93	..	..



## 2.12 Participation in education

	Gross enrollment ratio							Net enrollment ratio <sup>a</sup>			
	Preprimary % of relevant age group 1997	Primary % of relevant age group		Secondary % of relevant age group		Tertiary % of relevant age group		Primary % of relevant age group		Secondary % of relevant age group	
		1980	1997	1980	1997	1980	1997	1980	1997	1980	1997
Rwanda	..	63	..	3	..	0 <sup>b</sup>	..	59	..	..	..
Saudi Arabia	8	61	76	30	61	7	16	49	61	21	43
Senegal	2	46	71	11	16	3	3	37	60	..	..
Sierra Leone	..	52	..	14	..	1	..	..	..	..	..
Singapore	..	108	94	60	74	8	39	99	93	..	..
Slovak Republic	76	..	102	..	94	..	22	..	..	..	..
Slovenia	61	98	98	..	92	20	36	..	95	..	..
South Africa	35	90	133	..	95	..	19	..	..	..	58
Spain	74	109	107	87	120	23	51	102	105	74	..
Sri Lanka	..	103	109	55	75	3	5	..	..	..	..
Sudan	23	50	51	16	21	2	..	..	..	..	..
Sweden	73	97	107	88	140 <sup>c</sup>	31	50	..	102	..	99
Switzerland	95	84	97	94	100	18	33	79	90	78	84
Syrian Arab Republic	7	100	101	46	43	17	16	90	91	39	38
Tajikistan	10	..	95	..	78	24	20	..	..	..	..
Tanzania	..	93	67	3	6	0 <sup>b</sup>	1	68	48	..	..
Thailand	75	99	89	29	59	15	22	..	..	..	..
Togo	3	118	120	33	27	2	4	..	81	..	..
Trinidad and Tobago	..	99	99	69	74	4	8	90	88	..	..
Tunisia	11	102	118	27	64	5	14	82	98	23	..
Turkey	8	96	107	35	58	5	21	..	99	..	51
Turkmenistan	..	..	..	..	..	23	..	..	..	..	..
Uganda	..	50	74	5	12	1	2	..	..	..	..
Ukraine	..	102	..	94	..	42	42	..	..	..	..
United Arab Emirates	57	89	89	52	80	3	12	74	78	..	71
United Kingdom	30	103	116	84	129 <sup>c</sup>	19	52	97	99	79	92
United States	70	99	102	91	97	56	81	..	95	..	90
Uruguay	45	107	109	62	85	17	30	..	93	..	..
Uzbekistan	55	81	78	106	94	29	..	..	..	..	..
Venezuela, RB	44	93	91	21	40	21	..	82	84	14	22
Vietnam	40	109	114	42	57	2	7	95	..	..	..
West Bank and Gaza	..	..	..	..	..	..	..	..	..	..	..
Yemen, Rep.	..	..	70	..	34	..	4	..	..	..	..
Yugoslavia, FR (Serb./Mont.)	31	..	69	..	62	..	22	..	..	..	..
Zambia	..	90	89	16	27	2	3	77	75	..	16
Zimbabwe	..	85	112	8	50	1	7	..	..	..	..
<b>World</b>	<b>31 w</b>	<b>97 w</b>	<b>106 w</b>	<b>49 w</b>	<b>64 w</b>	<b>13 w</b>	<b>14 w</b>	<b>.. w</b>	<b>.. w</b>	<b>.. w</b>	<b>.. w</b>
<b>Low income</b>	..	83	97	29	46	6	8	..	..	..	..
<b>Middle income</b>	36	106	119	52	69	10	12	..	98	..	..
Lower middle income	31	107	120	52	70	9	9	..	99	..	..
Upper middle income	60	102	109	51	66	14	22	..	94	..	43
<b>Low &amp; middle income</b>	25	96	107	42	59	8	10	..	..	..	..
East Asia & Pacific	33	111	119	44	69	4	8	..	100	..	..
Europe & Central Asia	..	99	100	86	..	31	32	..	92	..	..
Latin America & Carib.	57	105	113	42	60	14	17	..	91	..	33
Middle East & N. Africa	17	87	95	42	64	11	16	..	87	..	62
South Asia	5	77	100	27	49	5	7	..	..	..	..
Sub-Saharan Africa	..	81	78	15	27	1	..	..	..	..	..
<b>High income</b>	70	102	103	87	106	36	62	..	95	..	90
Europe EMU	87	106	104	81	108	25	49	..	94	..	91

a. Net enrollment ratios exceeding 100 percent indicate discrepancies between estimates of the school-age population and reported enrollment data. b. Less than 0.5. c. Includes training for the unemployed.



## Participation in education 2.12

### About the data

School enrollment data are reported to the United Nations Educational, Scientific, and Cultural Organization (UNESCO) by national education authorities. Enrollment ratios help to monitor two important issues for universal primary education, an international development goal that implies achieving a net primary enrollment ratio of 100 percent. Gross enrollment ratios help to assess whether an education system has sufficient capacity to meet the needs of universal primary education. And net enrollment ratios show the proportion of children of primary school age who are enrolled in school or who are out of school.

Enrollment ratios are a useful measure of participation in education, but they may also have significant limitations. Enrollment ratios 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. Behrman and Rosenzweig (1994), comparing official school enrollment data for Malaysia in 1988 with gross school attendance rates from a household survey, found that the official statistics systematically overstated enrollment.

Overage or underage enrollments 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 their underage children in primary school may do so by overstating the age of the children. And in some education systems ages for children repeating a grade may be deliberately or inadvertently underreported.

As an international indicator, the gross primary enrollment ratio has been used to indicate broad levels of participation as well as school capacity. It has an inherent weakness: the length of primary education differs significantly across countries. A short duration tends to increase the ratio and a long duration to decrease it (in part because there are more dropouts among older children).

Other problems affecting cross-country comparisons of enrollment data stem from errors in estimates of school-age populations. Age-gender structures from censuses or vital registration systems, the primary sources of data on school-age populations, are commonly subject to underenumeration (especially of young children) 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 postcensus 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, which are quite high in some developing countries, leading to a substantial number of overage children enrolled in each grade and raising the gross enrollment ratio. A common error that may also distort enrollment ratios is the lack of distinction between new entrants and repeaters, which, other things equal, leads to underreporting of repeaters and overestimation of dropouts. Thus gross enrollment ratios provide an indication of the capacity of each level of the education system, but a high ratio does not necessarily indicate a successful education system. 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.

Table 2.12a

Average annual growth in the population of primary school age in selected Sub-Saharan African countries, with and without AIDS, 2000–10  
%

	Without AIDS	With AIDS
Kenya	1.6	0.5
Uganda	3.4	3.0
Zambia	2.5	1.0
Zimbabwe	1.2	-0.8

Note: The projection without AIDS assumes that AIDS never existed; the projection with AIDS traces the historical development of AIDS and projects forward to 2010.

Source: World Bank 2000a.

**HIV/AIDS affects the demand for education through its effects on the size of the school-age population—through high death rates among adults of reproductive age and through mother-child transmission during birth or through breastfeeding. The impact will be greatest where prevalence rates are high.**

### 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.
- **Net enrollment ratio** is the ratio of the number of children of official school age (as defined by the national education system) who are enrolled in school to the population of the corresponding official school age. Based on the International Standard Classification of Education, 1976 (ISCED76),
- **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.

### Data sources

The data are from an electronic database maintained by UNESCO.





## 2.13 Education efficiency

	Net intake rate in grade 1		Percentage of cohort reaching grade 5				Repeaters				Coefficient of efficiency	
	% of school-age population		Male		Female		Primary % of total enrollment		Secondary % of total enrollment		Year	Ideal years to graduate as % of actual years
	1994-99 <sup>a</sup>	1994-99 <sup>a</sup>	1980	1997	1980	1997	1980	1997	1980	1997		
Albania	..	..	..	81	..	83	..	5.3	..	15.9	1994	88.8 <sup>b</sup>
Algeria	82	79	90	93	85	95	11.7	10.5	8.5	19.6	1998	84.1
Angola	..	..	..	..	..	..	29.2	..	..	..	1997	51.6
Argentina	..	..	..	70	..	70	..	5.3	..	9.2	1997	89.0
Armenia	..	..	..	..	..	..	..	0.2	..	..	1995	99.8 <sup>b</sup>
Australia	..	..	..	..	..	..	..	..	..	..	..	..
Austria	..	..	..	..	..	..	..	..	..	..	..	..
Azerbaijan	81	82	..	..	..	..	..	0.4	..	1.0	1997	98.1
Bangladesh	65	65	18	..	26	..	17.8	..	..	..	1998	75.7
Belarus	..	..	..	..	..	..	0.3	0.9	..	0.7	1995	98.4 <sup>b</sup>
Belgium	..	..	75	..	77	..	19.4	..	..	..	..	..
Benin	50	36	59	64	62	57	19.6	25.1	..	..	1994	49.8 <sup>b</sup>
Bolivia	57	58	..	..	..	..	..	..	..	..	1998	54.9
Bosnia and Herzegovina	100	100	..	..	..	..	..	..	..	..	..	..
Botswana	62	63	80	87	84	93	2.9	3.3	..	2.8	1995	90.7 <sup>b</sup>
Brazil	..	..	..	..	..	..	20.2	18.4	7.3	10.8	1998	78.0
Bulgaria	98	98	..	..	..	..	1.7	3.4	0.1	2.0	1997	89.6
Burkina Faso	16	11	76	74	74	77	17.1	16.0	14.3	..	1997	67.7 <sup>b</sup>
Burundi	31	31	100	..	96	..	30.2	..	4.3	..	1997	69.3
Cambodia	63	62	..	51	..	46	..	26.3	..	6.8	1998	39.5
Cameroon	..	..	70	..	69	..	30.0	..	13.7	..	1998	63.7
Canada	..	..	..	..	..	..	..	..	..	..	..	..
Central African Republic	25	19	63	..	50	..	35.1	..	..	..	1990	20.0 <sup>b</sup>
Chad	..	..	..	62	..	53	..	32.0	..	18.4	1995	43.2 <sup>b</sup>
Chile	39 <sup>c</sup>	38 <sup>c</sup>	94	100	97	100	..	5.4	..	4.3	1995	91.7 <sup>b</sup>
China	115 <sup>d</sup>	117 <sup>d</sup>	..	93	..	94	..	1.6	..	0.2	1995	94.2 <sup>b</sup>
Hong Kong, China	..	..	98	..	99	..	3.6	1.1	6.5	..	..	..
Colombia	..	..	36	70	39	76	13.2	7.2	..	..	1997	71.3
Congo, Dem. Rep.	26	19	56	..	59	..	18.8	..	..	..	1992	58.3 <sup>b</sup>
Congo, Rep.	..	..	81	40	83	78	25.7	33.2	..	31.7	1994	34.2 <sup>b</sup>
Costa Rica	..	..	77	86	82	89	7.9	10.1	7.5	9.3	1997	83.6
Côte d'Ivoire	26	21	86	77	79	71	19.6	24.2	..	..	1996	59.0
Croatia	98	99	..	..	..	..	..	0.5	..	0.6	1997	100.0
Cuba	93	93	..	..	..	..	5.7	3.1	..	1.7	1997	94.8
Czech Republic	..	..	..	..	..	..	..	1.2	..	0.7	1994	98.2 <sup>b</sup>
Denmark	..	..	99	100	99	99	..	..	..	..	1994	100.0 <sup>b</sup>
Dominican Republic	..	..	..	..	..	..	18.0	..	..	..	..	..
Ecuador	85	84	..	84	..	86	9.7	3.5	..	..	1996	80.4
Egypt, Arab Rep.	88	85	92	..	88	..	7.9	6.5	..	..	1998	91.7
El Salvador	53	51	17	76	16	77	8.8	4.3	..	0.9	1995	63.5 <sup>b</sup>
Eritrea	22	19	..	73	..	67	..	20.5	..	15.0	1995	66.5 <sup>b</sup>
Estonia	..	..	..	96	..	97	..	2.8	..	3.4	1994	95.6 <sup>b</sup>
Ethiopia	..	..	50	51	51	50	12.2	7.8	..	18.0	1994	74.8 <sup>b</sup>
Finland	..	..	..	100	..	100	..	0.4	..	..	1994	99.6 <sup>b</sup>
France	..	..	..	..	..	..	..	..	9.3	8.1	1990	94.2 <sup>b</sup>
Gabon	52	57	57	58	56	61	34.8	34.9	..	22.0	1994	46.5 <sup>b</sup>
Gambia, The	38	37	74	78	71	83	12.4	12.7	2.1	..	1997	74.3
Georgia	95	92	..	..	..	..	..	0.4	..	0.5	1998	98.6 <sup>b</sup>
Germany	..	..	..	..	..	..	..	1.7	..	2.2	1994	98.0 <sup>b</sup>
Ghana	..	..	..	..	..	..	2.1	..	..	..	1990	87.5 <sup>b</sup>
Greece	..	..	99	..	98	..	1.1	..	3.9	..	1990	99.8 <sup>b</sup>
Guatemala	76	73	..	52	..	47	15.0	15.3	2.5	..	1998	51.1
Guinea	20	15	59	..	41	..	21.9	27.9	..	30.4	1997	53.1
Guinea-Bissau	..	..	25	..	17	..	28.9	..	14.5	..	..	..
Haiti	42	43	20	..	21	..	15.5	..	..	..	1997	47.0
Honduras	46	46	..	..	..	..	16.2	12.0	..	..	1997	61.4



## Education efficiency 2.13

	Net intake rate in grade 1		Percentage of cohort reaching grade 5				Repeaters				Coefficient of efficiency	
	% of school-age population		Male		Female		Primary % of total enrollment		Secondary % of total enrollment		Year	Ideal years to graduate as % of actual years
	1994-99 <sup>a</sup>	1994-99 <sup>a</sup>	1980	1997	1980	1997	1980	1997	1980	1997		
Hungary	..	..	96	..	97	..	2.1	..	..	..	1991	93.7 <sup>b</sup>
India	74	61	..	..	..	..	..	3.7	..	..	1997	66.6
Indonesia	50	48	..	88	..	89	8.3	5.8	..	0.7	1997	88.3
Iran, Islamic Rep.	97	95	..	..	..	..	..	5.9	..	..	1997	92.1
Iraq	98	93	77	..	64	..	23.2	..	..	..	..	..
Ireland	99	98	..	..	..	..	..	1.7	..	2.2	1996	94.7
Israel	..	..	..	..	..	..	..	..	..	..	..	..
Italy	..	..	99	98	99	99	1.2	0.4	..	2.7	1994	99.6
Jamaica	75	75	91	..	91	..	3.9	..	2.1	..	1996	89.1
Japan	100	100	100	..	100	..	..	..	..	..	1998	99.9
Jordan	63	63	100	..	98	..	3.2	1.3	4.4	..	1997	97.3
Kazakhstan	99	98	..	..	..	..	..	0.6	..	0.8	1995	94.8
Kenya	..	..	60	..	62	..	12.9	..	..	..	..	..
Korea, Dem. Rep.	100	100	..	..	..	..	..	..	..	..	1998	100.0
Korea, Rep.	94	96	94	98	94	99	..	..	0.0 <sup>e</sup>	0.0 <sup>e</sup>	1997	97.2
Kuwait	63	62	..	..	..	..	6.2	3.4	7.0	5.4	1998	88.4
Kyrgyz Republic	97	96	..	..	..	..	..	0.4	..	0.6	1998	94.5
Lao PDR	55	53	..	57	..	54	..	23.4	..	5.5	1997	51.5
Latvia	80	84	..	..	..	..	..	2.5	..	1.3	1995	96.1 <sup>b</sup>
Lebanon	..	..	..	..	..	..	..	13.4	..	11.1	1998	40.0
Lesotho	23	26	50	55	68	71	20.7	20.1	..	..	1997	53.6
Libya	..	..	..	..	..	..	9.2	..	12.7	..	..	..
Lithuania	..	..	..	..	..	..	..	1.3	..	1.3	1995	98.1 <sup>b</sup>
Macedonia, FYR	77	75	..	95	..	95	..	0.5	..	..	1995	92.2 <sup>b</sup>
Madagascar	..	..	..	49	..	33	..	33.8	..	..	1996	25.9
Malawi	70	75	48	36	40	32	17.4	15.1	..	..	1994	43.9 <sup>b</sup>
Malaysia	96	97	97	..	97	..	..	..	..	..	1996	98.2
Mali	28	19	48	92	42	70	29.6	16.2	..	19.1	1995	66.4 <sup>b</sup>
Mauritania	30	30	..	61	..	68	14.0	15.8	..	12.7	1995	61.0 <sup>b</sup>
Mauritius	97	101 <sup>d</sup>	93	98	94	99	..	4.5	..	14.8	1998	98.3 <sup>b</sup>
Mexico	93	93	..	85	..	86	9.8	6.9	..	2.2	1998	93.8
Moldova	..	..	..	..	..	..	..	1.2	..	1.0	1995	97.3
Mongolia	83	78	..	..	..	..	1.1	0.7	..	0.2	1995	94.5 <sup>b</sup>
Morocco	55	51	79	76	78	74	29.5	12.3	14.9	19.1	1998	65.5
Mozambique	20	19	..	52	..	39	28.7	25.7	..	27.1	1998	38.1
Myanmar	..	..	..	..	..	..	..	..	..	..	1995	58.1 <sup>b</sup>
Namibia	56	59	..	..	..	..	..	11.7	..	9.3	1997	65.5 <sup>b</sup>
Nepal	59	48	..	..	..	..	..	..	..	..	1996	40.5
Netherlands	..	..	94	..	98	..	2.5	..	6.6	..	..	..
New Zealand	100	100	93	97	94	97	3.5	..	2.7	0.8	1995	93.0 <sup>b</sup>
Nicaragua	..	..	40	43	47	52	16.9	12.6	..	6.3	1994	52.8 <sup>b</sup>
Niger	23	15	74	72	72	73	14.3	13.0	6.6	20.4	1998	65.1
Nigeria	..	..	..	..	..	..	..	..	..	..	..	..
Norway	..	..	100	100	100	100	..	..	..	..	1994	100.0 <sup>b</sup>
Oman	75	75	96	96	87	96	12.4	9.2	..	12.9	1995	87.1 <sup>b</sup>
Pakistan	67 <sup>f</sup>	55 <sup>f</sup>	..	..	..	..	..	..	..	..	1997	68.3 <sup>b</sup>
Panama	77	77	74	..	79	..	12.7	..	10.3	..	..	..
Papua New Guinea	..	..	..	59	..	60	..	..	..	..	1996	67.5
Paraguay	69	73	58	77	58	80	13.6	9.1	..	3.0	1998	69.9
Peru	92	93	78	..	74	..	18.8	15.2	10.1	9.0	1998	80.3
Philippines	54	51	68	..	73	..	2.4	..	..	..	1990	76.1
Poland	..	..	..	..	..	..	..	2.2	1.3	0.4	1994	95.9 <sup>b</sup>
Portugal	100	100	..	..	..	..	19.5	..	..	..	1997	86.3
Puerto Rico	..	..	..	..	..	..	..	..	..	..	..	..
Romania	85	83	..	..	..	..	..	2.8	..	1.4	1996	92.7
Russian Federation	..	..	..	..	..	..	..	1.9	..	..	1993	97.0 <sup>b</sup>



## 2.13 Education efficiency

	Net intake rate in grade 1		Percentage of cohort reaching grade 5				Repeaters				Coefficient of efficiency	
	% of school-age population		Male		Female		Primary % of total enrollment		Secondary % of total enrollment		Year	Ideal years to graduate as % of actual years
	Male 1994-99 <sup>a</sup>	Female 1994-99 <sup>a</sup>	1980	1997	1980	1997	1980	1997	1980	1997		
Rwanda	..	..	69	..	74	..	5.7	..	..	..	1989	46.9
Saudi Arabia	87	75	82	87	86	92	15.7	7.6	14.8	9.2	1998	90.0 <sup>b</sup>
Senegal	..	..	89	89	82	85	15.6	13.3	..	14.7	1997	80.0 <sup>b</sup>
Sierra Leone	..	..	..	..	..	..	14.8	..	..	..	..	..
Singapore	..	..	100	..	99	..	6.6	..	..	..	..	..
Slovak Republic	..	..	..	..	..	..	..	2.1	..	..	1995	96.6 <sup>b</sup>
Slovenia	..	..	..	..	..	..	..	1.1	..	0.4	1995	98.9 <sup>b</sup>
South Africa	..	..	..	..	..	..	..	..	..	..	1990	75.1 <sup>b</sup>
Spain	..	..	95	..	94	..	6.4	..	8.8	..	1992	96.9 <sup>b</sup>
Sri Lanka	94	95	92	83	91	84	10.4	2.3	..	..	1997	90.4 <sup>b</sup>
Sudan	46	41	68	75	71	73	..	..	..	..	1998	68.4
Sweden	..	..	98	97	98	97	..	..	..	..	1994	99.3 <sup>b</sup>
Switzerland	98	99	75	..	74	..	2.0	1.6	2.9	..	1992	65.6 <sup>b</sup>
Syrian Arab Republic	91	88	93	93	88	94	8.1	7.3	13.9	..	1998	85.8 <sup>b</sup>
Tajikistan	..	..	..	..	..	..	..	0.5	..	0.4	..	..
Tanzania	13	15	89	78	90	84	1.2	2.1	..	..	1992	85.5 <sup>b</sup>
Thailand	37	37	..	..	..	..	8.3	..	..	..	1996	93.7
Togo	34	29	59	79	44	60	35.5	24.2	..	25.0	1997	44.9
Trinidad and Tobago	..	..	85	98	87	97	3.9	5.6	..	..	1997	93.0
Tunisia	87	85	89	90	84	92	20.6	16.1	7.4	17.2	1995	76.1 <sup>b</sup>
Turkey	..	..	..	..	..	..	..	4.9	..	..	1993	92.5 <sup>b</sup>
Turkmenistan	..	..	..	..	..	..	..	..	..	..	..	..
Uganda	93	90	82	..	73	..	10.3	..	..	..	..	..
Ukraine	..	..	..	..	..	..	0.3	..	..	..	1990	98.4
United Arab Emirates	96	98	100	83	100	84	9.0	4.2	..	7.8	1998	86.1 <sup>b</sup>
United Kingdom	..	..	..	..	..	..	..	..	..	..	..	..
United States	..	..	..	..	..	..	..	..	..	..	..	..
Uruguay	53	54	..	96	..	99	14.9	9.5	..	..	1995	88.0 <sup>b</sup>
Uzbekistan	..	..	..	..	..	..	..	0.2	..	..	1998	99.9
Venezuela, RB	62	62	..	86	..	92	10.7	10.3	6.6	4.7	1995	59.9 <sup>b</sup>
Vietnam	95	95	..	..	..	..	..	..	..	..	1997	79.6
West Bank and Gaza	..	..	..	..	..	..	..	..	..	..	..	..
Yemen, Rep.	83	51	..	..	..	..	..	..	..	..	1998	70.8
Yugoslavia, FR (Serb./Mont.)	..	..	..	..	..	..	..	1.0	..	..	1995	98.2 <sup>b</sup>
Zambia	40	45	88	..	82	..	1.9	2.8	..	..	1997	86.1
Zimbabwe	38	39	81	78	82	79	..	..	..	..	1998	86.1
<b>World</b>	.. w	.. w	.. w	.. w	.. w	.. w	.. w	.. w	.. w	.. w	.. w	.. w
<b>Low income</b>	67	57	..	..	..	..	..	..	..	..	..	..
<b>Middle income</b>	87	88	..	..	..	..	..	3.6	..	..	..	..
Lower middle income	106 <sup>d</sup>	107 <sup>d</sup>	..	91	..	92	..	3.0	..	1.5	..	..
Upper middle income	..	..	..	..	..	..	..	..	..	..	..	..
<b>Low &amp; middle income</b>	87	..	..	..	..	..	..	6.1	..	..	..	..
East Asia & Pacific	102 <sup>d</sup>	103 <sup>d</sup>	..	92	..	93	..	2.5	..	0.3	..	..
Europe & Central Asia	..	..	..	..	..	..	..	2.4	..	..	..	..
Latin America & Carib.	..	..	..	..	..	..	15.3	12.9	..	..	..	..
Middle East & N. Africa	86	83	88	..	84	..	12.1	..	..	..	..	..
South Asia	73	60	..	..	..	..	..	3.7	..	..	..	..
Sub-Saharan Africa	..	..	..	..	..	..	..	..	..	..	..	..
<b>High income</b>	..	..	..	..	..	..	..	..	..	..	..	..
Europe EMU	..	..	..	..	..	..	..	..	..	4.1	..	..

a. Data are for the most recent year available. b. Primary school only. c. Not including special education. d. Ratios exceeding 100 percent indicate discrepancies between estimates of the school-age population and reported enrollment data. e. Less than 0.05. f. Does not include children in private institutions.



## Education efficiency 2.13

### About the data

Indicators of students' progress through school, estimated by the United Nations Educational, Scientific, and Cultural Organization (UNESCO), provide a measure of an education system's success in maintaining a flow of students from one grade to the next and thus in imparting a particular level of education.

Low net intake rates reflect the fact that many children do not enter school at the official age, even though school attendance is mandatory in most countries, at least through the primary level. In addition, students drop out of school for a variety of reasons, including discouragement over poor performance, the cost of schooling, and the opportunity cost of time spent in school. And students' progress to higher grades may be limited by the availability of teachers, classrooms, and educational materials.

The rate of progression—sometimes called the rate of persistence or survival—is estimated as the proportion of a single-year cohort of students that eventually reaches a particular grade of school. It measures the holding power and internal efficiency of an education system. Progression rates approaching 100 percent indicate a high level of retention and a low level of dropout.

Because tracking data for individual students generally are not available, aggregate student flows from one grade to the next are estimated using data on enrollment and repetition by grade for two consecutive years. This procedure, called the reconstructed cohort method, makes three simplifying assumptions: dropouts never return to school; promotion, repetition, and dropout rates remain constant over the entire period in which the cohort is enrolled in school; and the same rates apply to all pupils enrolled in a given grade, regardless of whether they previously repeated a grade (Fredrickson 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.

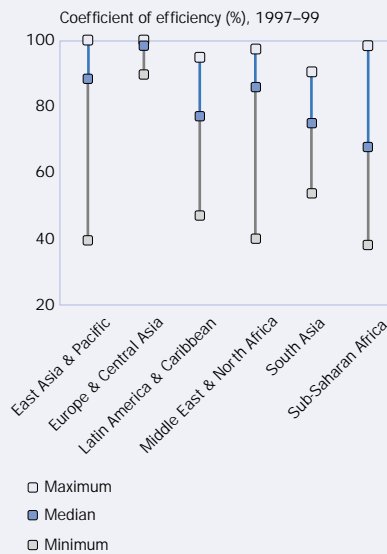
The percentage of the cohort reaching grade 5, rather than another grade, is shown because it is generally agreed that children who reach grade 5 should have acquired the basic literacy and numeracy skills that enable them to continue learning. This indicator provides no information on learning outcomes, however, and only indirectly reflects the quality of schooling. Assessing learning outcomes requires setting standards and measuring the attainment of those standards. National assessments are generally concerned with the performance not of individual students, but of all or part of the education system.

The repetition rate is 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 up limited school resources. Countries have different policies on repetition and promotion of students; in some cases the number of repeaters is controlled because of limited capacity.

The coefficient of efficiency is a synthetic indicator of the internal efficiency of an education system, reflecting the combined impact on efficiency of repetition and dropout. The ideal value of the coefficient is 100 percent, corresponding to a situation in which all pupils complete the school cycle, neither repeating grades nor dropping out. A coefficient less than 100 percent indicates some level of resource waste.

Figure 2.13

The internal efficiency of education systems varies widely



Source: UNESCO, Education for All Year 2000 Assessment database.

**The coefficient of efficiency for an education system is 100 percent if children progress through school without repeating a grade or dropping out. This coefficient varies widely among countries and regions. Of the 66 countries for which data are available, 40 (61 percent) have coefficients exceeding 70 percent. Within countries and regions gender disparities in the internal efficiency of education systems are small, and in the majority of cases they favor girls.**

### Definitions

- **Net intake rate in grade 1** is the number of new entrants in the first grade of primary education who are of official primary school entrance age, expressed as a percentage of the population of the corresponding age.
- **Percentage of cohort reaching grade 5** is the share 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** are the total number of students enrolled in the same grade as in the previous year, as a percentage of all students enrolled in that grade.
- **Coefficient of efficiency** refers to the ideal number of pupil-years required to produce graduates from a given cohort (in the absence of repetition and dropout) as a percentage of the actual number of pupil-years spent to produce the same number of graduates.

### Data sources

Data on net intake and coefficients of efficiency come from UNESCO's special data collection for the Education for All initiative. The remaining data in the table were compiled using an electronic database maintained by UNESCO.



## 2.14 Education outcomes

	Adult illiteracy rate				Youth illiteracy rate				Expected years of schooling			
	Male		Female		Male		Female		Males		Females	
	% ages 15 and over	1999	% ages 15 and over	1999	% ages 15-24	1999	% ages 15-24	1999	1990	1997	1990	1997
Albania	14	9	32	23	3	1	7	3	..	..	..	..
Algeria	32	23	59	44	13	8	32	16	11	11	9	10
Angola	..	..	..	..	..	..	..	..	..	..	..	..
Argentina	4	3	4	3	2	2	2	1	..	..	..	..
Armenia	1	1	4	3	0 <sup>a</sup>	0 <sup>a</sup>	1	0 <sup>a</sup>	..	..	..	..
Australia	..	..	..	..	..	..	..	..	13	17	13	17
Austria	..	..	..	..	..	..	..	..	15	15	14	14
Azerbaijan	..	..	..	..	..	..	..	..	..	..	..	..
Bangladesh	54	48	77	71	45	40	68	61	6	..	4	..
Belarus	0 <sup>a</sup>	0 <sup>a</sup>	1	1	0 <sup>a</sup>	0 <sup>a</sup>	0 <sup>a</sup>	0 <sup>a</sup>	..	..	..	..
Belgium	..	..	..	..	..	..	..	..	14	17	14	17
Benin	59	45	84	76	37	23	74	63	..	..	..	..
Bolivia	13	8	30	21	4	2	11	7	..	..	..	..
Bosnia and Herzegovina	..	..	..	..	..	..	..	..	..	..	..	..
Botswana	34	26	30	21	21	16	13	8	10	11	11	11
Brazil	18	15	20	15	12	10	9	6	..	..	..	..
Bulgaria	2	1	4	2	1	0 <sup>a</sup>	1	1	12	12	12	12
Burkina Faso	75	67	92	87	64	55	86	78	3	..	2	..
Burundi	50	44	73	61	42	36	55	40	6	..	4	..
Cambodia	49	41	86	79	34	25	73	59	..	..	..	..
Cameroon	28	19	46	31	10	6	15	7	..	..	..	..
Canada	..	..	..	..	..	..	..	..	17	17	17	17
Central African Republic	53	41	79	67	34	25	61	43	..	..	..	..
Chad	63	50	81	68	42	28	62	42	..	..	..	..
Chile	6	4	6	5	2	2	2	1	..	13	..	13
China	14	9	33	25	3	1	8	4	..	..	..	..
Hong Kong, China	5	4	16	10	2	1	1	0 <sup>a</sup>	..	..	..	..
Colombia	11	9	12	9	6	4	4	3	..	..	..	..
Congo, Dem. Rep.	38	28	66	51	19	12	42	27	..	..	..	..
Congo, Rep.	23	13	42	27	5	2	10	4	..	..	..	..
Costa Rica	6	5	6	5	3	2	2	1	..	..	..	..
Côte d'Ivoire	56	46	77	63	40	31	59	42	..	..	..	..
Croatia	1	1	5	3	0 <sup>a</sup>	0 <sup>a</sup>	0 <sup>a</sup>	0 <sup>a</sup>	..	11	..	12
Cuba	5	3	5	4	1	0 <sup>a</sup>	1	0 <sup>a</sup>	12	..	13	..
Czech Republic	..	..	..	..	..	..	..	..	..	13	..	13
Denmark	..	..	..	..	..	..	..	..	14	15	14	15
Dominican Republic	20	17	21	17	13	10	12	9	..	..	..	..
Ecuador	10	7	15	11	4	3	5	4	..	..	..	..
Egypt, Arab Rep.	40	34	66	57	29	24	49	38	..	..	..	..
El Salvador	24	19	31	24	15	11	17	13	..	10	..	10
Eritrea	42	33	72	61	27	20	54	39	..	5	..	4
Estonia	..	..	..	..	..	..	..	..	12	12	12	13
Ethiopia	64	57	80	68	52	46	64	48	..	..	..	..
Finland	..	..	..	..	..	..	..	..	15	15	16	17
France	..	..	..	..	..	..	..	..	14	15	15	16
Gabon	..	..	..	..	..	..	..	..	..	..	..	..
Gambia, The	68	57	80	72	49	36	66	52	..	..	..	..
Georgia	..	..	..	..	..	..	..	..	..	11	..	11
Germany	..	..	..	..	..	..	..	..	15	16	15	16
Ghana	30	21	53	39	12	7	25	13	..	..	..	..
Greece	2	2	8	4	1	0 <sup>a</sup>	0 <sup>a</sup>	0 <sup>a</sup>	13	14	13	14
Guatemala	31	24	47	40	20	15	34	28	..	..	..	..
Guinea	..	..	..	..	..	..	..	..	..	..	..	..
Guinea-Bissau	54	42	89	82	30	19	79	68	..	..	..	..
Haiti	57	49	63	53	44	37	46	36	..	..	..	..
Honduras	31	26	32	26	23	19	20	16	..	..	..	..



## Education outcomes 2.14

	Adult illiteracy rate				Youth illiteracy rate				Expected years of schooling			
	Male		Female		Male		Female		Males		Females	
	% ages 15 and over	% ages 15 and over	% ages 15 and over	% ages 15 and over	% ages 15-24	% ages 15-24	% ages 15-24	% ages 15-24	1990	1997	1990	1997
Hungary	1	1	1	1	0 <sup>a</sup>	0 <sup>a</sup>	0 <sup>a</sup>	0 <sup>a</sup>	11	13	11	13
India	38	32	64	56	27	21	46	36	..	..	..	..
Indonesia	13	9	27	19	3	2	7	3	10	10	9	10
Iran, Islamic Rep.	27	17	45	31	8	4	18	9	..	12	..	11
Iraq	43	35	67	55	29	23	48	34	..	..	..	..
Ireland	..	..	..	..	..	..	..	..	12	14	13	14
Israel	3	2	9	6	1	0 <sup>a</sup>	2	0 <sup>a</sup>	..	..	..	..
Italy	2	1	3	2	0 <sup>a</sup>	0 <sup>a</sup>	0 <sup>a</sup>	0 <sup>a</sup>	..	..	..	..
Jamaica	22	18	14	10	13	10	5	3	11	..	11	..
Japan	..	..	..	..	..	..	..	..	..	..	..	..
Jordan	10	6	28	17	2	1	4	0 <sup>a</sup>	9	9	9	9
Kazakhstan	..	..	..	..	..	..	..	..	..	..	..	..
Kenya	19	12	39	25	7	4	13	6	..	..	..	..
Korea, Dem. Rep.	..	..	..	..	..	..	..	..	..	..	..	..
Korea, Rep.	2	1	7	4	0 <sup>a</sup>	0 <sup>a</sup>	0 <sup>a</sup>	0 <sup>a</sup>	14	15	13	14
Kuwait	20	16	27	21	12	9	13	7	7	9	7	9
Kyrgyz Republic	..	..	..	..	..	..	..	..	..	..	..	..
Lao PDR	47	37	80	68	28	18	62	44	9	9	6	7
Latvia	0 <sup>a</sup>	0 <sup>a</sup>	0 <sup>a</sup>	0 <sup>a</sup>	0 <sup>a</sup>	0 <sup>a</sup>	0 <sup>a</sup>	0 <sup>a</sup>	..	12	..	13
Lebanon	12	8	27	20	5	3	11	7	..	..	..	..
Lesotho	35	28	11	7	23	18	3	2	9	9	11	10
Libya	17	10	49	33	1	0 <sup>a</sup>	17	7	..	..	..	..
Lithuania	1	0 <sup>a</sup>	1	1	0 <sup>a</sup>	0 <sup>a</sup>	0 <sup>a</sup>	0 <sup>a</sup>	..	..	..	..
Macedonia, FYR	..	..	..	..	..	..	..	..	..	11	..	11
Madagascar	34	27	50	41	22	17	33	24	..	..	..	..
Malawi	31	26	64	55	24	20	49	40	..	..	..	..
Malaysia	13	9	25	17	5	3	6	3	..	..	..	..
Mali	67	53	81	67	46	29	63	42	3	..	1	..
Mauritania	53	48	74	69	44	39	65	60	..	..	..	..
Mauritius	15	12	25	19	9	7	9	6	..	..	..	..
Mexico	10	7	15	11	4	3	6	4	..	..	..	..
Moldova	1	1	4	2	0 <sup>a</sup>	0 <sup>a</sup>	0 <sup>a</sup>	0 <sup>a</sup>	..	..	..	..
Mongolia	35	27	59	48	21	16	39	27	..	7	..	9
Morocco	47	39	75	65	32	24	58	43	..	..	..	..
Mozambique	51	41	82	72	34	26	68	55	4	4	3	3
Myanmar	13	11	26	20	10	9	14	10	..	..	..	..
Namibia	23	18	28	20	14	10	11	7	..	..	..	..
Nepal	53	42	86	77	34	25	73	59	..	..	..	..
Netherlands	..	..	..	..	..	..	..	..	15	16	15	16
New Zealand	..	..	..	..	..	..	..	..	14	16	15	17
Nicaragua	36	33	34	30	32	29	28	24	..	..	..	..
Niger	82	77	95	92	75	68	91	87	..	..	..	..
Nigeria	41	29	62	46	19	11	34	18	..	..	..	..
Norway	..	..	..	..	..	..	..	..	14	15	15	16
Oman	33	21	62	40	5	1	25	5	..	..	..	..
Pakistan	50	41	79	70	36	24	67	52	..	..	..	..
Panama	10	8	12	9	4	3	5	4	..	..	..	..
Papua New Guinea	34	29	52	44	25	20	38	30	..	..	..	..
Paraguay	8	6	12	8	4	3	5	3	9	10	8	10
Peru	8	6	21	15	3	2	8	5	..	..	..	..
Philippines	7	5	8	5	3	2	3	1	..	..	..	..
Poland	0 <sup>a</sup>	0 <sup>a</sup>	1	0 <sup>a</sup>	0 <sup>a</sup>	0 <sup>a</sup>	0 <sup>a</sup>	0 <sup>a</sup>	12	13	12	13
Portugal	9	6	16	11	1	0 <sup>a</sup>	0 <sup>a</sup>	0 <sup>a</sup>	13	14	14	15
Puerto Rico	9	7	9	6	5	3	3	2	..	..	..	..
Romania	1	1	5	3	1	1	1	0 <sup>a</sup>	11	12	11	12
Russian Federation	0 <sup>a</sup>	0 <sup>a</sup>	1	1	0 <sup>a</sup>	0 <sup>a</sup>	0 <sup>a</sup>	0 <sup>a</sup>	..	..	..	..



## 2.14 Education outcomes

	Adult illiteracy rate				Youth illiteracy rate				Expected years of schooling			
	Male		Female		Male		Female		Males		Females	
	% ages 15 and over	1990	1999	% ages 15 and over	1990	1999	% ages 15–24	1990	1999	1990	1997	1990
Rwanda	37	27	56	41	22	15	33	20	..	..	..	..
Saudi Arabia	22	17	49	34	9	5	21	10	9	10	7	9
Senegal	62	54	81	73	50	41	70	59	..	..	..	..
Sierra Leone	..	..	..	..	..	..	..	..	..	..	..	..
Singapore	6	4	17	12	1	0 <sup>a</sup>	1	0 <sup>a</sup>	..	..	..	..
Slovak Republic	..	..	..	..	..	..	..	..	..	..	..	..
Slovenia	0 <sup>a</sup>	0 <sup>a</sup>	1	0 <sup>a</sup>	0 <sup>a</sup>	0 <sup>a</sup>	0 <sup>a</sup>	0 <sup>a</sup>	..	..	..	..
South Africa	18	14	20	16	11	9	12	9	13	14	13	14
Spain	2	2	5	3	0 <sup>a</sup>	0 <sup>a</sup>	0 <sup>a</sup>	0 <sup>a</sup>	..	..	..	..
Sri Lanka	7	6	15	11	4	3	6	4	..	..	..	..
Sudan	39	31	68	55	24	18	46	30	..	..	..	..
Sweden	..	..	..	..	..	..	..	..	13	15	13	16
Switzerland	..	..	..	..	..	..	..	..	14	15	13	14
Syrian Arab Republic	18	12	53	41	8	5	33	22	11	10	9	9
Tajikistan	1	1	3	1	0 <sup>a</sup>	0 <sup>a</sup>	0 <sup>a</sup>	0 <sup>a</sup>	..	..	..	..
Tanzania	23	16	49	34	10	7	22	12	..	..	..	..
Thailand	5	3	11	7	1	1	2	2	..	..	..	..
Togo	36	26	71	60	19	13	55	42	11	..	6	..
Trinidad and Tobago	6	5	11	8	3	2	4	3	11	..	11	..
Tunisia	28	20	54	41	7	3	25	12	11	..	10	..
Turkey	11	7	33	24	3	1	12	6	..	10	..	9
Turkmenistan	..	..	..	..	..	..	..	..	..	..	..	..
Uganda	31	23	57	45	20	15	39	29	..	..	..	..
Ukraine	0 <sup>a</sup>	0 <sup>a</sup>	1	1	0 <sup>a</sup>	0 <sup>a</sup>	0 <sup>a</sup>	0 <sup>a</sup>	..	..	..	..
United Arab Emirates	29	26	30	22	19	15	11	6	10	10	11	11
United Kingdom	..	..	..	..	..	..	..	..	14	16	14	17
United States	..	..	..	..	..	..	..	..	15	16	16	16
Uruguay	4	3	3	2	1	1	1	0 <sup>a</sup>	..	..	..	..
Uzbekistan	10	7	23	16	3	2	8	5	..	..	..	..
Venezuela, RB	10	7	12	8	5	3	3	2	..	..	..	..
Vietnam	6	5	13	9	5	3	5	3	..	..	..	..
West Bank and Gaza	..	..	..	..	..	..	..	..	..	..	..	..
Yemen, Rep.	45	33	87	76	26	18	75	56	..	..	..	..
Yugoslavia, FR (Serb./Mont.)	..	..	..	..	..	..	..	..	..	..	..	..
Zambia	22	15	41	30	14	10	24	15	..	8	..	7
Zimbabwe	13	8	25	16	3	2	9	5	..	..	..	..
<b>World</b>	.. w	.. w	.. w	.. w	.. w	.. w	.. w	.. w	.. w	.. w	.. w	.. w
<b>Low income</b>	35	29	56	48	24	19	41	31	..	..	..	..
<b>Middle income</b>	13	9	26	20	5	4	9	6	..	..	..	..
Lower middle income	13	9	29	22	4	3	10	7	..	..	..	..
Upper middle income	11	9	14	11	6	5	6	4	..	..	..	..
<b>Low &amp; middle income</b>	22	18	39	32	13	11	23	19	..	..	..	..
East Asia & Pacific	13	8	29	22	3	2	8	4	..	..	..	..
Europe & Central Asia	2	2	6	5	1	1	3	2	..	..	..	..
Latin America & Carib.	14	11	17	13	8	6	8	6	..	..	..	..
Middle East & N. Africa	33	25	59	47	18	13	37	24	..	..	..	..
South Asia	41	34	66	58	29	23	50	41	..	..	..	..
Sub-Saharan Africa	40	31	60	47	25	18	40	27	..	..	..	..
<b>High income</b>	..	..	..	..	..	..	..	..	..	..	..	..
Europe EMU	..	..	..	..	..	..	..	..	..	..	..	..

a. Less than 0.5.



## Education outcomes 2.14

### 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 pupil-teacher ratios, repetition rates, and cohort progression through school. But until recently, despite an obvious interest in what education achieves, few systems in high-income or developing countries had systematically collected information on outcomes of education.

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 United Nations Educational, Scientific, and Cultural Organization (UNESCO) has established literacy as an outcome indicator based on an internationally agreed definition. The rate of illiteracy is defined as the percentage of people who cannot, with understanding, read and write a short, simple statement about their everyday life. In practice, illiteracy is difficult to measure. To estimate illiteracy using such a definition requires census or survey measurements under controlled conditions. Many countries estimate the number of illiterate people from self-reported data, or by taking people with no schooling as illiterate.

Literacy statistics for most countries cover the population ages 15 and above, 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, UNESCO has proposed the narrower age range of 15–24, which better captures the ability of participants in the formal education system. The youth illiteracy 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 (or never entered it) without acquiring basic literacy and numeracy skills. Reasons for this may include difficulties in attending school or dropping out before reaching grade 5 (see *About the data* for table 2.13) and thereby failing to achieve basic learning competencies.

The indicator expected years of schooling is an estimate of the total years of schooling that an average child at the age of school entry will receive, including years spent on repetition, given the current patterns of enrollment across cycles of education. It may also be interpreted as an indicator of the total education resources, measured in school years, that a child will acquire over his or her “lifetime” in school—or as an indicator of an education system’s overall level of development.

Because the calculation of this indicator assumes that the probability of a child’s being enrolled in school at any future age is equal to the current enrollment ratio for that age, it does not account for changes and trends in future enrollment ratios. The expected number of years and the expected number of grades completed are not necessarily consistent, because the first includes years spent in repetition. Comparability across countries and over time may be affected by differences in the length of the school year or changes in policies on automatic promotions and grade repetition.

Table 2.14a

Science achievement among eighth-grade students in selected economies, 1995 and 1999  
Average science scale score

	1995	1999
Bulgaria	<b>545</b>	<b>518</b>
Canada	<b>514</b>	<b>533</b>
Czech Republic	555	539
Hong Kong, China	510	530
Hungary	<b>537</b>	<b>522</b>
Iran, Islamic Rep.	463	448
Latvia	<b>473</b>	<b>503</b>
Lithuania	<b>464</b>	<b>488</b>
Singapore	580	568
International average	518	521

Note: Figures in bold denote a statistically significant difference between 1995 and 1999.

Source: International Association for the Evaluation of Educational Achievement 2000.

Conducted in 41 countries in 1994–95, the Third International Mathematics and Science Study (TIMSS) was designed to provide a base from which policymakers, curriculum specialists, and researchers could assess the performance of their education systems. TIMSS 1999 (also known as TIMSS-Repeat), conducted in 38 countries, was designed to show trends in eighth-grade mathematics and science achievement.

In 16 of the 38 countries in 1999, boys had significantly higher average achievement in science than girls—on average, 29 percent of boys ranked in the top achievement quarter, compared with 21 percent of girls. A student’s access to educational resources at home also mattered: students from homes with greater educational resources, including at least one parent who had finished university, had higher achievement in science than counterparts with fewer resources.

### Definitions

- **Adult illiteracy rate** is the percentage of people ages 15 and over who cannot, with understanding, read and write a short, simple statement about their everyday life.
- **Youth illiteracy rate** is the illiteracy rate among people ages 15–24.
- **Expected years of schooling** are the average number of years of formal schooling that children are expected to receive, including university education and years spent in repetition. They are the sum of the underlying age-specific enrollment ratios for primary, secondary, and tertiary education.

### Data sources

The data on illiteracy are based on UNESCO’s 1999 literacy estimates and projections. The data on expected years of schooling are from UNESCO’s *World Education Report 1998*.





## 2.15 Health expenditure, services, and use

	Health expenditure			Health expenditure per capita		Physicians		Hospital beds		Inpatient admission rate	Average length of stay	Outpatient visits per capita
	Public % of GDP	Private % of GDP	Total % of GDP	PPP \$	\$	per 1,000 people		per 1,000 people		% of population	days	1990-98 <sup>a</sup>
	1990-98 <sup>a</sup>	1990-98 <sup>a</sup>	1990-98 <sup>a,b</sup>	1990-98 <sup>a</sup>	1990-98 <sup>a</sup>	1980	1990-98 <sup>a</sup>	1980	1990-98 <sup>a</sup>	1990-98 <sup>a</sup>	1990-98 <sup>a</sup>	1990-98 <sup>a</sup>
Albania	3.5	0.5	4.0	116	36	..	1.4	..	3.2	..	13	2
Algeria	2.6	1.0	3.6	216	68	..	1.0	..	2.1	..	..	..
Angola	3.9	..	..	..	..	..	0.0 <sup>c</sup>	..	1.3	..	..	..
Argentina	4.9	5.4	10.3	1,291	852	..	2.7	..	3.3	..	..	..
Armenia	3.1	4.2	7.8	151	27	3.5	3.0	8.4	0.7	8	15	2
Australia	5.9	2.6	8.5	1,980	1,692	1.8	2.5	..	8.5	16	15	6
Austria	5.8	2.4	8.3	1,978	2,162	..	3.0	11.2	8.9	28	9	7
Azerbaijan	1.2	0.6	1.8	39	9	3.4	3.8	9.7	9.7	6	18	1
Bangladesh	1.7	1.9	3.6	51	12	0.1	0.2	0.2	0.3	..	..	..
Belarus	4.9	1.1	6.0	387	83	3.4	4.3	12.5	12.2	26	18	11
Belgium	7.9	1.0	8.9	2,172	2,184	2.5	3.4	..	7.2	20	11	8
Benin	1.6	1.6	3.2	29	12	0.1	0.1	1.5	0.2	..	..	..
Bolivia	4.1	2.4	6.4	150	69	..	1.3	..	1.7	..	..	..
Bosnia and Herzegovina	..	..	..	..	..	..	0.5	..	1.8	..	15	..
Botswana	2.5	1.6	4.1	267	127	0.1	0.2	2.4	1.6	..	..	..
Brazil	2.9	3.7	6.6	453	309	..	1.3	..	3.1	0 <sup>d</sup>	..	2
Bulgaria	3.8	0.8	4.7	230	69	2.5	3.5	11.1	10.6	18	14	6
Burkina Faso	1.2	2.7	3.9	36	10	0.0 <sup>c</sup>	0.0 <sup>c</sup>	..	1.4	2	3	0 <sup>d</sup>
Burundi	0.6	3.0	3.7	21	5	..	0.1	..	0.7	..	..	..
Cambodia	0.6	6.3	6.9	90	17	..	0.1	..	2.1	..	..	..
Cameroon	1.0	4.0	5.0	77	31	..	0.1	..	2.6	..	..	..
Canada	6.4	2.8	9.2	2,292	1,824	..	2.1	..	4.2	12	8	7
Central African Republic	2.0	1.0	3.0	33	9	0.0 <sup>c</sup>	0.1	1.6	0.9	..	..	..
Chad	2.3	0.6	2.9	25	7	..	0.0 <sup>c</sup>	..	0.7	..	..	..
Chile	2.7	3.1	5.9	511	289	..	1.1	3.4	2.7	..	..	..
China	2.0	2.6	4.5	143	33	0.9	2.0	2.0	2.9	4	13	..
Hong Kong, China	2.1	2.8	5.0	1,143	1,134	0.8	1.3	4.0	..	2	..	1
Colombia	5.2	4.2	9.3	553	227	..	1.1	1.6	1.5	..	..	..
Congo, Dem. Rep.	..	..	..	..	..	..	0.1	..	1.4	..	..	..
Congo, Rep.	2.0	3.8	5.8	46	41	..	0.3	..	3.4	..	..	..
Costa Rica	5.2	1.5	6.8	509	267	..	0.9	3.3	1.7	9	6	1
Côte d'Ivoire	1.2	2.6	3.8	62	29	..	0.1	..	0.8	..	..	..
Croatia	8.1	1.5	9.6	664	428	..	2.0	..	5.9	12	..	..
Cuba	8.2	0.9	9.1	..	83	..	5.3	..	5.1	..	..	..
Czech Republic	6.7	0.6	7.2	928	392	..	3.0	..	8.7	21	11	12
Denmark	6.8	1.5	8.3	2,102	2,732	..	2.9	..	4.6	20	7	6
Dominican Republic	1.9	3.0	4.8	246	93	..	2.2	..	1.5	..	..	..
Ecuador	1.7	2.0	3.6	115	59	..	1.7	1.9	1.6	..	..	..
Egypt, Arab Rep.	1.8	2.0	3.8	119	48	1.1	1.6	2.0	2.1	3	6	4
El Salvador	2.6	4.6	7.2	298	143	0.3	1.0	..	1.6	..	..	..
Eritrea	2.9	0.9	2.0	14	..	..	0.0 <sup>c</sup>	..	..	..	..	..
Estonia	5.5	1.4	6.9	553	219	4.2	3.1	12.4	7.4	18	9	6
Ethiopia	1.7	2.4	4.1	25	4	0.0 <sup>c</sup>	0.0 <sup>c</sup>	0.3	0.2	..	..	..
Finland	5.2	1.6	6.9	1,502	1,722	1.9	3.0	15.5	7.8	27	11	4
France	7.3	2.3	9.6	2,102	2,377	..	3.0	..	8.5	23	11	7
Gabon	2.1	1.0	3.1	198	121	..	0.2	..	3.2	..	..	..
Gambia, The	1.9	1.9	3.7	56	13	..	0.0 <sup>c</sup>	..	0.6	..	..	..
Georgia	0.5	1.7	2.2	73	14	4.8	3.8	10.7	4.8	5	11	1
Germany	7.9	2.7	10.6	2,424	2,769	2.2	3.5	..	9.3	22	12	7
Ghana	1.8	2.9	4.7	85	19	..	..	..	1.5	..	..	..
Greece	4.7	3.6	8.3	1,207	957	2.4	4.0	6.2	5.0	15	8	..
Guatemala	2.1	2.3	4.4	155	78	..	0.9	..	1.0	..	..	..
Guinea	2.2	1.4	3.6	68	19	..	0.2	..	0.6	..	..	..
Guinea-Bissau	1.1	..	..	..	..	0.1	0.2	1.8	1.5	..	..	..
Haiti	1.4	2.8	4.2	61	21	..	0.2	0.7	0.7	..	..	..
Honduras	3.9	4.7	8.6	210	74	..	0.8	1.3	1.1	..	..	..



# Health expenditure, services, and use 2.15

	Health expenditure			Health expenditure per capita		Physicians		Hospital beds		Inpatient admission rate	Average length of stay	Outpatient visits per capita
	Public % of GDP	Private % of GDP	Total % of GDP	PPP \$	\$	per 1,000 people		per 1,000 people		% of population	days	
	1990-98 <sup>a</sup>	1990-98 <sup>a</sup>	1990-98 <sup>a,b</sup>	1990-98 <sup>a</sup>	1990-98 <sup>a</sup>	1980	1990-98 <sup>a</sup>	1980	1990-98 <sup>a</sup>	1990-98 <sup>a</sup>	1990-98 <sup>a</sup>	1990-98 <sup>a</sup>
Hungary	5.2	2.0	6.4	660	290	2.5	3.5	9.1	8.3	24	9	15
India	0.8	4.2	5.4	94	20	0.4	0.4	0.8	0.8	..	..	..
Indonesia	0.7	0.8	1.6	44	8	..	0.2	..	0.7	..	..	..
Iran, Islamic Rep.	1.7	2.5	4.2	229	128	..	0.8	1.5	1.6	..	..	..
Iraq	3.8	1.8	5.6	..	..	0.6	0.6	1.9	1.5	..	..	..
Ireland	4.7	1.5	6.1	1,393	1,428	1.3	2.2	9.7	3.7	15	7	..
Israel	6.0	3.6	9.5	1,730	1,607	..	4.6	5.1	6.0	..	..	..
Italy	5.6	2.6	8.2	1,771	1,701	..	5.9	..	6.5	19	8	5
Jamaica	3.2	2.6	5.7	202	157	..	1.3	..	2.1	..	..	..
Japan	5.9	1.6	7.6	1,844	2,284	..	1.9	11.3	16.5	10	41	16
Jordan	5.3	3.8	9.1	296	123	0.8	1.7	1.3	1.8	11	4	3
Kazakhstan	3.5	2.4	5.9	273	86	3.2	3.5	13.2	8.5	15	16	0 <sup>d</sup>
Kenya	2.4	5.4	7.8	79	31	..	0.1	..	1.6	..	..	..
Korea, Dem. Rep.	..	..	..	..	..	..	..	..	..	..	..	..
Korea, Rep.	2.3	2.8	5.1	720	349	0.6	1.3	1.7	5.1	6	13	10
Kuwait	2.9	0.4	3.3	..	551	1.7	1.9	4.1	2.8	..	..	..
Kyrgyz Republic	2.9	1.6	4.5	109	15	2.9	3.1	12.0	9.5	21	15	1
Lao PDR	1.2	1.3	2.6	35	7	..	0.2	..	2.6	..	..	..
Latvia	4.2	2.6	6.7	410	167	4.1	3.4	13.7	10.3	21	14	4
Lebanon	2.2	7.6	9.8	430	361	..	2.3	..	2.7	17	4	..
Lesotho	3.4	2.2	..	..	..	..	0.1	..	..	..	..	..
Libya	..	..	..	..	..	1.3	1.3	..	4.3	..	..	..
Lithuania	4.8	1.5	6.3	429	183	3.9	3.9	12.1	9.6	24	12	7
Macedonia, FYR	5.5	1.0	6.5	288	113	..	2.3	..	5.2	10	15	3
Madagascar	1.1	1.0	2.1	16	5	..	0.3	..	0.9	..	..	..
Malawi	2.8	3.5	6.3	36	10	..	0.0 <sup>c</sup>	..	1.3	..	..	2
Malaysia	1.4	1.0	2.5	189	81	0.3	0.5	..	2.0	..	..	..
Mali	2.1	2.2	4.2	30	11	0.0 <sup>c</sup>	0.1	..	0.2	1	7	0 <sup>d</sup>
Mauritania	1.4	3.4	4.8	74	19	..	0.1	..	0.7	..	..	..
Mauritius	1.8	1.6	3.4	302	120	0.5	0.9	3.1	3.1	0 <sup>d</sup>	..	4
Mexico	2.8	1.9	4.7	371	202	..	1.6	..	1.1	6	4	2
Moldova	6.4	2.1	8.4	177	33	3.1	3.6	12.0	12.1	19	18	8
Mongolia	4.3	0.4	4.7	67	24	..	2.6	11.2	11.5	..	..	..
Morocco	1.2	3.2	4.4	134	49	..	0.4	..	1.0	3	7	..
Mozambique	2.8	0.7	3.5	28	8	0.0 <sup>c</sup>	..	1.1	0.9	..	..	..
Myanmar	0.2	1.6	1.8	..	102	..	0.3	0.9	0.6	..	..	..
Namibia	4.1	3.7	7.8	417	143	..	0.2	..	..	..	..	..
Nepal	1.3	4.2	5.4	66	11	0.0 <sup>c</sup>	0.0 <sup>c</sup>	0.2	0.2	..	..	..
Netherlands	6.0	2.5	8.6	1,974	2,140	..	2.6	12.5	11.3	11	34	6
New Zealand	6.2	1.8	8.1	1,454	1,128	1.6	2.3	..	6.2	14	7	..
Nicaragua	8.3	3.9	12.2	266	54	0.4	0.8	..	1.5	..	..	..
Niger	1.2	1.4	2.6	20	5	..	0.0 <sup>c</sup>	..	0.1	28	5	0 <sup>d</sup>
Nigeria	0.8	2.0	2.8	23	30	0.1	0.2	0.9	1.7	..	..	..
Norway	7.4	1.5	8.9	2,467	2,953	1.9	2.5	15.0	14.7	15	10	4
Oman	2.9	0.6	3.5	..	..	0.5	1.3	1.6	2.2	9	4	4
Pakistan	0.9	3.1	4.0	71	18	0.3	0.6	0.6	0.7	..	..	3
Panama	4.9	2.3	7.3	410	246	..	1.7	..	2.2	..	..	..
Papua New Guinea	2.5	0.7	3.2	75	27	0.1	0.1	5.5	4.0	..	..	..
Paraguay	1.7	3.6	5.2	233	86	..	1.1	..	1.3	..	..	..
Peru	2.4	3.7	6.1	278	141	0.7	0.9	..	1.5	1	6	2
Philippines	1.7	2.0	3.7	136	33	0.1	0.1	1.7	1.1	..	..	..
Poland	4.7	1.7	6.4	510	264	1.8	2.3	5.6	5.3	14	10	5
Portugal	5.2	3.0	7.5	1,137	803	..	3.1	..	4.0	12	9	3
Puerto Rico	..	6.5	..	..	..	..	1.8	..	3.3	..	..	..
Romania	2.6	1.5	4.1	265	63	1.5	1.8	8.8	7.6	18	10	5
Russian Federation	4.6	1.2	4.6	328	133	4.0	4.6	13.0	12.1	22	17	8



## 2.15 Health expenditure, services, and use

	Health expenditure			Health expenditure per capita		Physicians		Hospital beds		Inpatient admission rate	Average length of stay	Outpatient visits per capita
	Public % of GDP	Private % of GDP	Total % of GDP	PPP \$	\$	per 1,000 people		per 1,000 people		% of population	days	1990-98 <sup>a</sup>
	1990-98 <sup>a</sup>	1990-98 <sup>a</sup>	1990-98 <sup>a,b</sup>	1990-98 <sup>a</sup>	1990-98 <sup>a</sup>	1980	1990-98 <sup>a</sup>	1980	1990-98 <sup>a</sup>	1990-98 <sup>a</sup>	1990-98 <sup>a</sup>	1990-98 <sup>a</sup>
Rwanda	2.0	2.1	4.1	34	10	0.0 <sup>c</sup>	0.0 <sup>c</sup>	1.5	1.7	..	..	..
Saudi Arabia	6.4	1.6	8.0	890	611	..	1.7	..	2.3	11	4	1
Senegal	2.6	1.9	4.5	61	23	..	0.1	..	0.4	22	10	1
Sierra Leone	0.9	4.5	5.5	27	8	0.1	..	1.2	..	..	..	..
Singapore	1.2	2.1	3.2	777	841	0.9	1.4	4.2	3.6	12	..	..
Slovak Republic	5.7	1.5	7.2	728	285	..	3.0	..	7.5	20	11	4
Slovenia	6.6	0.9	7.6	1,126	746	..	2.1	7.0	5.7	16	11	..
South Africa	3.3	3.8	7.1	623	230	..	0.6	..	..	..	..	..
Spain	5.4	1.6	7.1	1,202	1,043	..	4.2	..	3.9	10	10	..
Sri Lanka	1.4	1.7	3.1	95	26	0.1	0.2	2.9	2.7	..	..	..
Sudan	0.7	2.7	3.4	48	126	0.1	0.1	0.9	1.1	..	..	..
Sweden	6.7	1.3	8.0	1,707	2,146	2.2	3.1	14.8	3.8	17	8	3
Switzerland	7.6	2.8	10.4	2,739	3,835	..	1.9	..	18.1	17	14	11
Syrian Arab Republic	0.8	1.6	2.4	90	116	0.4	1.3	1.1	1.4	..	..	..
Tajikistan	5.2	0.9	6.0	63	13	2.4	2.1	10.0	8.8	16	15	..
Tanzania	1.3	1.8	3.0	15	8	..	0.0 <sup>c</sup>	1.4	0.9	..	..	..
Thailand	1.9	4.1	6.0	349	112	0.1	0.4	1.5	2.0	..	..	2
Togo	1.3	1.3	2.6	36	8	0.1	0.1	..	1.5	..	..	..
Trinidad and Tobago	2.5	1.8	4.3	323	204	0.7	0.8	..	5.1	..	..	..
Tunisia	2.2	2.9	5.1	287	108	0.3	0.7	2.1	1.7	8	..	..
Turkey	2.9	2.9	5.8	386	177	0.6	1.2	2.2	2.5	7	6	2
Turkmenistan	4.1	1.1	5.1	146	31	2.9	0.2	10.6	11.5	17	15	..
Uganda	1.9	4.1	5.9	65	18	..	0.0 <sup>c</sup>	..	0.9	..	..	..
Ukraine	3.6	1.5	5.1	169	42	3.7	4.5	12.5	11.8	20	17	10
United Arab Emirates	0.8	7.4	8.2	1,495	1,428	1.1	1.8	2.8	2.6	11	5	..
United Kingdom	5.6	1.1	6.7	1,418	1,597	..	1.7	9.3	4.2	15	10	6
United States	5.8	7.2	13.0	3,950	4,108	1.8	2.7	5.9	3.7	13	7	6
Uruguay	1.9	7.2	9.1	823	621	..	3.7	..	4.4	..	..	..
Uzbekistan	3.4	0.6	4.1	87	..	2.9	3.3	11.5	8.3	19	14	..
Venezuela, RB	2.6	1.6	4.2	248	171	0.8	2.4	0.3	1.5	..	..	..
Vietnam	0.8	4.0	4.8	81	18	0.2	0.6	3.5	1.7	8	7	3
West Bank and Gaza	4.9	3.7	8.6	..	81	..	0.5	..	1.2	9	3	4
Yemen, Rep.	2.4	3.2	5.6	34	18	..	0.2	..	0.6	..	..	..
Yugoslavia, FR (Serb./Mont.)	..	..	..	..	..	..	2.0	..	5.3	8	12	2
Zambia	3.6	3.4	6.9	52	23	0.1	0.1	..	..	..	..	..
Zimbabwe	2.9	3.7	6.6	186	49	0.2	0.1	3.1	0.5	..	..	..
<b>World</b>	<b>2.6 w</b>	<b>3.0 w</b>	<b>5.5 w</b>	<b>561 w</b>	<b>489 w</b>	<b>1.0 w</b>	<b>1.5 w</b>	<b>3.4 w</b>	<b>3.3 w</b>	<b>9 w</b>	<b>13 w</b>	<b>6 w</b>
<b>Low income</b>	1.2	3.1	4.5	74	21	0.5	0.5	1.7	1.3	13	11	4
<b>Middle income</b>	2.5	2.6	5.0	267	117	1.2	1.8	3.4	3.4	6	12	4
Lower middle income	2.3	2.5	4.7	190	62	1.2	1.9	3.4	3.5	6	13	4
Upper middle income	3.4	2.9	6.2	549	318	..	1.6	..	3.3	6	8	4
<b>Low &amp; middle income</b>	1.9	2.8	4.8	179	73	0.9	1.2	2.7	2.5	7	12	4
East Asia & Pacific	1.7	2.4	4.2	151	43	0.8	1.5	2.0	2.5	4	13	4
Europe & Central Asia	4.0	1.6	5.2	326	138	3.0	3.3	10.4	8.8	17	14	6
Latin America & Carib.	3.2	3.3	6.5	452	272	..	1.6	..	2.2	2	5	2
Middle East & N. Africa	2.3	2.3	4.6	228	126	..	1.0	..	1.8	5	6	3
South Asia	0.9	3.8	5.1	87	19	0.3	0.4	0.7	0.7	..	..	3
Sub-Saharan Africa	1.7	2.6	4.3	89	42	..	0.1	..	1.1	12	6	1
<b>High income</b>	6.0	3.7	9.7	2,587	2,702	..	2.8	..	7.2	15	14	8
Europe EMU	6.7	2.3	8.9	1,980	2,045	..	3.9	..	7.6	19	12	6

a. Data are for the most recent year available. b. Data may not sum to total because of rounding and because of differences in the year for which the most recent data are available. c. Less than 0.05. d. Less than 0.5.



## Health expenditure, services, and use 2.15

### About the data

National health accounts track financial flows in the health sector, including both public and private expenditures. 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 a taxonomy of health care delivery institutions. The accounting system should be comprehensive and standardized, providing not only accurate measurements 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. Records of private out-of-pocket expenditures are often lacking. And compiling estimates of public health expenditures is complicated in countries where state or provincial and local governments are involved in health care financing and delivery because the data on public spending often are not aggregated. 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.

Health service indicators (physicians and hospital beds per 1,000 people) and health care utilization indicators (inpatient admission rates, average length of stay, and outpatient visits) 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 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 average length of stay in hospitals is an indicator of the efficiency of resource use. Longer stays

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

Table 2.15a

Responsiveness of national health systems to the population's expectations

	Score		Score
Malaysia	6.3	Senegal	5.0
Korea, Rep.	6.1	Brazil	4.8
Philippines	5.8	Bulgaria	4.4
Poland	5.7	Georgia	4.3
Indonesia	5.5	Burkina Faso	4.2
South Africa	5.4	Bangladesh	4.1
Ecuador	5.3	Nepal	3.8
Egypt, Arab Rep.	5.1	Uganda	3.7

Source: WHO, *World Health Report 2000*.

In *World Health Report 2000* the World Health Organization identified three overall goals for health systems: **good health, fairness of financial contributions, and responsiveness to the population's expectations.** To measure responsiveness, informants in 35 countries were asked to evaluate the health system's performance with respect to **dignity, autonomy, confidentiality, prompt attention, quality of basic amenities, social support, and choice of provider.** The results were combined in a composite score ranging from 0 to 10. The higher the score, the greater the health system's responsiveness.

### Definitions

- **Public health expenditure** consists of recurrent and capital spending from government (central and local) budgets, external borrowings and grants (including donations from international agencies and nongovernmental organizations), and social (or compulsory) health insurance funds.
- **Private health expenditure** includes direct household (out-of-pocket) spending, private insurance, charitable donations, and direct service payments by private corporations.
- **Total health expenditure** is the sum of public and private health 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.
- **Physicians** are defined as graduates of any faculty or school of medicine who are working in the country in any medical field (practice, teaching, research).
- **Hospital beds** include inpatient beds available in public, private, general, and specialized hospitals and rehabilitation centers. In most cases beds for both acute and chronic care are included.
- **Inpatient admission rate** is the percentage of the population admitted to hospitals during a year.
- **Average length of stay** is the average duration of inpatient hospital admissions.
- **Outpatient visits per capita** are the number of visits to health care facilities per capita, including repeat visits.

### Data sources

The estimates of health expenditure come from the WHO's *World Health Report 2000* and subsequent updates and from the OECD for its member countries, supplemented by World Bank country and sector studies, including the Human Development Network's *Sector Strategy: Health, Nutrition, and Population* (World Bank 1997e). Data are also drawn from World Bank public expenditure reviews, the International Monetary Fund's Government Finance Statistics database, and other studies. The data on private expenditure are largely from household surveys and World Bank poverty assessments and sector studies. The data on physicians, hospital beds, and utilization of health services are from the WHO and OECD, supplemented by country data.



## 2.16 Disease prevention: coverage and quality

	Access to an improved water source		Access to improved sanitation facilities		Tetanus vaccinations	Child immunization rate		Access to essential drugs	Tuberculosis treatment success rate	DOTS detection rate
	% of population		% of population		% of pregnant women	% of children under 12 months		% of population	% of cases	% of cases
	1990	2000	1990	2000	1996-98 <sup>a</sup>	Measles 1995-99 <sup>a</sup>	DPT 1995-99 <sup>a</sup>	1997	1990-97 <sup>a</sup>	1995-97 <sup>a</sup>
Albania	..	..	..	..	65	85	97	60	..	..
Algeria	..	94	..	73	52	78	83	95	86	97
Angola	..	38	..	44	24	57	22	20	..	70
Argentina	..	79	..	85	..	97	88	70	..	4
Armenia	..	..	..	..	..	91	91	40	77	49
Australia	100	100	100	100	..	89	88	100	..	..
Austria	100	100	100	100	..	90	90	100	..	..
Azerbaijan	..	..	..	..	..	87	93	86	7	..
Bangladesh	91	97	97	53	86	61	66	65	72	19
Belarus	..	100	..	..	..	98	97	70	..	..
Belgium	..	..	..	..	..	73	62	..	..	..
Benin	..	63	20	23	66	92	90	..	72	35
Bolivia	74	79	55	66	..	100	96	70	62	80
Bosnia and Herzegovina	..	..	..	..	..	83	90	..	..	..
Botswana	95	..	61	..	54	74	85	90	70	80
Brazil	82	87	72	77	..	90	83	40	..	..
Bulgaria	..	100	..	100	..	96	96	..	..	..
Burkina Faso	53	..	24	29	44	29	34	60	29	16
Burundi	65	..	89	..	9	47	63	20	45	25
Cambodia	..	30	..	18	31	63	64	30	94	50
Cameroon	52	62	87	92	38	46	48	..	..	..
Canada	100	100	100	100	..	96	97	100	..	..
Central African Republic	59	60	30	31	6	39	45	50	37	65
Chad	..	27	18	29	27	49	33	46	47	15
Chile	90	94	97	97	..	95	94	..	80	80
China	71	75	29	38	13	85	85	85	96	23
Hong Kong, China	..	..	..	..	..	82	88	..	..	..
Colombia	87	91	82	85	..	76	81	..	..	..
Congo, Dem. Rep.	..	45	..	20	10	15	25	..	80	46
Congo, Rep.	..	51	..	..	30	23	29	61	69	70
Costa Rica	..	98	..	96	..	92	93	100	..	..
Côte d'Ivoire	65	77	49	..	49	59	60	80	56	55
Croatia	..	95	..	100	..	92	93	100	..	..
Cuba	..	95	..	95	..	99	94	100	92	87
Czech Republic	..	..	..	..	..	97	98	..	66	53
Denmark	..	100	..	..	..	84	..	..	..	..
Dominican Republic	78	79	60	71	77	94	83	77	..	..
Ecuador	..	71	..	59	..	100	80	40	40	1
Egypt, Arab Rep.	94	95	87	94	61	96	95	..	81	10
El Salvador	..	74	..	83	..	75	94	80	..	45
Eritrea	..	46	..	13	34	55	56	57	..	3
Estonia	..	..	..	..	..	92	95	100	..	..
Ethiopia	22	24	13	15	30	53	64	..	72	24
Finland	100	100	100	100	..	98	100	98	..	..
France	..	..	..	..	..	84	98	..	..	..
Gabon	..	70	..	21	4	30	31	30	..	..
Gambia, The	..	62	..	37	96	87	90	90	80	75
Georgia	..	76	..	99	..	95	89	30	58	29
Germany	..	..	..	..	..	75	85	100	..	..
Ghana	56	64	60	63	18	73	72	..	51	33
Greece	..	..	..	..	..	88	88	100	..	..
Guatemala	78	92	77	85	..	93	86	50	81	52
Guinea	45	48	55	58	48	61	57	93	75	52
Guinea-Bissau	..	49	..	47	46	19	6	..	..	..
Haiti	46	46	25	28	..	85	59	30	..	2
Honduras	84	90	..	77	..	98	95	40	..	..



# Disease prevention: coverage and quality 2.16

	Access to an improved water source		Access to improved sanitation facilities		Tetanus vaccinations	Child immunization rate		Access to essential drugs	Tuberculosis treatment success rate	DOTS detection rate
	% of population		% of population		% of pregnant women	% of children under 12 months		% of population	% of cases	% of cases
	1990	2000	1990	2000	1996-98 <sup>a</sup>	Measles 1995-99 <sup>a</sup>	DPT 1995-99 <sup>a</sup>	1997	1990-97 <sup>a</sup>	1995-97 <sup>a</sup>
Hungary	99	99	99	99	..	100	100	100	..	..
India	78	88	21	31	80	60	78	35	79	1
Indonesia	69	76	54	66	78	71	64	80	81	7
Iran, Islamic Rep.	86	95	81	81	75	99	100	85	87	7
Iraq	..	85	..	79	56	94	90	85	..	..
Ireland	..	..	..	..	..	..	76	..	..	..
Israel	..	..	..	..	..	94	93	..	..	100
Italy	..	..	..	..	..	55	70	..	82	9
Jamaica	..	71	..	84	..	82	81	95	72	81
Japan	..	..	..	..	..	94	70	100	..	..
Jordan	97	96	98	99	22	83	85	100	..	..
Kazakhstan	..	91	..	99	..	100	98	..	..	..
Kenya	40	49	84	86	64	79	79	35	77	55
Korea, Dem. Rep.	..	..	..	..	5	98	87	..	..	..
Korea, Rep.	..	92	..	63	..	85	74	..	71	56
Kuwait	..	..	..	..	8	96	94	..	..	..
Kyrgyz Republic	..	77	..	100	..	97	98	..	88	4
Lao PDR	..	90	..	46	32	71	56	..	55	32
Latvia	..	..	..	..	..	97	95	90	64	69
Lebanon	..	100	..	99	..	81	94	..	89	56
Lesotho	..	91	..	92	17	58	64	80	71	65
Libya	71	72	97	97	..	93	97	100	..	..
Lithuania	..	..	..	..	..	97	93	..	..	..
Macedonia, FYR	..	99	..	99	..	98	95	..	..	..
Madagascar	44	47	36	42	30	46	48	65	55	60
Malawi	49	57	73	77	81	79	81	..	68	50
Malaysia	..	..	..	..	71	88	89	70	69	70
Mali	55	65	70	69	19	57	52	60	65	17
Mauritania	37	37	30	33	63	56	19	100	96	40
Mauritius	100	100	100	99	78	79	85	..	..	..
Mexico	83	86	69	73	..	94	96	92	75	15
Moldova	..	100	..	..	..	99	97	25	..	..
Mongolia	..	60	..	30	..	86	90	60	78	30
Morocco	75	82	62	75	33	93	94	..	88	94
Mozambique	..	60	..	43	41	90	81	50	54	57
Myanmar	64	68	45	46	78	85	73	60	79	25
Namibia	72	77	33	41	70	65	72	80	54	74
Nepal	66	81	21	27	65	81	76	20	85	11
Netherlands	100	100	100	100	..	96	97	100	81	45
New Zealand	..	..	..	..	..	83	88	100	..	..
Nicaragua	70	79	76	84	23	97	83	46	79	90
Niger	53	59	15	20	41	25	21	..	57	21
Nigeria	49	57	60	63	29	26	21	10	32	10
Norway	100	100	..	..	..	93	95	100	80	90
Oman	37	39	84	92	96	90	99	90	87	83
Pakistan	84	88	34	61	58	81	80	65	70	2
Panama	..	87	..	94	..	90	92	80	..	..
Papua New Guinea	42	42	82	82	11	57	56	90	60	4
Paraguay	63	79	89	95	..	70	77	..	51	55
Peru	72	77	64	76	57	92	98	60	89	95
Philippines	87	87	74	83	46	87	87	95	82	3
Poland	..	..	..	..	..	97	98	..	..	..
Portugal	..	..	..	..	..	96	97	100	74	67
Puerto Rico	..	..	..	..	..	..	..	..	68	81
Romania	..	58	..	53	..	98	97	85	..	..
Russian Federation	..	99	..	..	..	98	97	..	62	1



## 2.16 Disease prevention: coverage and quality

	Access to an improved water source		Access to improved sanitation facilities		Tetanus vaccinations	Child immunization rate		Access to essential drugs	Tuberculosis treatment success rate	DOTS detection rate
	% of population		% of population		% of pregnant women	% of children under 12 months		% of population	% of cases	% of cases
	1990	2000	1990	2000	1996-98 <sup>a</sup>	Measles 1995-99 <sup>a</sup>	DPT 1995-99 <sup>a</sup>	1997	1990-97 <sup>a</sup>	1995-97 <sup>a</sup>
Rwanda	..	41	..	8	43	78	85	60	61	45
Saudi Arabia	..	95	..	100	66	92	93	..	..	..
Senegal	72	78	57	70	34	48	52	..	41	62
Sierra Leone	..	28	..	28	42	68	56	..	74	37
Singapore	100	100	100	100	..	86	94	100	86	28
Slovak Republic	..	100	..	100	..	99	99	100	73	34
Slovenia	100	100	..	..	..	96	92	100	87	60
South Africa	..	86	..	86	26	82	76	80	69	6
Spain	..	..	..	..	..	93	94	100	..	..
Sri Lanka	66	83	82	83	78	95	99	95	80	71
Sudan	67	75	58	62	55	88	87	15	..	1
Sweden	100	100	100	100	..	96	99	..	..	..
Switzerland	100	100	100	100	79	81	..	100	..	..
Syrian Arab Republic	..	80	..	90	53	97	97	80	92	5
Tajikistan	..	..	..	..	..	90	96	..	..	..
Tanzania	50	54	88	90	27	78	82	..	76	55
Thailand	71	80	86	96	81	94	97	95	78	5
Togo	51	54	37	34	32	47	48	70	60	15
Trinidad and Tobago	..	86	..	88	..	88	90	..	..	..
Tunisia	80	..	76	..	50	93	100	51	..	..
Turkey	80	83	87	91	..	76	79	..	..	..
Turkmenistan	..	58	..	100	..	97	98	..	..	..
Uganda	44	50	84	75	38	53	51	70	33	65
Ukraine	..	..	..	..	87	99	99	..	..	..
United Arab Emirates	..	..	..	..	..	96	94	..	..	..
United Kingdom	100	100	100	100	..	91	93	..	..	..
United States	100	100	100	100	..	92	96	..	71	86
Uruguay	..	98	..	95	..	93	93	..	80	95
Uzbekistan	..	85	..	100	..	96	99	..	..	..
Venezuela, RB	..	84	..	74	..	79	79	90	80	75
Vietnam	48	56	73	73	83	93	93	85	90	77
West Bank and Gaza	..	..	..	..	31	93	94	..	..	..
Yemen, Rep.	66	69	39	45	26	74	72	50	76	30
Yugoslavia, FR (Serb./Mont.)	..	..	..	..	..	84	92	80	..	..
Zambia	52	64	63	78	37	72	92	..	..	..
Zimbabwe	77	85	64	68	58	79	81	70	..	..
<b>World</b>	<b>76 w</b>	<b>81 w</b>	<b>49 w</b>	<b>56 w</b>		<b>75 w</b>	<b>78 w</b>			
<b>Low income</b>	70	76	40	46		64	70			
<b>Middle income</b>	75	82	47	59		88	88			
Lower middle income	74	80	43	54		87	87			
Upper middle income	..	87	..	79		90	88			
<b>Low &amp; middle income</b>	73	79	44	52		74	78			
East Asia & Pacific	70	75	38	48		83	82			
Europe & Central Asia	..	90	..	..		97	97			
Latin America & Carib.	81	85	72	78		90	87			
Middle East & N. Africa	85	89	78	83		91	92			
South Asia	79	87	31	36		63	75			
Sub-Saharan Africa	49	55	55	55		57	59			
<b>High income</b>	..	..	..	..		89	91			
Europe EMU	..	..	..	..		82	91			

a. Data are for the most recent year available.



# Disease prevention: coverage and quality 2.16

## 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, the data are at times 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. Drinking water contaminated by feces deposited near homes and an inadequate water supply cause diseases accounting for 10 percent of the disease burden in developing countries (World Bank 1993c). 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 WHO-UNICEF Joint Monitoring Programme. 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 adequate or safe, as these characteristics are not tested at the time of the surveys.

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 toxoid.

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, though they often rely on personnel with limited training to provide the vaccines. According to the World Bank's *World Development Report 1993: Investing in Health*, these diseases accounted for about 10 percent of the disease burden among children under five in 1990, compared with an expected 23 percent at 1970 levels of vaccination. In many develop-

ing countries, however, lack of precise information on the size of the cohort of children under one year of age makes immunization coverage difficult to measure.

Essential drugs are pharmaceutical products included by the WHO on a periodically updated list of safe and effective treatments for both communicable and noncommunicable diseases. They are cost-effective elements of a health system that can treat many common diseases and conditions, including, among many others, anemia, hypertension, tuberculosis, and malaria.

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.

Table 2.16a

Children receiving each dose of vaccine against diphtheria, pertussis, and tetanus in selected developing countries, various years %

	DPT1	DPT2	DPT3
Bangladesh	84.9	79.2	69.3
Bolivia	81.6	66.8	48.6
Burkina Faso	78.3	64.5	41.0

Source: Demographic and Health Survey data.

**A high "dropout" rate for DPT immunization (the proportion of children who receive the first dose but not the second, or the first and second but not the third) indicates a need to provide better information to caregivers, so that those who bring a child to a clinic for the first vaccination bring the child back for the rest.**

## 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 stand-pipe, borehole, protected well or spring, and 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 one kilometer of the dwelling.
- **Access to improved sanitation facilities** refers to the percentage of the population with at least adequate excreta disposal facilities (private or shared, but not public) 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.
- **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.
- **Child immunization rate** is the percentage of children under one year of age receiving vaccination coverage 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.
- **Access to essential drugs** refers to the percentage of the population for which a minimum of 20 of the most essential drugs are continuously available and affordable at public or private health facilities or drug outlets within one hour's walk.
- **Tuberculosis treatment success rate** refers to the percentage of new, registered smear-positive (infectious) cases that were cured or in which a full-course treatment was completed.
- **DOTS detection rate** is the percentage of estimated new infectious tuberculosis cases detected under the directly observed treatment, short-course (DOTS) case detection and treatment strategy.

## Data sources

The table was produced using information provided to the WHO by countries, the WHO's EPI Information System, its Essential Drugs and Medicine Policy, and its *Global Tuberculosis Control Report 1999*; the United Nations Children's Fund's (UNICEF) *State of the World's Children 2001*; and the WHO and UNICEF's *Global Water Supply and Sanitation Assessment 2000 Report*.





## 2.17 Reproductive health

	Total fertility rate		Adolescent fertility rate	Women at risk of unintended pregnancy	Contraceptive prevalence rate	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 total		per 100,000 live births	
	1980	1999	1999	1990-99 <sup>a</sup>	1990-99 <sup>a</sup>	1982	1996-99 <sup>a</sup>	Reported 1990-99 <sup>a</sup>	Adjusted 1995
Albania	3.6	2.4	12	..	..	..	..	..	31
Algeria	6.7	3.4	20	..	51	..	..	220	150
Angola	6.9	6.7	215	..	..	34	..	..	1,300
Argentina	3.3	2.5	63	..	..	..	..	38	85
Armenia	2.3	1.3	40	..	..	..	96	35	29
Australia	1.9	1.8	29	..	..	99	..	..	6
Austria	1.6	1.3	20	..	..	..	..	..	11
Azerbaijan	3.2	2.0	22	..	..	..	99	43	37
Bangladesh	6.1	3.2	140	15	54	2	14	440	600
Belarus	2.0	1.3	22	..	..	..	..	28	33
Belgium	1.7	1.6	11	..	..	..	..	..	8
Benin	7.0	5.6	109	21	16	..	60	500	880
Bolivia	5.5	4.0	80	26	49	..	59	390	550
Bosnia and Herzegovina	2.1	1.6	33	..	..	..	..	10	15
Botswana	6.1	4.1	74	..	..	..	..	330	480
Brazil	3.9	2.2	71	7	77	98	88	160	260
Bulgaria	2.0	1.1	45	..	..	..	..	15	23
Burkina Faso	7.5	6.6	139	26	12	12	27	..	1,400
Burundi	6.8	6.1	53	..	..	..	..	..	1,900
Cambodia	4.7	4.4	13	..	22	..	31	470	590
Cameroon	6.4	4.9	134	13	19	..	55	430	720
Canada	1.7	1.5	20	..	..	..	..	..	6
Central African Republic	5.8	4.7	128	16	15	..	..	1,100	1,200
Chad	6.9	6.3	185	9	4	24	11	830	1,500
Chile	2.8	2.2	44	..	..	92	100	20	33
China	2.5	1.9	15	..	85	..	..	55	60
Hong Kong, China	2.0	1.0	5	..	..	89	..	..	..
Colombia	3.9	2.7	84	8	72	..	..	80	120
Congo, Dem. Rep.	6.6	6.2	211	..	..	..	..	..	940
Congo, Rep.	6.3	5.9	138	..	..	..	..	..	1,100
Costa Rica	3.6	2.5	76	..	..	..	..	29	35
Côte d'Ivoire	7.4	4.9	128	43	15	..	47	600	1,200
Croatia	..	1.5	18	..	..	..	..	6	18
Cuba	2.0	1.6	67	..	..	..	..	27	24
Czech Republic	2.1	1.2	23	..	69	..	..	9	14
Denmark	1.5	1.8	9	..	..	..	..	10	15
Dominican Republic	4.2	2.8	12	13	64	..	96	230	110
Ecuador	5.0	3.1	73	..	66	62	..	160	210
Egypt, Arab Rep.	5.1	3.3	61	16	52	..	56	170	170
El Salvador	4.9	3.2	104	8	60	..	90	120	180
Eritrea	..	5.6	116	28	8	..	..	1,000	1,100
Estonia	2.0	1.2	25	..	..	..	..	50	80
Ethiopia	6.6	6.3	151	..	4	10	..	..	1,800
Finland	1.6	1.8	11	..	..	..	..	6	6
France	1.9	1.8	9	..	71	..	..	10	20
Gabon	4.5	5.1	162	..	..	..	..	600	620
Gambia, The	6.5	5.5	167	..	..	41	..	..	1,100
Georgia	2.3	1.3	31	21	41	..	..	70	22
Germany	1.4	1.4	14	..	..	..	..	8	12
Ghana	6.5	4.3	84	23	22	..	44	210	590
Greece	2.2	1.3	17	..	..	..	..	1	2
Guatemala	6.3	4.7	109	23	38	..	..	190	270
Guinea	6.1	5.3	162	24	6	..	35	670	1,200
Guinea-Bissau	5.8	5.5	183	..	..	..	..	910	910
Haiti	5.9	4.1	66	48	18	34	..	..	1,100
Honduras	6.5	4.0	108	11	50	..	55	110	220



## Reproductive health 2.17

	Total fertility rate		Adolescent fertility rate	Women at risk of unintended pregnancy	Contraceptive prevalence rate	Births attended by skilled health staff		Maternal mortality ratio	
	births per woman					per 1,000 women ages 15–19	% of married women ages 15–49	% of women ages 15–49	% of total
	1980	1999	1999	1990–99 <sup>a</sup>	1990–99 <sup>a</sup>				1982
Hungary	1.9	1.3	27	..	73	99	..	15	23
India	5.0	3.1	107	16	52	23	..	410	440
Indonesia	4.3	2.6	57	11	57	27	43	450	470
Iran, Islamic Rep.	6.7	2.7	48	..	73	..	..	37	130
Iraq	6.4	4.4	38	..	..	..	..	..	370
Ireland	3.2	1.9	14	..	60	..	..	6	9
Israel	3.2	2.9	20	..	..	..	..	5	8
Italy	1.6	1.2	8	..	..	..	..	7	11
Jamaica	3.7	2.5	92	15	65	86	95	120	120
Japan	1.8	1.4	3	..	..	..	..	8	12
Jordan	6.8	3.7	32	14	50	..	97	41	41
Kazakhstan	2.9	2.0	39	11	66	..	98	70	80
Kenya	7.8	4.5	106	24	39	..	44	590	1,300
Korea, Dem. Rep.	2.8	2.0	2	..	..	..	..	110	35
Korea, Rep.	2.6	1.6	4	..	..	70	..	20	20
Kuwait	5.3	2.7	32	..	..	..	98	5	25
Kyrgyz Republic	4.1	2.7	34	12	60	..	98	65	80
Lao PDR	6.7	5.4	41	..	25	..	..	650	650
Latvia	2.0	1.1	31	..	..	..	..	45	70
Lebanon	4.0	2.4	25	..	61	..	95	100	130
Lesotho	5.5	4.5	81	..	23	..	..	..	530
Libya	7.3	3.6	53	..	45	..	94	75	120
Lithuania	2.0	1.4	35	..	..	..	..	18	27
Macedonia, FYR	2.5	1.8	36	..	..	..	..	3	17
Madagascar	6.6	5.6	167	26	19	..	47	490	580
Malawi	7.6	6.3	151	36	22	..	..	620	580
Malaysia	4.2	3.0	24	..	..	88	..	39	39
Mali	7.1	6.4	174	26	7	14	24	580	630
Mauritania	6.3	5.3	129	..	..	..	58	550	870
Mauritius	2.7	2.0	40	..	75	..	..	50	45
Mexico	4.7	2.8	70	..	65	..	..	55	65
Moldova	2.4	1.7	53	..	74	..	..	42	65
Mongolia	5.3	2.7	50	10	60	..	..	150	65
Morocco	5.4	2.9	47	16	59	29	..	230	390
Mozambique	6.5	5.2	159	7	6	..	44	1,100	980
Myanmar	4.9	3.1	24	..	..	97	57	230	170
Namibia	5.9	4.7	101	22	29	..	..	230	370
Nepal	6.1	4.3	117	28	29	..	10	..	830
Netherlands	1.6	1.6	5	..	75	100	..	7	10
New Zealand	2.0	2.0	30	..	..	..	..	15	15
Nicaragua	6.3	3.6	130	15	60	..	65	150	250
Niger	7.4	7.3	211	17	8	26	18	590	920
Nigeria	6.9	5.2	114	22	6	..	..	700	1,100
Norway	1.7	1.8	12	..	..	..	..	6	9
Oman	9.9	4.5	61	..	..	..	..	19	120
Pakistan	7.0	4.8	100	32	24	..	..	..	200
Panama	3.7	2.5	77	..	..	80	..	70	100
Papua New Guinea	5.8	4.2	66	29	26	..	53	370	390
Paraguay	5.2	4.0	81	17	57	..	71	190	170
Peru	4.5	3.1	65	12	64	30	56	270	240
Philippines	4.8	3.5	43	26	47	..	56	170	240
Poland	2.3	1.4	21	..	..	..	..	8	12
Portugal	2.2	1.5	22	..	..	..	100	8	12
Puerto Rico	2.6	1.9	64	..	78	..	..	..	30
Romania	2.4	1.3	41	..	48	..	..	41	60
Russian Federation	1.9	1.3	42	..	34	..	99	50	75



## 2.17 Reproductive health

	Total fertility rate		Adolescent fertility rate	Women at risk of unintended pregnancy	Contraceptive prevalence rate	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 total		per 100,000 live births	
	1980	1999	1999	1990–99 <sup>a</sup>	1990–99 <sup>a</sup>	1982	1996–99 <sup>a</sup>	Reported 1990–99 <sup>a</sup>	Adjusted 1995
Rwanda	8.3	6.0	54	37	21	20	..	..	2,300
Saudi Arabia	7.3	5.5	107	..	21	..	91	..	23
Senegal	6.8	5.4	99	33	13	..	47	560	1,200
Sierra Leone	6.5	5.9	196	..	..	..	..	..	2,100
Singapore	1.7	1.5	9	..	..	100	100	6	9
Slovak Republic	2.3	1.4	62	..	..	..	..	9	14
Slovenia	2.1	1.2	65	..	..	..	..	11	17
South Africa	4.6	2.9	45	..	69	..	84	..	340
Spain	2.2	1.2	8	..	..	..	..	6	8
Sri Lanka	3.5	2.1	21	..	..	85	95	60	60
Sudan	6.5	4.5	53	25	10	23	..	500	1,500
Sweden	1.7	1.5	9	..	..	..	..	5	8
Switzerland	1.5	1.5	4	..	..	..	..	5	8
Syrian Arab Republic	7.4	3.7	41	..	45	43	..	110	200
Tajikistan	5.6	3.3	28	..	..	..	..	65	120
Tanzania	6.7	5.4	130	24	25	..	35	530	1,100
Thailand	3.5	1.9	76	..	72	40	..	44	44
Togo	6.8	5.1	84	..	24	..	51	480	980
Trinidad and Tobago	3.3	1.8	42	..	..	..	99	..	65
Tunisia	5.2	2.2	11	..	60	40	82	70	70
Turkey	4.3	2.4	56	11	64	70	81	130	55
Turkmenistan	4.9	2.8	16	..	..	..	..	65	65
Uganda	7.2	6.4	189	29	15	..	..	510	1,100
Ukraine	2.0	1.3	34	..	68	..	..	27	45
United Arab Emirates	5.4	3.3	71	..	..	..	..	3	30
United Kingdom	1.9	1.7	28	..	..	..	..	7	10
United States	1.8	2.1	50	..	64	..	99	8	12
Uruguay	2.7	2.3	66	..	..	..	..	26	50
Uzbekistan	4.8	2.7	42	14	56	..	98	21	60
Venezuela, RB	4.2	2.9	95	..	..	82	..	60	43
Vietnam	5.0	2.3	34	..	75	100	77	160	95
West Bank and Gaza	..	5.8	96	..	42	..	..	..	..
Yemen, Rep.	7.9	6.2	100	39	21	..	22	350	850
Yugoslavia, FR (Serb./Mont.)	2.3	1.7	32	..	..	..	93	10	15
Zambia	7.0	5.4	138	27	26	..	47	650	870
Zimbabwe	6.4	3.6	85	15	48	37	84	400	610
<b>World</b>	<b>3.7 w</b>	<b>2.7 w</b>	<b>68 w</b>		<b>50 w</b>				
<b>Low income</b>	5.3	3.7	104		23				
<b>Middle income</b>	3.2	2.2	39		53				
Lower middle income	3.0	2.1	33		53				
Upper middle income	3.7	2.4	58		65				
<b>Low &amp; middle income</b>	4.1	2.9	73		49				
East Asia & Pacific	3.0	2.1	27		57				
Europe & Central Asia	2.5	1.6	39		64				
Latin America & Carib.	4.1	2.6	73		59				
Middle East & N. Africa	6.1	3.5	52		52				
South Asia	5.3	3.4	110		49				
Sub-Saharan Africa	6.6	5.3	130		21				
<b>High income</b>	1.8	1.7	25		75				
Europe EMU	1.8	1.4	11		75				

a. Data are for the most recent year available.



## Reproductive health 2.17

### 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. Health conditions related to sex and reproduction have been estimated to account for 25 percent of the global disease burden in women (Murray and Lopez 1998). 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 more than 300 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. In cases 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 for 1999 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 face the risk of unintended pregnancy, 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 pregnancy because of postpartum anovulation, menopause, or infertility. Common reasons for not using contraception are lack of knowledge about contraceptive methods and concerns about their 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 Demographic and Health 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.

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 improves maternal health and reduces 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 reported are estimates based on national surveys, vital registration, or surveillance or are derived from community and hospital records. Those shown as adjusted are based on a modeling exercise carried out by the World Health Organization (WHO) and United Nations Children's Fund (UNICEF). In this exercise maternal mortality was estimated with a regression model using information on fertility, birth attendants, and HIV prevalence. Neither set of ratios can be assumed to provide an accurate estimate of maternal mortality in 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.
- **Women at risk of unintended pregnancy** are 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.
- **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 during pregnancy and childbirth, per 100,000 live births.

### Data sources

The data on reproductive health come from Demographic and Health Surveys, the WHO's *Coverage of Maternity Care* (1997) and other WHO sources, UNICEF, and national statistical offices.

Table 2.17a

Access to reproductive health care in selected developing countries, various years

	Contraceptive prevalence rate			Pregnant women receiving antenatal care			Births attended by skilled health staff		
	% of women ages 15–49			%			%		
	Poorest quintile	Richest quintile	Average	Poorest quintile	Richest quintile	Average	Poorest quintile	Richest quintile	Average
Bangladesh	39	49	42	14	59	26	2	30	8
Brazil	56	77	70	68	98	86	72	99	88
Cameroon	1	13	4	53	99	79	32	95	64
India	25	51	37	25	89	49	12	79	34
Indonesia	46	57	55	74	99	89	21	89	49
Kenya	13	49	32	88	96	92	23	78	44

Note: Households are grouped into quintiles by assets.

Source: World Bank and Macro International analysis based on Demographic and Health Survey data.

**Women in the poorest households are less likely to use contraception and more likely to have unwanted or mistimed births than those in the richest households. And they are less likely to receive antenatal care and to have skilled health workers attending them in childbirth. The result is higher rates of maternal mortality among the poor.**



## 2.18 Health: risk factors and future challenges

	Years lived in poor health		Prevalence of anemia	Low-birthweight babies	Prevalence of child malnutrition		Consumption of iodized salt	Prevalence of smoking		Incidence of tuberculosis	Prevalence of HIV
	Males	Females	% of pregnant women	% of births	Weight for age	Height for age	% of households	Males	Females	per 100,000 people	% of adults
	% of lifespan 1999	% of lifespan 1999	1985-99 <sup>a</sup>	1992-98 <sup>a</sup>	% of children under 5 1993-99 <sup>a</sup>	% of children under 5 1993-99 <sup>a</sup>	1992-99 <sup>a</sup>	% of adults 1988-99 <sup>a</sup>	% of adults 1988-99 <sup>a</sup>	1997	1999
Albania	13	13	..	8	8	15	..	44	6	28	0.01
Algeria	8	12	42	..	13	18	92	44	7	44	0.07
Angola	20	21	29	..	41	53	10	..	..	238	2.78
Argentina	10	11	26	7	2	5	90	47	34	56	0.69
Armenia	10	11	..	..	3	12	70	50	..	44	0.01
Australia	8	8	..	7	0	0	..	27	23	8	0.15
Austria	7	7	..	6	..	..	..	30	19	19	0.23
Azerbaijan	11	11	..	6	10	22	..	30	1	58	0.01
Bangladesh	13	14	53	50	56	55	55	4	10	246	0.02
Belarus	10	10	..	6	..	..	37	55	5	65	0.28
Belgium	8	8	..	..	..	..	..	31	26	16	0.15
Benin	18	20	41	9	29	25	79	37	..	220	2.45
Bolivia	14	13	54	9	8	27	91	43	18	253	0.10
Bosnia and Herzegovina	11	11	..	..	..	..	..	48	..	81	0.04
Botswana	18	18	..	..	17	29	27	21	..	503	35.80
Brazil	13	12	33	8	6	11	95	38	29	78	0.57
Bulgaria	9	9	..	7	..	..	..	49	24	43	0.01
Burkina Faso	20	22	24	..	33	33	23	..	..	155	6.44
Burundi	20	21	68	16	..	..	80	..	..	252	11.32
Cambodia	16	14	..	18	47	53	7	..	..	539	4.04
Cameroon	17	17	44	..	22	29	83	36	..	133	7.73
Canada	8	10	..	6	..	..	..	27	23	7	0.30
Central African Republic	18	19	67	..	23	28	87	..	..	237	13.84
Chad	18	20	37	..	39	40	55	24	..	205	2.69
Chile	10	11	13	5	1	2	100	26	18	29	0.19
China	10	11	52	..	9	16	91	63	4	113	0.07
Hong Kong, China	..	..	..	5	..	..	..	27	3	95	0.06
Colombia	11	12	24	17	8	15	92	24	21	55	0.31
Congo, Dem. Rep.	17	17	..	20	34	45	90	..	..	263	5.07
Congo, Rep.	19	22	..	..	..	..	..	..	..	277	6.43
Costa Rica	12	14	27	6	5	6	97	29	7	18	0.54
Côte d'Ivoire	11	10	34	..	24	24	..	42	2	290	10.76
Croatia	9	9	..	..	1	1	90	31	..	64	0.02
Cuba	8	10	47	8	..	..	45	48	26	18	0.03
Czech Republic	9	10	23	6	..	..	..	28	12	20	0.04
Denmark	8	8	..	..	..	..	..	32	30	11	0.17
Dominican Republic	13	14	..	14	6	11	13	24	17	114	2.80
Ecuador	11	12	17	17	..	..	99	47	18	165	0.29
Egypt, Arab Rep.	9	11	24	..	11	21	84	44	5	36	0.02
El Salvador	12	12	14	11	12	23	91	38	12	74	0.60
Eritrea	18	21	..	..	44	38	80	..	..	227	2.87
Estonia	10	10	..	..	..	..	..	48	22	52	0.04
Ethiopia	19	22	42	9	..	..	0	6	..	251	10.63
Finland	8	9	..	..	..	..	..	27	20	13	0.05
France	7	8	..	6	..	..	..	39	27	19	0.44
Gabon	15	15	..	..	..	..	..	..	..	174	4.16
Gambia, The	16	16	80	..	26	30	9	..	..	211	1.95
Georgia	9	10	..	..	3	12	..	60	15	67	0.01
Germany	9	8	..	..	..	..	..	43	30	15	0.10
Ghana	17	17	64	8	25	26	28	..	..	214	3.60
Greece	7	7	..	..	..	..	..	46	28	29	0.16
Guatemala	13	13	45	8	24	46	49	38	18	85	1.38
Guinea	20	21	..	13	..	..	37	60	44	171	1.54
Guinea-Bissau	18	20	74	..	..	..	..	..	..	181	2.50
Haiti	16	18	64	15	28	32	10	11	9	385	5.17
Honduras	12	12	14	9	25	39	80	36	11	96	1.92



# Health: risk factors and future challenges 2.18

	Years lived in poor health		Prevalence of anemia	Low-birthweight babies	Prevalence of child malnutrition		Consumption of iodized salt	Prevalence of smoking		Incidence of tuberculosis	Prevalence of HIV
	Males	Females	% of pregnant women	% of births	Weight for age % of children under 5	Height for age % of children under 5	% of households	Males % of adults	Females % of adults	per 100,000 people	% of adults
	1999	1999	1985-99 <sup>a</sup>	1992-98 <sup>a</sup>	1993-99 <sup>a</sup>	1993-99 <sup>a</sup>	1992-99 <sup>a</sup>	1988-99 <sup>a</sup>	1988-99 <sup>a</sup>	1997	1999
Hungary	9	10	..	8	..	..	..	44	27	47	0.05
India	11	13	88	34	45	43	70	45	7	187	0.70
Indonesia	12	12	64	15	34	42	64	69	3	285	0.05
Iran, Islamic Rep.	8	12	17	10	11	15	94	25	5	55	0.01
Iraq	10	12	18	24	..	..	10	40	5	160	0.01
Ireland	8	8	..	..	..	..	..	32	31	21	0.10
Israel	9	10	..	8	..	..	..	33	25	7	0.08
Italy	7	8	..	..	..	..	..	32	17	10	0.35
Jamaica	11	12	40	11	4	7	100	15	..	8	0.71
Japan	7	8	..	8	..	..	..	53	13	29	0.02
Jordan	8	12	50	2	5	8	95	44	5	11	0.02
Kazakhstan	12	12	27	9	8	16	53	33	..	104	0.04
Kenya	18	18	35	..	22	33	100	67	32	297	13.95
Korea, Dem. Rep.	11	12	71	..	32	15	5	42	..	178	0.01
Korea, Rep.	9	11	..	..	..	..	..	65	6	142	0.01
Kuwait	12	16	40	7	2	3	..	34	2	81	0.12
Kyrgyz Republic	13	14	..	6	11	25	27	60	16	99	0.01
Lao PDR	17	17	62	60	40	47	93	..	..	167	0.05
Latvia	10	10	..	4	..	..	..	53	18	82	0.11
Lebanon	8	11	49	19	3	12	92	53	..	26	0.09
Lesotho	17	18	7	..	16	44	73	39	1	407	23.57
Libya	8	12	..	..	5	15	90	..	..	19	0.05
Lithuania	9	13	..	4	..	..	..	41	9	80	0.02
Macedonia, FYR	11	11	..	8	6	7	..	51	18	47	0.00
Madagascar	19	23	..	15	40	48	73	..	..	205	0.14
Malawi	21	23	55	..	30	48	58	20	9	404	15.96
Malaysia	9	12	56	8	20	..	..	49	4	112	0.42
Mali	21	24	58	..	27	49	9	..	..	292	2.03
Mauritania	19	20	24	9	23	44	3	..	..	226	0.52
Mauritius	12	10	29	..	15	10	0	42	3	66	0.08
Mexico	12	12	41	9	8	18	97	..	..	41	0.29
Moldova	10	10	20	5	..	..	..	44	3	73	0.20
Mongolia	13	13	45	11	13	25	68	55	19	205	0.00
Morocco	10	11	45	4	..	..	..	..	..	122	0.03
Mozambique	19	20	58	..	26	36	62	..	..	255	13.22
Myanmar	12	12	58	..	28	42	65	71	52	171	1.99
Namibia	17	18	16	..	..	..	59	65	35	527	19.54
Nepal	14	14	65	23	47	48	55	20	15	211	0.29
Netherlands	7	8	..	..	..	..	..	37	30	10	0.19
New Zealand	9	10	..	6	..	..	..	26	24	5	0.06
Nicaragua	13	13	36	8	12	25	86	51	16	95	0.20
Niger	24	26	41	..	50	41	64	..	..	148	1.35
Nigeria	19	20	55	..	39	38	98	15	2	214	5.06
Norway	8	9	..	5	..	..	..	34	33	6	0.07
Oman	12	13	54	8	23	23	61	13	0	13	0.11
Pakistan	12	13	37	25	38	36	19	36	9	181	0.10
Panama	11	11	..	8	..	..	95	56	20	57	1.54
Papua New Guinea	15	14	16	16	..	..	..	76	80	250	0.22
Paraguay	13	12	44	9	..	..	83	24	7	73	0.11
Peru	12	12	53	6	8	26	93	42	16	265	0.35
Philippines	11	12	48	11	30	33	15	75	18	310	0.07
Poland	8	9	..	8	..	..	..	39	19	44	0.06
Portugal	8	9	..	7	..	..	..	30	7	55	0.74
Puerto Rico	..	..	..	14	..	..	..	22	10	10	..
Romania	10	10	31	10	..	..	..	43	15	121	0.02
Russian Federation	10	10	30	..	3	13	30	63	14	106	0.18



## 2.18 Health: risk factors and future challenges

	Years lived in poor health		Prevalence of anemia	Low-birthweight babies	Prevalence of child malnutrition		Consumption of iodized salt	Prevalence of smoking		Incidence of tuberculosis	Prevalence of HIV
	Males	Females	% of pregnant women	% of births	Weight for age	Height for age	% of households	Males	Females	per 100,000 people	% of adults
	% of lifespan 1999	% of lifespan 1999	1985-99 <sup>a</sup>	1992-98 <sup>a</sup>	% of children under 5 1993-99 <sup>a</sup>	% of children under 5 1993-99 <sup>a</sup>	1992-99 <sup>a</sup>	% of adults 1988-99 <sup>a</sup>	% of adults 1988-99 <sup>a</sup>	1997	1999
Rwanda	20	23	..	..	27	42	95	7	4	276	11.21
Saudi Arabia	8	12	..	5	..	..	..	40	8	46	0.01
Senegal	19	19	26	..	22	23	9	32	5	223	1.77
Sierra Leone	22	27	31	..	..	..	75	19	..	315	2.99
Singapore	10	12	..	7	..	..	..	27	3	48	0.19
Slovak Republic	8	9	..	..	..	..	..	55	30	35	0.01
Slovenia	9	10	..	5	..	..	..	30	20	30	0.02
South Africa	18	18	37	..	9	23	62	..	..	394	19.94
Spain	7	8	..	..	..	..	..	42	25	61	0.58
Sri Lanka	10	10	39	18	33	20	47	..	..	48	0.07
Sudan	20	20	36	15	34	34	0	24	2	180	0.99
Sweden	8	9	..	..	..	..	..	17	22	5	0.08
Switzerland	8	9	..	5	..	..	..	38	27	11	0.46
Syrian Arab Republic	9	12	..	7	13	21	40	53	9	75	0.01
Tajikistan	15	15	50	..	..	..	20	..	..	87	0.01
Tanzania	19	21	59	..	31	43	74	50	12	307	8.10
Thailand	12	12	57	7	19	16	50	39	2	142	2.15
Togo	18	19	48	..	25	22	73	..	..	353	5.98
Trinidad and Tobago	9	10	53	14	..	..	..	..	..	11	1.05
Tunisia	7	11	38	16	9	23	98	61	4	40	0.04
Turkey	8	12	74	..	8	16	18	51	49	41	0.01
Turkmenistan	15	13	..	..	..	..	0	27	1	74	0.00
Uganda	21	23	30	..	26	38	69	52	17	312	8.30
Ukraine	9	9	..	8	..	..	4	49	21	61	0.96
United Arab Emirates	10	13	..	..	7	..	..	24	1	21	0.18
United Kingdom	7	8	..	6	..	..	..	29	28	18	0.11
United States	9	9	..	7	1	2	..	28	22	7	0.61
Uruguay	9	10	20	8	4	10	..	..	..	31	0.33
Uzbekistan	12	13	..	..	19	31	17	40	1	81	0.01
Venezuela, RB	11	12	29	12	8	15	90	42	39	42	0.49
Vietnam	12	13	..	11	37	39	89	73	4	189	0.24
West Bank and Gaza	..	..	..	6	..	..	..	40	3	26	..
Yemen, Rep.	13	14	..	26	46	52	39	60	29	111	0.01
Yugoslavia, FR (Serb./Mont.)	11	11	..	..	2	7	63	..	57	51	0.10
Zambia	21	21	34	10	24	42	90	35	10	576	19.95
Zimbabwe	18	19	..	11	16	21	80	34	1	543	25.06
<b>World</b>	<b>11 w</b>	<b>12 w</b>	<b>55 w</b>	<b>.. w</b>	<b>.. w</b>	<b>.. w</b>	<b>67 w</b>	<b>47 w</b>	<b>12 w</b>	<b>136 w</b>	<b>1.05 w</b>
<b>Low income</b>	13	15	69	..	..	..	61	43	9	212	2.01
<b>Middle income</b>	10	11	45	..	14	17	72	55	11	108	0.53
Lower middle income	10	11	47	..	9	18	69	58	8	112	0.18
Upper middle income	11	12	35	..	..	..	87	43	23	91	1.84
<b>Low &amp; middle income</b>	12	13	55	..	..	..	67	50	10	157	1.19
East Asia & Pacific	11	11	54	..	12	23	74	63	6	150	0.22
Europe & Central Asia	10	10	39	..	..	..	25	51	21	75	0.18
Latin America & Carib.	12	12	34	10	9	16	89	37	25	81	0.58
Middle East & N. Africa	9	12	29	..	..	..	53	41	7	67	0.03
South Asia	11	13	79	34	47	43	66	40	8	193	0.56
Sub-Saharan Africa	19	20	45	..	..	..	60	..	..	267	8.38
<b>High income</b>	8	8	..	..	..	..	..	35	22	18	0.33
Europe EMU	8	8	..	..	..	..	..	38	25	22	0.31

a. Data are for the most recent year available.



## Health: risk factors and future 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 a number of 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.

An effort to summarize the overall health status of populations with one indicator was undertaken by the WHO as part of its *World Health Report 2000*. The WHO has developed a measure indicating the number of years lived in good health, known as disability-adjusted life expectancy (DALE). The measure, equal to life expectancy minus the number of years spent in poor health, is estimated from three sources: life table survival to each age, the assumed prevalence of each disability (diseases, disorders, or impairments), and weights assigned to the severity of the disability. Life table survivorship is available for some countries from vital registration and can be approximated with model life tables for others; prevalence of disability is much less available from measured sources. Time spent in poor health averages about 8 years, ranging between 6 and 10 years for most countries. The data are presented in the table as the share of the expected lifespan spent in poor health.

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

Low birthweight, which is associated with maternal malnutrition, raises the risk of infant mortality and stunts growth in infancy and childhood. Estimates of low-birthweight infants are drawn mostly from hospital records. But 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.

Estimates of child malnutrition, based on both weight for age (underweight) and height for age (stunting), are from national survey data. The proportion of children 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 postnatally, 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.

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, *The State of the World's Children 1999*).

Smoking is the most common form of tobacco use in most 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 low- and middle-income 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 intensity of smoking or duration, they should be interpreted with caution. The data in the table are based on surveys and other studies compiled in *Tobacco Control Country Profiles* (Corrao and others 2000), issued for the 2000 World Conference on Tobacco or Health.

Tuberculosis is the main cause of death from a single infectious agent among adults in developing countries (WHO 1999). 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.

Adult HIV prevalence rates reflect the rate of HIV infection in each country's population. The estimates of HIV prevalence are based on extrapolations from data collected through surveys and surveillance of small, non-representative groups.

### Definitions

- **Years lived in poor health** show the difference between life expectancy at birth and disability-adjusted life expectancy (DALE), expressed as a percentage of life expectancy.
- **Prevalence of anemia**, or iron deficiency, refers to the percentage of pregnant women with hemoglobin levels less than 11 grams per deciliter.
- **Low-birthweight babies** are newborns weighing less than 2,500 grams, with the measurement taken within the first hours of life, before significant postnatal weight loss has occurred.
- **Prevalence of child malnutrition** is the percentage of children under five whose weight for age and height for age are less than minus two standard deviations from the median for the international reference population ages 0–59 months. For children up to two years of age, 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.
- **Consumption of iodized salt** refers to the percentage of households that use edible salt fortified with iodine.
- **Prevalence of smoking** is the percentage of adult men and women who smoke cigarettes. The age range varies among countries, but in most is 18 and above or 15 and above.
- **Incidence of tuberculosis** is the estimated number of new tuberculosis cases (pulmonary, smear positive, extra-pulmonary).
- **Prevalence of HIV** refers to the percentage of people ages 15–49 who are infected with HIV.

### Data sources

The data are drawn from a variety of sources, including the United Nations Administrative Committee on Coordination, Subcommittee on Nutrition's *Update on the Nutrition Situation*; the WHO's *World Health Report 2000* and *Global Tuberculosis Control Report 1999*; Corrao and others' *Tobacco Control Country Profiles* (2000); UNICEF's *State of the World's Children 2001*; the WHO and UNICEF's *Low Birth Weight: A Tabulation of Available Information* (1992); and UNAIDS and the WHO's *AIDS Epidemic Update* (2000).





## 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		Male per 1,000 1988-99 <sup>a</sup>	Female per 1,000 1988-99 <sup>a</sup>	Male per 1,000 1999	Female per 1,000 1999	Male % of cohort 1999	Female % of cohort 1999
	1980	1999	1980	1999	1980	1999						
Albania	69	72	47	24	57	..	15	15	175	84	72	84
Algeria	59	71	98	34	139	39	..	..	153	117	73	79
Angola	41	47	154	127	261	208	..	..	427	375	36	41
Argentina	70	74	35	18	38	22	..	..	160	78	74	86
Armenia	73	74	26	14	..	18	..	..	159	77	74	87
Australia	74	79	11	5	13	5	..	..	108	55	83	91
Austria	73	78	14	4	17	5	..	..	121	59	81	91
Azerbaijan	68	71	30	16	..	21	..	..	205	98	68	83
Bangladesh	48	61	132	61	211	89	37	47	276	290	56	56
Belarus	71	68	16	11	..	14	..	..	335	115	55	81
Belgium	73	78	12	5	15	6	..	..	129	61	80	90
Benin	48	53	116	87	214	145	89	90	371	312	44	51
Bolivia	52	62	118	59	170	83	26	26	261	210	58	65
Bosnia and Herzegovina	70	73	31	13	..	18	..	..	166	90	74	85
Botswana	58	39	71	58	94	95	18	16	786	740	21	25
Brazil	63	67	70	32	81	40	8	9	256	139	59	77
Bulgaria	71	71	20	14	25	17	..	..	221	109	67	83
Burkina Faso	44	45	134	105	..	210	131	128	551	522	28	31
Burundi	47	42	122	105	193	176	101	114	582	546	26	30
Cambodia	39	54	201	100	330	143	..	..	364	315	44	50
Cameroon	50	51	103	77	173	154	69	75	477	419	43	48
Canada	75	79	10	5	13	6	..	..	106	53	83	92
Central African Republic	46	44	117	96	..	151	63	64	608	555	25	32
Chad	42	49	123	101	235	189	106	99	438	383	36	43
Chile	69	76	32	10	35	12	3	2	140	72	78	88
China	67	70	42	30	65	37	10	11	164	129	71	78
Hong Kong, China	74	80	11	3	..	5	..	..	106	54	84	91
Colombia	66	70	41	23	58	28	7	7	210	115	67	81
Congo, Dem. Rep.	49	46	112	85	210	161	..	..	515	482	37	42
Congo, Rep.	50	48	89	89	125	144	..	..	487	414	32	41
Costa Rica	73	77	19	12	29	14	..	..	116	68	81	89
Côte d'Ivoire	49	46	108	111	170	180	71	58	524	497	31	33
Croatia	70	73	21	8	23	9	..	..	194	76	69	86
Cuba	74	76	20	7	22	8	..	..	123	78	81	87
Czech Republic	70	75	16	5	19	5	..	..	173	81	74	87
Denmark	74	76	8	5	10	6	..	..	140	79	79	88
Dominican Republic	64	71	76	39	92	47	13	13	156	104	72	81
Ecuador	63	69	74	28	101	35	12	9	176	138	71	80
Egypt, Arab Rep.	56	67	120	47	175	61	22	28	193	168	67	72
El Salvador	57	70	84	30	120	36	17	20	207	125	67	79
Eritrea	44	50	..	60	..	105	89	78	484	431	33	40
Estonia	69	71	17	10	25	12	..	..	288	94	59	85
Ethiopia	42	42	155	104	213	180	..	..	567	523	26	30
Finland	73	77	8	4	9	5	..	..	136	59	79	91
France	74	79	10	5	13	5	..	..	124	50	81	92
Gabon	48	53	116	84	194	133	..	..	386	344	43	48
Gambia, The	40	53	159	75	216	110	83	79	411	349	42	49
Georgia	71	73	25	15	..	20	..	..	192	81	70	86
Germany	73	77	12	5	16	5	..	..	131	66	80	89
Ghana	53	58	94	57	157	109	53	51	316	272	53	58
Greece	74	78	18	6	23	7	..	..	114	61	82	90
Guatemala	57	65	84	40	121	52	15	18	288	186	57	70
Guinea	40	46	151	96	280	167	101	98	442	438	36	37
Guinea-Bissau	39	44	169	127	290	214	..	..	474	421	31	36
Haiti	51	53	123	70	200	118	59	58	438	344	40	50
Honduras	60	70	70	34	103	46	..	..	184	113	69	79



## 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		Male	Female	Male	Female	Male	Female
	1980	1999	1980	1999	1980	1999	per 1,000 1988-99 <sup>a</sup>	per 1,000 1988-99 <sup>a</sup>	per 1,000 1999	per 1,000 1999	% of cohort 1999	% of cohort 1999
Hungary	70	71	23	8	26	10	..	..	..	..	65	84
India	54	63	115	71	177	90	25	37	218	206	62	65
Indonesia	55	66	90	42	125	52	19	20	235	183	63	70
Iran, Islamic Rep.	60	71	87	26	126	33	..	..	156	139	73	78
Iraq	62	59	80	101	95	128	..	..	196	169	59	64
Ireland	73	76	11	6	14	7	..	..	124	71	79	88
Israel	73	78	16	6	19	8	..	..	110	67	83	89
Italy	74	78	15	5	17	6	..	..	116	54	81	91
Jamaica	71	75	33	20	39	24	..	..	137	84	78	86
Japan	76	81	8	4	11	4	..	..	97	45	85	93
Jordan	..	71	41	26	49	31	7	5	156	118	73	80
Kazakhstan	67	65	33	22	..	28	11	6	380	166	50	74
Kenya	55	48	75	76	115	118	36	38	591	546	35	39
Korea, Dem. Rep.	67	60	32	58	43	93	..	..	311	208	57	65
Korea, Rep.	67	73	26	8	27	9	..	..	198	93	70	85
Kuwait	71	77	27	11	35	13	..	..	122	64	80	89
Kyrgyz Republic	65	67	43	26	..	38	10	11	300	138	58	77
Lao PDR	45	54	127	93	200	143	..	..	376	317	44	51
Latvia	69	70	20	14	26	18	..	..	297	98	59	83
Lebanon	65	70	48	26	..	32	..	..	175	132	71	78
Lesotho	53	45	119	92	168	141	..	..	518	486	41	45
Libya	60	71	79	22	80	28	6	5	183	125	70	80
Lithuania	71	72	20	9	24	12	..	..	261	86	64	86
Macedonia, FYR	..	73	54	16	69	17	..	..	160	102	74	83
Madagascar	51	54	119	90	216	149	75	68	327	287	52	58
Malawi	44	39	169	132	265	227	126	114	548	541	27	28
Malaysia	67	72	30	8	42	10	4	4	183	111	72	82
Mali	42	43	184	120	..	223	136	138	470	406	35	41
Mauritania	47	54	120	88	175	142	..	..	346	294	46	52
Mauritius	66	71	32	19	40	23	..	..	207	113	69	84
Mexico	67	72	51	29	74	36	15	17	166	104	72	84
Moldova	66	67	35	17	..	22	..	..	310	173	57	74
Mongolia	58	67	82	58	..	73	27	22	199	168	66	73
Morocco	58	67	99	48	152	62	21	19	199	145	66	74
Mozambique	44	43	145	131	223	203	84	82	580	514	32	37
Myanmar	52	60	109	77	134	120	..	..	278	228	54	61
Namibia	53	50	90	63	114	108	30	34	524	475	37	40
Nepal	48	58	132	75	180	109	..	..	264	275	55	54
Netherlands	76	78	9	5	11	5	..	..	112	62	81	90
New Zealand	73	77	13	5	16	6	..	..	126	66	81	90
Nicaragua	59	69	84	34	143	43	12	11	200	137	67	77
Niger	42	46	135	116	317	252	184	202	468	374	33	42
Nigeria	46	47	99	83	196	151	118	102	444	390	39	45
Norway	76	78	8	4	11	4	..	..	111	58	83	91
Oman	60	73	41	17	95	24	..	..	139	103	77	83
Pakistan	55	63	127	90	161	126	22	37	186	153	64	69
Panama	70	74	32	20	36	25	..	..	140	83	76	85
Papua New Guinea	51	58	78	58	..	77	28	21	369	330	50	53
Paraguay	67	70	50	24	61	27	10	12	185	130	68	79
Peru	60	69	81	39	126	48	19	20	199	140	67	78
Philippines	61	69	52	31	81	41	21	19	193	146	68	76
Poland	70	73	26	9	..	10	..	..	227	88	70	86
Portugal	71	75	24	6	31	6	..	..	152	70	77	88
Puerto Rico	74	76	19	10	..	..	..	..	152	58	75	90
Romania	69	69	29	20	36	24	7	5	262	119	63	80
Russian Federation	67	66	22	16	..	20	3	2	382	138	51	79



## 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		Male	Female	Male	Female	Male	Female
	1980	1999	1980	1999	1980	1999	per 1,000 1988-99 <sup>a</sup>	per 1,000 1988-99 <sup>a</sup>	per 1,000 1999	per 1,000 1999	% of cohort 1999	% of cohort 1999
Rwanda	46	40	128	123	..	203	87	73	604	566	24	27
Saudi Arabia	61	72	65	19	85	25	..	..	160	129	74	80
Senegal	45	52	117	67	..	124	76	74	459	389	38	46
Sierra Leone	35	37	190	168	336	283	..	..	544	483	23	28
Singapore	71	78	12	3	13	4	..	..	130	72	81	88
Slovak Republic	70	73	21	8	23	10	..	..	206	87	69	85
Slovenia	70	75	15	5	18	6	..	..	165	72	75	88
South Africa	57	48	67	62	91	76	..	..	601	533	47	57
Spain	76	78	12	5	16	6	..	..	127	55	81	91
Sri Lanka	68	73	34	15	48	19	10	9	150	96	76	84
Sudan	48	56	94	67	145	109	62	63	384	338	45	51
Sweden	76	79	7	4	9	4	..	..	101	57	84	91
Switzerland	76	80	9	5	11	5	..	..	104	49	84	92
Syrian Arab Republic	62	69	56	26	73	30	..	..	202	135	68	78
Tajikistan	66	69	58	20	..	34	..	..	232	140	64	77
Tanzania	50	45	108	95	176	152	61	58	542	500	30	34
Thailand	64	69	49	28	58	33	11	11	240	147	67	79
Togo	49	49	100	77	188	143	75	90	478	435	35	40
Trinidad and Tobago	68	73	35	16	40	20	4	3	180	132	74	83
Tunisia	62	73	69	24	100	30	19	19	159	133	73	79
Turkey	61	69	109	36	133	45	12	14	177	145	69	79
Turkmenistan	64	66	54	33	..	45	..	..	281	158	58	74
Uganda	48	42	116	88	180	162	82	72	597	590	25	25
Ukraine	69	67	17	14	..	17	..	..	346	134	53	79
United Arab Emirates	68	75	55	8	..	9	..	..	125	92	80	85
United Kingdom	74	77	12	6	14	6	..	..	119	66	81	89
United States	74	77	13	7	15	8	..	..	143	78	80	89
Uruguay	70	74	37	15	42	17	..	..	168	74	73	87
Uzbekistan	67	70	47	22	..	29	15	9	227	125	65	79
Venezuela, RB	68	73	36	20	42	23	..	..	155	88	74	85
Vietnam	63	69	57	37	105	42	..	..	205	144	66	76
West Bank and Gaza	..	72	..	23	..	26	10	7	164	106	73	82
Yemen, Rep.	49	56	141	79	198	97	33	36	307	283	48	51
Yugoslavia, FR (Serb./Mont.)	70	72	33	12	..	16	..	..	176	106	72	83
Zambia	50	38	90	114	149	187	96	93	607	597	25	25
Zimbabwe	55	40	80	70	108	118	26	26	569	526	31	35
<b>World</b>	<b>63 w</b>	<b>66 w</b>	<b>80 w</b>	<b>54 w</b>	<b>123 w</b>	<b>78 w</b>	<b>32 w</b>	<b>35 w</b>	<b>221 w</b>	<b>170 w</b>	<b>65 w</b>	<b>73 w</b>
<b>Low income</b>	53	59	112	77	177	116	45	51	288	258	55	60
<b>Middle income</b>	66	69	54	31	79	39	12	12	199	135	68	78
Lower middle income	66	69	55	32	84	40	12	13	191	133	69	78
Upper middle income	66	69	52	27	67	34	..	..	233	143	66	80
<b>Low &amp; middle income</b>	60	64	86	59	135	85	32	35	239	190	62	69
East Asia & Pacific	65	69	55	35	82	44	12	13	184	141	69	76
Europe & Central Asia	68	69	41	21	..	26	..	..	289	127	60	80
Latin America & Carib.	65	70	61	30	80	38	13	14	207	122	67	80
Middle East & N. Africa	59	68	95	44	136	56	..	..	183	151	68	74
South Asia	54	63	119	74	180	99	26	38	223	212	61	65
Sub-Saharan Africa	48	47	114	92	189	161	92	86	499	453	36	41
<b>High income</b>	74	78	12	6	15	6	..	..	125	63	81	91
Europe EMU	74	78	13	5	16	5	..	..	125	58	80	91

a. Data are for the most recent year available.



## Mortality 2.19

## About the data

Mortality rates for different age groups—infants, children, or 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) frequently are 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 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 for 1999 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.

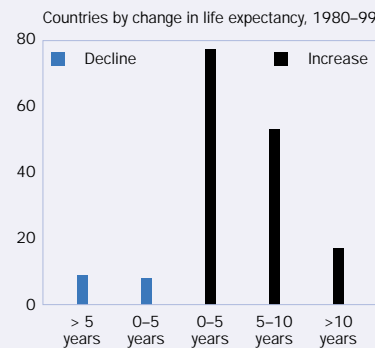
Specific problems arise in calculating infant mortality rates in developing countries, where routine data collection in the health system often omits many infant deaths. In countries where civil registration of deaths is incomplete, especially in rural areas, many infants dying during the first weeks of life may not even have been registered as having been born. Rates based on civil registration in these countries, or on hospital data covering mainly urban areas, are therefore biased because they reflect the more privileged population. Infant and child mortality rates are higher for boys than for girls in countries in which parental gender preferences are absent. 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, it is likely that girls 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.

Figure 2.19

Progress in life expectancy has been uneven



Note: The figure covers all countries for which data are available for 1980–99.

Source: World Bank data files.

**Unweighted life expectancies for all countries represented in the figure increased by four years between 1980 and 1999, but the progress was unevenly distributed—in 17 countries life expectancy increased by more than 10 years, while in 17 others it declined. Among those with declining life expectancies, 9 are in Sub-Saharan Africa (with the largest declines) and 6 are in Europe and Central Asia (with declines of 0–2 years). The other two with declining life expectancies are Iraq and the Democratic Republic of Korea.**

## 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 the age of one year, 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.
- **Child mortality rate** is the probability of dying between the ages of one and five, if subject to current age-specific mortality rates.
- **Adult mortality rate** is the probability of dying between the ages of 15 and 60—that is, the probability of a 15-year-old dying before reaching age 60, if subject to current age-specific mortality rates between ages 15 and 60.
- **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

The data are from the United Nations Statistics Division's *Population and Vital Statistics Report*; publications and other releases from country statistical offices; Demographic and Health Surveys from national sources and Macro International; and the United Nations Children's Fund's (UNICEF) *State of the World's Children 2000*.