



	Investment commitments in infrastructure projects with private participation <sup>a</sup>								Domestic credit to private sector	Businesses registered	
	\$ millions									% of GDP	New
	Telecommunications		Energy		Transport		Water and sanitation		2009		
2000-05	2006-09	2000-05	2006-09	2000-05	2006-09	2000-05	2006-09	2009	2009	2009	
Afghanistan	466.1	1,040.4	1.6	..	..	..	..	..	9.1	..	..
Albania	569.2	670.0	790.6	664.0	308.0	..	8.0	0.0	37.0	2,045	0.84
Algeria	3,422.5	1,925.0	962.0	2,320.0	120.9	269.0	510.0	1,572.0	16.2	10,544	0.44
Angola	278.7	1,129.0	45.0	9.4	..	53.0	..	..	21.2	..	..
Argentina	5,836.8	5,033.6	3,826.9	3,479.0	203.6	1,402.6	791.6	..	13.5	11,924	0.46
Armenia	317.1	488.8	74.0	127.0	63.0	715.0	0.0	0.0	23.1	2,698	1.28
Australia	..	..	..	..	..	..	..	..	127.8	89,960	6.38
Austria	..	..	..	..	..	..	..	..	126.9	3,228	0.58
Azerbaijan	355.6	1,283.5	375.2	..	..	..	0.0	..	19.6	5,314	0.93
Bangladesh	1,294.3	3,729.8	501.5	243.5	0.0	0.0	..	..	41.5	..	..
Belarus	735.4	2,219.2	..	1,875.0	..	4.0	..	..	37.3	5,508	0.80
Belgium	..	..	..	..	..	..	..	..	97.9	29,548	4.28
Benin	116.9	399.7	590.0	..	..	..	..	..	22.2	..	..
Bolivia	520.5	284.7	884.4	137.3	16.6	..	..	..	37.0	2,504	0.43
Bosnia and Herzegovina	0.0	1,086.6	..	800.0	..	..	..	..	57.3	1,896	0.58
Botswana	104.0	183.9	..	..	..	..	..	..	25.5	..	..
Brazil	41,053.8	31,121.4	26,171.6	46,690.5	3,398.4	22,086.9	1,234.4	1,365.4	54.0	315,645	2.38
Bulgaria	2,179.1	1,866.5	3,253.5	2,246.7	2.1	536.2	152.0	..	75.6	35,545	7.20
Burkina Faso	41.9	680.6	..	..	..	..	..	..	17.5	610	0.08
Burundi	53.6	0.0	..	..	..	..	..	..	21.7	..	..
Cambodia	136.1	436.9	82.1	695.8	125.3	40.1	..	..	24.5	2,003	0.22
Cameroon	394.4	701.4	91.8	440.0	0.0	..	..	0.0	11.3	..	..
Canada	..	..	..	..	..	..	..	..	128.6	174,000	7.56
Central African Republic	0.0	20.8	..	..	..	..	..	..	7.0	..	..
Chad	11.0	246.4	0.0	..	..	..	..	..	5.2	..	..
Chile	3,561.6	4,167.6	1,590.5	2,397.7	4,821.2	1,311.1	1,495.2	3.1	97.5	23,541	2.12
China	8,548.0	0.0	10,970.9	7,170.5	15,350.1	15,795.0	3,505.2	3,992.2	127.3	..	..
Hong Kong SAR, China	..	..	..	..	..	..	..	..	158.0	101,023	19.19
Colombia	1,570.9	5,294.7	351.6	944.6	1,005.4	2,344.4	314.3	305.0	29.9	31,132	1.07
Congo, Dem. Rep.	473.4	880.0	..	..	..	..	..	..	7.5	..	..
Congo, Rep.	61.8	330.7	..	..	..	735.0	0.0	..	4.8	..	..
Costa Rica	..	..	80.0	190.0	465.2	373.0	..	..	49.4	26,765	8.78
Côte d'Ivoire	134.9	885.4	0.0	0.0	176.4	..	..	0.0	17.1	..	..
Croatia	1,205.7	3,035.0	7.1	85.0	451.0	492.0	298.7	..	66.3	7,800	2.57
Cuba	60.0	0.0	116.0	60.0	0.0	..	600.0	..	..	..	..
Czech Republic	..	..	..	..	..	..	..	..	55.3	21,717	3.00
Denmark	..	..	..	..	..	..	..	..	231.6	16,519	4.57
Dominican Republic	393.0	220.1	1,306.6	0.0	898.9	879.9	..	..	21.3	12,881	2.13
Ecuador	357.8	1,764.7	302.0	129.0	685.0	766.0	510.0	..	25.3	..	..
Egypt, Arab Rep.	3,471.9	8,864.0	678.0	469.0	821.5	1,370.0	..	..	36.2	6,291	0.13
El Salvador	1,110.6	901.9	85.0	0.0	..	..	..	..	41.3	4,400	1.19
Eritrea	40.0	0.0	..	..	..	..	..	..	16.6	..	..
Estonia	..	..	..	..	..	..	..	..	110.2	7,199	8.10
Ethiopia	..	..	..	4.0	..	..	..	..	17.8	1,327	0.03
Finland	..	..	..	..	..	..	..	..	94.4	11,820	3.37
France	..	..	..	..	..	..	..	..	110.3	128,906	3.08
Gabon	26.6	278.8	0.0	0.0	177.4	3.9	..	..	10.1	3,490	4.27
Gambia, The	6.6	35.0	..	0.0	..	..	..	..	18.9	..	..
Georgia	173.8	612.2	40.0	634.2	..	573.0	..	435.0	31.2	7,226	2.32
Germany	..	..	..	..	..	..	..	..	112.3	64,840	1.19
Ghana	156.5	2,916.0	590.0	100.0	10.0	..	0.0	..	15.9	9,606	0.72
Greece	..	..	..	..	..	..	..	..	91.7	8,426	1.18
Guatemala	560.1	1,511.4	110.0	263.8	..	..	..	6.7	25.4	5,133	0.68
Guinea	50.6	242.2	..	..	..	159.0	..	..	..	..	..
Guinea-Bissau	21.9	96.4	..	..	..	..	..	..	5.6	..	..
Haiti	18.0	306.0	5.5	..	..	..	..	0.0	14.5	..	..
Honduras	135.0	930.5	358.8	..	120.0	..	207.9	..	52.6	..	..

# Private sector in the economy

# 5.1

	Investment commitments in infrastructure projects with private participation <sup>a</sup>								Domestic credit to private sector	Businesses registered	
	\$ millions								% of GDP	New	Entry density
	Telecommunications		Energy		Transport		Water and sanitation				
2000-05	2006-09	2000-05	2006-09	2000-05	2006-09	2000-05	2006-09	2009	2009	2009	
Hungary	5,172.8	1,523.3	851.6	1,707.0	3,297.5	1,588.0	0.0	0.0	71.3	42,951	6.26
India	20,030.5	33,682.4	8,369.2	50,754.4	4,172.2	23,012.8	112.9	241.7	46.8	84,800	0.12
Indonesia	6,557.2	9,748.1	1,860.5	3,779.3	159.2	1,731.5	44.8	20.2	27.6	28,998	0.18
Iran, Islamic Rep.	695.0	1,506.0	650.0	..	..	..	..	..	36.7	..	..
Iraq	984.0	4,521.0	..	590.0	..	..	..	..	6.4	..	..
Ireland	..	..	..	..	..	..	..	..	230.3	13,188	4.67
Israel	..	..	..	..	..	..	..	..	84.5	19,758	4.46
Italy	..	..	..	..	..	..	..	..	110.8	68,508	1.78
Jamaica	700.3	301.6	201.0	78.0	565.0	..	..	..	28.5	2,003	1.16
Japan	..	..	..	..	..	..	..	..	171.0	105,698	1.28
Jordan	1,589.0	648.6	..	989.0	0.0	1,380.0	169.0	951.0	71.7	2,737	0.74
Kazakhstan	1,153.7	3,170.2	300.0	0.0	231.0	31.0	..	..	50.3	27,978	2.59
Kenya	1,434.0	2,973.8	..	332.7	..	404.0	..	..	31.5	17,896	0.85
Korea, Dem. Rep.	..	400.0	..	..	..	..	..	..	..	..	..
Korea, Rep.	..	..	..	..	..	..	..	..	107.6	60,039	1.72
Kosovo	..	..	..	..	..	..	..	..	36.1	141	0.12
Kuwait	..	..	..	..	..	..	..	..	63.3	..	..
Kyrgyz Republic	11.5	115.9	..	..	..	..	0.0	..	15.1	4,412	1.26
Lao PDR	87.7	135.0	1,250.0	1,425.0	0.0	..	..	..	9.5	..	..
Latvia	700.0	468.1	158.1	184.0	..	135.0	..	..	107.8	7,175	4.62
Lebanon	138.1	0.0	..	..	153.0	..	0.0	..	73.9	..	..
Lesotho	88.4	30.6	0.0	..	..	..	..	..	13.5	..	..
Liberia	70.3	73.8	..	..	..	..	..	..	16.1	..	..
Libya	..	..	..	..	..	..	..	..	10.9	..	..
Lithuania	993.0	490.2	514.3	417.6	..	..	..	..	70.9	5,399	2.18
Macedonia, FYR	706.6	489.6	..	655.0	..	295.0	..	..	44.3	8,074	5.63
Madagascar	12.6	304.8	0.0	..	61.0	17.5	..	..	11.5	724	0.07
Malawi	36.3	197.7	0.0	..	..	..	..	..	14.2	619	0.08
Malaysia	3,777.0	1,700.0	6,637.6	384.5	4,263.0	1,379.0	6,502.2	0.0	117.1	41,638	2.55
Mali	82.6	583.0	365.9	..	55.4	..	..	..	17.4	..	..
Mauritania	92.1	133.1	..	..	..	..	..	..	..	..	..
Mauritius	413.0	102.1	0.0	..	..	..	0.0	..	85.1	6,626	7.33
Mexico	18,758.0	12,622.6	6,749.3	1,483.0	2,970.4	11,434.1	523.7	303.8	23.3	44,084	0.61
Moldova	46.1	392.3	227.2	68.0	0.0	60.0	..	..	36.2	4,180	1.32
Mongolia	22.1	0.0	..	..	..	..	..	..	43.9	..	..
Morocco	6,139.5	2,549.6	1,049.0	..	200.0	200.0	..	..	64.4	26,166	1.28
Mozambique	123.0	156.2	1,205.8	..	334.6	0.0	..	..	25.1	..	..
Myanmar	..	..	..	556.1	..	..	..	..	..	..	..
Namibia	35.0	8.5	1.0	..	..	..	0.0	..	46.8	..	..
Nepal	109.3	26.0	15.1	..	..	..	..	..	59.4	..	..
Netherlands	..	..	..	..	..	..	..	..	215.3	35,100	3.10
New Zealand	..	..	..	..	..	..	..	..	147.0	47,897	17.08
Nicaragua	218.5	380.1	126.3	95.0	104.0	..	..	..	34.4	..	..
Niger	85.5	251.7	..	..	..	..	3.4	..	12.2	24	0.00
Nigeria	6,949.7	11,348.1	1,920.0	280.0	2,355.4	644.1	..	..	37.6	65,089	0.79
Norway	..	..	..	..	..	..	..	..	..	13,805	4.49
Oman	..	..	..	..	..	..	..	..	49.0	3,165	1.67
Pakistan	6,594.9	8,706.5	375.4	4,058.2	112.8	923.7	..	..	23.5	2,759	0.03
Panama	211.4	1,224.0	449.3	576.7	51.4	0.0	..	..	85.7	548	0.26
Papua New Guinea	..	150.0	..	..	..	..	..	..	32.1	..	..
Paraguay	199.0	591.4	..	..	..	..	..	..	29.1	..	..
Peru	2,241.4	2,485.0	2,498.9	1,142.9	522.5	3,157.6	152.0	..	24.1	51,151	2.65
Philippines	4,616.4	4,177.0	3,428.4	9,463.3	943.5	678.9	0.0	530.5	30.3	11,435	0.19
Poland	16,800.1	7,750.0	2,620.5	2,475.4	1,672.0	3,642.3	64.3	0.8	52.9	14,434	0.52
Portugal	..	..	..	..	..	..	..	..	187.8	27,759	3.92
Puerto Rico	..	..	..	..	..	..	..	..	..	..	..
Qatar	..	..	..	..	..	..	..	..	51.5	..	..



	Investment commitments in infrastructure projects with private participation <sup>a</sup>								Domestic credit to private sector % of GDP 2009	Businesses registered	
	\$ millions									New 2009	Entry density 2009
	Telecommunications		Energy		Transport		Water and sanitation				
2000-05	2006-09	2000-05	2006-09	2000-05	2006-09	2000-05	2006-09	2009	2009	2009	
Romania	3,906.9	4,188.9	1,240.8	6,288.7	..	116.8	116.0	41.0	47.1	56,698	3.66
Russian Federation	22,049.4	24,525.8	1,726.0	27,214.2	109.4	191.0	904.7	1,241.7	45.3	261,633	2.61
Rwanda	72.3	351.0	1.6	..	..	..	..	..	..	3,028	0.51
Saudi Arabia	..	..	..	..	..	..	..	..	52.1	..	..
Senegal	593.1	1,333.0	93.3	..	55.4	398.0	0.0	0.0	24.7	1,636	0.22
Serbia	563.5	3,297.4	..	..	..	..	0.0	..	42.2	9,715	1.94
Sierra Leone	48.8	111.2	..	1.2	..	..	..	..	9.3	..	..
Singapore	..	..	..	..	..	..	..	..	103.2	26,416	7.40
Slovak Republic	..	..	..	..	..	..	..	..	44.7	15,825	4.04
Slovenia	..	..	..	..	..	..	..	..	94.0	5,836	4.16
Somalia	13.4	0.0	..	..	..	..	..	..	..	..	..
South Africa	10,519.5	7,714.0	1,251.3	9.9	504.7	3,483.0	31.3	0.0	147.1	24,700	0.77
Spain	..	..	..	..	..	..	..	..	211.5	79,757	2.92
Sri Lanka	766.1	1,444.5	270.8	..	..	..	..	..	24.8	4,223	0.29
Sudan	747.7	1,748.3	..	..	..	30.0	..	120.7	12.3	..	..
Swaziland	27.7	48.3	..	..	..	..	..	..	25.0	..	..
Sweden	..	..	..	..	..	..	..	..	139.3	24,228	4.09
Switzerland	..	..	..	..	..	..	..	..	174.8	25,250	4.88
Syrian Arab Republic	583.0	307.7	..	..	..	82.0	..	..	20.3	..	..
Tajikistan	8.5	125.0	16.0	..	..	..	..	..	29.0	2,171	0.48
Tanzania	515.3	1,484.5	348.0	28.4	27.7	134.0	8.5	..	15.3	..	..
Thailand	5,602.7	3,106.0	4,693.3	2,341.0	939.0	..	522.7	18.8	116.3	27,520	0.59
Timor-Leste	0.0	0.0	..	..	..	..	..	..	18.6	..	..
Togo	0.0	44.0	657.7	190.0	..	..	..	..	21.9	125	0.04
Trinidad and Tobago	..	..	..	..	..	..	..	..	31.5	..	..
Tunisia	751.0	2,805.0	30.0	..	..	840.0	..	..	68.4	9,079	1.23
Turkey	12,788.6	12,068.7	6,754.8	8,862.7	3,118.6	4,138.5	..	..	36.5	44,472	0.87
Turkmenistan	20.0	158.1	..	..	..	..	..	..	..	..	..
Uganda	387.6	1,463.0	113.9	1,000.6	..	404.0	0.0	..	13.1	11,152	0.72
Ukraine	3,162.9	4,508.8	160.0	54.0	..	130.0	100.0	102.0	73.3	19,300	0.60
United Arab Emirates	..	..	..	..	..	..	..	..	93.0	..	..
United Kingdom	..	..	..	..	..	..	..	..	213.5	330,100	8.05
United States	..	..	..	..	..	..	..	..	202.9	..	..
Uruguay	114.2	158.5	330.0	..	251.1	..	368.0	..	20.6	4,664	2.08
Uzbekistan	285.6	942.1	..	..	..	25.0	0.0	..	..	14,428	0.78
Venezuela, RB	3,337.0	2,619.8	39.5	..	34.0	..	15.0	..	21.7	..	..
Vietnam	430.0	1,593.7	2,360.6	297.0	20.0	965.0	266.0	..	112.7	..	..
West Bank and Gaza	279.8	47.0	150.0	..	..	..	..	..	..	..	..
Yemen, Rep.	376.8	392.2	..	15.8	..	220.0	..	..	7.4	..	..
Zambia	208.3	624.0	3.0	..	15.6	..	0.0	..	12.0	5,509	0.88
Zimbabwe	72.0	343.0	..	..	..	..	..	..	..	..	..
<b>World</b>	<b>.. s</b>	<b>.. s</b>	<b>.. s</b>	<b>.. s</b>	<b>.. s</b>	<b>.. s</b>	<b>.. s</b>	<b>.. s</b>	<b>138.2 w</b>		
<b>Low income</b>	6,362.3	20,932.3	..	..	..	..	..	..	26.4		
<b>Middle income</b>	227,575.0	248,323.5	107,077.9	191,687.3	50,686.8	105,160.9	16,175.1	6,654.9	72.8		
Lower middle income	84,109.2	27,585.0	38,840.9	82,564.1	26,511.7	51,724.0	3,704.9	5,271.6	92.9		
Upper middle income	143,465.8	134,452.2	49,324.0	109,123.2	5,696.9	41,208.8	407.0	..	47.8		
<b>Low &amp; middle income</b>	233,937.3	269,255.8	87,324.8	196,264.6	5,403.2	86,781.7	..	..	72.0		
East Asia & Pacific	29,862.2	4,662.0	31,290.4	26,112.4	21,800.1	20,589.5	10,840.9	4,561.7	117.1		
Europe & Central Asia	50,274.6	62,911.8	5,316.0	47,981.4	..	..	..	..	45.0		
Latin America & Carib.	81,401.1	72,021.9	45,682.0	57,940.1	16,150.3	43,755.5	2,516.1	..	40.8		
Middle East & N. Africa	13,435.4	23,566.1	..	..	..	..	..	..	34.5		
South Asia	29,314.5	48,647.1	9,533.6	55,257.1	4,285.0	23,936.5	112.9	241.7	43.5		
Sub-Saharan Africa	24,654.4	40,481.6	..	..	..	..	..	..	65.1		
<b>High income</b>	..	..	..	..	..	..	..	..	165.1		
Euro area	..	..	..	..	..	..	..	..	133.0		

a. Data refer to total for the period shown. Includes infrastructure projects with private sector participation that reached financial closure in 1990-2009.

## About the data

Private sector development and investment—tapping private sector initiative and investment for socially useful purposes—are critical for poverty reduction. In parallel with public sector efforts, private investment, especially in competitive markets, has tremendous potential to contribute to growth. Private markets are the engine of productivity growth, creating productive jobs and higher incomes. And with government playing a complementary role of regulation, funding, and service provision, private initiative and investment can help provide the basic services and conditions that empower poor people—by improving health, education, and infrastructure.

Investment in infrastructure projects with private participation has made important contributions to easing fiscal constraints, improving the efficiency of infrastructure services, and extending delivery to poor people. Developing countries have been in the forefront, pioneering better approaches to infrastructure services and reaping the benefits of greater competition and customer focus.

The data on investment in infrastructure projects with private participation refer to all investment (public and private) in projects in which a private company assumes operating risk during the operating period or development and operating risk during the contract period. Investment refers to commitments not disbursements. Foreign state-owned companies are considered private entities for the purposes of this measure.

Investments are classified into two types: investments in physical assets—the resources a company commits to invest in expanding and modernizing facilities—and payments to the government to acquire state-owned enterprises or rights to provide services in a specific area or to use part of the radio spectrum.

The data are from the World Bank's Private Participation in Infrastructure (PPI) Project database, which tracks infrastructure projects with private participation in developing countries. It provides information on more than 4,600 infrastructure projects in 137 developing economies from 1984 to 2009. The database contains more than 30 fields per project record, including country, financial closure year, infrastructure services provided, type of private participation, investment, technology, capacity, project location, contract duration, private sponsors, bidding process, and development bank support. Data on the projects are compiled from publicly available information. The database aims to be as comprehensive as possible, but some projects—particularly those

involving local and small-scale operators—may be omitted because they are not publicly reported. The database is a joint product of the World Bank's Finance, Economics, and Urban Development Department and the Public-Private Infrastructure Advisory Facility. Geographic and income aggregates are calculated by the World Bank's Development Data Group. For more information, see <http://ppi.worldbank.org/>.

Credit is an important link in money transmission; it finances production, consumption, and capital formation, which in turn affect economic activity. The data on domestic credit to the private sector are taken from the banking survey of the International Monetary Fund's (IMF) *International Financial Statistics* or, when unavailable, from its monetary survey. The monetary survey includes monetary authorities (the central bank), deposit money banks, and other banking institutions, such as finance companies, development banks, and savings and loan institutions. Credit to the private sector may sometimes include credit to state-owned or partially state-owned enterprises.

Entrepreneurship is essential to the dynamism of the modern market economy, and a greater entry rate of new businesses can foster competition and economic growth. The table includes data on business registrations from the 2008 World Bank Group Entrepreneurship Survey, which includes entrepreneurial activity in more than 100 countries for 2000–08. Survey data are used to analyze firm creation, its relationship to economic growth and poverty reduction, and the impact of regulatory and institutional reforms. The 2008 survey improves on earlier surveys' methodology and country coverage for better cross-country comparability. Data on total and newly registered businesses were collected directly from national registrars of companies. For cross-country comparability, only limited liability corporations that operate in the formal sector are included. For additional information on sources, methodology, calculation of entrepreneurship rates, and data limitations see <http://econ.worldbank.org/research/entrepreneurship>.

## Definitions

• **Investment commitments in infrastructure projects with private participation** refers to infrastructure projects in telecommunications, energy (electricity and natural gas transmission and distribution), transport, and water and sanitation that have reached financial closure and directly or indirectly serve the public. Incinerators, movable assets, standalone solid waste projects, and small projects such as windmills are excluded. Included are operation and management contracts, concessions (operation and management contracts with major capital expenditure), greenfield projects (new facilities built and operated by a private entity or a public-private joint venture), and divestitures. Investment commitments are the sum of investments in physical assets and payments to the government. Investments in physical assets are resources the project company commits to invest during the contract period in new facilities or in expansion and modernization of existing facilities. Payments to the government are the resources the project company spends on acquiring government assets such as state-owned enterprises, rights to provide services in a specific area, or use of specific radio spectrums. • **Domestic credit to private sector** is financial resources provided to the private sector—such as through loans, purchases of nonequity securities, and trade credits and other accounts receivable—that establish a claim for repayment. For some countries these claims include credit to public enterprises. • **New businesses registered** are the number of limited liability corporations registered in the calendar year. • **Entry density** is the number of newly registered limited liability corporations per 1,000 people ages 15–64.

## Data sources

Data on investment commitments in infrastructure projects with private participation are from the World Bank's PPI Project database (<http://ppi.worldbank.org>). Data on domestic credit are from the IMF's *International Financial Statistics*. Data on business registration are from the World Bank's Entrepreneurship Survey and database (<http://econ.worldbank.org/research/entrepreneurship>).



## 5.2

## Business environment: Enterprise Surveys

Survey year	Regulations and tax		Permits and licenses	Corruption	Crime	Informality	Gender	Finance	Infrastructure	Innovation	Trade	Workforce	
	Time dealing with officials % of management time	Average number of times meeting with tax officials											Time required to obtain operating license days
Afghanistan	2008	6.8	1.2	13.8	41.5	1.5	88.0	2.8	1.4	6.5	8.5	14.6	14.6
Albania	2007	18.7	3.9	21.2	57.7	0.5	89.4	10.8	12.4	13.7	24.6	1.9	19.9
Algeria	2007	25.1	2.3	19.3	64.7	0.9	98.3	15.0	8.9	4.0	5.0	14.1	17.3
Angola	2006	7.1	3.3	24.1	46.8	0.4	..	23.4	2.1	3.7	5.1	16.5	19.4
Argentina	2006	13.8	2.2	78.3	18.7	1.5	93.8	30.3	6.9	1.6	26.9	5.5	52.2
Armenia	2009	10.3	2.1	20.0	11.6	0.6	96.2	31.8	31.9	1.8	26.9	3.3	30.4
Australia	..	..	..	..	..	..	..	..	..	..	..	..	..
Austria	..	..	..	..	..	..	..	..	..	..	..	..	..
Azerbaijan	2009	3.0	2.1	15.8	32.0	0.3	85.1	10.8	19.0	1.8	18.2	1.9	10.5
Bangladesh	2007	3.2	1.3	6.0	85.1	0.1	..	16.1	24.7	10.6	7.8	8.4	16.2
Belarus	2008	13.6	1.1	38.2	13.5	0.4	98.5	52.9	35.8	0.8	13.9	2.6	44.4
Belgium	..	..	..	..	..	..	..	..	..	..	..	..	..
Benin	2009	20.7	1.2	64.3	54.5	1.9	87.9	43.9	4.2	7.5	7.3	9.6	32.4
Bolivia	2006	13.5	1.7	26.0	32.4	0.9	90.5	41.1	22.2	4.4	13.8	15.3	53.9
Bosnia and Herzegovina	2009	11.2	1.0	21.4	8.1	0.2	98.6	32.8	59.7	1.9	30.1	1.4	66.5
Botswana	2006	5.0	0.9	13.7	27.6	1.3	..	40.9	11.3	1.4	12.7	1.4	37.7
Brazil	2009	18.7	1.2	83.5	9.7	1.7	95.8	59.3	48.4	3.0	25.7	15.9	52.9
Bulgaria	2009	10.6	2.2	20.8	8.5	0.5	98.5	33.9	34.7	1.6	19.9	4.2	30.7
Burkina Faso	2009	22.2	1.5	35.8	8.5	0.3	77.7	19.2	25.6	5.8	14.4	7.4	24.8
Burundi	2006	5.7	1.8	27.3	56.5	1.1	..	34.8	12.3	10.7	7.1	..	22.1
Cambodia	2007	5.6	1.0	..	61.2	0.0	87.5	..	11.3	2.4	2.8	1.5	48.4
Cameroon	2009	7.0	4.4	30.0	50.8	1.7	82.1	15.7	31.4	4.9	20.4	15.1	25.5
Canada	..	..	..	..	..	..	..	..	..	..	..	..	..
Central African Republic	..	..	..	..	..	..	..	..	..	..	..	..	..
Chad	2009	20.8	3.4	24.3	41.8	2.5	77.1	40.1	4.2	3.3	43.3	11.9	43.4
Chile	2006	9.0	3.0	67.7	8.2	0.6	97.8	27.8	29.1	1.8	22.0	5.8	46.9
China	2003	18.3	14.4	11.6	72.6	0.1	..	..	28.8	1.3	35.9	6.6	84.8
Hong Kong SAR, China	..	..	..	..	..	..	..	..	..	..	..	..	..
Colombia	2006	14.3	0.6	28.2	8.2	0.7	85.6	43.0	30.6	2.3	5.9	7.0	39.5
Congo, Dem. Rep.	2010	29.4	8.0	40.0	65.7	1.8	61.9	38.9	6.7	22.7	8.5	18.0	24.1
Congo, Rep.	2009	6.0	2.7	..	49.2	3.3	84.3	31.8	7.7	16.4	19.6	..	37.5
Costa Rica	2005	9.6	0.5	..	33.8	0.4	..	65.3	14.9	1.9	10.5	3.5	46.4
Côte d'Ivoire	2009	1.8	3.6	14.5	30.6	3.4	56.4	61.9	13.9	5.0	4.3	16.6	19.1
Croatia	2007	10.9	0.7	26.5	14.5	0.2	98.1	33.5	60.0	0.8	16.5	1.3	28.0
Cuba	..	..	..	..	..	..	..	..	..	..	..	..	..
Czech Republic	2009	10.4	1.5	19.9	8.7	0.4	98.0	25.0	33.4	0.6	43.5	5.7	70.7
Denmark	..	..	..	..	..	..	..	..	..	..	..	..	..
Dominican Republic	2005	8.8	0.5	..	26.3	0.7	..	..	12.5	15.2	9.6	11.4	53.3
Ecuador	2006	17.3	0.6	19.9	21.5	0.9	91.1	32.7	24.0	2.7	18.2	7.0	61.6
Egypt, Arab Rep.	2008	8.8	3.4	90.6	15.2	3.0	14.3	34.0	5.6	3.4	21.1	6.2	21.7
El Salvador	2006	9.2	2.7	35.4	34.3	2.6	79.5	39.6	17.3	2.9	11.0	2.5	49.6
Eritrea	2009	0.5	0.2	..	0.0	0.0	100.0	4.2	11.9	0.2	15.1	9.6	26.1
Estonia	2009	5.5	0.4	8.3	1.6	0.9	97.4	36.3	41.5	0.5	21.2	1.8	69.3
Ethiopia	2006	3.8	1.1	11.4	12.4	1.4	..	30.9	11.0	0.9	4.2	4.3	38.2
Finland	..	..	..	..	..	..	..	..	..	..	..	..	..
France	..	..	..	..	..	..	..	..	..	..	..	..	..
Gabon	2009	2.8	15.2	12.1	26.1	0.4	63.7	33.1	6.3	1.7	18.6	3.8	30.9
Gambia, The	2006	7.3	2.5	8.4	52.4	2.7	..	21.3	7.6	11.8	22.2	5.0	25.6
Georgia	2008	2.1	0.6	11.8	4.1	0.7	99.6	40.8	38.2	1.4	16.0	3.8	14.5
Germany	2005	1.2	1.3	..	..	0.5	..	20.3	45.0	..	..	4.7	35.4
Ghana	2007	4.0	4.1	6.4	38.8	0.9	66.4	44.0	16.0	6.0	6.8	7.8	33.0
Greece	2005	1.8	1.7	..	21.6	0.0	..	24.4	25.9	..	11.7	5.5	20.0
Guatemala	2006	9.2	2.1	75.4	15.7	1.5	91.3	28.4	12.8	4.5	8.0	4.5	28.1
Guinea	2006	2.7	2.8	13.0	84.8	2.0	..	25.4	0.9	14.0	5.2	4.3	21.1
Guinea-Bissau	2006	2.9	3.4	30.4	62.7	1.1	..	19.9	0.7	5.3	8.4	5.6	12.4
Haiti	..	..	..	..	..	..	..	..	..	..	..	..	..
Honduras	2006	4.6	1.5	31.6	16.7	2.2	89.4	39.9	8.5	3.8	16.5	6.0	33.3

# Business environment: Enterprise Surveys

# 5.2

Survey year	Regulations and tax		Permits and licenses	Corruption	Crime	Informality	Gender	Finance	Infrastructure	Innovation	Trade	Workforce	
	Time dealing with officials % of management time	Average number of times meeting with tax officials	Time required to obtain operating license days	Informal payments to public officials % of firms	Losses due to theft, robbery, vandalism, and arson % of sales	Firms formally registered when operations started % of firms	Firms with female participation in ownership % of firms	Firms using banks to finance investment % of firms	Value lost due to electrical outages % of sales	Inter-nationally recognized quality certification ownership % of firms	Average time to clear direct exports through customs days	Firms offering formal training <sup>a</sup> % of firms	
Hungary	2009	13.5	0.8	35.6	4.0	0.1	100.0	42.4	48.7	0.9	39.4	4.3	14.8
India	2006	6.7	2.6	..	47.5	0.1	..	9.1	46.7	6.6	22.5	15.1	15.9
Indonesia	2009	1.9	0.2	21.1	14.6	0.3	29.1	42.8	11.7	2.4	2.9	2.4	4.7
Iran, Islamic Rep.	..	..	..	..	..	..	..	..	..	..	..	..	..
Iraq	..	..	..	..	..	..	..	..	..	..	..	..	..
Ireland	2005	2.3	1.3	..	8.3	0.3	..	41.6	37.4	1.5	17.2	2.6	73.2
Israel	..	..	..	..	..	..	..	..	..	..	..	..	..
Italy	..	..	..	..	..	..	..	..	..	..	..	..	..
Jamaica	2005	6.3	1.8	..	17.7	1.1	..	32.2	37.0	11.8	16.4	4.3	53.5
Japan	..	..	..	..	..	..	..	..	..	..	..	..	..
Jordan	2006	6.7	1.7	6.4	18.1	0.1	..	13.1	8.6	1.7	15.5	3.8	23.9
Kazakhstan	2009	4.7	2.6	30.8	23.3	1.0	97.4	34.4	31.0	3.7	10.8	8.5	40.9
Kenya	2007	5.1	6.7	23.4	79.2	3.9	..	37.1	22.9	6.4	9.8	5.6	40.7
Korea, Dem. Rep.	..	..	..	..	..	..	..	..	..	..	..	..	..
Korea, Rep.	2005	0.1	2.2	..	14.1	0.0	..	19.1	39.9	..	17.6	7.2	39.5
Kosovo	2009	9.8	4.5	18.8	2.2	0.3	89.2	10.9	25.3	17.1	7.9	1.7	24.6
Kuwait	..	..	..	..	..	..	..	..	..	..	..	..	..
Kyrgyz Republic	2009	4.9	2.1	18.0	37.5	0.3	95.9	60.4	17.9	10.5	16.2	15.8	29.7
Lao PDR	2009	1.6	4.4	13.6	39.8	0.3	93.5	39.4	0.0	4.3	7.2	7.5	11.1
Latvia	2009	9.7	1.5	11.5	11.3	0.3	98.5	46.3	37.3	1.1	18.2	1.9	43.4
Lebanon	2009	8.9	2.2	81.0	23.0	0.0	97.6	33.5	23.8	9.4	17.9	7.6	52.4
Lesotho	2009	5.6	1.8	16.4	14.0	2.9	86.8	18.4	32.7	6.7	24.7	5.4	42.5
Liberia	2009	7.5	6.5	16.0	55.2	2.8	73.8	53.0	10.1	2.9	2.4	..	17.0
Libya	..	..	..	..	..	..	..	..	..	..	..	..	..
Lithuania	2009	9.3	0.8	65.5	8.5	0.4	97.1	38.7	47.4	0.7	15.6	2.4	46.0
Macedonia, FYR	2009	14.5	3.0	33.8	11.5	0.7	99.2	36.4	47.0	5.9	21.5	2.5	19.0
Madagascar	2009	17.1	0.9	41.3	19.2	1.2	97.5	50.0	12.2	7.7	8.7	14.2	27.0
Malawi	2009	3.5	2.7	15.0	10.8	5.7	78.6	23.9	20.6	17.0	17.9	4.9	48.4
Malaysia	2007	7.8	2.6	22.4	..	1.0	53.0	13.1	48.6	3.0	54.1	2.7	50.1
Mali	2007	2.4	1.6	41.0	28.9	0.6	85.4	18.4	7.0	1.8	8.6	4.8	22.5
Mauritania	2006	5.8	1.8	10.7	82.1	0.6	..	17.3	3.2	1.6	5.9	3.9	25.5
Mauritius	2009	9.4	0.5	19.1	1.6	1.4	84.2	16.9	37.5	2.2	11.1	10.3	25.6
Mexico	2006	20.5	0.6	11.2	22.6	0.7	94.1	24.8	2.6	2.4	20.3	5.2	24.6
Moldova	2009	7.0	1.9	13.9	25.4	0.4	97.9	53.1	30.8	2.0	9.1	2.4	33.1
Mongolia	2009	12.1	2.0	43.5	30.4	0.6	90.1	52.0	26.5	0.8	16.7	18.6	61.2
Morocco	2007	11.4	0.9	3.4	13.4	0.0	86.0	13.1	12.3	1.3	17.3	1.8	24.7
Mozambique	2007	3.3	1.9	35.2	14.8	1.8	85.9	24.4	10.5	2.4	18.7	10.1	22.1
Myanmar	..	..	..	..	..	..	..	..	..	..	..	..	..
Namibia	2006	2.9	0.3	9.6	11.4	1.3	..	33.4	8.1	0.7	17.6	1.4	44.5
Nepal	2009	6.5	1.3	14.5	15.2	0.9	94.0	27.4	17.5	27.0	3.1	5.6	8.8
Netherlands	..	..	..	..	..	..	..	..	..	..	..	..	..
New Zealand	..	..	..	..	..	..	..	..	..	..	..	..	..
Nicaragua	2006	9.3	1.3	19.7	17.2	0.9	85.4	41.4	13.0	8.7	18.7	5.0	28.9
Niger	2009	21.1	1.6	39.7	35.2	0.9	90.5	17.6	9.3	1.9	4.6	2.6	32.1
Nigeria	2007	6.1	3.0	12.1	40.9	4.1	..	20.0	2.7	8.9	8.5	7.5	25.7
Norway	..	..	..	..	..	..	..	..	..	..	..	..	..
Oman	2003	..	4.4	11.8	33.2	..	..	..	31.0	4.2	10.8	3.4	20.9
Pakistan	2007	2.2	1.6	16.4	27.2	0.5	..	6.7	9.7	9.9	9.6	4.8	6.7
Panama	2006	10.3	1.4	41.2	25.4	0.5	98.0	37.1	19.2	2.4	14.7	5.7	43.9
Papua New Guinea	..	..	..	..	..	..	..	..	..	..	..	..	..
Paraguay	2006	7.9	0.7	37.8	84.8	0.9	94.0	44.8	8.2	2.5	7.1	5.5	46.9
Peru	2006	13.5	1.4	81.1	11.3	0.4	99.2	32.8	30.9	3.2	14.6	5.4	57.7
Philippines	2009	9.1	1.6	10.6	18.6	1.1	97.5	69.4	22.0	3.4	15.7	8.1	31.1
Poland	2009	12.8	0.6	14.6	5.0	0.5	99.3	47.9	40.7	1.9	17.3	6.0	60.9
Portugal	2005	1.1	1.6	..	14.5	0.2	..	50.8	24.4	..	12.7	7.2	31.9
Puerto Rico	..	..	..	..	..	..	..	..	..	..	..	..	..
Qatar	..	..	..	..	..	..	..	..	..	..	..	..	..



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## Business environment: Enterprise Surveys

	Survey year	Regulations and tax		Permits and licenses	Corruption	Crime	Informality	Gender	Finance	Infrastructure	Innovation	Trade	Workforce
		Time dealing with officials % of management time	Average number of times meeting with tax officials	Time required to obtain operating license days	Informal payments to public officials % of firms	Losses due to theft, robbery, vandalism, and arson % of sales	Firms formally registered when operations started % of firms	Firms with female participation in ownership % of firms	Firms using banks to finance investment % of firms	Value lost due to electrical outages % of sales	Inter-nationally recognized quality certification ownership % of firms	Average time to clear direct exports through customs days	Firms offering formal training <sup>a</sup> % of firms
Romania	2009	9.2	2.3	23.7	9.8	0.3	98.7	47.9	37.3	2.2	26.1	2.0	24.9
Russian Federation	2009	19.9	1.6	57.4	29.4	0.8	94.7	33.1	30.6	1.2	11.7	4.6	52.2
Rwanda	2006	5.9	3.3	6.5	20.0	1.3	..	41.0	15.9	8.7	10.8	6.7	27.6
Saudi Arabia	..	..	..	..	..	..	..	..	..	..	..	..	..
Senegal	2007	2.9	1.3	21.4	18.1	0.5	78.9	26.3	19.8	5.0	6.1	7.4	16.3
Serbia	2009	12.2	1.4	28.0	18.0	0.6	95.0	28.8	42.8	1.3	21.8	1.6	36.5
Sierra Leone	2009	7.4	1.9	12.6	18.8	0.8	89.2	7.9	6.9	6.6	13.8	..	18.6
Singapore	..	..	..	..	..	..	..	..	..	..	..	..	..
Slovak Republic	2009	6.7	0.9	32.1	9.1	0.7	100.0	29.6	33.5	0.3	28.6	2.4	33.1
Slovenia	2009	7.3	0.3	56.1	5.4	0.4	99.9	42.2	52.2	0.5	28.0	2.2	47.5
Somalia	..	..	..	..	..	..	..	..	..	..	..	..	..
South Africa	2007	6.0	0.8	36.2	15.1	1.0	91.0	22.6	34.8	1.6	26.4	4.5	36.8
Spain	2005	0.8	1.5	..	4.4	0.2	..	34.1	32.6	3.0	21.3	4.9	51.3
Sri Lanka	2004	3.5	4.9	49.5	16.3	0.5	..	..	26.2	..	..	7.6	32.6
Sudan	..	..	..	..	..	..	..	..	..	..	..	..	..
Swaziland	2006	4.4	1.4	24.0	40.6	1.3	..	28.6	7.7	2.5	22.1	2.1	51.0
Sweden	..	..	..	..	..	..	..	..	..	..	..	..	..
Switzerland	..	..	..	..	..	..	..	..	..	..	..	..	..
Syrian Arab Republic	2009	12.2	2.3	169.2	83.8	0.8	..	14.4	20.7	8.6	7.4	5.1	38.3
Tajikistan	2008	11.7	1.4	22.6	40.5	0.3	92.7	34.4	21.4	15.1	16.7	20.4	21.1
Tanzania	2006	4.0	2.7	15.9	49.5	1.2	..	30.9	6.8	9.6	14.7	5.7	36.5
Thailand	2006	0.4	1.0	32.1	..	0.1	..	..	74.4	1.5	39.0	1.3	75.3
Timor-Leste	2009	4.1	0.9	16.6	19.4	1.5	91.8	42.9	1.6	7.6	2.2	..	49.7
Togo	2009	2.7	1.2	56.4	16.7	2.4	75.8	31.8	16.9	10.5	6.6	6.7	31.0
Trinidad and Tobago	..	..	..	..	..	..	..	..	..	..	..	..	..
Tunisia	..	..	..	..	..	..	..	..	..	..	..	..	..
Turkey	2008	27.1	1.3	36.0	17.7	0.4	94.1	40.7	51.9	2.8	30.0	5.2	28.8
Turkmenistan	..	..	..	..	..	..	..	..	..	..	..	..	..
Uganda	2006	5.2	2.4	9.3	51.7	1.0	..	34.7	7.7	10.2	15.5	3.2	35.0
Ukraine	2008	11.3	2.1	31.0	22.9	0.6	95.8	47.1	32.1	4.4	13.0	3.4	24.8
United Arab Emirates	..	..	..	..	..	..	..	..	..	..	..	..	..
United Kingdom	..	..	..	..	..	..	..	..	..	..	..	..	..
United States	..	..	..	..	..	..	..	..	..	..	..	..	..
Uruguay	2006	7.0	0.7	133.8	7.3	0.7	97.8	41.6	6.9	0.9	6.8	2.5	24.6
Uzbekistan	2008	11.1	0.7	9.1	56.2	0.7	100.0	39.8	8.2	5.4	1.3	5.1	9.6
Venezuela, RB	2006	33.6	2.9	41.6	..	1.4	97.3	..	35.7	4.4	12.5	14.1	42.3
Vietnam	2009	4.9	1.1	15.9	52.1	0.3	87.5	59.2	21.5	3.7	16.7	4.5	43.6
West Bank and Gaza	2006	5.7	1.7	21.3	13.3	1.2	..	18.0	4.2	4.6	18.2	6.0	26.5
Yemen, Rep.	2010	11.8	7.3	6.5	68.2	0.6	81.7	6.4	4.2	13.2	4.4	6.2	12.9
Zambia	2007	4.6	1.9	48.3	14.3	1.0	96.2	37.2	10.2	3.7	17.2	2.3	26.0
Zimbabwe	..	..	..	..	..	..	..	..	..	..	..	..	..

**Note:** Enterprise surveys are updated several times a year; see [www.enterprisesurveys.org](http://www.enterprisesurveys.org) for the most recent updates.

a. For survey data collected in 2006 and 2007, data refer to the manufacturing module only.

## About the data

The World Bank Group's Enterprise Survey gathers firm-level data on the business environment to assess constraints to private sector growth and enterprise performance. Standardized surveys are conducted all over the world, and data are available on more than 120,000 firms in 125 countries. The survey covers 11 dimensions of the business environment, including regulation, corruption, crime, informality, finance, infrastructure, trade. For some countries, firm-level panel data are available, making it possible to track changes in the business environment over time.

Firms evaluating investment options, governments interested in improving business conditions, and economists seeking to explain economic performance have all grappled with defining and measuring the business environment. The firm-level data from Enterprise Surveys provide a useful tool for benchmarking economies across a large number of indicators measured at the firm level.

Most countries can improve regulation and taxation without compromising broader social interests. Excessive regulation may harm business performance and growth. For example, time spent with tax officials is a burden firms may face in paying taxes. The business environment suffers when governments increase uncertainty and risks or impose unnecessary costs and unsound regulation and taxation. Time to obtain licenses and permits and the associated red tape constrain firm operations.

In some countries doing business requires informal payments to "get things done" in customs, taxes, licenses, regulations, services, and the like. Such corruption harms the business environment by distorting policymaking, undermining government credibility, and diverting public resources. Crime, theft, and disorder also impose costs on businesses and society.

In many developing countries informal businesses operate without formal registration. These firms have less access to financial and public services and can engage in fewer types of contracts and investments, constraining growth.

Equal opportunities for men and women contribute to development. Female participation in firm ownership is a measure of women's integration as decision makers.

Financial markets connect firms to lenders and investors, allowing firms to grow their businesses: creditworthy firms can obtain credit from financial intermediaries at competitive prices. But too often market imperfections and government-induced distortions limit access to credit and thus restrain growth.

The reliability and availability of infrastructure benefit households and support development. Firms with access to modern and efficient infrastructure—telecommunications, electricity, and transport—can be more productive. Firm-level innovation and use of modern technology may help firms compete.

Delays in clearing customs can be costly, deterring firms from engaging in trade or making them uncompetitive globally. Ill-considered labor regulations discourage firms from creating jobs, and while employed workers may benefit, unemployed, low-skilled, and informally employed workers will not. A trained labor force enables firms to thrive, compete, innovate, and adopt new technology.

The data in the table are from Enterprise Surveys implemented by the World Bank's Financial and Private Sector Development Enterprise Analysis Unit. All economies in East Asia and Pacific, Europe and Central Asia, Latin America and the Caribbean, Middle East and North Africa, and Sub-Saharan Africa (for 2009) and Afghanistan, Bangladesh, and India draw a sample of registered nonagricultural businesses, excluding those in the financial and public sectors. Samples for other economies are drawn only from the manufacturing sector and are footnoted in the table. Typical Enterprise Survey sample sizes range from 150 to 1,800, depending on the size of the economy. In each country samples are selected by stratified random sampling, unless otherwise noted. Stratified random sampling allows indicators to be computed by sector, firm size, and region and increases the precision of economywide indicators compared with alternative simple random sampling. Stratification by sector of activity divides the economy into manufacturing and retail and other services sectors. For medium-size and large economies the manufacturing sector is further stratified by industry. Firm size is stratified into small (5–19 employees), medium-size (20–99 employees), and large (more than 99 employees). Geographic stratification divides the national economy into the main centers of economic activity.

## Definitions

- **Survey year** is the year in which the underlying data were collected.
- **Time dealing with officials** is the average percentage of senior management's time that is spent in a typical week dealing with requirements imposed by government regulations.
- **Average number of times meeting with tax officials** is the average number of visits or required meetings with tax officials.
- **Time required to obtain operating license** is the average wait to obtain an operating license from the day applied for to the day granted.
- **Informal payments to public officials** are the percentage of firms that answered positively to the question "Was a gift or informal payment expected or requested during a meeting with tax officials?"
- **Losses due to theft, robbery, vandalism, and arson** are the estimated losses from those causes that occurred on establishments' premises as a percentage of annual sales.
- **Firms formally registered when operations started** are the percentage of firms formally registered when they started operations in the country. Firms not formally registered (the residual) are in the informal sector of the economy.
- **Firms with female participation in ownership** are the percentage of firms with a woman among the owners.
- **Firms using banks to finance investment** are the percentage of firms that invested in fixed assets during the last fiscal year that used banks to finance fixed assets.
- **Value lost due to electrical outages** is losses that resulted from power outages as a percentage of annual sales.
- **Internationally recognized quality certification ownership** is the percentage of firms that have an internationally recognized quality certification, such as International Organization for Standardization 9000, 9001, 9002, or 14000 or Hazard Analysis and Critical Control Points.
- **Average time to clear direct exports through customs** is the average number of days to clear direct exports through customs.
- **Firms offering formal training** are the percentage of firms offering formal training programs for their permanent, full-time employees.

## Data sources

Data on the business environment are from the World Bank Group's Enterprise Surveys website ([www.enterprisesurveys.org](http://www.enterprisesurveys.org)).





# 5.3

## Business environment: Doing Business indicators

	Starting a business			Registering property		Dealing with construction permits		Enforcing contracts		Protecting investors	Closing a business
	Number of procedures June 2010	Time required days June 2010	Cost % of per capita income June 2010	Number of procedures June 2010	Time required days June 2010	Number of procedures to build a warehouse June 2010	Time required to build a warehouse days June 2010	Number of procedures June 2010	Time required days June 2010	Disclosure index 0–10 (least to most disclosure) June 2010	Time to resolve insolvency years June 2010
Afghanistan	4	7	26.7	9	250	13	340	47	1,642	1	..
Albania	5	5	16.8	6	42	24	331	39	390	8	..
Algeria	14	24	12.9	11	47	22	240	46	630	6	2.5
Angola	8	68	163.0	7	184	12	328	46	1,011	5	6.2
Argentina	14	26	14.2	6	52	28	338	36	590	6	2.8
Armenia	6	15	3.1	3	7	20	137	49	285	5	1.9
Australia	2	2	0.7	5	5	16	221	28	395	8	1.0
Austria	8	28	5.2	3	21	14	194	25	397	3	1.1
Azerbaijan	6	8	3.1	4	11	31	207	39	237	7	2.7
Bangladesh	7	19	33.3	8	245	14	231	41	1,442	6	4.0
Belarus	5	5	1.6	3	15	16	151	28	225	5	5.8
Belgium	3	4	5.4	8	79	14	169	26	505	8	0.9
Benin	7	31	152.6	4	120	15	320	42	825	6	4.0
Bolivia	15	50	100.8	7	92	17	249	40	591	1	1.8
Bosnia and Herzegovina	12	55	17.7	7	33	16	255	37	595	3	3.3
Botswana	10	61	2.2	5	16	24	167	29	625	7	1.7
Brazil	15	120	7.3	14	42	18	411	45	616	6	4.0
Bulgaria	4	18	1.6	8	15	24	139	39	564	10	3.3
Burkina Faso	4	14	49.8	4	59	15	122	37	446	6	4.0
Burundi	11	32	129.3	5	94	25	212	44	832	4	..
Cambodia	9	85	128.3	7	56	23	709	44	401	5	..
Cameroon	6	19	51.2	5	93	14	213	43	800	6	3.2
Canada	1	5	0.4	6	17	14	75	36	570	8	0.8
Central African Republic	8	22	228.4	5	75	21	239	43	660	6	4.8
Chad	13	75	226.9	6	44	14	164	41	743	6	..
Chile	8	22	6.8	6	31	18	155	36	480	8	4.5
China	14	38	4.5	4	29	37	336	34	406	10	1.7
Hong Kong SAR, China	3	6	2.0	5	36	7	67	24	280	10	1.1
Colombia	9	14	14.7	7	20	10	50	34	1,346	8	3.0
Congo, Dem. Rep.	10	84	735.1	6	54	14	128	43	625	3	5.2
Congo, Rep.	10	160	111.4	6	55	17	169	44	560	6	3.3
Costa Rica	12	60	10.5	6	21	23	191	40	852	2	3.5
Côte d'Ivoire	10	40	133.0	6	62	21	592	33	770	6	2.2
Croatia	6	7	8.6	5	104	13	315	38	561	1	3.1
Cuba	..	..	..	..	..	..	..	..	..	..	..
Czech Republic	9	20	9.3	4	43	36	150	27	611	2	3.2
Denmark	4	6	0.0	3	42	6	69	35	410	7	1.1
Dominican Republic	8	19	19.2	7	60	17	214	34	460	5	3.5
Ecuador	13	56	32.6	9	16	19	155	39	588	1	5.3
Egypt, Arab Rep.	6	7	6.3	7	72	25	218	41	1,010	8	4.2
El Salvador	8	17	45.0	5	31	34	155	30	786	5	4.0
Eritrea	13	84	69.2	11	78	..	..	39	405	4	..
Estonia	5	7	1.9	3	18	14	134	36	425	8	3.0
Ethiopia	5	9	14.1	10	41	12	128	37	620	4	3.0
Finland	3	14	1.1	3	14	18	66	32	375	6	0.9
France	5	7	0.9	8	59	13	137	29	331	10	1.9
Gabon	9	58	21.9	7	39	16	210	38	1,070	6	5.0
Gambia, The	8	27	199.6	5	66	17	146	32	434	2	3.0
Georgia	3	3	5.0	1	2	10	98	36	285	8	3.3
Germany	9	15	4.8	5	40	12	100	30	394	5	1.2
Ghana	7	12	20.3	5	34	18	220	36	487	7	1.9
Greece	15	19	20.7	11	22	15	169	39	819	1	2.0
Guatemala	12	37	49.1	4	23	22	178	31	1,459	3	3.0
Guinea	13	41	146.6	6	104	32	255	50	276	6	3.8
Guinea-Bissau	17	216	183.3	9	211	15	167	40	1,140	6	..
Haiti	13	105	212.0	5	405	11	1,179	35	508	2	5.7
Honduras	13	14	47.2	7	23	17	106	45	900	0	3.8

# Business environment: Doing Business indicators

# 5.3

	Starting a business			Registering property		Dealing with construction permits		Enforcing contracts		Protecting investors	Closing a business
	Number of procedures June 2010	Time required days June 2010	Cost % of per capita income June 2010	Number of procedures June 2010	Time required days June 2010	Number of procedures to build a warehouse June 2010	Time required to build a warehouse days June 2010	Number of procedures June 2010	Time required days June 2010	Disclosure index 0–10 (least to most disclosure) June 2010	Time to resolve insolvency years June 2010
Hungary	4	4	8.2	4	17	31	189	35	395	2	2.0
India	12	29	56.5	5	44	37	195	46	1,420	7	7.0
Indonesia	9	47	22.3	6	22	14	160	40	570	10	5.5
Iran, Islamic Rep.	6	8	4.0	9	36	17	322	39	505	5	4.5
Iraq	11	77	107.8	5	51	14	215	51	520	4	..
Ireland	4	13	0.4	5	38	11	192	20	515	10	0.4
Israel	5	34	4.3	7	144	20	235	35	890	7	4.0
Italy	6	6	18.5	8	27	14	257	41	1,210	7	1.8
Jamaica	6	8	5.2	6	37	10	156	35	655	4	1.1
Japan	8	23	7.5	6	14	15	187	30	360	7	0.6
Jordan	8	13	44.6	7	21	19	87	38	689	5	4.3
Kazakhstan	6	19	1.0	4	40	34	219	38	390	8	1.5
Kenya	11	33	38.3	8	64	11	120	40	465	3	4.5
Korea, Dem. Rep.	..	..	..	..	..	..	..	..	..	..	..
Korea, Rep.	8	14	14.7	7	11	13	34	35	230	7	1.5
Kosovo	10	58	28.7	8	33	21	320	53	420	3	2.0
Kuwait	13	35	1.3	8	55	25	104	50	566	7	4.2
Kyrgyz Republic	2	10	3.7	4	5	13	143	39	260	8	4.0
Lao PDR	7	100	11.3	9	135	24	172	42	443	2	..
Latvia	5	16	1.5	6	42	24	186	27	309	5	3.0
Lebanon	5	9	75.0	8	25	21	218	37	721	9	4.0
Lesotho	7	40	26.0	6	101	15	601	41	785	2	2.6
Liberia	5	20	54.6	10	50	24	77	41	1,280	4	3.0
Libya	..	..	..	..	..	..	..	..	..	..	..
Lithuania	6	22	2.8	3	3	17	162	30	275	5	1.5
Macedonia, FYR	3	3	2.5	5	58	21	146	37	370	9	2.9
Madagascar	2	7	12.9	7	74	16	178	38	871	5	..
Malawi	10	39	108.4	6	49	21	268	42	312	4	2.6
Malaysia	9	17	17.5	5	56	25	261	30	585	10	2.3
Mali	6	8	79.7	5	29	15	168	36	620	6	3.6
Mauritania	9	19	33.6	4	49	25	201	46	370	5	8.0
Mauritius	5	6	3.8	4	26	18	107	36	645	6	1.7
Mexico	6	9	12.3	5	74	11	105	38	415	8	1.8
Moldova	8	10	10.9	5	5	30	292	31	365	7	2.8
Mongolia	7	13	3.2	5	11	21	215	32	314	5	4.0
Morocco	6	12	15.8	8	47	19	163	40	615	7	1.8
Mozambique	9	13	13.9	8	42	17	381	30	730	5	5.0
Myanmar	..	..	..	..	..	..	..	..	..	..	..
Namibia	10	66	18.5	9	23	12	139	33	270	5	1.5
Nepal	7	31	46.6	3	5	15	424	39	735	6	5.0
Netherlands	6	8	5.7	5	7	18	230	26	514	4	1.1
New Zealand	1	1	0.4	2	2	7	65	30	216	10	1.3
Nicaragua	6	39	117.9	8	124	17	219	35	540	4	2.2
Niger	9	17	118.6	4	35	17	265	39	545	6	5.0
Nigeria	8	31	78.9	13	82	18	350	40	457	5	2.0
Norway	5	7	1.8	1	3	14	252	33	280	7	0.9
Oman	5	12	3.3	2	16	15	186	51	598	8	4.0
Pakistan	10	21	10.7	6	50	12	223	47	976	6	2.8
Panama	6	9	10.3	8	32	20	116	31	686	1	2.5
Papua New Guinea	6	51	17.7	4	72	24	217	42	591	5	3.0
Paraguay	7	35	55.1	6	46	13	179	38	591	6	3.9
Peru	6	27	13.6	4	7	19	188	41	428	8	3.1
Philippines	15	38	29.7	8	33	26	169	37	842	2	5.7
Poland	6	32	17.5	6	152	32	311	38	830	7	3.0
Portugal	6	6	6.5	1	1	19	272	31	547	6	2.0
Puerto Rico	7	7	0.7	8	194	22	209	39	620	7	3.8
Qatar	8	12	9.7	10	16	19	76	43	570	5	2.8



# 5.3

## Business environment: Doing Business indicators

	Starting a business			Registering property		Dealing with construction permits		Enforcing contracts		Protecting investors	Closing a business
	Number of procedures June 2010	Time required days June 2010	Cost % of per capita income June 2010	Number of procedures June 2010	Time required days June 2010	Number of procedures to build a warehouse June 2010	Time required to build a warehouse days June 2010	Number of procedures June 2010	Time required days June 2010	Disclosure index 0–10 (least to most disclosure) June 2010	Time to resolve insolvency years June 2010
Romania	6	10	2.6	8	48	17	228	31	512	9	3.3
Russian Federation	9	30	3.6	6	43	53	540	37	281	6	3.8
Rwanda	2	3	8.8	4	55	14	195	24	230	7	..
Saudi Arabia	4	5	7.0	2	2	12	89	43	635	9	1.5
Senegal	4	8	63.1	6	122	16	210	44	780	6	3.0
Serbia	7	13	7.9	6	91	20	279	36	635	7	2.7
Sierra Leone	6	12	110.7	7	86	25	252	40	515	6	2.6
Singapore	3	3	0.7	3	5	11	25	21	150	10	0.8
Slovak Republic	6	16	1.9	3	17	13	287	31	565	3	4.0
Slovenia	2	6	0.0	6	113	14	199	32	1,290	3	2.0
Somalia	..	..	..	..	..	..	..	..	..	..	..
South Africa	6	22	6.0	6	24	17	174	30	600	8	2.0
Spain	10	47	15.1	4	18	11	233	39	515	5	1.0
Sri Lanka	4	35	5.4	8	83	22	214	40	1,318	4	1.7
Sudan	10	36	33.6	6	9	19	271	53	810	0	..
Swaziland	12	56	33.0	9	44	14	116	40	972	2	2.0
Sweden	3	15	0.6	1	7	8	116	30	508	8	2.0
Switzerland	6	20	2.1	4	16	14	154	31	417	0	3.0
Syrian Arab Republic	7	13	38.1	4	19	26	128	55	872	7	4.1
Tajikistan	8	27	36.9	6	37	30	228	34	430	8	1.7
Tanzania	12	29	30.9	9	73	22	328	38	462	3	3.0
Thailand	7	32	5.6	2	2	11	156	36	479	10	2.7
Timor-Leste	10	83	18.4	..	..	22	208	51	1,285	3	..
Togo	7	75	178.1	5	295	15	277	41	588	6	3.0
Trinidad and Tobago	9	43	0.8	8	162	20	261	42	1,340	4	..
Tunisia	10	11	5.0	4	39	20	97	39	565	5	1.3
Turkey	6	6	17.2	6	6	25	188	35	420	9	3.3
Turkmenistan	..	..	..	..	..	..	..	..	..	..	..
Uganda	18	25	94.4	13	77	18	171	38	490	2	2.2
Ukraine	10	27	6.1	10	117	22	374	30	345	5	2.9
United Arab Emirates	8	15	6.4	1	2	17	64	49	537	4	5.1
United Kingdom	6	13	0.7	2	8	11	95	28	399	10	1.0
United States	6	6	1.4	4	12	19	40	32	300	7	1.5
Uruguay	11	65	42.1	8	66	30	234	41	720	3	2.1
Uzbekistan	7	15	11.9	12	78	28	274	42	195	4	4.0
Venezuela, RB	17	141	30.2	8	47	11	395	29	510	3	4.0
Vietnam	9	44	12.1	4	57	13	194	34	295	6	5.0
West Bank and Gaza	11	49	93.7	7	47	21	199	44	540	6	..
Yemen, Rep.	6	12	82.1	6	19	15	107	36	520	6	3.0
Zambia	6	18	27.9	5	40	17	254	35	471	3	2.7
Zimbabwe	9	90	182.8	5	31	17	1,012	38	410	8	3.3
<b>World</b>	<b>8 u</b>	<b>34 u</b>	<b>40.7 u</b>	<b>6 u</b>	<b>58 u</b>	<b>18 u</b>	<b>207 u</b>	<b>38 u</b>	<b>605 u</b>	<b>5 u</b>	<b>2.9 u</b>
<b>Low income</b>	8	41	107.9	7	94	18	275	39	613	5	3.7
<b>Middle income</b>	8	39	31.7	6	54	19	201	39	638	5	3.1
Lower middle income	8	35	44.4	6	65	18	197	40	679	5	3.3
Upper middle income	8	43	16.1	6	41	19	206	38	588	6	2.9
<b>Low &amp; middle income</b>	8	39	52.6	6	65	19	221	39	631	5	3.3
East Asia & Pacific	8	40	31.5	5	99	19	181	37	564	5	3.1
Europe & Central Asia	6	18	8.9	6	36	23	235	38	382	7	2.9
Latin America & Carib.	9	60	39.6	7	62	16	220	39	698	4	3.2
Middle East & N. Africa	8	23	54.6	7	39	20	181	42	701	6	3.5
South Asia	7	25	24.5	6	100	18	241	44	1,053	4	4.5
Sub-Saharan Africa	9	43	95.2	7	69	18	240	39	641	5	3.4
<b>High income</b>	6	18	7.3	5	38	17	169	35	532	6	2.1
Euro area	6	14	6.7	5	35	14	227	31	602	5	1.6

Note: Regional aggregates are for developing countries only.

## About the data

The economic health of a country is measured not only in macroeconomic terms but also by other factors that shape daily economic activity such as laws, regulations, and institutional arrangements. The Doing Business indicators measure business regulation, gauge regulatory outcomes, and measure the extent of legal protection of property, the flexibility of employment regulation, and the tax burden on businesses.

The table presents a subset of Doing Business indicators covering 6 of the 10 sets of indicators: starting a business, registering property, dealing with construction permits, enforcing contracts, protecting investors, and closing a business. Table 5.5 includes Doing Business measures of getting credit, and table 5.6 presents data on paying taxes.

The fundamental premise of the Doing Business project is that economic activity requires good rules and regulations that are efficient, accessible to all who need to use them, and simple to implement. Thus some Doing Business indicators give a higher score for more regulation, such as stricter disclosure requirements in related-party transactions, and others give a higher score for simplified regulations, such as a one-stop shop for completing business startup formalities.

In constructing the indicators, it is assumed that entrepreneurs know about all regulations and comply with them; in practice, entrepreneurs may not be aware of all required procedures or may avoid legally required procedures altogether. But where regulation is particularly onerous, levels of informality are higher, which comes at a cost: firms in the informal sector usually grow more slowly, have less access to credit, and employ fewer workers—and those workers remain outside the protections of labor law. The indicators in the table can help policymakers understand the business environment in a country and—along with information from other sources such as the World Bank's Enterprise Surveys—provide insights into potential areas of reform.

Doing Business data are collected with a standardized survey that uses a simple business case to ensure comparability across economies and over time—with assumptions about the legal form of the business, its size, its location, and nature of its operation. Surveys in 183 countries are administered through more than 8,200 local experts, including lawyers, business consultants, accountants, freight forwarders, government officials, and other professionals who routinely administer or advise on legal and regulatory requirements.

The Doing Business project encompasses two types of data: data from readings of laws and regulations and data on time and motion indicators that measure efficiency in achieving a regulatory goal. Within the time and motion indicators cost estimates are recorded from official fee schedules where applicable. The data from surveys are subjected to numerous tests for robustness, which lead to revision or expansion of the information collected.

The Doing Business methodology has limitations that should be considered when interpreting the data. First, the data collected refer to businesses in the economy's largest city and may not represent regulations in other locations of the economy. To address this limitation, subnational indicators are being collected for selected economies. These subnational studies point to significant differences in the speed of reform and the ease of doing business across cities in the same economy. Second, the data often focus on a specific business form—generally a limited liability company of a specified size—and may not represent regulation for other types of businesses such as sole proprietorships. Third, transactions described in a standardized business case refer to a specific set of issues and may not represent the full set of issues a business encounters. Fourth, the time measures involve an element of judgment by the expert respondents. When sources indicate different estimates, the Doing Business time indicators represent the median values of several responses given under the assumptions of the standardized case. Fifth, the methodology assumes that a business has full information on what is required and does not waste time when completing procedures.

## Definitions

- **Number of procedures for starting a business** is the number of procedures required to start a business, including interactions to obtain necessary permits and licenses and to complete all inscriptions, verifications, and notifications to start operations for businesses with specific characteristics of ownership, size, and type of production.
- **Time required for starting a business** is the number of calendar days to complete the procedures for legally operating a business using the fastest procedure, independent of cost.
- **Cost for starting a business** is normalized as a percentage of gross national income (GNI) per capita. It includes all official fees and fees for legal or professional services if such services are required by law.
- **Number of procedures for registering property** is the number of procedures required for a business to legally transfer property.
- **Time required for registering property** is the number of calendar days for a business to legally transfer property.
- **Number of procedures for dealing with licenses to build a warehouse** is the number of interactions of a company's employees or managers with external parties, including government staff, public inspectors, notaries, land registry and cadastre staff, and technical experts apart from architects and engineers.
- **Time required for dealing with construction permits to build a warehouse** is the number of calendar days to complete the required procedures for building a warehouse using the fastest procedure, independent of cost.
- **Number of procedures for enforcing contracts** is the number of independent actions, mandated by law or court regulation, that demand interaction between the parties to a contract or between them and the judge or court officer.
- **Time required for enforcing contracts** is the number of calendar days from the time of the filing of a lawsuit in court to the final determination and payment.
- **Extent of disclosure index** measures the degree to which investors are protected through disclosure of ownership and financial information. Higher values indicate more disclosure.
- **Time to resolve insolvency** is the number of years from time of filing for insolvency in court until resolution of distressed assets and payment of creditors.

## Data sources

Data on the business environment are from the World Bank's Doing Business project ([www.doingbusiness.org](http://www.doingbusiness.org)).



# 5.4

## Stock markets

	Market capitalization				Market liquidity		Turnover ratio		Listed domestic companies		S&P/Global Equity Indices	
	\$ millions		% of GDP		Value of shares traded % of GDP		Value of shares traded % of market capitalization		number		% change	
	2000	2010	2000	2009	2000	2009	2000	2010	2000	2010	2009	2010
Afghanistan	..	..	..	..	..	..	..	..	..	..	..	..
Albania	..	..	..	..	..	..	..	..	..	..	..	..
Algeria	..	..	..	..	..	..	..	..	..	..	..	..
Angola	..	..	..	..	..	..	..	..	..	..	..	..
Argentina	166,068	63,910	58.4	15.9	2.1	0.9	4.8	4.6	127	101	97.8 <sup>a</sup>	55.3 <sup>a</sup>
Armenia	2	28	0.1	1.6	0.0	0.0	11.9	0.2	105	2	..	..
Australia	372,794	1,454,547	89.4	136.1	54.3	82.4	56.5	90.1	1,330	1,913	72.4	12.5
Austria	29,935	67,683	15.7	14.1	4.9	6.7	29.8	79.4	97	72	57.0	10.9
Azerbaijan	3	..	0.1	..	..	..	..	..	2	..	..	..
Bangladesh	1,186	47,000	2.5	7.9	1.6	16.3	74.8	54.4	221	302	38.6 <sup>a</sup>	37.6 <sup>a</sup>
Belarus	..	..	..	..	..	..	..	..	..	..	..	..
Belgium	182,481	269,342	78.5	55.5	16.4	27.1	20.7	42.0	174	161	54.5	0.5
Benin	..	..	..	..	..	..	..	..	..	..	..	..
Bolivia	1,742	3,388	20.7	16.1	0.8	0.1	5.7	0.4	26	38	..	..
Bosnia and Herzegovina	..	..	..	..	..	..	..	..	..	..	..	..
Botswana	978	4,076	17.4	33.8	0.8	0.9	4.7	3.5	16	21	24.3 <sup>a</sup>	-6.8 <sup>a</sup>
Brazil	226,152	1,545,566	35.1	73.2	15.7	40.7	44.6	66.4	459	373	125.1	6.5
Bulgaria	617	7,276	4.8	14.6	0.4	0.8	8.7	2.8	503	390	17.2 <sup>a</sup>	-15.2 <sup>a</sup>
Burkina Faso	..	..	..	..	..	..	..	..	..	..	..	..
Burundi	..	..	..	..	..	..	..	..	..	..	..	..
Cambodia	..	..	..	..	..	..	..	..	..	..	..	..
Cameroon	..	..	..	..	..	..	..	..	..	..	..	..
Canada	841,385	2,160,229	116.1	125.8	87.6	92.8	77.3	71.1	1,418	3,805	57.5	22.0
Central African Republic	..	..	..	..	..	..	..	..	..	..	..	..
Chad	..	..	..	..	..	..	..	..	..	..	..	..
Chile	60,401	341,584	80.3	128.0	8.1	23.0	9.5	19.7	258	227	84.0	47.2
China	580,991	4,762,837	48.5	100.4	60.2	179.6	158.3	164.4	1,086	2,063	66.3	6.9
Hong Kong SAR, China	623,398	2,711,334	368.6	1,088.3	223.4	707.4	61.3	63.9	779	1,396	67.1	21.3
Colombia	9,560	208,502	9.5	57.0	0.4	5.5	3.8	13.4	126	84	75.7 <sup>a</sup>	44.1 <sup>a</sup>
Congo, Dem. Rep.	..	..	..	..	..	..	..	..	..	..	..	..
Congo, Rep.	..	..	..	..	..	..	..	..	..	..	..	..
Costa Rica	2,924	1,445	18.3	5.0	0.7	0.1	4.0	2.8	21	9	..	..
Côte d'Ivoire	1,185	7,099	11.4	26.4	0.3	0.6	2.5	2.0	41	38	-10.7 <sup>a</sup>	19.3 <sup>a</sup>
Croatia	2,742	24,912	12.8	40.7	0.9	2.3	7.1	4.1	64	221	31.1 <sup>a</sup>	-0.4 <sup>a</sup>
Cuba	..	..	..	..	..	..	..	..	..	..	..	..
Czech Republic	11,002	43,056	19.4	27.7	11.6	10.8	57.7	29.4	131	16	23.0	0.2
Denmark	107,666	231,746	67.3	60.4	57.2	47.9	86.0	69.1	225	196	40.6	25.1
Dominican Republic	..	..	..	..	..	..	..	..	..	..	..	..
Ecuador	704	5,263	4.4	7.4	0.1	2.4	2.0	3.8	30	40	-13.1 <sup>a</sup>	9.7 <sup>a</sup>
Egypt, Arab Rep.	28,741	82,495	28.8	47.7	11.1	28.0	36.1	43.0	1,076	211	35.6	11.5
El Salvador	2,041	4,227	15.5	21.0	0.2	..	1.2	..	40	61	..	..
Eritrea	..	..	..	..	..	..	..	..	..	..	..	..
Estonia	1,846	2,260	32.5	13.9	5.7	2.0	18.0	13.1	23	15	32.9 <sup>a</sup>	56.0 <sup>a</sup>
Ethiopia	..	..	..	..	..	..	..	..	..	..	..	..
Finland	293,635	118,160	241.2	38.2	169.8	38.3	64.3	97.4	154	123	17.5	10.7
France	1,446,634	1,926,488	108.9	74.4	81.6	51.6	74.1	42.5	808	901	25.6 <sup>b</sup>	-9.9 <sup>b</sup>
Gabon	..	..	..	..	..	..	..	..	..	..	..	..
Gambia, The	..	..	..	..	..	..	..	..	..	..	..	..
Georgia	24	1,060	0.8	6.8	0.1	0.0	11.3	0.3	269	143	..	..
Germany	1,270,243	1,429,707	66.8	39.0	56.3	38.7	79.1	103.0	1,022	571	25.8 <sup>c</sup>	7.4 <sup>c</sup>
Ghana	502	3,531	10.1	9.6	0.2	0.2	1.4	3.4	22	35	-42.7 <sup>a</sup>	94.1 <sup>a</sup>
Greece	110,839	72,639	88.3	16.6	75.7	15.7	60.4	67.7	329	287	22.1	-43.8
Guatemala	172	..	0.9	..	0.1	..	6.4	..	7	..	..	..
Guinea	..	..	..	..	..	..	..	..	..	..	..	..
Guinea-Bissau	..	..	..	..	..	..	..	..	..	..	..	..
Haiti	..	..	..	..	..	..	..	..	..	..	..	..
Honduras	458	..	8.8	..	..	..	..	..	94	..	..	..

	Market capitalization				Market liquidity		Turnover ratio		Listed domestic companies		S&P/Global Equity Indices	
	\$ millions		% of GDP		Value of shares traded % of GDP		Value of shares traded % of market capitalization		number		% change	
	2000	2010	2000	2009	2000	2009	2000	2010	2000	2010	2009	2010
Hungary	12,021	27,708	25.1	21.9	25.4	20.1	85.8	94.5	60	48	73.0	-10.8
India	148,064	1,615,860	32.2	85.6	110.8	79.1	306.5	75.6	5,937	4,987	94.1	18.7
Indonesia	26,834	360,388	16.3	33.0	8.7	21.3	31.5	48.1	290	420	130.1	37.9
Iran, Islamic Rep.	7,350	86,616	7.3	19.1	1.1	5.2	7.4	22.9	304	341	..	..
Iraq	..	..	..	..	..	..	..	..	..	..	..	..
Ireland	81,882	33,722	84.8	13.2	14.9	8.1	19.2	52.9	76	50	44.7	-7.7
Israel	64,081	218,055	51.4	93.2	18.8	45.2	36.6	66.7	654	596	56.8	7.4
Italy	768,364	318,140	70.0	15.0	70.9	21.8	104.0	169.7	291	291	23.1	-17.4
Jamaica	3,582	6,626	39.8	51.4	0.8	1.0	2.5	3.3	46	39	-15.8 <sup>a</sup>	22.4 <sup>a</sup>
Japan	3,157,222	4,099,591	67.6	66.6	57.7	82.7	69.9	114.5	2,561	3,553	16.4 <sup>d</sup>	9.6 <sup>d</sup>
Jordan	4,943	30,864	58.4	127.0	4.9	54.4	7.7	30.1	163	277	-13.9 <sup>a</sup>	-8.6 <sup>a</sup>
Kazakhstan	1,342	60,742	7.3	50.0	0.5	3.5	4.9	3.9	23	60	1.5 <sup>a</sup>	-1.0 <sup>a</sup>
Kenya	1,283	14,461	10.1	36.6	0.4	1.7	3.5	8.6	57	53	0.6 <sup>a</sup>	33.8 <sup>a</sup>
Korea, Dem. Rep.	..	..	..	..	..	..	..	..	..	..	..	..
Korea, Rep.	171,587	1,089,217	32.2	100.5	200.2	190.0	376.6	168.9	1,308	1,781	67.2	25.3
Kosovo	..	..	..	..	..	..	..	..	..	..	..	..
Kuwait	20,772	119,621	55.1	72.4	11.2	82.9	21.3	38.8	77	215	-10.4 <sup>a</sup>	29.1 <sup>a</sup>
Kyrgyz Republic	4	79	0.3	1.6	1.7	1.5	580.6	11.9	80	11	..	..
Lao PDR	..	..	..	..	..	..	..	..	..	..	..	..
Latvia	563	1,252	7.2	7.0	2.9	0.1	47.8	1.8	64	33	2.2 <sup>a</sup>	39.4 <sup>a</sup>
Lebanon	1,583	12,586	9.2	37.3	0.7	3.0	6.7	14.7	12	10	43.4 <sup>a</sup>	-8.7 <sup>a</sup>
Lesotho	..	..	..	..	..	..	..	..	..	..	..	..
Liberia	..	..	..	..	..	..	..	..	..	..	..	..
Libya	..	..	..	..	..	..	..	..	..	..	..	..
Lithuania	1,588	5,661	13.9	12.0	1.8	0.8	14.8	5.8	54	39	36.7 <sup>a</sup>	44.0 <sup>a</sup>
Macedonia, FYR	7	2,647	0.2	10.0	3.3	0.7	1,612.9	2.0	1	34	..	..
Madagascar	..	..	..	..	..	..	..	..	..	..	..	..
Malawi	..	1,363	..	29.3	..	0.4	..	1.5	..	14	..	..
Malaysia	116,935	410,534	124.7	132.6	62.4	37.8	44.6	27.1	795	957	46.7	35.1
Mali	..	..	..	..	..	..	..	..	..	..	..	..
Mauritania	..	..	..	..	..	..	..	..	..	..	..	..
Mauritius	1,331	6,506	29.0	55.2	1.6	3.8	5.1	6.4	40	86	44.2 <sup>a</sup>	8.2 <sup>a</sup>
Mexico	125,204	454,345	21.5	38.9	7.8	8.8	32.5	27.3	179	130	55.8	26.6
Moldova	38	..	3.2	..	1.9	0.2	80.2	..	34	..	..	..
Mongolia	37	1,093	3.4	10.2	0.7	0.4	23.2	6.4	410	336	..	..
Morocco	10,899	69,153	29.4	68.8	3.0	32.2	8.9	16.3	53	73	-1.7	13.1
Mozambique	..	..	..	..	..	..	..	..	..	..	..	..
Myanmar	..	..	..	..	..	..	..	..	..	..	..	..
Namibia	311	1,176	8.0	9.1	0.6	0.2	4.4	1.8	13	7	22.6 <sup>a</sup>	24.2 <sup>a</sup>
Nepal	790	4,843	14.4	43.8	0.6	1.8	5.4	1.9	110	190	..	..
Netherlands	640,456	661,204	166.3	68.5	175.9	76.3	101.4	98.4	234	113	41.7	1.2
New Zealand	18,866	36,295	36.7	52.9	21.0	29.4	45.9	20.8	142	102	40.4	5.2
Nicaragua	..	..	..	..	..	..	..	..	..	..	..	..
Niger	..	..	..	..	..	..	..	..	..	..	..	..
Nigeria	4,237	50,883	9.2	19.3	0.6	2.6	7.3	12.5	195	215	-35.4 <sup>a</sup>	20.3 <sup>a</sup>
Norway	65,034	250,922	38.6	59.5	35.7	64.9	93.4	90.8	191	195	91.4	13.7
Oman	3,463	20,267	17.4	37.5	2.8	12.6	14.2	18.2	131	120	22.0 <sup>a</sup>	12.2 <sup>a</sup>
Pakistan	6,581	38,169	8.9	20.5	44.6	14.5	486.8	36.2	762	644	56.7 <sup>a</sup>	15.3 <sup>a</sup>
Panama	2,794	10,917	24.0	32.6	1.3	0.2	4.7	2.0	29	34	15.4 <sup>a</sup>	12.8 <sup>a</sup>
Papua New Guinea	1,520	9,742	49.3	116.1	0.0	0.2	0.1	..	7	10	..	..
Paraguay	224	42	3.5	0.3	0.1	0.1	3.5	..	56	50	..	..
Peru	10,562	99,831	19.8	53.5	2.9	2.4	12.7	4.7	230	199	79.3	51.3
Philippines	25,957	157,321	34.2	49.7	10.8	10.7	24.1	22.6	228	251	71.5	56.7
Poland	31,279	190,235	18.3	31.5	8.5	13.0	48.1	47.6	225	569	41.9	11.3
Portugal	60,681	81,996	51.9	42.4	46.5	19.7	85.5	34.6	109	47	35.0	-16.6
Puerto Rico	..	..	..	..	..	..	..	..	..	..	..	..
Qatar	5,152	123,592	29.0	89.4	1.3	25.9	4.5	17.3	22	43	5.1 <sup>a</sup>	27.7 <sup>a</sup>



# 5.4 | Stock markets

	Market capitalization				Market liquidity		Turnover ratio		Listed domestic companies		S&P/Global Equity Indices	
	\$ millions		% of GDP		Value of shares traded % of GDP		Value of shares traded % of market capitalization		number		% change	
	2000	2010	2000	2009	2000	2009	2000	2010	2000	2010	2009	2010
Romania	1,069	32,385	2.9	18.8	0.6	1.2	24.3	5.4	5,555	1,383	26.1 <sup>a</sup>	-6.6 <sup>a</sup>
Russian Federation	38,922	1,004,525	15.0	69.9	7.8	55.4	36.6	85.7	249	345	106.6	21.7
Rwanda	..	..	..	..	..	..	..	..	..	..	..	..
Saudi Arabia	67,171	353,414	35.6	84.8	9.2	89.7	27.1	60.5	75	146	28.5 <sup>e</sup>	9.0 <sup>e</sup>
Senegal	..	..	..	..	..	..	..	..	..	..	..	..
Serbia	734	9,690	4.9	26.8	0.1	1.3	..	2.2	6	7	..	..
Sierra Leone	..	..	..	..	..	..	..	..	..	..	..	..
Singapore	152,827	370,091	164.8	170.5	98.7	138.4	52.1	82.9	418	461	76.7	18.4
Slovak Republic	1,217	4,150	4.2	5.3	3.1	0.2	78.7	3.9	493	90	-23.1 <sup>a</sup>	5.4 <sup>a</sup>
Slovenia	2,547	9,428	12.8	24.3	2.3	2.1	19.7	2.6	38	71	16.1 <sup>a</sup>	-20.3 <sup>a</sup>
Somalia	..	..	..	..	..	..	..	..	..	..	..	..
South Africa	204,952	1,012,538	154.2	247.0	58.3	120.0	33.2	39.6	616	360	53.7	32.1
Spain	504,219	1,171,615	86.8	88.8	169.8	109.5	210.7	76.0	1,019	3,310	29.0	-24.5
Sri Lanka	1,074	19,924	6.6	19.4	0.9	2.1	10.8	23.6	239	241	118.0 <sup>a</sup>	84.6 <sup>a</sup>
Sudan	..	..	..	..	..	..	..	..	..	..	..	..
Swaziland	73	..	4.9	6.9	0.0	..	0.3	..	6	5	..	..
Sweden	328,339	581,174	132.8	106.5	157.7	96.1	111.2	86.8	292	331	66.0	32.6
Switzerland	792,316	1,229,357	317.0	217.7	243.7	161.7	82.0	75.6	252	246	24.5	11.0
Syrian Arab Republic	..	..	..	..	..	..	..	..	..	..	..	..
Tajikistan	..	..	..	..	..	..	..	..	..	..	..	..
Tanzania	233	1,264	2.3	5.4	0.4	0.1	19.4	..	4	11	..	..
Thailand	29,489	277,732	24.0	52.4	19.0	51.2	52.9	104.8	381	541	72.8	52.1
Timor-Leste	..	..	..	..	..	..	..	..	..	..	..	..
Togo	..	..	..	..	..	..	..	..	..	..	..	..
Trinidad and Tobago	4,330	12,158	53.1	52.6	1.7	1.1	3.1	1.2	27	37	-10.2 <sup>a</sup>	0.8 <sup>a</sup>
Tunisia	2,828	10,682	14.5	23.1	3.2	3.2	22.6	17.2	44	54	40.6 <sup>a</sup>	11.7 <sup>a</sup>
Turkey	69,659	306,662	26.1	36.7	67.2	39.6	196.5	158.4	315	337	99.6	21.4
Turkmenistan	..	..	..	..	..	..	..	..	..	..	..	..
Uganda	35	..	0.6	..	0.0	..	1.7	..	2	8	..	..
Ukraine	1,881	39,457	6.0	14.8	0.9	0.5	19.2	7.5	139	183	31.1 <sup>a</sup>	53.8 <sup>a</sup>
United Arab Emirates	5,727	104,669	8.1	47.6	0.2	28.5	1.8	25.6	54	101	24.6 <sup>a</sup>	-6.8 <sup>a</sup>
United Kingdom	2,576,992	3,107,038	174.4	128.6	124.2	156.5	66.6	101.9	1,904	2,056	35.2 <sup>f</sup>	5.2 <sup>f</sup>
United States	15,104,037	17,138,978	152.6	106.8	321.9	331.0	200.8	189.1	7,524	4,279	23.5 <sup>g</sup>	12.8 <sup>g</sup>
Uruguay	161	157	0.7	0.4	0.0	0.0	0.9	..	16	6	..	..
Uzbekistan	32	..	0.2	..	0.1	0.0	25.7	..	5	..	..	..
Venezuela, RB	8,128	3,991	6.9	2.7	0.6	0.0	8.8	0.8	85	55	..	..
Vietnam	..	20,385	..	21.8	..	6.8	..	141.4	..	164	46.9 <sup>a</sup>	0.5 <sup>a</sup>
West Bank and Gaza	765	2,450	18.6	..	4.6	..	23.4	18.7	24	41	..	..
Yemen, Rep.	..	..	..	..	..	..	..	..	..	..	..	..
Zambia	236	2,817	7.3	17.4	0.2	0.8	3.1	..	9	19	16.7 <sup>a</sup>	17.4 <sup>a</sup>
Zimbabwe	2,432	11,476	36.8	161.4	4.2	16.1	11.3	..	69	76	-83.8	..
<b>World</b>	<b>32,187,124 s</b>	<b>56,172,634 s</b>	<b>101.7 w</b>	<b>85.2 w</b>	<b>151.4 w</b>	<b>142.5 w</b>	<b>140.2 w</b>	<b>122.0 w</b>	<b>47,751 s</b>	<b>47,071 s</b>		
<b>Low income</b>	..	86,835	..	37.7	..	7.9	18.3	32.5	..	719		
<b>Middle income</b>	1,941,548	13,277,006	36.5	73.2	34.5	82.7	93.8	101.1	21,522	16,778		
Lower middle income	879,123	7,570,880	36.2	82.2	54.6	124.3	162.2	132.4	11,444	11,088		
Upper middle income	1,062,425	5,706,126	36.8	62.1	17.5	31.5	44.2	55.7	10,078	5,690		
<b>Low &amp; middle income</b>	1,948,214	13,363,841	36.1	72.6	34.0	81.9	93.5	100.8	22,094	17,497		
East Asia & Pacific	780,487	6,001,435	47.1	91.0	49.8	149.0	116.2	146.0	3,190	4,758		
Europe & Central Asia	115,145	1,473,816	17.5	50.8	30.1	38.3	131.0	91.2	7,199	2,963		
Latin America & Carib.	620,023	2,750,758	31.7	52.9	8.4	20.9	27.1	46.1	1,672	1,457		
Middle East & N. Africa	57,110	294,845	19.9	38.0	5.1	16.2	21.4	27.7	1,676	1,007		
South Asia	157,695	1,725,795	26.1	73.3	90.2	67.0	308.8	73.5	7,269	6,364		
Sub-Saharan Africa	217,754	1,117,191	89.8	154.1	32.3	48.1	31.7	37.1	1,088	948		
<b>High income</b>	30,238,910	42,808,793	115.2	89.9	175.5	165.3	143.0	128.5	25,657	29,574		
Euro area	5,435,393	6,276,893	86.8	49.3	80.2	45.6	90.1	75.0	5,051	6,278		

a. Refers to the S&P Frontier BMI index. b. Refers to the CAC 40 index. c. Refers to the DAX index. d. Refers to the Nikkei 225 index. e. Refers to Saudi Arabia country index. f. Refers to the FTSE 100. g. Refers to the S&P 500 index.

**About the data**

The development of an economy's financial markets is closely related to its overall development. Well functioning financial systems provide good and easily accessible information. That lowers transaction costs, which in turn improves resource allocation and boosts economic growth. Both banking systems and stock markets enhance growth, the main factor in poverty reduction. At low levels of economic development commercial banks tend to dominate the financial system, while at higher levels domestic stock markets tend to become more active and efficient relative to domestic banks.

Open economies with sound macroeconomic policies, good legal systems, and shareholder protection attract capital and therefore have larger financial markets. Recent research on stock market development shows that modern communications technology and increased financial integration have resulted in more cross-border capital flows, a stronger presence of financial firms around the world, and the migration of stock exchange activities to international exchanges. Many firms in emerging markets now cross-list on international exchanges, which provides them with lower cost capital and more liquidity-traded shares. However, this also means that exchanges in emerging markets may not have enough financial activity to sustain them, putting pressure on them to rethink their operations.

The indicators in the table are from Standard & Poor's Emerging Markets Data Base. They include measures of size (market capitalization, number of listed domestic companies) and liquidity (value of shares traded as a percentage of gross domestic product, value of shares traded as a percentage of market capitalization). The comparability of such indicators across countries may be limited by conceptual and statistical weaknesses, such as inaccurate reporting and differences in accounting standards. The percentage change in stock market prices in U.S. dollars for developing economies is from Standard & Poor's Global Equity Indices (S&P IFCI) and Standard & Poor's Frontier Broad Market Index (BMI). The percentage change for France, Germany, Japan, the United Kingdom, and the United States is from local stock market prices. The indicator is an important measure of overall performance. Regulatory and institutional factors that can affect investor confidence, such as entry and exit restrictions, the existence of a securities and exchange commission, and the quality of laws to protect investors, may influence the functioning of stock markets but are not included in the table.

Stock market size can be measured in various ways, and each may produce a different ranking of

countries. Market capitalization shows the overall size of the stock market in U.S. dollars and as a percentage of GDP. The number of listed domestic companies is another measure of market size. Market size is positively correlated with the ability to mobilize capital and diversify risk.

Market liquidity, the ability to easily buy and sell securities, is measured by dividing the total value of shares traded by GDP. The turnover ratio—the value of shares traded as a percentage of market capitalization—is also a measure of liquidity as well as of transaction costs. (High turnover indicates low transaction costs.) The turnover ratio complements the ratio of value traded to GDP, because the turnover ratio is related to the size of the market and the value traded ratio to the size of the economy. A small, liquid market will have a high turnover ratio but a low value of shares traded ratio. Liquidity is an important attribute of stock markets because, in theory, liquid markets improve the allocation of capital and enhance prospects for long-term economic growth. A more comprehensive measure of liquidity would include trading costs and the time and uncertainty in finding a counterpart in settling trades.

Standard & Poor's Index Services, the source for all the data in the table, provides regular updates on 21 emerging stock markets and 36 frontier markets. Standard & Poor's maintains a series of indexes for investors interested in investing in stock markets in developing countries. The S&P/IFCI index, Standard & Poor's leading emerging markets index, is designed to be sufficiently investable to support index tracking portfolios in emerging market stocks that are legally and practically open to foreign portfolio investment. The S&P/Frontier BMI measures the performance of 36 smaller and less liquid markets. The individual country indexes include all publicly listed equities representing an aggregate of at least 80 percent or more of market capitalization in each market. These indexes are widely used benchmarks for international portfolio management. See [www.standardandpoors.com](http://www.standardandpoors.com) for further information on the indexes.

Because markets included in Standard & Poor's emerging markets category vary widely in level of development, it is best to look at the entire category to identify the most significant market trends. And it is useful to remember that stock market trends may be distorted by currency conversions, especially when a currency has registered a significant devaluation.

*About the data* is based on Demirgüç-Kunt and Levine (1996), Beck and Levine (2001), and Claessens, Klingebiel, and Schmukler (2002).

**Definitions**

- **Market capitalization** (also known as market value) is the share price times the number of shares outstanding.
- **Market liquidity** is the total value of shares traded during the period divided by gross domestic product (GDP). This indicator complements the market capitalization ratio by showing whether market size is matched by trading.
- **Turnover ratio** is the total value of shares traded during the period divided by the average market capitalization for the period. Average market capitalization is calculated as the average of the end-of-period values for the current period and the previous period.
- **Listed domestic companies** are the domestically incorporated companies listed on the country's stock exchanges at the end of the year. This indicator does not include investment companies, mutual funds, or other collective investment vehicles.
- **S&P/Global Equity Indices** measure the U.S. dollar price change in the stock markets.

**Data sources**

Data on stock markets are from Standard & Poor's *Global Stock Markets Factbook 2010*, which draws on the Emerging Markets Data Base, supplemented by other data from Standard & Poor's. The firm collects data through an annual survey of the world's stock exchanges, supplemented by information provided by its network of correspondents and by Reuters. Data on GDP are from the World Bank's national accounts data files.





	Getting credit		Financial access and outreach					Bank capital to asset ratio	Ratio of bank non-performing loans to total gross loans	Domestic credit provided by banking sector	Interest rate spread	Risk premium on lending
	Strength of legal rights index 0-10 (weak to strong) June 2010	Depth of credit information index 0-6 (low to high) June 2010	Deposit accounts at commercial banks per 1,000 adults 2009	Loan accounts at commercial banks per 1,000 adults 2009	Commercial bank branches per 100,000 adults 2009	Automated teller machines per 100,000 adults 2009	Point-of-sale terminals per 100,000 adults 2009	% 2009	% 2009	% of GDP 2009	Lending rate minus deposit rate percentage points 2009	Prime lending rate minus treasury bill rate percentage points 2009
Afghanistan	6	0	..	4	1.1	0.18	..	..	1.5	..	..	
Albania	9	4	451	102	21.4	26.87	123	8.7	10.5	68.5	5.9	6.4
Algeria	3	2	683	..	5.3	4.13	8	..	..	-8.9	6.3	7.3
Angola	4	3	..	..	5.5	7.82	25	..	..	29.2	8.1	..
Argentina	4	6	875	503	13.3	33.04	..	13.3	3.0	28.0	4.1	..
Armenia	6	5	572	192	15.7	22.22	94	21.0	4.8	19.9	10.1	9.3
Australia	9	5	..	..	31.8	159.30	3,939	5.0	1.2	143.6	3.2	2.9
Austria	7	6	2,442	..	..	118.37	4,890	7.0	2.3	141.1	..	..
Azerbaijan	6	5	702	..	8.6	23.05	112	..	..	23.1	7.8	16.7
Bangladesh	7	2	319	42	5.2	..	..	6.5	11.2	60.4	6.4	..
Belarus	3	5	..	..	44.9	29.71	165	16.6	4.2	34.6	1.0	..
Belgium	7	4	3,725	..	50.0	85.96	1,086	4.5	2.7	119.3	..	5.6
Benin	3	1	..	..	..	..	..	..	..	19.1	..	..
Bolivia	1	6	274	72	6.3	15.11	33	8.7	3.5	49.5	8.9	9.5
Bosnia and Herzegovina	5	5	380	344	25.0	27.14	502	15.2	5.9	58.3	4.3	..
Botswana	7	4	481	80	6.9	29.26	..	..	..	-1.0	6.3	..
Brazil	3	5	..	390	12.2	110.19	1,471	9.5	4.2	97.5	35.4	34.9
Bulgaria	8	6	1,987	456	88.1	78.22	683	10.8	6.4	69.4	5.2	6.2
Burkina Faso	3	1	..	..	..	..	..	..	..	15.2	..	..
Burundi	2	1	21	1	1.7	0.04	0	..	..	36.5	..	..
Cambodia	8	0	76	25	3.7	..	36	..	..	19.0	..	..
Cameroon	3	2	..	..	..	..	..	..	..	6.9	10.8	..
Canada	6	6	..	..	23.7	202.78	2,202	5.7	1.3	178.1	2.3	2.0
Central African Republic	3	2	..	..	..	..	..	..	..	17.2	10.8	..
Chad	3	1	..	..	..	..	..	..	..	8.3	10.8	..
Chile	4	5	746	629	15.0	55.56	450	7.4	3.0	98.8	5.2	..
China	6	4	..	..	..	..	..	5.6	1.6	145.2	3.1	..
Hong Kong SAR, China	10	5	..	..	24.4	..	..	12.7	1.1	166.8	5.0	4.9
Colombia	5	5	1,151	..	13.7	26.31	..	13.6	4.1	37.2	6.9	..
Congo, Dem. Rep.	3	0	6	..	0.3	..	..	..	..	7.6	49.5	..
Congo, Rep.	3	2	..	..	..	..	..	..	..	-15.9	10.8	..
Costa Rica	5	5	..	..	..	53.35	0	13.9	2.0	54.3	12.8	..
Côte d'Ivoire	3	1	..	..	..	..	..	..	..	22.8	..	..
Croatia	6	4	..	..	33.2	88.62	2,121	13.9	7.8	76.9	8.4	..
Cuba	..	..	..	..	..	..	..	..	..	..	..	..
Czech Republic	6	5	1,680	..	22.4	38.40	651	6.1	4.6	62.4	4.7	4.7
Denmark	9	4	..	..	46.7	70.42	2,023	5.7	0.3	223.0	..	..
Dominican Republic	3	6	..	310	10.0	27.21	..	9.1	4.0	40.6	10.3	..
Ecuador	3	5	494	..	1.6	26.01	..	7.7	2.9	18.9	7.1	..
Egypt, Arab Rep.	3	6	..	..	..	..	..	6.4	13.4	75.4	5.5	2.1
El Salvador	5	6	737	..	8.2	22.86	250	13.2	3.6	44.5	..	..
Eritrea	2	0	..	..	..	..	..	..	..	112.1	..	..
Estonia	7	5	2,752	1,022	22.2	89.09	1,417	8.5	5.2	106.2	4.6	..
Ethiopia	4	2	82	1	1.2	..	..	..	..	37.1	3.3	7.3
Finland	7	5	..	..	18.5	38.74	66	6.4	0.7	98.7	..	..
France	7	4	..	..	23.0	102.55	2,153	4.5	3.6	128.4	..	..
Gabon	3	2	..	..	..	..	..	16.2	9.8	7.5	10.8	..
Gambia, The	5	0	269	44	5.5	1.48	5	..	..	38.7	11.5	..
Georgia	7	6	661	349	18.6	28.77	169	18.3	6.3	33.2	15.2	19.5
Germany	7	6	..	..	16.3	79.74	799	4.8	3.3	131.8	..	..
Ghana	8	3	270	..	4.4	4.16	4	17.0	16.2	27.9	..	..
Greece	3	5	3,219	1,297	38.8	76.06	3,827	6.1	7.7	112.7	..	..
Guatemala	8	6	1,050	374	33.1	22.18	486	10.5	2.7	37.7	8.3	..
Guinea	3	0	..	..	..	..	..	..	..	..	..	..
Guinea-Bissau	3	1	..	..	..	..	..	..	..	4.9	..	..
Haiti	3	2	330	11	..	0.58	..	..	..	25.8	16.2	..
Honduras	6	6	744	..	1.5	21.89	..	..	..	54.1	8.6	..

# Financial access, stability, and efficiency

# 5.5

	Getting credit		Financial access and outreach					Bank capital to asset ratio	Ratio of bank non-performing loans to total gross loans	Domestic credit provided by banking sector	Interest rate spread	Risk premium on lending
	Strength of legal rights index 0–10 (weak to strong) June 2010	Depth of credit information index 0–6 (low to high) June 2010	Deposit accounts at commercial banks per 1,000 adults 2009	Loan accounts at commercial banks per 1,000 adults 2009	Commercial bank branches per 100,000 adults 2009	Automated teller machines per 100,000 adults 2009	Point-of-sale terminals per 100,000 adults 2009	% 2009	% 2009	% of GDP 2009	Lending rate minus deposit rate percentage points 2009	Prime lending rate minus treasury bill rate percentage points 2009
Hungary	7	5	1,571	..	17.1	54.24	585	8.5	6.7	79.9	5.2	2.6
India	8	4	680	124	9.3	3.55	..	6.4	2.3	69.4	..	..
Indonesia	3	4	484	181	6.7	13.44	120	10.3	3.3	36.9	5.2	..
Iran, Islamic Rep.	4	4	..	..	28.8	23.97	1,353	..	..	37.2	-1.1	..
Iraq	3	0	..	..	..	..	..	..	..	-16.3	7.8	1.8
Ireland	8	5	..	..	34.1	..	..	5.6	9.0	219.8	..	..
Israel	9	5	2,254	1,055	19.8	47.38	..	6.0	1.5	78.1	2.6	2.3
Italy	3	5	763	597	53.0	93.93	2,386	8.0	7.0	141.6	..	3.8
Jamaica	8	0	1,172	215	7.2	21.89	674	..	..	59.8	9.5	-3.5
Japan	7	6	..	..	12.5	..	..	4.7	1.7	320.5	1.3	1.6
Jordan	4	2	814	160	16.2	..	..	11.0	6.7	99.3	4.3	..
Kazakhstan	4	5	..	..	21.6	52.83	173	-9.3	21.2	54.6	..	..
Kenya	10	4	296	70	4.0	6.67	..	12.7	7.9	44.8	8.8	7.4
Korea, Dem. Rep.	..	..	..	..	..	..	..	..	..	..	..	..
Korea, Rep.	7	6	..	..	12.6	..	..	10.9	1.2	112.4	2.2	..
Kosovo	8	4	..	..	..	..	..	..	4.4	14.3	10.1	..
Kuwait	4	4	..	..	15.1	50.05	904	12.1	9.7	65.1	3.3	5.2
Kyrgyz Republic	10	3	115	25	6.3	..	..	..	..	14.0	19.2	12.5
Lao PDR	4	0	..	..	1.7	3.06	..	..	..	10.5	19.3	11.5
Latvia	9	5	1,219	687	12.0	..	..	7.4	16.4	93.2	8.2	5.8
Lebanon	3	5	1,310	..	29.1	38.55	1,293	7.0	6.0	165.0	2.3	4.7
Lesotho	6	0	199	18	1.9	7.13	..	7.9	4.0	-15.5	8.2	5.2
Liberia	4	1	..	..	..	..	..	..	..	149.5	10.1	..
Libya	..	..	..	..	..	..	..	..	..	-65.9	3.5	..
Lithuania	5	6	2,142	381	28.8	51.69	1,413	7.9	19.3	69.3	3.6	-0.1
Macedonia, FYR	7	4	1,302	962	22.1	45.98	1,297	11.4	8.9	44.0	3.0	..
Madagascar	2	0	34	21	1.0	0.96	2	..	..	11.6	33.5	37.4
Malawi	7	0	124	17	1.8	1.48	2	..	..	32.0	21.8	15.1
Malaysia	10	6	2,227	973	11.6	43.25	941	9.0	3.7	137.4	3.0	3.0
Mali	3	1	..	..	..	..	..	..	..	10.7	..	..
Mauritania	3	1	37	..	3.8	0.74	..	..	..	..	15.5	13.1
Mauritius	5	3	2,110	417	19.4	37.71	647	..	..	109.7	10.8	..
Mexico	5	6	1,014	..	14.0	40.15	..	9.7	3.1	44.1	5.1	1.6
Moldova	8	0	..	..	9.7	..	..	16.0	16.3	41.6	5.6	9.2
Mongolia	6	3	1,935	272	56.7	18.18	448	..	..	32.2	8.4	15.0
Morocco	3	5	277	..	11.6	16.65	46	7.6	5.5	100.5	..	..
Mozambique	2	4	112	20	2.9	4.32	34	7.7	1.8	22.8	6.2	5.1
Myanmar	..	..	..	..	..	..	..	..	..	..	5.0	..
Namibia	8	5	466	356	7.3	27.31	217	7.9	2.7	43.5	4.9	2.9
Nepal	6	2	165	38	3.2	1.13	..	..	..	69.6	5.5	1.7
Netherlands	6	5	1,772	..	26.1	63.78	2,286	4.3	..	224.4	-0.6	..
New Zealand	10	5	..	..	31.7	72.34	3,916	..	..	154.2	6.3	7.6
Nicaragua	3	5	198	185	6.8	..	..	..	..	67.5	8.0	..
Niger	3	1	..	..	..	..	..	..	..	12.2	..	..
Nigeria	8	0	..	..	..	..	..	18.4	6.6	35.9	5.1	14.6
Norway	7	4	..	..	35.0	59.73	2,827	6.0	1.5	..	2.0	..
Oman	4	2	..	..	22.1	..	..	13.5	3.5	41.9	3.3	..
Pakistan	6	4	226	47	7.5	3.39	47	10.1	12.2	48.4	5.9	2.0
Panama	6	6	757	435	18.9	36.94	427	11.7	1.4	81.6	4.8	..
Papua New Guinea	5	3	..	..	2.8	..	..	..	..	39.1	7.8	3.0
Paraguay	3	6	80	89	6.2	..	..	8.7	1.6	25.5	26.8	..
Peru	7	6	716	367	7.5	17.67	40	9.9	2.7	18.1	18.2	..
Philippines	3	3	517	..	10.5	13.33	..	11.1	4.1	49.4	5.8	5.3
Poland	9	4	1,527	..	32.6	42.16	253	9.0	7.6	61.5	..	..
Portugal	3	5	..	..	55.9	189.60	2,548	6.5	3.2	196.1	..	..
Puerto Rico	7	5	1,026	..	16.6	43.33	1,398	..	..	..	..	..
Qatar	3	2	..	..	..	..	..	..	..	75.7	2.8	..



# 5.5

## Financial access, stability, and efficiency

	Getting credit		Financial access and outreach					Bank capital to asset ratio	Ratio of bank non-performing loans to total gross loans	Domestic credit provided by banking sector	Interest rate spread	Risk premium on lending
	Strength of legal rights index (weak to strong) 0-10 June 2010	Depth of credit information index (low to high) 0-6 June 2010	Deposit accounts at commercial banks per 1,000 adults 2009	Loan accounts at commercial banks per 1,000 adults 2009	Commercial bank branches per 100,000 adults 2009	Automated teller machines per 100,000 adults 2009	Point-of-sale terminals per 100,000 adults 2009	% 2009	% 2009	% of GDP 2009	Lending rate minus deposit rate percentage points 2009	Prime lending rate minus treasury bill rate percentage points 2009
Romania	8	5	..	431	27.6	50.63	460	7.6	15.3	52.7	5.3	6.4
Russian Federation	3	5	..	..	2.9	65.60	275	15.7	9.7	33.8	6.7	..
Rwanda	8	4	202	2	3.1	0.38	1	13.0	13.1	..	9.8	8.9
Saudi Arabia	5	6	..	..	..	..	..	11.9	3.3	0.6	..	..
Senegal	3	1	..	..	..	..	..	9.3	18.7	26.6	..	..
Serbia	8	5	..	..	44.9	41.31	959	21.0	15.5	44.8	0.0	1.4
Sierra Leone	6	0	..	..	..	..	..	18.9	16.5	10.7	14.8	9.0
Singapore	10	4	2,305	899	11.0	50.64	1,887	10.5	2.3	91.2	5.1	5.0
Slovak Republic	9	4	..	..	25.7	47.76	611	9.6	5.3	53.8	4.3	..
Slovenia	5	2	1,394	..	15.7	99.47	1,925	8.3	2.3	94.5	4.5	4.8
Somalia	..	..	..	..	..	..	..	..	..	..	..	..
South Africa	9	6	788	297	8.0	54.85	..	6.7	5.9	183.5	3.2	3.9
Spain	6	5	741	310	40.5	157.10	3,523	6.8	5.1	228.4	..	..
Sri Lanka	4	5	1,652	487	9.1	10.46	..	..	..	39.6	5.1	2.7
Sudan	5	0	..	..	..	..	..	..	..	20.0	..	..
Swaziland	6	5	270	98	2.9	15.96	52	16.9	8.1	9.1	6.0	3.4
Sweden	5	4	..	..	22.8	36.94	..	5.0	2.0	143.8	..	..
Switzerland	8	5	..	..	..	93.70	2,004	5.5	0.4	191.0	2.7	2.8
Syrian Arab Republic	1	2	157	23	2.2	0.95	..	..	..	45.1	3.7	..
Tajikistan	3	0	..	..	3.9	2.97	2	..	..	27.5	17.1	..
Tanzania	8	0	..	..	1.8	2.63	11	..	..	18.1	7.1	7.9
Thailand	4	5	1,498	276	10.9	65.48	..	9.8	5.3	136.9	4.9	4.7
Timor-Leste	1	0	..	..	..	..	..	..	..	-18.4	10.3	..
Togo	3	1	..	..	..	..	..	..	..	30.2	..	..
Trinidad and Tobago	8	4	..	..	..	..	..	..	..	26.5	8.5	9.2
Tunisia	3	5	672	176	13.6	14.26	172	..	13.2	75.2	..	..
Turkey	4	5	1,851	315	17.3	40.99	3,046	13.3	5.6	63.0	..	..
Turkmenistan	..	..	..	..	..	..	..	..	..	..	..	..
Uganda	7	4	154	21	1.9	2.24	3	13.4	4.2	11.2	11.2	13.9
Ukraine	9	3	3,755	..	3.3	70.09	293	13.1	40.2	88.5	7.1	..
United Arab Emirates	4	5	..	..	..	..	..	16.0	4.8	114.5	..	..
United Kingdom	9	6	..	..	..	127.07	2,177	5.4	3.5	228.9	..	0.1
United States	8	6	1,761	..	35.4	169.23	2,156	11.0	5.4	230.5	..	3.1
Uruguay	5	6	507	439	13.9	30.57	275	8.9	1.0	27.9	10.9	3.4
Uzbekistan	2	3	..	..	..	..	..	..	..	..	..	..
Venezuela, RB	2	0	518	484	18.5	27.99	..	9.4	3.0	20.5	3.5	..
Vietnam	8	5	..	..	3.3	..	..	..	..	123.0	3.1	2.0
West Bank and Gaza	0	3	..	..	..	..	..	..	..	..	..	..
Yemen, Rep.	2	2	106	6	1.8	2.44	17	..	..	19.3	7.3	4.5
Zambia	9	5	293	19	3.5	4.54	11	..	..	18.5	15.0	6.7
Zimbabwe	6	0	139	..	2.8	..	..	..	..	..	457.5	330.2
<b>World</b>	<b>5.5 u</b>	<b>3.0 u</b>						<b>9.4 m</b>	<b>4.2 m</b>	<b>169.0 w</b>	<b>6.2 m</b>	
<b>Low income</b>	4.9	1.3						..	..	35.1	11.5	
<b>Middle income</b>	5.1	3.1						10.1	4.8	89.4	6.3	
Lower middle income	4.6	2.6						10.0	5.1	110.3	7.3	
Upper middle income	5.7	3.6						9.7	4.2	63.3	5.5	
<b>Low &amp; middle income</b>	5.0	2.6						..	5.3	88.4	6.8	
East Asia & Pacific	5.8	1.9						..	..	134.2	7.1	
Europe & Central Asia	6.3	4.1						13.3	9.3	47.1	5.7	
Latin America & Carib.	5.2	3.4						9.6	3.0	67.1	7.7	
Middle East & N. Africa	2.5	3.1						..	..	40.9	4.3	
South Asia	5.4	2.1						6.4	10.5	65.6	5.9	
Sub-Saharan Africa	4.6	1.6						..	..	78.5	8.5	
<b>High income</b>	6.7	4.3						6.8	3.4	201.8	..	
Euro area	6.3	4.1						6.5	3.6	152.0	..	

**About the data**

Access to finance can expand opportunities for all with higher levels of access and use of banking services associated with lower financing obstacles for people and businesses. A stable financial system that promotes efficient savings and investment is also crucial for a thriving democracy and market economy.

There are several aspects of access to financial services: availability, cost, and quality of services. The development and growth of credit markets depend on access to timely, reliable, and accurate data on borrowers' credit experiences. Access to credit can be improved by making it easy to create and enforce collateral agreements and increasing information about potential borrowers' creditworthiness. Lenders look at a borrower's credit history and collateral. Where credit registries and effective collateral laws are absent—as in many developing countries—banks make fewer loans. Indicators that cover getting credit include the strength of legal rights index and the depth of credit information index.

The “unbanked” have to resort to informal services to manage their money—saving under the mattress, borrowing from family and friends, or money lenders—that are usually less reliable and more costly than formal banking institutions. The table presents data on financial access covering deposits and loans, and outreach indicators such as the number of branches, automatic teller machines, and point-of-sale terminals.

Data on financial access cover 142 countries and present indicators on savings, credit, and payment services in banks and regulated nonbank financial institutions. Data were collected for commercial banks and regulated nonbank financial institutions such as cooperatives, credit unions, specialized state financial institutions, and microfinance institutions.

The size and mobility of international capital flows make it increasingly important to monitor the strength of financial systems. Robust financial systems can increase economic activity and welfare, but instability in the financial system can disrupt financial activity and impose widespread costs on the economy. The ratio of bank capital to assets, a measure of bank solvency and resiliency, shows the extent to which banks can deal with unexpected losses. Capital includes tier 1 capital (paid-up shares and common stock), a common feature in all countries' banking systems, and total regulatory capital, which includes several types of subordinated debt instruments that need not be repaid if the funds are required to maintain minimum capital levels (tier 2 and tier 3 capital). Total assets include

all nonfinancial and financial assets. Data are from internally consistent financial statements.

The ratio of bank nonperforming loans to total gross loans, a measure of bank health and efficiency, helps identify problems with asset quality in the loan portfolio. A high ratio may signal deterioration of the credit portfolio. International guidelines recommend that loans be classified as nonperforming when payments of principal and interest are 90 days or more past due or when future payments are not expected to be received in full. Domestic credit provided by the banking sector as a share of GDP is a measure of banking sector depth and financial sector development in terms of size. In a few countries governments may hold international reserves as deposits in the banking system rather than in the central bank. Since the claims on the central government are a net item (claims on the central government minus central government deposits), this net figure may be negative, resulting in a negative figure of domestic credit provided by the banking sector.

The interest rate spread—the margin between the cost of mobilizing liabilities and the earnings on assets—is a measure of financial sector efficiency in intermediation. A narrow interest rate spread means low transaction costs, which reduces the cost of funds for investment, crucial to economic growth.

The risk premium on lending is the spread between the lending rate to the private sector and the “risk-free” government rate. Spreads are expressed as annual averages. A small spread indicates that the market considers its best corporate customers to be low risk. A negative rate indicates that the market considers its best corporate clients to be lower risk than the government.

**Definitions**

• **Strength of legal rights index** measures the degree to which collateral and bankruptcy laws protect the rights of borrowers and lenders and thus facilitate lending. Higher values indicate that the laws are better designed to expand access to credit. • **Depth of credit information index** measures rules affecting the scope, accessibility, and quality of information available through public or private credit registries. Higher values indicate the availability of more credit information. • **Deposit accounts** are accounts at commercial banks that allow money to be deposited and withdrawn by the account holder. The major types of deposits are checking accounts, savings accounts, and time deposits. • **Loan accounts at commercial banks** include loans from banks to individuals, businesses, and others, including home mortgages,

consumer loans, business loans, trade loans, student loans, emergency loans, agricultural loans, and the like. • **Commercial banks branches** are retail locations offering a wide array of face-to-face and automated financial services. • **Automated teller machines** are computerized telecommunications devices that provide clients of a financial institution with access to financial transactions in a public place. • **Point-of-sale terminals** are the equipment used to manage the selling process by a salesperson-accessible interface in the location where a transaction takes place. • **Bank capital to asset ratio** is the ratio of bank capital and reserves to total assets. Capital and reserves include funds contributed by owners, retained earnings, general and special reserves, provisions, and valuation adjustments. • **Ratio of bank nonperforming loans to total gross loans** is the value of nonperforming loans divided by the total value of the loan portfolio (including nonperforming loans before the deduction of loan loss provisions). The amount recorded as nonperforming should be the gross value of the loan as recorded on the balance sheet, not just the amount overdue. • **Domestic credit provided by banking sector** is all credit to various sectors on a gross basis, except to the central government, which is net. The banking sector includes monetary authorities, deposit money banks, and other banking institutions for which data are available. • **Interest rate spread** is the interest rate charged by banks on loans to prime customers minus the interest rate paid by commercial or similar banks for demand, time, or savings deposits. • **Risk premium on lending** is the interest rate charged by banks on loans to prime private sector customers minus the “risk-free” treasury bill interest rate at which short-term government securities are issued or traded in the market.

**Data sources**

Data on getting credit are from the World Bank's Doing Business project ([www.doingbusiness.org](http://www.doingbusiness.org)). Data on financial access and outreach are from the Consultative Group to Assist the Poor and the World Bank Group's *Financial Access 2010*. Data on bank capital and nonperforming loans are from the IMF's *Global Financial Stability Report*. Data on credit and interest rates are from the IMF's *International Financial Statistics*.



## 5.6

## Tax policies

	Tax revenue collected by central government		Taxes payable by businesses					
	% of GDP		Number of payments June 2010	Time to prepare, file, and pay taxes hours June 2010	Profit tax % of commercial profits June 2010	Labor tax and contributions % of commercial profits June 2010	Other taxes % of commercial profits June 2010	Total tax rate % of commercial profits June 2010
	2000	2009						
Afghanistan	..	7.3	8	275	0.0	0.0	36.4	36.4
Albania	16.1	..	44	360	8.5	27.3	4.9	40.6
Algeria	..	34.3 <sup>a</sup>	34	451	6.6	29.7	35.7	72.0
Angola	..	..	31	282	24.6	9.0	19.5	53.2
Argentina	9.8 <sup>a</sup>	..	9	453	2.8	29.4	76.0	108.2
Armenia	..	16.4	50	581	16.6	23.0	1.1	40.7
Australia	23.0 <sup>a</sup>	22.1 <sup>a</sup>	11	109	25.9	20.7	1.3	47.9
Austria	19.9 <sup>a</sup>	18.7 <sup>a</sup>	22	170	15.7	34.6	5.1	55.5
Azerbaijan	..	16.7	18	306	13.8	24.8	2.2	40.9
Bangladesh	7.6	8.6	21	302	25.7	0.0	9.2	35.0
Belarus	16.6	19.4	82	798	22.0	39.3	19.2	80.4
Belgium	27.4 <sup>a</sup>	24.0 <sup>a</sup>	11	156	4.8	50.4	1.8	57.0
Benin	15.5 <sup>a</sup>	16.1 <sup>a</sup>	55	270	14.8	27.3	23.9	66.0
Bolivia	13.2 <sup>a</sup>	17.0 <sup>a</sup>	42	1,080	0.0	15.5	64.6	80.0
Bosnia and Herzegovina	..	19.6 <sup>a</sup>	51	422	5.3	12.6	5.0	23.0
Botswana	..	..	19	152	15.9	0.0	3.6	19.5
Brazil	14.0	15.6	10	2,600	21.4	40.9	6.6	69.0
Bulgaria	17.9	20.9	17	616	4.6	20.4	3.9	29.0
Burkina Faso	10.5 <sup>a</sup>	12.9 <sup>a</sup>	46	270	16.1	22.6	6.2	44.9
Burundi	13.6	..	32	211	19.4	7.8	126.2	153.4
Cambodia	8.2 <sup>a</sup>	9.6 <sup>a</sup>	39	173	18.9	0.1	3.5	22.5
Cameroon	11.2	..	44	654	29.9	18.3	0.9	49.1
Canada	15.3 <sup>a</sup>	11.8 <sup>a</sup>	8	131	9.8	12.6	6.9	29.2
Central African Republic	..	..	54	504	176.8	8.1	18.9	203.8
Chad	..	..	54	732	31.3	28.4	5.7	65.4
Chile	16.7 <sup>a</sup>	15.3 <sup>a</sup>	9	316	18.0	3.8	3.2	25.0
China	6.8	10.3	7	398	6.0	49.6	7.9	63.5
Hong Kong SAR, China	9.1 <sup>a</sup>	13.0 <sup>a</sup>	3	80	18.7	5.3	0.1	24.1
Colombia	11.0 <sup>a</sup>	11.9 <sup>a</sup>	20	208	17.7	33.9	27.1	78.7
Congo, Dem. Rep.	3.5	..	32	336	58.9	7.9	272.8	339.7
Congo, Rep.	5.9	..	61	606	0.0	32.9	32.6	65.5
Costa Rica	..	13.9 <sup>a</sup>	42	272	18.9	29.5	6.6	55.0
Côte d'Ivoire	..	16.4 <sup>a</sup>	64	270	8.8	20.1	15.5	44.4
Croatia	22.4	19.1	17	196	11.4	19.4	1.6	32.5
Cuba	..	..	..	..	..	..	..	..
Czech Republic	15.4	13.5	12	557	7.4	38.4	3.0	48.8
Denmark	30.8 <sup>a</sup>	34.5 <sup>a</sup>	9	135	21.9	3.6	3.7	29.2
Dominican Republic	..	14.9 <sup>a</sup>	9	324	20.5	18.3	1.8	40.7
Ecuador	..	..	8	654	18.4	13.7	3.2	35.3
Egypt, Arab Rep.	13.4	15.7	29	433	13.2	25.8	3.6	42.6
El Salvador	10.7 <sup>a</sup>	12.5 <sup>a</sup>	53	320	17.0	17.2	0.8	35.0
Eritrea	..	..	18	216	8.8	0.0	75.8	84.5
Estonia	15.8 <sup>a</sup>	17.6 <sup>a</sup>	7	81	8.0	39.2	2.4	49.6
Ethiopia	8.1	..	19	198	26.8	0.0	4.3	31.1
Finland	24.7 <sup>a</sup>	21.3 <sup>a</sup>	8	243	15.9	27.7	1.0	44.6
France	23.2 <sup>a</sup>	19.6 <sup>a</sup>	7	132	8.2	51.7	5.9	65.8
Gabon	..	..	26	488	18.4	22.7	2.3	43.5
Gambia, The	..	..	50	376	41.4	12.9	238.0	292.3
Georgia	7.7	23.2	18	387	13.3	0.0	2.0	15.3
Germany	11.9 <sup>a</sup>	12.0 <sup>a</sup>	16	215	23.0	22.0	3.3	48.2
Ghana	17.2	12.5	33	224	18.1	14.1	0.5	32.7
Greece	23.3 <sup>a</sup>	19.1 <sup>a</sup>	10	224	13.9	31.7	1.6	47.2
Guatemala	10.1	10.4	24	344	25.9	14.3	0.7	40.9
Guinea	11.1	..	56	416	19.4	24.5	10.8	54.6
Guinea-Bissau	..	..	46	208	14.9	24.8	6.1	45.9
Haiti	..	..	42	160	23.3	12.4	4.3	40.1
Honduras	..	14.4 <sup>a</sup>	47	224	26.7	10.7	10.9	48.3

	Tax revenue collected by central government		Taxes payable by businesses					
	% of GDP		Number of payments	Time to prepare, file, and pay taxes hours	Profit tax % of commercial profits	Labor tax and contributions % of commercial profits	Other taxes % of commercial profits	Total tax rate % of commercial profits
	2000	2009						
Hungary	21.9 <sup>a</sup>	23.5 <sup>a</sup>	14	277	16.7	34.4	2.2	53.3
India	9.0	9.8	56	258	24.0	18.2	21.1	63.3
Indonesia	11.6	11.4	51	266	26.6	10.6	0.1	37.3
Iran, Islamic Rep.	6.3	9.3	20	344	17.8	25.9	0.4	44.1
Iraq	..	..	13	312	14.9	13.5	0.0	28.4
Ireland	26.0 <sup>a</sup>	20.8 <sup>a</sup>	9	76	11.9	11.6	3.0	26.5
Israel	28.7 <sup>a</sup>	23.0 <sup>a</sup>	33	235	23.8	5.3	2.6	31.7
Italy	23.2 <sup>a</sup>	23.0 <sup>a</sup>	15	285	22.8	43.4	2.4	68.6
Jamaica	..	21.9 <sup>a</sup>	72	414	28.6	13.0	8.5	50.1
Japan	..	9.2 <sup>a</sup>	14	355	27.9	14.7	6.0	48.6
Jordan	19.0	16.2	26	101	15.2	12.4	3.6	31.2
Kazakhstan	10.2	8.1	9	271	16.3	11.5	1.9	29.6
Kenya	16.8	19.6	41	393	33.1	6.8	9.9	49.7
Korea, Dem. Rep.	..	..	..	..	..	..	..	..
Korea, Rep.	15.4	15.5	14	250	15.3	12.9	1.6	29.8
Kosovo	..	21.1	33	163	10.2	5.6	0.6	16.5
Kuwait	1.3	0.9	15	118	4.7	10.7	0.0	15.5
Kyrgyz Republic	11.7	15.4	48	202	8.9	21.5	26.7	57.2
Lao PDR	..	12.5	34	362	25.2	5.6	2.9	33.7
Latvia	14.2	12.6	7	293	6.5	27.2	4.8	38.5
Lebanon	11.9 <sup>a</sup>	17.3 <sup>a</sup>	19	180	6.1	24.1	0.0	30.2
Lesotho	37.4	60.0	21	324	16.4	0.0	3.2	19.6
Liberia	..	0.3	32	158	0.0	5.4	38.3	43.7
Libya	..	..	..	..	..	..	..	..
Lithuania	14.6 <sup>a</sup>	13.8 <sup>a</sup>	11	175	0.0	35.1	3.6	38.7
Macedonia, FYR	..	19.7	40	119	6.3	0.6	3.8	10.6
Madagascar	11.3 <sup>a</sup>	13.0 <sup>a</sup>	23	201	15.8	20.3	1.6	37.7
Malawi	..	..	19	157	23.3	1.1	0.7	25.1
Malaysia	13.7	15.7	12	145	16.7	15.6	1.4	33.7
Mali	13.2 <sup>a</sup>	14.7 <sup>a</sup>	59	270	12.9	32.6	6.7	52.2
Mauritania	..	..	38	696	44.2	17.6	6.6	68.4
Mauritius	..	19.2 <sup>a</sup>	7	161	11.8	5.0	7.3	24.1
Mexico	11.7	..	6	404	23.1	26.1	1.3	50.5
Moldova	14.7	17.8	48	228	0.0	30.2	0.7	30.9
Mongolia	14.5	18.0	43	192	9.5	12.4	1.0	23.0
Morocco	19.9 <sup>a</sup>	23.8 <sup>a</sup>	28	358	18.1	22.2	1.4	41.7
Mozambique	..	..	37	230	27.7	4.5	2.1	34.3
Myanmar	3.0	..	..	..	..	..	..	..
Namibia	27.5	27.3	37	375	4.0	1.0	4.6	9.6
Nepal	8.7	12.2	34	338	16.2	11.3	10.7	38.2
Netherlands	22.3 <sup>a</sup>	22.7 <sup>a</sup>	9	134	20.9	17.9	1.7	40.5
New Zealand	29.2 <sup>a</sup>	30.8 <sup>a</sup>	8	192	30.4	3.0	0.9	34.3
Nicaragua	13.8	17.8	64	222	24.8	19.2	19.2	63.2
Niger	..	11.5 <sup>a</sup>	41	270	20.1	19.6	6.8	46.5
Nigeria	..	0.3	35	938	21.8	9.7	0.7	32.2
Norway	27.4 <sup>a</sup>	25.4 <sup>a</sup>	4	87	24.4	15.9	1.3	41.6
Oman	7.2	..	14	62	9.7	11.8	0.1	21.6
Pakistan	10.1	9.3	47	560	14.3	15.0	2.3	31.6
Panama	10.2	..	62	482	17.0	22.6	10.5	50.1
Papua New Guinea	19.0	..	33	194	22.0	11.7	8.6	42.3
Paraguay	10.9	13.0	35	311	9.6	18.6	6.7	35.0
Peru	12.2	13.4	9	380	26.0	11.0	3.2	40.2
Philippines	13.7	12.8	47	195	21.3	10.3	14.2	45.8
Poland	16.0 <sup>a</sup>	16.4 <sup>a</sup>	29	325	17.7	22.1	2.5	42.3
Portugal	20.6 <sup>a</sup>	19.7 <sup>a</sup>	8	298	14.9	26.8	1.6	43.3
Puerto Rico	..	..	16	218	26.3	14.4	27.0	67.7
Qatar	..	19.8	3	36	0.0	11.3	0.0	11.3



# 5.6 Tax policies

	Tax revenue collected by central government		Taxes payable by businesses					
	% of GDP		Number of payments	Time to prepare, file, and pay taxes hours	Profit tax % of commercial profits	Labor tax and contributions % of commercial profits	Other taxes % of commercial profits	Total tax rate % of commercial profits
	2000	2009						
Romania	11.7 <sup>a</sup>	17.9 <sup>a</sup>	113	222	10.4	32.3	2.2	44.9
Russian Federation	13.6 <sup>a</sup>	12.9 <sup>a</sup>	11	320	9.0	31.8	5.7	46.5
Rwanda	..	..	26	148	21.2	5.7	4.4	31.3
Saudi Arabia	..	..	14	79	2.1	12.4	0.0	14.5
Senegal	16.1	..	59	666	14.8	24.1	7.0	46.0
Serbia	..	21.0	66	279	11.6	20.2	2.2	34.0
Sierra Leone	10.2	10.8	29	357	0.0	11.3	224.3	235.6
Singapore	15.4	13.8	5	84	7.4	14.9	3.1	25.4
Slovak Republic	..	12.4 <sup>a</sup>	31	257	7.0	39.6	2.1	48.7
Slovenia	20.6	18.3	22	260	14.8	18.2	2.4	35.4
Somalia	..	..	..	..	..	..	..	..
South Africa	24.0 <sup>a</sup>	25.4 <sup>a</sup>	9	200	24.4	2.5	3.7	30.5
Spain	16.2 <sup>a</sup>	8.5 <sup>a</sup>	8	197	20.9	35.0	0.7	56.5
Sri Lanka	14.5	13.3	62	256	27.4	16.9	20.3	64.7
Sudan	6.4	..	42	180	13.8	19.2	3.1	36.1
Swaziland	24.9	..	33	104	28.1	4.0	4.7	36.8
Sweden	23.6 <sup>a</sup>	21.5 <sup>a</sup>	2	122	16.4	36.6	1.6	54.6
Switzerland	11.1	10.9	19	63	8.9	17.5	3.6	30.1
Syrian Arab Republic	..	..	20	336	23.2	19.3	0.5	42.9
Tajikistan	7.7	..	54	224	17.7	28.5	39.9	86.0
Tanzania	..	..	48	172	19.9	18.0	7.3	45.2
Thailand	..	15.1 <sup>a</sup>	23	264	28.9	5.7	2.8	37.4
Timor-Leste	..	..	6	276	0.0	0.0	0.2	0.2
Togo	..	17.0 <sup>a</sup>	53	270	8.8	28.3	13.7	50.8
Trinidad and Tobago	22.1	31.6	40	210	21.6	5.8	5.8	33.1
Tunisia	21.3	21.9	8	144	15.0	25.2	22.5	62.8
Turkey	..	18.9 <sup>a</sup>	15	223	17.0	23.1	4.4	44.5
Turkmenistan	..	..	..	..	..	..	..	..
Uganda	10.4	12.0	32	161	23.3	11.3	1.1	35.7
Ukraine	14.1	16.4	135	657	10.4	43.3	1.8	55.5
United Arab Emirates	1.7	..	14	12	0.0	14.1	0.0	14.1
United Kingdom	28.4 <sup>a</sup>	26.0 <sup>a</sup>	8	110	23.1	10.8	3.3	37.3
United States	12.5 <sup>a</sup>	8.2 <sup>a</sup>	11	187	27.6	10.0	9.2	46.8
Uruguay	14.7	18.8	53	336	23.6	15.6	2.9	42.0
Uzbekistan	..	..	44	205	1.6	27.1	66.9	95.6
Venezuela, RB	13.3	..	70	864	10.0	18.0	24.6	52.6
Vietnam	..	..	32	941	12.5	20.3	0.3	33.1
West Bank and Gaza	..	..	27	154	16.2	0.0	0.6	16.8
Yemen, Rep.	9.4	..	44	248	35.1	11.3	1.4	47.8
Zambia	18.6	17.1	37	132	1.7	10.4	4.0	16.1
Zimbabwe	..	..	49	242	24.0	6.2	10.1	40.3
<b>World</b>	<b>15.5 w</b>	<b>14.2 w</b>	<b>30 u</b>	<b>282 u</b>	<b>17.9 u</b>	<b>16.3 u</b>	<b>13.7 u</b>	<b>47.8 u</b>
<b>Low income</b>	10.4	11.6	38	271	24.8	12.6	39.2	76.5
<b>Middle income</b>	10.9	14.1	34	337	17.1	15.8	8.6	41.5
Lower middle income	8.2	11.3	36	326	16.3	14.3	9.6	40.2
Upper middle income	..	15.8	32	351	18.0	17.5	7.5	43.0
<b>Low &amp; middle income</b>	10.9	14.0	35	319	19.2	14.9	17.0	51.1
East Asia & Pacific	7.7	11.1	27	233	18.4	10.3	7.8	36.5
Europe & Central Asia	..	15.0	47	340	10.0	22.7	9.6	42.2
Latin America & Carib.	13.0	..	34	408	21.4	15.3	11.2	47.9
Middle East & N. Africa	12.0	17.5	25	263	16.6	18.9	6.1	41.6
South Asia	9.3	9.7	31	283	17.8	7.8	14.2	39.9
Sub-Saharan Africa	..	17.9	37	311	23.3	13.2	31.7	68.2
<b>High income</b>	16.4	14.2	15	179	14.3	20.1	4.2	38.6
Euro area	19.1	17.1	15	190	13.9	29.2	2.4	45.5

Note: Regional aggregates for Taxes payable by businesses are for developing countries only.

a. Data were reported on a cash basis and have been adjusted to the accrual framework of the International Monetary Fund's Government Finance Statistics Manual 2001.

## About the data

Taxes are the main source of revenue for most governments. The sources of tax revenue and their relative contributions are determined by government policy choices about where and how to impose taxes and by changes in the structure of the economy. Tax policy may reflect concerns about distributional effects, economic efficiency (including corrections for externalities), and the practical problems of administering a tax system. There is no ideal level of taxation. But taxes influence incentives and thus the behavior of economic actors and the economy's competitiveness.

The level of taxation is typically measured by tax revenue as a share of gross domestic product (GDP). Comparing levels of taxation across countries provides a quick overview of the fiscal obligations and incentives facing the private sector. The table shows only central government data, which may significantly understate the total tax burden, particularly in countries where provincial and municipal governments are large or have considerable tax authority.

Low ratios of tax revenue to GDP may reflect weak administration and large-scale tax avoidance or evasion. Low ratios may also reflect a sizable parallel economy with unrecorded and undisclosed incomes. Tax revenue ratios tend to rise with income, with higher income countries relying on taxes to finance a much broader range of social services and social security than lower income countries are able to.

The total tax rate payable by businesses provides a comprehensive measure of the cost of all the taxes a business bears. It differs from the statutory tax rate, which is the factor applied to the tax base. In computing business tax rates, actual tax payable is divided by commercial profit. The indicators covering taxes payable by businesses measure all taxes and contributions that are government mandated (at any level—federal, state, or local), apply to standardized businesses, and have an impact in their income statements. The taxes covered go beyond the definition of a tax for government national accounts (compulsory, unrequited payments to general government) and also measure any imposts that affect business accounts. The main differences are in labor contributions and value-added taxes. The indicators account for government-mandated contributions paid by the employer to a required private pension fund or workers insurance fund but exclude value-added taxes because they do not affect the accounting profits of the business—that is, they are not reflected in the income statement.

To make the data comparable across countries, several assumptions are made about businesses. The main assumptions are that they are limited liability companies, they operate in the country's most populous city, they are domestically owned, they perform general industrial or commercial activities, and they have certain levels of start-up capital, employees, and turnover. For details about the assumptions, see the World Bank's *Doing Business 2011*.

The *Doing Business* methodology on business taxes is consistent with the Total Tax Contribution framework developed by PricewaterhouseCoopers, which measures the taxes that are borne by companies and affect their income statements. However, PricewaterhouseCoopers bases its calculation on data from the largest companies in the economy, while *Doing Business* focuses on a standardized medium-sized company.

## Definitions

- **Tax revenue collected by central government** is compulsory transfers to the central government for public purposes. Certain compulsory transfers such as fines, penalties, and most social security contributions are excluded. Refunds and corrections of erroneously collected tax revenue are treated as negative revenue. The analytic framework of the International Monetary Fund's (IMF) *Government Finance Statistics Manual 2001* (GFSM 2001) is based on accrual accounting and balance sheets. For countries still reporting government finance data on a cash basis, the IMF adjusts reported data to the GFSM 2001 accrual framework. These countries are footnoted in the table.
- **Number of tax payments by businesses** is the total number of taxes paid by businesses during one year. When electronic filing is available, the tax is counted as paid once a year even if payments are more frequent.
- **Time to prepare, file, and pay taxes** is the time, in hours per year, it takes to prepare, file, and pay (or withhold) three major types of taxes: the corporate income tax, the value-added or sales tax, and labor taxes, including payroll taxes and social security contributions.
- **Profit tax** is the amount of taxes on profits paid by the business.
- **Labor tax and contributions** is the amount of taxes and mandatory contributions on labor paid by the business.
- **Other taxes** includes the amounts paid for property taxes, turnover taxes, and other small taxes such as municipal fees and vehicle and fuel taxes.
- **Total tax rate** measures the amount of taxes and mandatory contributions payable by the business in the second year of operation, expressed as a share of commercial profits. *Doing Business 2011* reports the total tax rate for fiscal 2009. Taxes withheld (such as sales or value added tax or personal income tax) but not paid by the company are excluded. For further details on the method used for assessing the total tax payable, see the World Bank's *Doing Business 2011*.

## Data sources

Data on central government tax revenue are from print and electronic editions of the IMF's *Government Finance Statistics Yearbook*. Data on taxes payable by businesses are from *Doing Business 2011* ([www.doingbusiness.org](http://www.doingbusiness.org)).





	Military expenditures				Armed forces personnel				Arms transfers			
	% of GDP		% of central government expenditure		thousands		% of labor force		Trend indicator values 1990 \$ millions			
	2000	2009	2000	2009	2000	2009	2000	2009	Exports		Imports	
	2000	2009	2000	2009	2000	2009	2000	2009	2000	2009	2000	2009
Afghanistan	..	1.8	..	4.6	400	256	5.4	2.7	..	..	33	344
Albania	1.2	2.1	5.4	..	68	15	5.2	1.0	..	..	..	25
Algeria	3.4	3.8	..	15.0	305	334	2.7	2.3	..	..	418	942
Angola	6.4	4.2	..	..	118	117	1.9	1.4	2	..	200	11
Argentina	1.1	0.8	5.5	..	102	104	0.6	0.5	2	..	209	11
Armenia	3.6	4.0	..	17.1	42	56	2.9	3.4	..	..	2	1
Australia	1.9	1.9	7.8	7.3	52	57	0.5	0.5	43	51	364	757
Austria	1.0	0.9	2.5	2.3	41	26	1.0	0.6	21	33	25	330
Azerbaijan	2.3	3.5	..	22.9	87	82	2.5	2.0	..	..	3	49
Bangladesh	1.4	1.1	14.9	10.0	137	221	0.2	0.3	..	..	205	12
Belarus	1.3	1.8	5.3	5.5	91	183	1.9	3.7	295	292	41	..
Belgium	1.4	1.1	3.2	2.5	39	39	0.9	0.8	24	217	39	84
Benin	0.6	1.0	4.7	6.8	7	7	0.3	0.2	..	..	6	2
Bolivia	1.9	1.6	7.6	7.9	70	83	2.0	1.8	..	..	19	5
Bosnia and Herzegovina	3.6	1.5	..	3.8	76	11	4.1	0.5	4	..	25	..
Botswana	3.3	3.1	..	..	10	11	1.3	1.1	..	..	52	10
Brazil	1.8	1.6	8.1	6.4	673	713	0.8	0.7	26	49	124	210
Bulgaria	2.7	2.3	8.6	7.2	114	65	3.2	1.8	2	7	7	153
Burkina Faso	1.2	1.3	9.8	10.4	11	11	0.2	0.2	..	..	..	1
Burundi	6.0	3.8	30.3	..	46	51	1.4	1.1	..	..	1	..
Cambodia	2.2	1.2	16.8	13.9	360	191	6.1	2.4	1	..	..	4
Cameroon	1.3	1.5	12.4	..	22	23	0.4	0.3	..	..	1	1
Canada	1.1	1.4	6.0	7.5	69	66	0.4	0.3	110	177	550	80
Central African Republic	1.0	1.8	..	..	5	3	0.3	0.2	..	..	..	..
Chad	1.9	6.4	..	..	35	35	1.1	0.8	..	..	15	23
Chile	3.7	3.1	17.7	13.6	117	104	1.9	1.4	1	133	179	231
China	1.8 <sup>a</sup>	2.0 <sup>a</sup>	19.8 <sup>a</sup>	16.1 <sup>a</sup>	3,910	2,945	0.5	0.4	272	870	2,015	595
Hong Kong SAR, China	..	..	..	..	..	..	..	..	..	..	..	..
Colombia	2.8	4.1	15.6	20.9	247	442	1.6	2.3	..	..	62	250
Congo, Dem. Rep.	1.0	1.1	11.4	..	93	159	0.5	0.6	..	..	74	..
Congo, Rep.	1.4	1.2	5.9	..	15	12	1.2	0.8	..	..	0	0
Costa Rica	..	..	..	..	15	10	1.0	0.5	..	0	..	..
Côte d'Ivoire	..	1.6	..	8.8	15	19	0.2	0.2	..	..	33	..
Croatia	3.1	1.8	7.8	5.0	101	22	5.1	1.1	2	..	70	3
Cuba	..	3.2	..	..	85	76	1.8	1.5	..	..	..	..
Czech Republic	2.0	1.5	6.1	4.1	63	27	1.2	0.5	78	19	16	5
Denmark	1.5	1.4	4.3	3.3	22	19	0.8	0.6	20	12	64	47
Dominican Republic	0.7	0.6	..	3.8	40	40	1.1	0.9	..	..	13	6
Ecuador	1.7	3.3	..	..	58	59	1.2	1.0	..	..	12	46
Egypt, Arab Rep.	3.2	2.1	12.3	7.1	679	866	3.1	3.2	..	..	788	217
El Salvador	0.9	0.6	4.3	3.0	29	33	1.3	1.3	..	..	16	4
Eritrea	36.4	..	..	..	200	202	14.5	9.4	0	..	17	4
Estonia	1.4	2.3	4.7	6.2	8	5	1.2	0.8	..	..	27	56
Ethiopia	7.6	1.3	29.7	..	353	138	1.2	0.3	..	..	124	..
Finland	1.3	1.5	3.7	3.8	35	25	1.3	0.9	9	40	516	70
France	2.5	2.4	5.7	5.1	389	342	1.5	1.2	1,055	1,851	106	149
Gabon	1.8	1.1	..	..	7	7	1.2	0.9	..	..	..	21
Gambia, The	0.8	0.7	..	..	1	1	0.1	0.1	..	..	..	..
Georgia	0.6	5.6	5.3	18.1	33	32	1.4	1.4	54	..	6	81
Germany	1.5	1.4	4.7	4.3	221	251	0.5	0.6	1,603	2,473	135	137
Ghana	1.0	0.4	3.3	2.4	8	16	0.1	0.1	..	..	1	13
Greece	4.3	4.0	9.8	7.9	163	143	3.3	2.8	2	..	710	1,269
Guatemala	0.8	0.4	7.5	3.5	53	34	1.3	0.6	..	..	1	0
Guinea	1.5	..	11.8	..	19	19	0.5	0.4	..	..	19	0
Guinea-Bissau	4.4	..	..	..	9	6	1.7	1.0	..	..	..	..
Haiti	..	..	..	..	5	0	0.1	0.0	..	..	..	1
Honduras	0.5	0.8	..	3.2	14	20	0.6	0.7	..	..	..	0

# Military expenditures and arms transfers

# 5.7

	Military expenditures				Armed forces personnel				Arms transfers			
	% of GDP		% of central government expenditure		thousands		% of labor force		Trend indicator values 1990 \$ millions			
	2000	2009	2000	2009	2000	2009	2000	2009	Exports		Imports	
	2000	2009	2000	2009	2000	2009	2000	2009	2000	2009	2000	2009
Hungary	1.7	1.3	4.1	2.9	58	42	1.4	1.0	34	6	14	2
India	3.1	2.7	19.5	16.6	2,372	2,626	0.6	0.6	16	22	911	2,116
Indonesia	1.0	0.9	5.8	5.6	492	582	0.5	0.5	16	..	171	452
Iran, Islamic Rep.	3.8	2.7	22.5	12.2	753	563	3.4	1.9	0	5	415	91
Iraq	..	6.3	..	..	479	659	8.0	8.6	..	..	..	365
Ireland	0.7	0.6	2.6	1.5	12	10	0.7	0.5	..	4	0	1
Israel	7.8	6.9	17.6	17.0	181	185	7.2	6.0	354	760	357	158
Italy	2.0	1.7	5.2	3.9	503	327	2.2	1.3	189	588	37	112
Jamaica	0.5	0.6	..	1.6	3	3	0.3	0.2	..	..	5	2
Japan	1.0	1.0	..	..	249	260	0.4	0.4	..	..	431	391
Jordan	6.2	5.5	23.1	19.3	149	111	10.4	5.7	..	44	130	195
Kazakhstan	0.8	1.2	5.7	6.9	99	81	1.3	0.9	19	..	147	49
Kenya	1.3	1.9	7.8	8.7	27	29	0.2	0.2	..	..	9	35
Korea, Dem. Rep.	..	..	..	..	1,244	1,379	11.2	11.2	13	..	18	5
Korea, Rep.	2.6	2.9	15.6	13.2	688	660	3.0	2.7	8	163	1,262	1,172
Kosovo	..	..	..	..	..	..	..	..	..	..	..	..
Kuwait	7.1	3.2	24.9	7.5	20	23	1.8	1.5	99	..	238	17
Kyrgyz Republic	2.9	3.6	18.0	21.4	14	20	0.7	0.8	..	16	..	..
Lao PDR	0.8	0.4	..	3.6	129	129	5.2	4.2	..	..	7	7
Latvia	0.9	2.6	3.2	7.5	9	6	0.8	0.5	..	..	3	0
Lebanon	5.4	4.1	17.7	14.0	77	79	6.5	5.4	45	..	4	47
Lesotho	4.1	2.8	7.8	3.1	2	2	0.2	0.2	..	..	6	..
Liberia	..	0.8	..	..	15	2	1.3	0.1	..	..	8	..
Libya	3.2	1.2	..	..	77	76	4.2	3.2	11	12	145	11
Lithuania	1.7	1.7	6.5	4.4	17	25	1.0	1.6	3	..	5	26
Macedonia, FYR	1.9	2.1	..	5.8	24	8	2.8	0.9	..	..	11	..
Madagascar	1.2	1.1	11.5	9.3	29	22	0.4	0.2	..	..	..	..
Malawi	0.7	1.2	..	..	6	5	0.1	0.1	1	..	..	..
Malaysia	1.6	2.0	9.9	8.9	116	134	1.2	1.1	8	..	30	1,494
Mali	2.4	2.0	20.7	13.4	15	12	0.5	0.3	..	..	7	7
Mauritania	3.5	3.8	..	..	21	21	2.0	1.5	..	..	31	..
Mauritius	0.2	0.2	..	..	2	2	0.3	0.4	..	..	..	..
Mexico	0.6	0.5	3.7	..	208	332	0.5	0.7	..	..	227	57
Moldova	0.4	0.5	1.4	1.2	13	8	0.7	0.5	6	11	..	..
Mongolia	2.2	1.4	9.5	5.8	16	17	1.4	1.2	..	..	..	12
Morocco	2.3	3.3	12.0	12.0	241	246	2.4	2.1	..	..	123	49
Mozambique	1.3	0.9	..	..	6	11	0.1	0.1	..	..	0	..
Myanmar	2.3	..	..	..	429	513	1.7	1.9	..	..	3	3
Namibia	2.4	3.3	8.3	10.7	9	15	1.5	1.9	..	..	18	10
Nepal	1.0	1.6	..	..	90	158	0.9	1.2	..	..	11	..
Netherlands	1.6	1.5	4.0	3.4	57	43	0.7	0.5	280	608	141	243
New Zealand	1.2	1.1	3.5	3.1	9	10	0.5	0.4	1	..	45	48
Nicaragua	0.8	0.7	4.7	3.2	16	12	0.9	0.5	..	..	..	..
Niger	1.1	..	..	..	11	11	0.3	0.2	..	..	..	0
Nigeria	0.8	0.9	..	10.8	107	162	0.3	0.3	..	..	38	73
Norway	1.7	1.5	5.3	4.1	27	26	1.1	1.0	3	17	263	576
Oman	10.6	8.7	40.4	..	48	47	5.4	4.3	..	..	120	93
Pakistan	4.0	3.0	23.4	18.0	900	921	2.2	1.6	3	..	158	1,146
Panama	1.0	..	4.6	..	12	12	0.9	0.8	..	..	0	..
Papua New Guinea	0.9	0.5	2.9	..	4	3	0.2	0.1	..	..	..	..
Paraguay	1.1	0.9	6.4	5.2	35	25	1.5	0.8	..	..	6	..
Peru	2.0	1.2	10.9	6.7	193	192	1.7	1.4	10	..	24	33
Philippines	1.1	0.8	6.2	4.6	149	166	0.5	0.4	..	4	9	4
Poland	1.8	2.0	5.4	5.7	239	121	1.4	0.7	45	93	159	94
Portugal	1.9	2.0	5.1	4.6	91	91	1.7	1.6	..	40	2	431
Puerto Rico	..	..	..	..	..	..	..	..	..	..	..	..
Qatar	4.7	2.2	..	13.7	12	12	3.6	1.2	9	..	11	285



# 5.7

## Military expenditures and arms transfers

	Military expenditures				Armed forces personnel				Arms transfers					
	% of GDP		% of central government expenditure		thousands		% of labor force		Trend indicator values 1990 \$ millions		Exports		Imports	
	2000	2009	2000	2009	2000	2009	2000	2009	2000	2009	2000	2009	2000	2009
Romania	2.5	1.4	8.9	4.4	283	152	2.4	1.6	3	3	23	56		
Russian Federation	3.7	4.3	19.3	14.0	1,427	1,495	2.0	2.0	3,985	4,469	..	1		
Rwanda	3.5	1.4	..	..	76	35	2.0	0.7	..	..	14	6		
Saudi Arabia	10.6	11.0	..	..	217	249	3.4	2.9	..	..	80	626		
Senegal	1.3	1.6	10.4	..	15	19	0.4	0.3	..	..	..	3		
Serbia	5.5	2.2	..	5.9	136	29	..	..	..	..	..	..		
Sierra Leone	3.7	2.3	12.8	11.2	4	11	0.2	0.5	..	..	13	..		
Singapore	4.7	4.3	28.7	27.9	169	148	8.2	5.5	10	124	622	1,729		
Slovak Republic	1.7	1.5	..	4.0	41	17	1.6	0.6	92	8	2	1		
Slovenia	1.1	1.8	2.9	4.1	14	12	1.4	1.2	..	..	1	6		
Somalia	..	..	..	..	50	2	1.7	0.1	..	..	1	..		
South Africa	1.6	1.4	5.6	4.4	72	77	0.5	0.4	18	154	16	139		
Spain	1.2	1.3	3.9	4.1	242	222	1.3	1.0	46	925	332	430		
Sri Lanka	5.0	3.5	21.9	18.5	204	223	2.6	2.7	..	..	274	64		
Sudan	4.7	..	53.0	..	120	127	1.1	0.9	..	..	107	39		
Swaziland	1.6	2.1	7.3	..	3	..	0.8	..	..	..	1	..		
Sweden	2.0	1.3	..	..	88	22	2.0	0.4	306	353	210	46		
Switzerland	1.1	0.8	4.2	4.7	28	26	0.7	0.6	176	270	14	31		
Syrian Arab Republic	5.3	4.2	..	..	425	403	8.6	5.8	..	..	19	175		
Tajikistan	1.2	..	13.4	..	7	16	0.4	0.6	3	..	..	7		
Tanzania	1.3	1.0	..	..	35	28	0.2	0.1	..	..	..	0		
Thailand	1.4	1.8	..	9.1	417	420	1.2	1.1	..	..	90	34		
Timor-Leste	..	11.8	..	..	..	1	..	0.3	..	..	..	..		
Togo	..	2.0	..	13.0	8	9	0.4	0.3	..	..	..	..		
Trinidad and Tobago	..	..	..	..	8	4	1.3	0.6	..	..	10	6		
Tunisia	1.7	1.4	6.2	4.6	47	48	1.5	1.2	..	..	11	8		
Turkey	3.7	2.8	..	10.1	828	613	3.6	2.4	15	36	1,170	675		
Turkmenistan	2.9	..	..	..	15	22	0.8	0.9	..	..	..	47		
Uganda	2.5	2.2	16.0	15.9	51	47	0.5	0.3	..	..	6	1		
Ukraine	3.6	2.9	13.5	7.0	420	215	1.8	0.9	288	214	..	..		
United Arab Emirates	9.4	5.6	..	..	66	51	3.5	1.8	..	3	243	604		
United Kingdom	2.4	2.7	6.6	5.8	213	178	0.7	0.6	1,484	1,024	829	288		
United States	3.0	4.7	15.6	17.8	1,455	1,564	1.0	1.0	7,220	6,795	301	831		
Uruguay	1.3	1.6	5.0	5.3	25	25	1.6	1.5	1	..	4	37		
Uzbekistan	1.2	..	..	..	79	87	0.9	0.7	..	90	6	..		
Venezuela, RB	1.5	1.3	7.1	..	79	115	0.8	0.9	..	17	108	172		
Vietnam	..	2.2	..	..	524	495	1.4	1.1	..	..	5	44		
West Bank and Gaza	..	..	..	..	..	56	..	5.9	..	..	..	14		
Yemen, Rep.	5.0	4.4	23.9	..	136	138	3.2	2.2	..	..	158	45		
Zambia	1.8	1.7	10.3	5.7	23	17	0.6	0.3	..	..	27	3		
Zimbabwe	5.2	2.8	..	..	62	51	1.2	1.0	3	..	2	..		
<b>World</b>	<b>2.3 w</b>	<b>2.6 w</b>	<b>10.2 w</b>	<b>10.0 w</b>	<b>29,353 s</b>	<b>27,924 s</b>	<b>1.1 w</b>	<b>0.9 w</b>	<b>.. s</b>	<b>.. s</b>	<b>18,088 s</b>	<b>22,223 s</b>		
<b>Low income</b>	2.2	1.5	..	..	4,040	3,845	1.3	1.0	..	..	572	329		
<b>Middle income</b>	2.1	2.2	15.0	12.2	18,924	18,350	1.0	0.8	..	..	8,353	10,467		
Lower middle income	2.2	2.1	18.0	14.3	12,446	12,108	0.8	0.7	983	1,251	5,109	5,682		
Upper middle income	2.0	2.2	..	9.8	6,478	6,242	1.6	1.4	..	..	3,244	4,785		
<b>Low &amp; middle income</b>	2.1	2.1	15.0	12.2	22,965	22,195	1.0	0.8	..	..	8,925	10,889		
East Asia & Pacific	1.7	1.9	18.7	14.6	7,794	6,978	0.8	0.6	389	870	2,339	2,644		
Europe & Central Asia	3.4	3.3	..	12.0	3,871	3,227	2.1	1.7	4,667	4,830	..	1,162		
Latin America & Carib.	1.4	1.5	7.2	..	2,084	2,439	0.9	0.9	..	..	970	1,058		
Middle East & N. Africa	3.5	3.5	12.7	12.3	3,379	3,591	3.8	3.1	..	..	2,056	2,065		
South Asia	3.1	2.6	19.9	16.5	4,114	4,404	0.8	0.7	19	22	1,548	3,606		
Sub-Saharan Africa	2.0	1.7	..	..	1,724	1,554	0.7	0.5	..	..	647	354		
<b>High income</b>	2.3	2.8	10.1	9.9	6,388	5,729	1.2	1.0	13,136	16,637	9,163	11,334		
Euro area	1.8	1.7	4.8	4.2	1,869	1,569	1.3	1.0	3,319	6,779	2,075	3,322		

Note: For some countries data are partial or uncertain or based on rough estimates. See SIPRI (2010).

a. Estimates differ from statistics of the government of China, which has published the following estimates: military expenditure as 1.2 percent of GDP in 2000 and 1.4 percent in 2008 and 7.6 percent of national government expenditure in 2000 and 6.7 percent in 2008 (see National Bureau of Statistics of China, www.stats.gov.cn).

# Military expenditures and arms transfers

## About the data

Although national defense is an important function of government and security from external threats that contributes to economic development, high levels of military expenditures for defense or civil conflicts burden the economy and may impede growth. Data on military expenditures as a share of gross domestic product (GDP) are a rough indicator of the portion of national resources used for military activities and of the burden on the national economy. As an “input” measure military expenditures are not directly related to the “output” of military activities, capabilities, or security. Comparisons of military spending between countries should take into account the many factors that influence perceptions of vulnerability and risk, including historical and cultural traditions, the length of borders that need defending, the quality of relations with neighbors, and the role of the armed forces in the body politic.

Data on military spending reported by governments are not compiled using standard definitions. They are often incomplete and unreliable. Even in countries where the parliament vigilantly reviews budgets and spending, military expenditures and arms transfers rarely receive close scrutiny or full, public disclosure (see Ball 1984 and Happe and Wakeman-Linn 1994). Therefore, the Stockholm International Peace Research Institute (SIPRI) has adopted a definition of military expenditure derived from the North Atlantic Treaty Organization (NATO) definition (see *Definitions*). The data on military expenditures as a share of GDP and as a share of central government expenditure are estimated by SIPRI. Central government expenditures are from the International Monetary Fund (IMF). Therefore the data in the table may differ from comparable data published by national governments.

SIPRI's primary source of military expenditure data is official data provided by national governments. These data are derived from national budget documents, defense white papers, and other public documents from official government agencies, including governments' responses to questionnaires sent by SIPRI, the United Nations, or the Organization for Security and Co-operation in Europe. Secondary sources include international statistics, such as those of NATO and the IMF's *Government Finance Statistics Yearbook*. Other secondary sources include country reports of the Economist Intelligence Unit, country reports by IMF staff, and specialist journals and newspapers.

In the many cases where SIPRI cannot make independent estimates, it uses the national data provided. Because of the differences in definitions and the difficulty in verifying the accuracy and completeness of data, data on military expenditures are not

always strictly comparable across countries. However, SIPRI puts a high priority on ensuring that the data series for each country is comparable over time. More information on SIPRI's military expenditure project can be found at [www.sipri.org/contents/milap/](http://www.sipri.org/contents/milap/).

Data on armed forces refer to military personnel on active duty, including paramilitary forces. Because data exclude personnel not on active duty, they underestimate the share of the labor force working for the defense establishment. Governments rarely report the size of their armed forces, so such data typically come from intelligence sources.

SIPRI's Arms Transfers Programme collects data on arms transfers from open sources. Since publicly available information is inadequate for tracking all weapons and other military equipment, SIPRI covers only what it terms *major conventional weapons*. Data cover the supply of weapons through sales, aid, gifts, and manufacturing licenses; therefore the term *arms transfers* rather than *arms trade* is used. SIPRI data also cover weapons supplied to or from rebel forces in an armed conflict as well as arms deliveries for which neither the supplier nor the recipient can be identified with acceptable certainty; these data are available in SIPRI's database.

SIPRI's estimates of arms transfers are designed as a trend-measuring device in which similar weapons have similar values, reflecting both the quantity and quality of weapons transferred. SIPRI cautions that the estimated values do not reflect financial value (payments for weapons transferred) because reliable data on the value of the transfer are not available, and even when values are known, the transfer usually includes more than the actual conventional weapons, such as spares, support systems, and training, and details of the financial arrangements (such as credit and loan conditions and discounts) are usually not known.

Given these measurement issues, SIPRI's method of estimating the transfer of military resources includes an evaluation of the technical parameters of the weapons. Weapons for which a price is not known are compared with the same weapons for which actual acquisition prices are available (core weapons) or for the closest match. These weapons are assigned a value in an index that reflects their military resource value in relation to the core weapons. These matches are based on such characteristics as size, performance, and type of electronics, and adjustments are made for secondhand weapons. More information on SIPRI's Arms Transfers Programme is available at [www.sipri.org/research/armaments/transfers](http://www.sipri.org/research/armaments/transfers).

## Definitions

- **Military expenditures** are SIPRI data derived from the NATO definition, which includes all current and capital expenditures on the armed forces, including peacekeeping forces; defense ministries and other government agencies engaged in defense projects; paramilitary forces, if judged to be trained and equipped for military operations; and military space activities. Such expenditures include military and civil personnel, including retirement pensions and social services for military personnel; operation and maintenance; procurement; military research and development; and military aid (in the military expenditures of the donor country). Excluded are civil defense and current expenditures for previous military activities, such as for veterans benefits, demobilization, and weapons conversion and destruction. This definition cannot be applied for all countries, however, since that would require more detailed information than is available about military budgets and off-budget military expenditures (for example, whether military budgets cover civil defense, reserves and auxiliary forces, police and paramilitary forces, and military pensions).
- **Armed forces personnel** are active duty military personnel, including paramilitary forces if the training, organization, equipment, and control suggest they may be used to support or replace regular military forces. Reserve forces, which are not fully staffed or operational in peace time, are not included. The data also exclude civilians in the defense establishment and so are not consistent with the data on military expenditures on personnel.
- **Arms transfers** cover the supply of military weapons through sales, aid, gifts, and manufacturing licenses. Weapons must be transferred voluntarily by the supplier, have a military purpose, and be destined for the armed forces, paramilitary forces, or intelligence agencies of another country. The trends shown in the table are based on actual deliveries only. Data cover major conventional weapons such as aircraft, armored vehicles, artillery, radar systems and other sensors, missiles, and ships designed for military use, as well as some major components such as turrets for armored vehicles and engines. Excluded are transfers of other military equipment such as most small arms and light weapons, trucks, small artillery, ammunition, support equipment, technology transfers, and other services.

## Data sources

Data on military expenditures are from SIPRI's *Yearbook 2010: Armaments, Disarmament, and International Security*. Data on armed forces personnel are from the International Institute for Strategic Studies' *The Military Balance 2011*. Data on arms transfers are from SIPRI's Arms Transfers Programme ([www.sipri.org/research/armaments/transfers](http://www.sipri.org/research/armaments/transfers)).



	International Development Association Resource Allocation Index 1–6 (low to high) 2009	Peacebuilding and peacekeeping		Battle-related deaths number 2000–08 <sup>b</sup>	Intentional homicides per 100,000 people Public health sources Law enforcement and criminal justice sources 2004 2004–08 <sup>c</sup>		Military expenditures % of GDP 2009	Business environment		
		Operation name <sup>a</sup> December 2010	Troops, police, and military observers number December 2010		Survey year	Losses due to theft, robbery, vandalism, and arson % of sales		Firms formally registered when operations started % of firms		
Afghanistan	2.8	UNAMA	16	26,589	3.4	..	1.8	2008	1.5	88.0
Angola	2.8	..	..	3,534	38.6	5.0	4.2	2006	0.4	..
Bosnia and Herzegovina	3.7	..	..	0	1.9	1.9	1.5	2009	0.2	98.6
Burundi	3.1	BINUB	4	4,937	37.4	..	3.8	2006	1.1	..
Central African Republic	2.6	MINURCAT <sup>e</sup>	3	350	29.8	..	1.8	..	..	..
Chad	2.5	MINURCAT	..	4,328	19.2	..	6.4	2009	2.5	77.1
Comoros	2.5	..	..	0	11.9	..	..	..	..	..
Congo, Dem. Rep.	2.7	MONUC	19,105	75,118	35.0	..	1.1	2010	1.8	61.9
Congo, Rep.	2.8	..	..	116	19.9	..	1.2	2009	3.3	84.3
Côte d'Ivoire	2.8	UNOCI	9,071	1,265	50.8	0.4	1.6	2009	3.4	56.4
Eritrea	2.2	..	..	57	16.1	..	..	2009	0.0	100.0
Georgia	4.4	..	..	648	3.7	7.6	5.6	2008	0.7	99.6
Guinea	2.8	..	..	1,174	16.9	0.4	..	2006	2.0	..
Guinea-Bissau	2.6	..	..	0	17.6	..	..	2006	1.1	..
Haiti	2.9	MINUSTAH	11,984	244	21.8	..	0.0	..	..	..
Iraq	..	UNAMI	235	124,002	7.3	..	6.3	..	..	..
Kiribati	3.1	..	..	0	6.6	..	..	..	..	..
Kosovo	3.4	UNMIK	16	0	..	..	..	2009	0.3	89.2
Liberia	2.8	UNMIL	9,392	2,487	17.4	..	0.8	2009	2.8	73.8
Myanmar	..	..	..	2,833	15.6	..	..	..	..	..
Nepal	3.3	UNMIN	72	11,520	13.6	2.2	1.6	2009	0.9	94.0
São Tomé and Príncipe	2.9	..	..	0	5.3	..	..	..	..	..
Sierra Leone	3.2	..	..	212	37.2	2.6	2.3	2009	0.8	89.2
Solomon Islands	2.8	RAMSI	580	0	1.5	..	..	..	..	..
Somalia	..	..	..	3,983	3.2	..	..	..	..	..
Sudan	2.5	UNMIS <sup>f</sup>	10,416	12,363	27.2	..	..	..	..	..
Tajikistan	3.2	..	..	0	1.9 <sup>h</sup>	2.3	..	2008	0.3	92.7
Timor-Leste	2.9	UNMIT	1,517	0	12.5	..	11.8	2009	1.5	91.8
Togo	2.8	..	..	0	14.3	..	2.0	2009	2.4	75.8
West Bank and Gaza	..	..	..	0	..	3.9	..	2006	1.2	..
Western Sahara <sup>j</sup>	..	MINURSO	242	..	..	..	..	..	..	..
Yemen, Rep.	3.2	..	..	0	2.5	4.0	4.4	2010	0.6	81.7
Zimbabwe	1.9	..	..	0	34.3	8.7	2.8	..	..	..
<b>Fragile situations</b>				<b>275,761 s</b>	<b>21.1 w</b>	<b>..</b>	<b>3.2 w</b>			
<b>Low income</b>				<b>146,844</b>	<b>17.6</b>	<b>..</b>	<b>1.4</b>			

**Note:** The countries with fragile situations in the table are primarily International Development Association–eligible countries and nonmember or inactive countries and territories with a 3.2 or lower harmonized average of the World Bank's Country Policy and Institutional Assessment rating and the corresponding rating by a regional development bank, or that have had a UN or regional peacebuilding and political mission (for example, by the African Union, European Union, or Organization of American States) or peacekeeping mission (for example, by the African Union, European Union, North Atlantic Treaty Organization, or Organization of American States) during the last three years. This definition is pursuant to an agreement between the World Bank and other multilateral development banks at the start of the International Development Association 15 round in 2007. The list of countries and territories with fragile situations is an interim one, and the World Bank will continue to improve and refine its understanding of fragility.

a. UNAMA is United Nations Assistance Mission in Afghanistan, BINUB is Bureau Intégré des Nations Unies au Burundi (United Nations Integrated Office in Burundi), MINURCAT is United Nations Mission in the Central African Republic and Chad, MONUC is United Nations Organization Mission in DR Congo, UNOCI is United Nations Operation in Côte d'Ivoire, MINUSTAH is United Nations Stabilization Mission in Haiti, UNAMI is United Nations Assistance Mission for Iraq, UNMIK is Interim Administration Mission in Kosovo, UNMIL is United Nations Mission in Liberia, UNMIN is United Nations Mission in Nepal, RAMSI is Regional Assistance Mission to Solomon Islands, UNMIS is United Nations Missions in Sudan, UNMIT is United Nations Integrated Mission in Timor-Leste, and MINURSO is United Nations Mission for the Referendum in Western Sahara. b. Total over the period. c. Data are for the most recent year available. d. Average over the period. e. Includes peacekeepers in Chad. The mission ended in 2010. f. The Internal Displacement Monitoring Centre's (IDMC) high estimate; the low estimate is 50,000. g. Does not include 22,444 troops, police, and military observers from the African Union–UN Hybrid Operation in Darfur. h. Data are for 2005. i. Includes Palestinian refugees under the mandate of the United Nations Relief and Works Agency for Palestine Refugees in the Near East, who are not included in data from the UN High Commissioner for Refugees. j. The designation Western Sahara is used instead of Former Spanish Sahara (the designation used on the maps on the front and back cover flaps) because it is the designation used by the UN operation established there by Security Council resolution 690/1991. Neither designation expresses any World Bank view on the status of the territory so-identified. k. IDMC's high estimate; the low estimate is 570,000.

	Children in employment		Refugees		Internally displaced persons	Access to an improved water source	Access to improved sanitation facilities	Maternal mortality ratio		Under-five mortality rate	Depth of hunger	Primary gross enrollment ratio
	Survey year	% of children ages 7–14	By country of origin	By country of asylum				number	% of population			
			2009	2009	2009	2008	2008			National estimates	Modeled estimates	per 1,000
Afghanistan	..	..	2,887,123	37	297,000	48	37	..	1,400	199	..	104
Angola	2001	30.1	141,021	14,734	20,000	50	57	..	610	161	320	128
Bosnia and Herzegovina	2006	10.6	70,018	7,132	114,000	99	95	3	9	14	140	109
Burundi	2005	11.7	94,239	24,967	100,000	72	46	615	970	166	380	147
Central African Republic	2000	67.0	159,554	27,047	162,000	67	34	543	850	171	300	89
Chad	2004	60.4	55,014	338,495	168,000	50	9	1,099	1,200	209	310	90
Comoros	..	..	268	..	..	95	36	..	340	104	300	119
Congo, Dem. Rep.	2000	39.8	455,852	185,809	1,900,000	46	23	549	670	199	410	90
Congo, Rep.	2005	30.1	20,544	111,411	7,800	71	30	781	580	128	230	120
Côte d'Ivoire	2006	45.7	23,153	24,604	621,000	80	23	543	470	119	230	74
Eritrea	..	..	209,168	4,751	10,000	61	14	..	280	55	350	48
Georgia	2006	31.8	15,020	870	230,000	98	95	14	48	29	150	108
Guinea	1994	48.3	10,920	15,325	..	71	19	980	680	142	260	90
Guinea-Bissau	2006	50.5	1,109	7,898	..	61	21	405	1,000	193	250	120
Haiti	2005	33.4	24,116	3	..	63	17	630	300	87	430	..
Iraq	2006	14.7	1,785,212	35,218	2,764,000	79	73	84	75	44	..	103
Kiribati	..	..	33	..	..	61	31	..	..	46	180	116
Kosovo	..	..	..	..	19,700	..	..	..	..	..	..	..
Liberia	2007	37.4	71,599	6,952	..	68	17	994	990	112	340	91
Myanmar	..	..	406,669	..	470,000	71	81	316	240	71	230	116
Nepal	1999	47.2	5,108	108,461	70,000 <sup>f</sup>	88	31	281	380	48	220	..
São Tomé and Príncipe	..	..	33	..	..	89	26	148	..	78	160	131
Sierra Leone	2007	14.9	15,417	9,051	..	49	13	857	970	192	340	158
Solomon Islands	..	..	66	..	..	69	29	..	100	36	180	107
Somalia	2006	43.5	678,309	1,815	1,500,000	30	23	1,044	1,200	180	..	33
Sudan	2000	19.1	368,195	186,292	4,900,000	57	34	1,107	750	108	240	74
Tajikistan	2005	8.9	562	2,679	..	70	94	38	64	61	240	102
Timor-Leste	..	..	7	1	400	69	50	..	370	56	260	113
Togo	2006	38.7	18,378	8,531	1,500	60	12	..	350	98	280	115
West Bank and Gaza	..	..	95,201	1,885,188 <sup>i</sup>	..	91	89	..	..	30	190	79
Western Sahara <sup>j</sup>	..	..	..	..	160,000	..	..	..	..	..	..	..
Yemen, Rep.	2006	18.3	1,934	170,854	175,000	62	52	..	210	66	270	85
Zimbabwe	1999	14.3	22,449	3,995	1,000,000 <sup>k</sup>	82	44	555	790	90	300	..
<b>Fragile situations</b>			<b>7,636,291 s</b>	<b>3,182,120 s</b>	<b>14,047,900 s</b>	<b>64 w</b>	<b>43 w</b>	<b>..</b>	<b>640 w</b>	<b>132 w</b>	<b>290 w</b>	<b>94 w</b>
<b>Low income</b>			5,427,548	1,893,823	..	64	35	..	580	118	285	104

#### About the data

The table focuses on countries with fragile situations and highlights the links among weak institutions, poor development outcomes, fragility, and risk of conflict. These countries and territories often have weak institutions that are ill-equipped to handle economic shocks, natural disasters, and illegal trade or to resist conflict, which increasingly spills across borders. Organized violence, including violent crime, interrupts economic and social development through lost human and social capital, disrupted services, displaced populations and reduced confidence for future investment. As a result, countries with fragile situations achieve lower development outcomes and make slower progress toward the Millennium Development Goals.

According to the Geneva Declaration on Armed Violence and Development, more than 740,000 people die each year because of the violence associated with armed conflict and large- and small-scale criminality. Recovery and rebuilding can take years, and the challenges are numerous: infrastructure to be rebuilt, persistently high crime, widespread health problems, education systems in disrepair, and landmines to be cleared. Most countries emerging from conflict lack the capacity to rebuild the economy. Thus, capacity building is one of the first tasks for restoring growth and is linked to building peace and creating the conditions that lead to sustained poverty reduction. The World Bank and other international development agencies can help, but countries with fragile situations

have to build their own institutions tailored to their own needs. Peacekeeping operations in post-conflict situations have been effective in reducing the risks of reversion to conflict.

The countries with fragile situations in the table are primarily International Development Association-eligible countries and nonmember or inactive countries or territories of the World Bank with a 3.2 or lower harmonized average of the World Bank's Country Policy and Institutional Assessment rating and the corresponding rating by a regional development bank or that have had a UN or regional peacebuilding mission (for example, by the African Union, European Union, or Organization of American States) or peacekeeping mission (for example, by the African Union, European

**About the data (continued)**

Union, North Atlantic Treaty Organization (NATO), or Organization of American States) during the last three years. Peacebuilding and peacekeeping involve many elements—military, police, and civilian—working together to lay the foundations for sustainable peace. The list of countries and territories with fragile situations is an interim one, and the World Bank will continue to improve and refine its understanding of fragility.

An armed conflict is a contested incompatibility that concerns a government or territory where the use of armed force between two parties (one of them the government) results in at least 25 battle-related deaths in a calendar year. There were 35 active armed conflicts in 26 locations in 2009. Separate measures are presented for intentional homicides—unlawful deaths purposefully inflicted on a person by another person—which exclude deaths arising from armed conflict. One measure draws from international public health data sources, while the other draws from estimates by the United Nations Office on Drugs and Crime, which obtains data from national and international law enforcement and criminal justice sources. Data from these two sources measure different phenomena and are therefore unlikely to provide identical numbers.

Data on military expenditures reported by governments are not compiled using standard definitions and are often incomplete and unreliable. Even in countries where the parliament vigilantly reviews budgets and spending, military expenditures and arms transfers rarely receive close scrutiny or full public disclosure. Data are from the Stockholm International Peace Research Institute (SIPRI), which uses NATO's pre-2004 definition of military expenditure (see *Definitions*). Therefore, the data in the table may differ from comparable data published by national governments. For a more detailed discussion of military expenditures, see *About the data* for table 5.7.

Along with public sector efforts, private sector development and investment, especially in competitive markets, has tremendous potential to contribute to growth and poverty reduction. The World Bank's Enterprise Surveys review the business environment, assessing constraints to private sector growth and enterprise performance. In some countries doing business requires informal payments to "get things done" in customs, taxes, licenses, regulations, services, and the like. Crime, theft, and disorder also impose costs on businesses and society. And in many developing countries informal businesses operate without licenses. These firms have less access to financial and public services and can engage in

fewer types of contracts and investments, constraining growth. The table presents data on the loss of sales due to theft, robbery, vandalism, and arson and on the percentage of firms operating informally. For further information on enterprise surveys, see *About the data* for table 5.2.

As the table shows, the human toll of armed violence across various contexts is severe. Additionally, in countries with fragile situations weak institutional capacity often results in poor performance and failure to meet expectations of effective service delivery. Failure to deliver water, health, and education services can weaken struggling governments. The table includes several indicators related to living conditions in fragile situations: children in employment, refugees, internally displaced persons, access to water and sanitation, maternal and under-five mortality, depth of hunger, and primary school enrollment. For more detailed information on these indicators, see *About the data* for table 2.6 (children in employment), table 6.18 (refugees), table 2.18 (access to improved water and sanitation), table 2.19 (maternal mortality), table 2.22 (under-five mortality), and table 2.12 (primary school enrollment).

**Definitions**

• **International Development Association Resource Allocation Index** is from the Country Policy and Institutional Assessment rating, which is the average score of four clusters of indicators designed to measure macroeconomic, governance, social, and structural dimensions of development: economic management, structural policies, policies for social inclusion and equity, and public sector management and institutions (see table 5.9). Countries are rated on a scale of 1 (low) to 6 (high). • **Peacebuilding and peacekeeping** refer to operations that engage in peacebuilding (reducing the risk of lapsing or relapsing into conflict by strengthening national capacities for conflict management and laying the foundation for sustainable peace and development) or peacekeeping (providing essential security to preserve the peace where fighting has been halted and to assist in implementing agreements achieved by the peacemakers). UN peacekeeping operations are authorized by the UN Secretary-General and planned, managed, directed, and supported by the United Nations Department of Peacekeeping Operations and the Department of Field Support. The UN Charter gives the Security Council primary responsibility for maintaining international peace and security, including the establishment of a UN peacekeeping operation.

• **Troops, police, and military observers** in peacebuilding and peacekeeping refer to people active in peacebuilding and peacekeeping as part of an official operation. Peacekeepers deploy to war-torn regions where no one else is willing or able to go to prevent conflict from returning or escalating. • **Battle-related deaths** are deaths of members of warring parties in battle-related conflicts. Typically, battle-related deaths occur in warfare involving the armed forces of the warring parties (battlefield fighting, guerrilla activities, and all kinds of bombardments of military units, cities, and villages). The targets are usually the military and its installations or state institutions and state representatives, but there is often substantial collateral damage of civilians killed in cross-fire, indiscriminate bombings, and other military activities. All deaths—civilian as well as military—incurred in such situations are counted as battle-related deaths. • **Intentional homicides** are estimates of unlawful homicides purposely inflicted as a result of domestic disputes, interpersonal violence, violent conflicts over land resources, intergang violence over turf or control, and predatory violence and killing by armed groups. Intentional homicide does not include all intentional killing; the difference is usually in the organization of the killing. Individuals or small groups usually commit homicide, whereas killing in armed conflict is usually committed by fairly cohesive groups of up to several hundred members and is thus usually excluded. Data are from international public health organizations such as the World Health Organization (WHO) and the Pan American Health Organization and from the United Nations Survey of Crime Trends and Operations of Criminal Justice Systems (CTS), which draws from national and international law enforcement and criminal justice sources. • **Military expenditures** are SIPRI data derived from NATO's pre-2004 definition, which includes all current and capital expenditures on the armed forces, including peacekeeping forces; defense ministries and other government agencies engaged in defense projects; paramilitary forces, if judged to be trained and equipped for military operations; and military space activities. Such expenditures include military and civil personnel, including retirement pensions and social services for military personnel; operation and maintenance; procurement; military research and development; and military aid (in the military expenditures of the donor country). Excluded are civil defense and current expenditures for previous military activities, such as for veterans benefits, demobilization, and weapons conversion and destruction. This definition cannot

be applied to all countries, however, since the necessary detailed information is missing in some cases for military budgets and off-budget military expenditures (for example, whether military budgets cover civil defense, reserves and auxiliary forces, police and paramilitary forces, and military pensions).

- **Survey year** is the year in which the underlying data were collected.
- **Losses due to theft, robbery, vandalism, and arson** are the estimated losses from those causes that occurred on business establishment premises calculated as a percentage of annual sales.
- **Firms formally registered when operations started** are the percentage of firms formally registered when they started operations in the country.
- **Children in employment** are children involved in any economic activity for at least one hour in the reference week of the survey.
- **Refugees** are people who are recognized as refugees under the 1951 Convention Relating to the Status of Refugees or its 1967 Protocol, the 1969 Organization of African Unity Convention Governing the Specific Aspects of Refugee Problems in Africa, people recognized as refugees in accordance with the UN Refugee Agency (UNHCR) statute, people granted refugee-like humanitarian status, and people provided temporary protection. Asylum seekers—people who have applied for asylum or refugee status and who have not yet received a decision, or who are registered as asylum seekers—are excluded. Palestinian refugees are people (and their descendants) whose residence was Palestine between June 1946 and May 1948 and who lost their homes and means of livelihood as a result of the 1948 Arab-Israeli conflict.
- **Country of origin** refers to the nationality or country of citizenship of a claimant.
- **Country of asylum** is the country where an asylum claim was filed and granted.
- **Internally displaced persons** are people or groups of people who have been forced or obliged to flee or to leave their homes or places of habitual residence, in particular as a result of armed conflict, or to avoid the effects of armed conflict, situations of generalized violence, violations of human rights, or natural or human-made disasters and who have not crossed an international border.
- **Access to an improved water source** refers to people with reasonable access to water from an improved source, such as piped water into a dwelling, public tap, tubewell, protected dug well, and rainwater collection. Reasonable access is the availability of at least 20 liters a person a day from a source within 1 kilometer of the dwelling.
- **Access to improved sanitation facilities** refers to people with at least adequate access to excreta

disposal facilities that can effectively prevent human, animal, and insect contact with excreta. Improved facilities range from protected pit latrines to flush toilets.

- **Maternal mortality ratio** is the number of women who die from pregnancy-related causes during pregnancy and childbirth per 100,000 live births. National estimates are based on national surveys, vital registration records, and surveillance data or are derived from community and hospital records. Modeled estimates are based on an exercise by the WHO, United Nations Children's Fund (UNICEF), United Nations Population Fund (UNFPA), and the World Bank. See *About the data* for table 2.19 for further details.
- **Under-five mortality rate** is the probability per 1,000 that a newborn baby will die before reaching age 5, if subject to current age-specific mortality rates.
- **Depth of hunger**, or the intensity of food deprivation, indicates how much people who are food-deprived fall short of minimum food needs in terms of dietary energy. It is measured by comparing the average amount of dietary energy that undernourished people get from the foods they eat with the minimum amount of dietary energy they need to maintain body weight and undertake light activity. Depth of hunger is low when it is less than 200 kilocalories per person per day and high when it is above 300.
- **Primary gross enrollment ratio** is the ratio of total enrollment, regardless of age, to the population of the age group that officially corresponds to the primary level of education. 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.

#### Data sources

Data on the International Development Association Resource Allocation Index are from the World Bank Group's International Development Association database ([www.worldbank.org/ida](http://www.worldbank.org/ida)). Data on peacebuilding and peacekeeping operations are from the UN Department of Peacekeeping Operations. Data on battle-related deaths are primarily from the Peace Research Institute Oslo/Uppsala Conflict Data Program (UCDP) Armed Conflict Dataset (v.4-2010) 1946-2009 ([www.pcr.uu.se/research/ucdp/datasets](http://www.pcr.uu.se/research/ucdp/datasets)), supplemented with data from the UCDP Battle-Related Deaths Dataset (v.5-2010). Data

on intentional homicides are from the UN Office on Drugs and Crime's International Homicide Statistics database. Data on military expenditures are from SIPRI's *Yearbook 2010: Armaments, Disarmament, and International Security* and database ([www.sipri.org/databases/milex](http://www.sipri.org/databases/milex)). Data on the business environment are from the World Bank's Enterprise Surveys ([www.enterprisesurveys.org](http://www.enterprisesurveys.org)). Data on children in employment are estimates produced by the Understanding Children's Work project based on household survey data sets made available by the International Labour Organization's International Programme on the Elimination of Child Labour under its Statistical Monitoring Programme on Child Labour, UNICEF under its Multiple Indicator Cluster Survey program, the World Bank under its Living Standards Measurement Study program, and national statistical offices (see table 2.6). Data on refugees are from the UNHCR's *Statistical Yearbook 2009*, complemented by statistics on Palestinian refugees under the mandate of the United Nations Relief and Works Agency for Palestine Refugees in the Near East as published on its website ([www.unrwa.org](http://www.unrwa.org)). Data on internally displaced persons are from the Internal Displacement Monitoring Centre. Data on access to water and sanitation are from the WHO and UNICEF's *Progress on Sanitation and Drinking Water* (2010). National estimates of maternal mortality are from UNICEF's *The State of the World's Children 2009* and Childinfo and Demographic and Health Surveys by Macro International. Modeled estimates for maternal mortality are from WHO, UNICEF, UNFPA, and the World Bank's *Trends in Maternal Mortality in 1990–2008* (2010). Data on under-five mortality estimates by the Inter-agency Group for Child Mortality Estimation (which comprises UNICEF, WHO, the World Bank, United Nations Population Division, and other universities and research institutes) and are based mainly on household surveys, censuses, and vital registration data, supplemented by the World Bank's Human Development Network estimates based on vital registration and sample registration data (see table 2.22). Data on depth of hunger are from the Food and Agriculture Organization's Food Security Statistics ([www.fao.org/economic/ess/food-security-statistics/en/](http://www.fao.org/economic/ess/food-security-statistics/en/)). Data on primary gross enrollment are from the United Nations Educational, Scientific, and Cultural Organization's Institute for Statistics.





	International Development Association Resource Allocation Index 1-6 (low to high)	Economic management 1-6 (low to high)				Structural policies 1-6 (low to high)			
		Macroeconomic management	Fiscal policy	Debt policy	Average	Trade	Financial sector	Business regulatory environment	Average
		2009	2009	2009	2009	2009	2009	2009	2009
Afghanistan	2.8	3.5	3.0	3.5	3.3	3.0	2.5	2.5	2.7
Angola	2.8	3.0	3.0	3.0	3.0	4.0	2.5	2.0	2.8
Armenia	4.2	5.0	5.0	5.0	5.0	4.5	4.0	4.0	4.2
Azerbaijan	3.8	4.0	4.5	5.0	4.5	4.0	3.5	4.0	3.8
Bangladesh	3.5	4.0	4.0	4.0	4.0	3.5	3.5	3.5	3.5
Benin	3.5	4.0	3.5	3.5	3.7	4.0	3.5	3.5	3.7
Bhutan	3.9	4.5	4.5	4.5	4.5	3.0	3.0	3.5	3.2
Bolivia	3.8	4.0	4.0	4.5	4.2	5.0	4.0	2.5	3.8
Bosnia and Herzegovina	3.7	4.0	3.5	4.0	3.8	4.0	4.0	4.0	4.0
Burkina Faso	3.8	4.5	4.5	4.0	4.3	4.0	3.0	3.5	3.5
Burundi	3.1	3.5	3.5	3.0	3.3	4.0	2.5	2.5	3.0
Cambodia	3.3	4.5	3.5	3.5	3.8	4.0	2.5	3.5	3.3
Cameroon	3.2	4.0	4.0	3.0	3.7	3.5	3.0	3.0	3.2
Cape Verde	4.2	4.5	4.5	4.5	4.5	4.0	4.0	3.5	3.8
Central African Republic	2.6	3.5	3.0	2.5	3.0	3.5	2.5	2.0	2.7
Chad	2.5	2.5	2.5	2.5	2.5	3.0	3.0	2.5	2.8
Comoros	2.5	3.0	2.0	2.0	2.3	3.0	2.5	2.5	2.7
Congo, Dem. Rep.	2.7	3.5	3.5	2.5	3.2	3.5	2.0	2.0	2.5
Congo, Rep.	2.8	3.5	3.0	2.5	3.0	3.5	3.0	2.5	3.0
Côte d'Ivoire	2.8	3.5	2.5	2.5	2.8	4.0	3.0	3.0	3.3
Djibouti	3.2	3.5	3.0	2.5	3.0	4.0	3.5	3.5	3.7
Dominica	3.8	4.0	4.5	3.0	3.8	4.0	3.5	4.5	4.0
Eritrea	2.2	2.0	2.0	1.5	1.8	1.5	1.0	2.0	1.5
Ethiopia	3.4	3.5	4.0	3.5	3.7	3.0	3.0	3.5	3.2
Gambia, The	3.3	4.0	3.5	3.0	3.5	3.5	3.0	3.5	3.3
Georgia	4.4	4.5	4.5	5.0	4.7	6.0	3.5	5.5	5.0
Ghana	3.8	3.5	3.5	4.0	3.7	4.0	4.0	4.0	4.0
Grenada	3.7	3.5	2.5	3.0	3.0	4.5	4.0	4.0	4.2
Guinea	2.8	2.5	2.5	2.0	2.3	4.0	3.0	3.0	3.3
Guinea-Bissau	2.6	2.5	2.5	1.5	2.2	4.0	3.0	2.5	3.2
Guyana	3.4	3.5	3.0	4.0	3.5	4.0	3.5	3.0	3.5
Haiti	2.9	4.0	3.5	2.5	3.3	4.0	3.0	2.5	3.2
Honduras	3.5	3.0	3.5	4.0	3.5	4.5	3.0	3.5	3.7
India	3.8	4.5	3.5	4.0	4.0	3.5	4.0	3.5	3.7
Kenya	3.7	4.5	4.0	4.0	4.2	4.0	4.0	4.0	4.0
Kiribati	3.1	2.5	3.0	5.0	3.5	3.0	3.0	3.0	3.0
Kosovo	3.4	3.5	3.0	3.5	3.3	5.0	3.5	3.5	4.0
Kyrgyz Republic	3.7	4.5	4.0	4.0	4.2	5.0	3.0	3.5	3.8

**About the data**

The International Development Association (IDA) is the part of the World Bank Group that helps the poorest countries reduce poverty by providing concessional loans and grants for programs aimed at boosting economic growth and improving living conditions. IDA funding helps these countries deal with the complex challenges they face in meeting the Millennium Development Goals.

The World Bank's IDA Resource Allocation Index (IRAI), presented in the table, is based on the results of the annual Country Policy and Institutional Assessment (CPIA) exercise, which covers the IDA-eligible countries. The table does not include Myanmar and Somalia because they were not rated in the 2009 exercise even though they are IDA eligible. Country

assessments have been carried out annually since the mid-1970s by World Bank staff. Over time the criteria have been revised from a largely macroeconomic focus to include governance aspects and a broader coverage of social and structural dimensions. Country performance is assessed against a set of 16 criteria grouped into four clusters: economic management, structural policies, policies for social inclusion and equity, and public sector management and institutions. IDA resources are allocated to a country on per capita terms based on its IDA country performance rating and, to a limited extent, based on its per capita gross national income. This ensures that good performers receive a higher IDA allocation in per capita

terms. The IRAI is a key element in the country performance rating.

The CPIA exercise is intended to capture the quality of a country's policies and institutional arrangements, focusing on key elements that are within the country's control, rather than on outcomes (such as economic growth rates) that are influenced by events beyond the country's control. More specifically, the CPIA measures the extent to which a country's policy and institutional framework supports sustainable growth and poverty reduction and, consequently, the effective use of development assistance.

All criteria within each cluster receive equal weight, and each cluster has a 25 percent weight in the overall

# Public policies and institutions

# 5.9

	International Development Association Resource Allocation Index 1–6 (low to high)	Economic management 1–6 (low to high)				Structural policies 1–6 (low to high)			
		Macroeconomic management	Fiscal policy	Debt policy	Average	Trade	Financial sector	Business regulatory environment	Average
		2009	2009	2009	2009	2009	2009	2009	2009
Lao PDR	3.2	4.0	4.0	3.0	3.7	3.5	2.0	3.0	2.8
Lesotho	3.5	4.0	4.0	4.0	4.0	3.5	3.5	3.0	3.3
Liberia	2.8	3.5	3.5	2.5	3.2	3.0	2.5	3.0	2.8
Madagascar	3.5	4.0	3.0	4.0	3.7	4.0	3.0	3.5	3.5
Malawi	3.4	3.0	3.5	3.0	3.2	4.0	3.0	3.5	3.5
Maldives	3.4	2.5	2.0	3.0	2.5	4.0	3.0	4.0	3.7
Mali	3.7	4.5	4.0	4.5	4.3	4.0	3.0	3.5	3.5
Mauritania	3.2	3.5	2.5	3.5	3.2	4.0	2.5	3.5	3.3
Moldova	3.7	3.5	3.5	4.0	3.7	4.5	3.5	3.5	3.8
Mongolia	3.4	3.5	3.0	3.0	3.2	4.5	2.0	3.5	3.3
Mozambique	3.7	4.5	4.5	4.5	4.5	4.5	3.5	3.0	3.7
Nepal	3.3	3.5	3.5	3.0	3.3	3.5	3.0	3.0	3.2
Nicaragua	3.7	4.0	4.0	4.5	4.2	4.5	3.0	3.5	3.7
Niger	3.3	4.0	3.5	4.0	3.8	4.0	3.0	3.0	3.3
Nigeria	3.5	4.0	4.5	4.5	4.3	3.5	3.5	3.5	3.5
Pakistan	3.2	3.0	3.0	3.5	3.2	3.5	3.5	4.0	3.7
Papua New Guinea	3.3	4.0	3.5	4.5	4.0	4.5	3.0	3.0	3.5
Rwanda	3.8	4.0	4.0	3.5	3.8	4.0	3.5	4.0	3.8
Samoa	4.1	4.0	4.0	5.0	4.3	5.0	4.0	3.5	4.2
São Tomé and Príncipe	2.9	3.0	3.0	2.5	2.8	4.0	2.5	2.5	3.0
Senegal	3.7	4.0	4.0	4.0	4.0	4.0	3.5	4.0	3.8
Sierra Leone	3.2	4.0	3.5	3.5	3.7	3.5	3.0	3.0	3.2
Solomon Islands	2.8	3.5	2.5	3.0	3.0	3.0	3.0	2.5	2.8
Sri Lanka	3.5	3.0	3.0	3.5	3.2	3.5	3.5	4.0	3.7
St. Lucia	3.8	4.0	3.5	3.5	3.7	4.0	3.5	4.5	4.0
St. Vincent & Grenadines	3.8	4.0	3.5	3.5	3.7	4.0	3.5	4.5	4.0
Sudan	2.5	3.5	3.0	1.5	2.7	2.5	2.5	3.0	2.7
Tajikistan	3.2	3.5	3.5	3.5	3.5	4.0	2.5	3.0	3.2
Tanzania	3.8	4.5	4.5	4.0	4.3	4.0	4.0	3.5	3.8
Timor-Leste	2.9	3.0	3.5	3.5	3.3	4.5	2.5	1.5	2.8
Togo	2.8	3.0	3.0	2.5	2.8	4.0	2.5	3.0	3.2
Tonga	3.5	3.0	3.0	3.0	3.0	5.0	3.5	3.0	3.8
Uganda	3.9	4.5	4.5	4.5	4.5	4.0	3.5	4.0	3.8
Uzbekistan	3.3	4.0	4.0	4.0	4.0	2.5	3.0	3.0	2.8
Vanuatu	3.4	4.0	3.5	4.5	4.0	3.5	3.0	3.5	3.3
Vietnam	3.8	4.5	4.5	4.0	4.3	3.5	3.0	3.5	3.3
Yemen, Rep.	3.2	3.5	2.5	3.5	3.2	4.5	2.0	3.5	3.3
Zambia	3.4	4.0	3.0	3.5	3.5	4.0	3.5	3.0	3.5
Zimbabwe	1.9	2.0	2.0	1.0	1.7	3.0	1.5	2.0	2.2

score, which is obtained by averaging the average scores of the four clusters. For each of the 16 criteria countries are rated on a scale of 1 (low) to 6 (high). The scores depend on the level of performance in a given year assessed against the criteria, rather than on changes in performance compared with the previous year. All 16 CPIA criteria contain a detailed description of each rating level. In assessing country performance, World Bank staff evaluate the country's performance on each of the criteria and assign a rating. The ratings reflect a variety of indicators, observations, and judgments based on country knowledge and on relevant publicly available indicators. In interpreting the assessment scores, it should be noted that the

criteria are designed in a developmentally neutral manner. Accordingly, higher scores can be attained by a country that, given its stage of development, has a policy and institutional framework that more strongly fosters growth and poverty reduction.

The country teams that prepare the ratings are very familiar with the country, and their assessments are based on country diagnostic studies prepared by the World Bank or other development organizations and on their own professional judgment. An early consultation is conducted with country authorities to make sure that the assessments are informed by up-to-date information. To ensure that scores are consistent across countries, the process involves

two key phases. In the benchmarking phase a small representative sample of countries drawn from all regions is rated. Country teams prepare proposals that are reviewed first at the regional level and then in a Bankwide review process. A similar process is followed to assess the performance of the remaining countries, using the benchmark countries' scores as guideposts. The final ratings are determined following a Bankwide review. The overall numerical IRAI score and the separate criteria scores were first publicly disclosed in June 2006.

See IDA's website at [www.worldbank.org/ida](http://www.worldbank.org/ida) for more information.



	Policies for social inclusion and equity 1–6 (low to high)						Public sector management and institutions 1–6 (low to high)					
	Gender equality 2009	Equity of public resource use 2009	Building human resources 2009	Social protection and labor 2009	Policies and institutions for environmental sustainability 2009	Average 2009	Property rights and rule-based governance 2009	Quality of budgetary and financial management 2009	Efficiency of revenue mobilization 2009	Quality of public administration 2009	Transparency, accountability, and corruption in the public sector 2009	Average 2009
Afghanistan	2.0	3.0	3.0	2.5	2.5	2.6	1.5	3.5	3.0	2.0	2.0	2.4
Angola	3.5	2.5	2.5	3.0	3.0	2.9	2.0	2.5	2.5	2.5	2.5	2.4
Armenia	4.5	4.5	4.0	4.5	3.0	4.1	3.5	4.5	3.5	4.0	3.0	3.7
Azerbaijan	4.0	4.0	4.0	4.0	3.0	3.8	3.0	4.0	3.5	3.0	2.5	3.2
Bangladesh	4.0	3.5	4.0	3.5	3.0	3.6	3.0	3.0	3.0	3.0	3.0	3.0
Benin	3.5	3.0	3.5	3.0	3.5	3.3	3.0	3.5	3.5	3.0	3.5	3.3
Bhutan	4.0	4.0	4.0	3.5	4.5	4.0	3.5	3.5	4.0	4.0	4.5	3.9
Bolivia	4.0	4.0	4.0	3.5	3.5	3.8	2.5	3.5	4.0	3.0	3.5	3.3
Bosnia and Herzegovina	4.5	3.5	3.5	3.5	3.5	3.7	3.0	3.5	4.0	3.0	3.0	3.3
Burkina Faso	3.5	4.0	3.5	3.5	3.5	3.6	3.5	4.5	3.5	3.5	3.5	3.7
Burundi	4.0	3.5	3.0	3.0	3.0	3.3	2.5	3.0	3.0	2.5	2.0	2.6
Cambodia	4.0	3.0	3.5	3.0	3.0	3.3	2.5	3.5	3.0	2.5	2.0	2.7
Cameroon	3.0	3.0	3.5	3.0	3.0	3.1	2.5	3.0	3.5	3.0	2.5	2.9
Cape Verde	4.5	4.5	4.5	4.5	3.5	4.3	4.0	4.0	3.5	4.0	4.5	4.0
Central African Republic	2.5	2.5	2.5	2.0	3.0	2.5	2.0	2.5	2.5	2.5	2.5	2.4
Chad	2.5	2.5	2.5	2.5	2.0	2.4	2.0	2.0	2.5	2.5	2.0	2.2
Comoros	3.0	2.5	3.0	2.5	2.0	2.6	2.5	2.0	2.5	2.5	2.5	2.4
Congo, Dem. Rep.	2.5	3.0	3.0	3.0	2.5	2.8	2.0	2.5	2.5	2.0	2.0	2.2
Congo, Rep.	3.0	2.5	3.0	2.5	2.5	2.7	2.5	2.5	3.0	2.5	2.5	2.6
Côte d'Ivoire	2.5	2.0	2.5	2.5	2.5	2.4	2.0	2.5	4.0	2.0	2.5	2.6
Djibouti	3.0	3.0	3.5	3.0	3.5	3.2	2.5	3.0	3.5	2.5	2.5	2.8
Dominica	3.5	3.5	4.0	3.5	3.5	3.6	4.0	3.5	4.0	3.5	4.0	3.8
Eritrea	3.5	2.5	3.5	2.5	2.0	2.8	2.5	2.5	3.5	3.0	2.0	2.7
Ethiopia	3.0	4.5	4.0	3.5	3.0	3.6	3.0	3.5	3.5	3.5	2.5	3.2
Gambia, The	3.5	3.5	3.5	2.5	3.5	3.3	3.0	3.0	3.5	3.0	2.0	2.9
Georgia	4.5	4.5	4.5	4.5	3.0	4.2	3.5	4.0	4.5	4.0	3.0	3.8
Ghana	4.0	4.0	4.5	3.5	3.5	3.9	3.5	3.5	4.5	3.5	4.0	3.8
Grenada	4.5	3.5	4.0	3.5	4.0	3.9	3.5	4.0	3.5	3.5	4.0	3.7
Guinea	3.5	3.0	3.0	3.0	2.5	3.0	2.0	3.0	3.0	3.0	2.0	2.6
Guinea-Bissau	2.5	3.0	2.0	2.5	2.5	2.5	2.5	2.5	3.0	2.5	2.5	2.6
Guyana	4.0	3.5	4.0	3.0	3.0	3.5	3.0	3.5	3.5	2.5	3.0	3.1
Haiti	3.0	3.0	2.5	2.5	2.5	2.7	2.0	3.0	2.5	2.5	2.5	2.5
Honduras	4.0	4.0	3.5	3.5	3.5	3.7	3.0	4.0	4.0	2.5	3.0	3.3
India	3.5	4.0	4.0	3.5	3.5	3.7	3.5	4.0	4.0	3.5	3.5	3.7
Kenya	3.0	3.5	4.0	3.5	3.5	3.5	2.5	3.5	4.0	3.5	3.0	3.3
Kiribati	2.5	3.5	2.5	3.0	3.0	2.9	3.5	3.0	3.0	3.0	3.0	3.1
Kosovo	3.5	3.5	2.5	3.5	3.0	3.2	3.0	4.0	3.5	2.5	3.0	3.2
Kyrgyz Republic	4.5	3.5	3.5	3.5	3.0	3.6	2.5	3.5	3.5	3.0	2.5	3.0

### Definitions

• **International Development Association Resource Allocation Index** is obtained by calculating the average score for each cluster and then by averaging those scores. For each of 16 criteria countries are rated on a scale of 1 (low) to 6 (high) • **Economic management** cluster: **Macroeconomic management** assesses the monetary, exchange rate, and aggregate demand policy framework. • **Fiscal policy** assesses the short- and medium-term sustainability of fiscal policy (taking into account monetary and exchange rate policy and the sustainability of the public debt) and its impact on growth. • **Debt policy** assesses whether the debt management strategy is conducive to minimizing budgetary risks and ensuring

long-term debt sustainability. • **Structural policies** cluster: **Trade** assesses how the policy framework fosters trade in goods. • **Financial sector** assesses the structure of the financial sector and the policies and regulations that affect it. • **Business regulatory environment** assesses the extent to which the legal, regulatory, and policy environments help or hinder private businesses in investing, creating jobs, and becoming more productive. • **Policies for social inclusion and equity** cluster: **Gender equality** assesses the extent to which the country has installed institutions and programs to enforce laws and policies that promote equal access for men and women in education, health, the economy, and

protection under law. • **Equity of public resource use** assesses the extent to which the pattern of public expenditures and revenue collection affects the poor and is consistent with national poverty reduction priorities. • **Building human resources** assesses the national policies and public and private sector service delivery that affect the access to and quality of health and education services, including prevention and treatment of HIV/AIDS, tuberculosis, and malaria. • **Social protection and labor** assess government policies in social protection and labor market regulations that reduce the risk of becoming poor, assist those who are poor to better manage further risks, and ensure a minimal level of welfare

	Policies for social inclusion and equity 1–6 (low to high)						Public sector management and institutions 1–6 (low to high)					
	Gender equality	Equity of public resource use	Building human resources	Social protection and labor	Policies and institutions for environmental sustainability	Average	Property rights and rule-based governance	Quality of budgetary and financial manage- ment	Efficiency of revenue mobilization	Quality of public administration	Transparency, accountability, and corruption in the public sector	Average
	2009	2009	2009	2009	2009	2009	2009	2009	2009	2009	2009	2009
Lao PDR	3.5	4.0	3.0	2.5	4.0	3.4	3.0	3.5	3.0	3.0	2.0	2.9
Lesotho	4.0	3.0	3.5	3.0	3.0	3.3	3.5	3.0	4.0	3.0	3.5	3.4
Liberia	2.5	3.0	2.5	2.5	2.0	2.5	2.5	2.5	3.5	2.5	3.0	2.8
Madagascar	3.5	4.0	3.5	3.5	3.5	3.6	3.5	3.0	4.0	3.5	2.5	3.3
Malawi	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.0	4.0	3.5	3.0	3.4
Maldives	4.0	4.0	3.5	3.5	4.0	3.8	4.0	3.0	4.0	3.5	3.0	3.5
Mali	3.5	3.5	3.5	3.5	3.0	3.4	3.5	3.5	3.5	3.0	3.5	3.4
Mauritania	4.0	3.5	3.5	3.0	3.0	3.4	3.0	3.0	3.5	3.0	2.5	3.0
Moldova	5.0	3.5	4.0	3.5	3.5	3.9	3.5	4.0	3.5	3.0	3.0	3.4
Mongolia	3.5	3.5	4.0	3.5	3.0	3.5	3.0	4.0	3.5	3.5	3.0	3.4
Mozambique	3.5	3.5	3.5	3.0	3.0	3.3	3.0	4.0	4.0	3.0	3.0	3.4
Nepal	4.0	4.0	4.0	3.0	3.5	3.7	2.5	3.0	3.5	3.0	3.0	3.0
Nicaragua	3.5	3.5	3.5	3.5	3.5	3.5	3.0	4.0	4.0	3.0	3.0	3.4
Niger	2.5	3.5	3.5	3.0	3.0	3.1	3.0	3.5	3.5	3.0	2.5	3.1
Nigeria	3.0	3.5	3.0	3.5	3.0	3.2	2.5	3.0	3.0	3.0	3.0	2.9
Pakistan	2.0	3.5	3.0	3.0	3.0	2.9	2.5	3.5	3.0	3.5	2.5	3.0
Papua New Guinea	2.5	3.5	2.5	3.0	2.0	2.7	2.0	3.0	3.5	2.5	3.0	2.8
Rwanda	3.5	4.5	4.5	3.5	3.5	3.9	3.0	4.0	3.5	3.5	3.5	3.5
Samoa	3.5	4.5	4.0	3.5	4.0	3.9	4.0	3.5	4.5	4.0	4.0	4.0
São Tomé and Príncipe	3.0	3.0	3.0	2.5	2.5	2.8	2.5	3.0	3.5	3.0	3.5	3.1
Senegal	3.5	3.5	3.5	3.0	3.5	3.4	3.5	3.0	4.0	3.5	3.0	3.4
Sierra Leone	3.0	3.0	3.5	3.5	2.5	3.1	2.5	3.5	2.5	3.0	3.0	2.9
Solomon Islands	3.0	2.5	3.0	2.5	2.0	2.6	3.0	2.5	2.5	2.0	3.0	2.6
Sri Lanka	4.0	3.5	4.5	3.5	3.5	3.8	3.5	4.0	3.5	3.0	3.0	3.4
St. Lucia	3.5	4.0	4.0	3.5	3.5	3.7	4.0	3.5	4.5	3.5	4.5	4.0
St. Vincent & Grenadines	4.0	3.5	4.0	3.5	3.5	3.7	4.0	3.5	4.0	3.5	4.0	3.8
Sudan	2.0	2.5	2.5	2.5	2.0	2.3	2.0	2.0	3.0	2.5	1.5	2.2
Tajikistan	4.0	3.5	3.0	3.5	3.0	3.4	2.5	3.0	3.0	3.0	2.0	2.7
Tanzania	3.5	4.0	4.0	3.5	3.5	3.7	3.5	3.5	4.0	3.5	3.0	3.5
Timor-Leste	3.5	3.0	2.5	2.5	2.5	2.8	2.0	3.0	3.0	2.5	3.0	2.7
Togo	3.0	2.0	3.0	3.0	2.5	2.7	2.5	2.5	3.0	2.0	2.0	2.4
Tonga	3.0	4.0	4.0	3.0	3.0	3.4	3.5	3.5	4.0	3.5	3.5	3.6
Uganda	3.5	4.0	4.0	3.5	4.0	3.8	3.5	4.0	3.5	3.0	2.5	3.3
Uzbekistan	4.0	3.5	4.0	3.5	3.5	3.7	2.5	3.5	3.5	3.0	1.5	2.8
Vanuatu	3.5	3.5	2.5	2.0	3.0	2.9	3.5	3.5	3.5	3.0	3.0	3.3
Vietnam	4.5	4.5	4.0	3.5	3.5	4.0	3.5	4.0	4.0	3.5	3.0	3.6
Yemen, Rep.	2.0	3.5	3.0	3.5	3.5	3.1	2.5	3.5	3.0	3.0	3.0	3.0
Zambia	3.5	3.5	4.0	3.0	3.5	3.5	3.0	3.5	3.5	3.0	3.0	3.2
Zimbabwe	2.5	1.5	1.0	1.0	2.0	1.6	1.5	2.0	3.5	1.5	1.5	2.0

to all people. • **Policies and institutions for environmental sustainability** assess the extent to which environmental policies foster the protection and sustainable use of natural resources and the management of pollution. • **Public sector management and institutions cluster:** **Property rights and rule-based governance** assess the extent to which private economic activity is facilitated by an effective legal system and rule-based governance structure in which property and contract rights are reliably respected and enforced. • **Quality of budgetary and financial management** assesses the extent to which there is a comprehensive and credible budget linked to policy priorities, effective financial management systems,

and timely and accurate accounting and fiscal reporting, including timely and audited public accounts.

• **Efficiency of revenue mobilization** assesses the overall pattern of revenue mobilization—not only the de facto tax structure, but also revenue from all sources as actually collected. • **Quality of public administration** assesses the extent to which civilian central government staff is structured to design and implement government policy and deliver services effectively. • **Transparency, accountability, and corruption in the public sector** assess the extent to which the executive can be held accountable for its use of funds and for the results of its actions by the electorate, the legislature, and the judiciary and the

extent to which public employees within the executive are required to account for administrative decisions, use of resources, and results obtained. The three main dimensions assessed are the accountability of the executive to oversight institutions and of public employees for their performance, access of civil society to information on public affairs, and state capture by narrow vested interests.

#### Data sources

Data on public policies and institutions are from the World Bank Group's CPIA database available at [www.worldbank.org/ida](http://www.worldbank.org/ida).



	Roads				Railways			Ports	Air		
	Total road network km	Paved roads %	Passengers carried million passenger-km	Goods hauled million ton-km	Rail lines total route-km	Passengers carried million passenger-km	Goods hauled million ton-km	Port container traffic thousand TEU	Registered carrier departures worldwide thousands	Passengers carried thousands	Air freight million ton-km
	2000-08 <sup>a</sup>	2000-08 <sup>a</sup>	2000-08 <sup>a</sup>	2000-08 <sup>a</sup>	2000-09 <sup>a</sup>	2000-09 <sup>a</sup>	2000-09 <sup>a</sup>	2009	2009	2009	2009
Afghanistan	42,150	29.3	..	..	..	..	..	..	..	..	..
Albania	18,000	39.0	197	2,200	423	32	46	..	5	231	0
Algeria	111,261	73.5	..	..	4,723	1,141	1,184	..	53	4,371	4
Angola	51,429	10.4	166,045	4,709	..	..	..	..	3	275	64
Argentina	231,374	30.0	..	..	25,023	6,979	12,025	1,555	75	5,695	112
Armenia	7,704	90.5	2,742	179	845	27	354	..	8	653	6
Australia	818,356	..	302,369	189,847	9,674	1,546	62,083	6,197	403	50,027	2,769
Austria	110,778	100.0	69,000	26,411	5,784	10,210	20,202	..	139	8,521	342
Azerbaijan	52,942	50.6	14,041	9,947	2,079	1,025	7,592	..	10	840	7
Bangladesh	239,226	9.5	..	..	2,835	5,609	870	1,182	16	1,409	0
Belarus	94,797	88.6	8,184	22,767	5,510	7,401	42,742	..	6	333	1
Belgium	153,595	78.2	132,404	46,891	3,578	10,493	6,542	9,701	250	4,859	1,427
Benin	19,000	9.5	..	..	758	..	36	..	..	..	..
Bolivia	62,479	7.0	..	..	2,866	313	1,060	..	19	1,537	7
Bosnia and Herzegovina	21,846	52.3	..	300	1,016	61	988	..	1	80	0
Botswana	25,798	32.6	..	..	888	94	674	..	6	234	0
Brazil	1,751,868	5.5	..	..	29,817	..	267,700	6,246	752	67,946	1,782
Bulgaria	40,231	98.4	13,688	11,843	4,150	2,144	3,152	..	11	798	2
Burkina Faso	92,495	4.2	..	..	622	..	..	..	1	79	0
Burundi	12,322	10.4	..	..	..	..	..	..	..	..	..
Cambodia	38,257	6.3	201	..	650	45	92	..	3	184	1
Cameroon	51,346	8.4	..	..	977	377	978	..	10	466	23
Canada	1,409,000	39.9	493,814	129,600	58,345	2,901	258,280	4,175	1,198	52,584	1,347
Central African Republic	24,307	..	..	..	..	..	..	..	..	..	..
Chad	40,000	0.8	..	..	..	..	..	..	..	..	..
Chile	79,814	20.2	..	..	5,352	840	4,032	2,814	97	8,097	1,179
China	3,730,164	53.5	1,247,611	3,286,819	65,491	787,890	2,523,917	105,977	2,140	229,062	11,976
Hong Kong SAR, China	2,040	100.0	..	..	..	..	..	21,040	150	23,973	13,293
Colombia	164,183	..	157	39,726	1,672	..	11,884	2,042	196	12,115	2,420
Congo, Dem. Rep.	153,497	1.8	..	..	3,641	35	182	..	..	..	..
Congo, Rep.	17,000	7.1	..	..	795	211	234	..	..	..	..
Costa Rica	38,049	25.3	27	1	..	..	..	876	33	933	9
Côte d'Ivoire	81,996	7.9	..	..	639	10	675	..	..	..	..
Croatia	29,248	86.9	4,093	11,042	2,723	1,835	2,641	..	25	1,679	2
Cuba	..	49.0	6,551	2,222	5,076	1,285	1,351	..	11	780	27
Czech Republic	130,573	100.0	88,468	50,877	9,539	6,462	11,249	..	78	5,048	22
Denmark	73,257	100.0	70,173	10,717	2,131	7,312	2,030	..	86	6,773	14
Dominican Republic	12,600	49.4	..	..	..	..	..	1,263	..	..	..
Ecuador	43,670	14.8	11,819	1,193	..	..	..	1,001	46	2,897	3
Egypt, Arab Rep.	104,918	86.9	12,793	..	5,195	40,837	3,840	6,250	56	6,216	180
El Salvador	10,029	19.8	..	..	..	..	..	..	19	1,997	15
Eritrea	4,010	21.8	..	..	..	..	..	..	..	..	..
Estonia	58,034	28.8	3,190	7,641	929	274	5,780	..	9	396	1
Ethiopia	44,359	13.7	219,113	2,456	..	..	..	..	44	2,914	424
Finland	78,860	65.5	71,800	28,500	5,919	3,876	8,872	1,064	105	7,423	484
France	951,200	100.0	769,000	313,000	33,778	87,667	26,482	4,491	772	58,318	6,625
Gabon	9,170	10.2	..	..	810	95	2,485	..	5	525	62
Gambia, The	3,742	19.3	16	..	..	..	..	..	..	..	..
Georgia	20,329	94.1	5,269	586	1,566	626	5,417	..	5	294	2
Germany	644,288	100.0	949,306	472,700	33,706	76,772	93,946	12,765	1,081	103,397	10,188
Ghana	57,614	14.9	..	..	953	85	181	..	..	..	..
Greece	116,711	91.8	..	18,360	1,552	1,413	538	935	113	8,795	31
Guatemala	14,095	34.5	..	..	..	..	..	906	..	..	..
Guinea	44,348	9.8	..	..	..	..	..	..	..	..	..
Guinea-Bissau	3,455	27.9	..	..	..	..	..	..	..	..	..
Haiti	4,160	24.3	..	..	..	..	..	..	..	..	..
Honduras	13,600	20.4	..	..	..	..	..	..	..	..	..

	Roads				Railways			Ports	Air		
	Total road network km	Paved roads %	Passengers carried million passenger-km	Goods hauled million ton-km	Rail lines total route-km	Passengers carried million passenger-km	Goods hauled million ton-km	Port container traffic thousand TEU	Registered carrier departures worldwide thousands	Passengers carried thousands	Air freight million ton-km
	2000-08 <sup>a</sup>	2000-08 <sup>a</sup>	2000-08 <sup>a</sup>	2000-08 <sup>a</sup>	2000-09 <sup>a</sup>	2000-09 <sup>a</sup>	2000-09 <sup>a</sup>	2009	2009	2009	2009
Hungary	197,534	37.7	20,449	35,743	7,793	5,708	447	..	46	2,953	10
India	4,236,429	49.3	..	..	63,273	838,032	551,448	7,889	602	54,446	1,235
Indonesia	437,759	59.1	..	..	3,370	14,344	4,390	6,394	330	27,421	277
Iran, Islamic Rep.	174,301	73.3	..	..	7,555	15,312	20,540	2,206	134	13,053	96
Iraq	45,550	84.3	..	..	2,025	54	121	..	..	..	..
Ireland	96,424	100.0	..	15,900	1,919	1,683	79	817	528	77,747	121
Israel	18,096	100.0	..	..	1,005	1,968	1,055	2,033	48	4,605	985
Italy	487,700	100.0	97,560	192,700	16,959	45,590	13,569	9,532	383	33,195	400
Jamaica	22,210	73.3	..	..	..	..	..	1,690	17	1,380	10
Japan	1,200,858	79.6	947,562	327,632	20,036	253,555	22,100	16,286	642	86,897	10,486
Jordan	7,816	100.0	..	..	294	..	353	..	32	2,324	163
Kazakhstan	93,612	89.9	106,878	63,481	14,205	14,860	197,302	..	19	1,193	15
Kenya	63,265	14.1	..	22	1,917	226	1,399	..	34	2,949	272
Korea, Dem. Rep.	25,554	2.8	..	..	..	..	..	..	2	101	2
Korea, Rep.	104,237	78.5	97,854	12,545	3,378	31,298	9,273	16,054	256	34,169	15,163
Kosovo	..	..	..	..	..	..	..	..	..	..	..
Kuwait	5,749	85.0	..	..	..	..	..	..	18	2,597	281
Kyrgyz Republic	34,000	91.1	6,468	903	417	106	745	..	5	309	2
Lao PDR	34,994	13.5	2,113	287	..	..	..	..	10	303	2
Latvia	69,684	100.0	17,966	12,344	1,885	75	18,693	..	27	1,302	18
Lebanon	6,970	..	..	..	..	..	..	995	14	1,308	94
Lesotho	5,940	18.3	..	..	..	..	..	..	..	..	..
Liberia	10,600	6.2	..	..	..	..	..	..	..	..	..
Libya	83,200	57.2	..	..	..	..	..	..	10	1,147	0
Lithuania	81,030	28.6	42,739	20,419	1,767	357	11,888	..	12	617	7
Macedonia, FYR	13,922	56.5	1,239	3,978	699	154	497	..	1	87	0
Madagascar	49,827	11.6	..	..	854	10	12	..	10	500	14
Malawi	15,451	45.0	..	..	797	44	33	..	4	157	1
Malaysia	98,722	82.8	..	..	1,665	1,527	1,384	15,843	182	23,766	2,853
Mali	18,912	19.0	..	794	733	196	189	..	..	..	..
Mauritania	11,066	26.8	..	..	728	47	7,566	..	1	142	0
Mauritius	2,028	98.0	..	..	..	..	..	..	11	1,093	153
Mexico	366,096	35.3	463,865	227,290	26,704	449	71,136	2,869	222	15,728	714
Moldova	12,778	85.8	1,640	1,577	1,157	423	1,017	..	5	402	1
Mongolia	49,250	3.5	1,215	782	1,814	1,009	7,852	..	5	257	3
Morocco	58,256	67.8	..	794	2,110	4,190	4,111	1,222	62	4,931	63
Mozambique	30,331	20.8	..	..	3,116	114	695	..	11	490	6
Myanmar	27,000	11.9	..	..	..	4,163	885	..	28	1,527	3
Namibia	66,467	12.8	47	591	..	..	..	..	5	455	0
Nepal	17,782	55.9	..	..	..	..	..	..	7	484	6
Netherlands	136,135	90.0	..	77,100	2,886	15,400	4,331	10,066	292	29,109	4,520
New Zealand	93,911	65.9	..	..	..	..	4,078	2,955	217	12,104	799
Nicaragua	20,333	12.0	123	..	..	..	..	..	..	..	..
Niger	18,948	20.7	..	..	..	..	..	..	..	..	..
Nigeria	193,200	15.0	..	..	3,528	174	77	..	17	1,365	8
Norway	93,247	80.5	63,362	17,564	4,114	2,877	2,092	..	110	8,786	14
Oman	53,430	43.5	..	..	..	..	..	3,768	26	2,361	39
Pakistan	260,420	65.4	263,788	129,249	7,791	24,731	6,187	2,058	51	5,303	304
Panama	13,727	38.1	..	..	..	..	..	4,597	66	6,348	0
Papua New Guinea	19,600	3.5	..	..	..	..	..	..	21	847	19
Paraguay	29,500	50.8	..	..	..	..	..	..	10	428	0
Peru	102,887	13.9	..	..	2,020	78	900	1,335	66	5,843	257
Philippines	200,037	9.9	..	..	479	83	1	4,116	87	10,481	227
Poland	383,313	68.2	26,791	174,223	19,764	16,454	29,940	859	83	4,279	55
Portugal	82,900	86.0	..	46,406	2,842	3,766	872	1,042	124	9,904	314
Puerto Rico	25,645	95.0	..	10	..	..	..	1,674	..	..	..
Qatar	7,790	90.0	..	..	..	..	..	..	77	10,211	2,276



	Roads				Railways			Ports	Air		
	Total road network km	Paved roads %	Passengers carried million passenger-km	Goods hauled million ton-km	Rail lines total route-km	Passengers carried million passenger-km	Goods hauled million ton-km	Port container traffic thousand TEU	Registered carrier departures worldwide thousands	Passengers carried thousands	Air freight million ton-km
	2000-08 <sup>a</sup>	2000-08 <sup>a</sup>	2000-08 <sup>a</sup>	2000-08 <sup>a</sup>	2000-09 <sup>a</sup>	2000-09 <sup>a</sup>	2000-09 <sup>a</sup>	2009	2009	2009	2009
Romania	198,817	30.2	20,194	56,377	10,776	5,975	8,902	1,381	58	3,268	4
Russian Federation	963,000	80.1	78,000	206,000	85,194	153,500	1,865,305	2,178	475	34,403	2,306
Rwanda	14,008	19.0	..	..	..	..	..	..	..	..	..
Saudi Arabia	221,372	21.5	..	..	1,020	337	1,748	4,431	157	17,508	1,838
Senegal	14,805	29.3	..	..	906	129	384	..	0	573	0
Serbia	40,130	47.7	4,719	1,112	4,058	683	3,013	..	17	927	2
Sierra Leone	11,300	8.0	..	..	..	..	..	..	0	22	8
Singapore	3,325	100.0	5,964	..	..	..	..	25,866	84	18,427	7,391
Slovak Republic	43,848	87.0	32,214	22,114	3,623	2,247	6,465	..	32	3,441	0
Slovenia	38,872	100.0	815	16,261	1,228	840	2,668	..	25	953	3
Somalia	22,100	11.8	..	..	..	..	..	..	..	..	..
South Africa	362,099	17.3	..	434	22,051	13,865	113,342	3,726	151	12,504	676
Spain	667,064	99.0	397,117	132,868	15,043	22,959	7,348	10,193	548	49,289	1,080
Sri Lanka	97,286	81.0	21,067	..	1,463	4,767	135	3,464	17	2,418	279
Sudan	11,900	36.3	..	..	4,508	34	766	..	7	607	42
Swaziland	3,594	30.0	..	..	300	..	..	..	..	..	..
Sweden	574,741	23.6	108,100	42,400	9,946	7,038	11,500	1,251	62	5,824	16
Switzerland	71,355	100.0	93,675	16,226	3,544	17,417	12,460	..	168	14,701	1,058
Syrian Arab Republic	64,983	91.0	589	..	1,801	1,120	2,370	685	19	1,343	11
Tajikistan	27,767	..	150	14,572	616	45	1,282	..	10	765	6
Tanzania	87,524	7.4	..	..	2,600 <sup>b</sup>	475 <sup>b</sup>	728 <sup>b</sup>	..	21	684	1
Thailand	180,053	98.5	..	..	4,429	8,037	3,161	5,898	124	19,619	2,133
Timor-Leste	..	..	..	..	..	..	..	..	..	..	..
Togo	11,652	21.0	..	..	..	..	..	..	..	..	..
Trinidad and Tobago	8,320	51.1	..	..	..	..	..	..	14	1,014	70
Tunisia	19,371	75.2	..	16,611	1,991	1,493	2,073	..	24	2,279	14
Turkey	426,951	..	206,098	181,935	8,686	5,374	9,681	4,522	272	31,339	856
Turkmenistan	24,000	81.2	..	..	3,095	1,685	11,547	..	15	1,706	9
Uganda	70,746	23.0	..	..	259	..	218	..	0	64	27
Ukraine	169,502	97.8	60,671	36,866	21,678	48,327	196,188	1,112	59	3,428	63
United Arab Emirates	4,080	100.0	..	..	..	..	..	14,425	171	31,762	8,960
United Kingdom	419,634	100.0	736,000	173,077	16,173	51,467	12,512	5,987	1,004	102,465	6,615
United States	6,506,221	67.4	7,980,611	1,889,923	226,205	9,476	2,431,181 <sup>c</sup>	34,300	9,182 <sup>d</sup>	679,423 <sup>d</sup>	61,684 <sup>d</sup>
Uruguay	77,732	..	2,032	..	2,993	15	284	..	9	564	4
Uzbekistan	81,600	87.3	56,674	21,038	4,230	2,832	24,238	..	23	1,850	76
Venezuela, RB	96,155	33.6	..	..	336	..	81	1,168	124	5,121	2
Vietnam	160,089	47.6	49,372	24,647	2,347	4,129	3,807	4,751	84	11,074	312
West Bank and Gaza	5,147	100.0	..	..	..	..	..	..	..	..	..
Yemen, Rep.	71,300	8.7	..	..	..	..	..	..	15	1,050	26
Zambia	66,781	22.0	..	..	1,273	183	..	..	4	62	..
Zimbabwe	97,267	19.0	..	..	2,583	..	1,580	..	6	261	7
<b>World</b>	<b>49.0 m</b>	<b>.. m</b>	<b>.. m</b>	<b>..m</b>	<b>.. s</b>	<b>2,264 m</b>	<b>5,321 m</b>	<b>443,740 s</b>	<b>26,379 s</b>	<b>2,270,901 s</b>	<b>202,136 s</b>
<b>Low income</b>	12.0	..	..	..	..	..	..	..	228	13,439	783
<b>Middle income</b>	35.4	..	..	..	..	1,343	4,072	206,537	7,169	664,804	31,329
Lower middle income	36.3	..	..	..	..	1,917	4,049	150,612	3,954	398,922	17,548
Upper middle income	36.8	..	..	..	..	1,083	5,812	55,926	3,215	265,882	13,781
<b>Low &amp; middle income</b>	24.3	..	..	..	..	..	3,910	207,719	7,398	678,243	32,112
East Asia & Pacific	11.4	..	..	..	..	4,248	3,483	142,980	3,093	326,294	17,878
Europe & Central Asia	..	27,816	21,038	171,322	1,025	7,592	11,018	1,018	83,523	3,365	
Latin America & Carib.	22.0	..	..	..	..	..	..	28,362	1,794	138,460	6,576
Middle East & N. Africa	81.0	..	..	..	..	1,493	2,222	..	419	38,022	653
South Asia	51.8	..	..	..	..	24,731	3,529	14,593	700	64,196	1,825
Sub-Saharan Africa	12.1	..	..	..	..	..	..	..	373	27,749	1,815
<b>High income</b>	93.4	..	29,505	..	7,038	8,872	8,872	236,021	18,981	1,592,658	170,024
Euro area	100.0	69,000	45,032	130,021	10,210	6,542	62,931	4,488	399,964	33,950	

a. Data are for the latest year available in the period shown. b. Includes Tazara railway. c. Refers to class 1 railways only. d. Covers only carriers designated by the U.S. Department of Transportation as major and national air carriers.

## About the data

Transport infrastructure—highways, railways, ports and waterways, and airports and air traffic control systems—and the services that flow from it are crucial to the activities of households, producers, and governments. Because performance indicators vary widely by transport mode and focus (whether physical infrastructure or the services flowing from that infrastructure), highly specialized and carefully specified indicators are required. The table provides selected indicators of the size, extent, and productivity of roads, railways, and air transport systems and of the volume of traffic in these modes as well as in ports.

Data for transport sectors are not always internationally comparable. Unlike for demographic statistics, national income accounts, and international trade data, the collection of infrastructure data has not been “internationalized.” But data on roads are collected by the International Road Federation (IRF) and data on air transport by the International Civil Aviation Organization (ICAO).

National road associations are the primary source of IRF data. In countries where a national road association is lacking or does not respond, other agencies are contacted, such as road directorates, ministries of transport or public works, or central statistical offices. As a result, definitions and data collection methods and quality differ, and the compiled data are of uneven quality. Moreover, the quality of transport service (reliability, transit time, and condition of goods delivered) is rarely measured, though it may be as important as quantity in assessing an economy’s transport system.

Unlike the road sector, where numerous qualified motor vehicle operators can operate anywhere on the road network, railways are a restricted transport system with vehicles confined to a fixed guideway. Considering the cost and service characteristics, railways generally are best suited to carry—and can effectively compete for—bulk commodities and containerized freight for distances of 500–5,000 kilometers, and passengers for distances of 50–1,000 kilometers. Below these limits road transport tends to be more competitive, while above these limits air transport for passengers and freight and sea transport for freight tend to be more competitive. The railways indicators in the table focus on scale and output measures: total route-kilometers, passenger-kilometers, and goods (freight) hauled in ton-kilometers.

Measures of port container traffic, much of it commodities of medium to high value added, give some indication of economic growth in a country.

But when traffic is merely transshipment, much of the economic benefit goes to the terminal operator and ancillary services for ships and containers rather than to the country more broadly. In transshipment centers empty containers may account for as much as 40 percent of traffic.

The air transport data represent the total (international and domestic) scheduled traffic carried by the air carriers registered in a country. Countries submit air transport data to ICAO on the basis of standard instructions and definitions issued by ICAO. In many cases, however, the data include estimates by ICAO for nonreporting carriers. Where possible, these estimates are based on previous submissions supplemented by information published by the air carriers, such as flight schedules.

The data cover the air traffic carried on scheduled services, but changes in air transport regulations in Europe have made it more difficult to classify traffic as scheduled or nonscheduled. Thus recent increases shown for some European countries may be due to changes in the classification of air traffic rather than actual growth. For countries with few air carriers or only one, the addition or discontinuation of a home-based air carrier may cause significant changes in air traffic.

## Definitions

- **Total road network** covers motorways, highways, main or national roads, secondary or regional roads, and all other roads in a country.
- **Paved roads** are roads surfaced with crushed stone (macadam) and hydrocarbon binder or bituminized agents, with concrete, or with cobblestones.
- **Passengers carried by road** are the number of passengers transported by road times kilometers traveled.
- **Goods hauled by road** are the volume of goods transported by road vehicles, measured in millions of metric tons times kilometers traveled.
- **Rail lines** are the length of railway route available for train service, irrespective of the number of parallel tracks.
- **Passengers carried by railway** are the number of passengers transported by rail times kilometers traveled.
- **Goods hauled by railway** are the volume of goods transported by railway, measured in metric tons times kilometers traveled.
- **Port container traffic** measures the flow of containers from land to sea transport modes and vice versa in twenty-foot-equivalent units (TEUs), a standard-size container. Data cover coastal shipping as well as international journeys. Transshipment traffic is counted as two lifts at the intermediate port (once to off-load and again as an outbound lift) and includes empty units.
- **Registered carrier departures worldwide** are domestic takeoffs and takeoffs abroad of air carriers registered in the country.
- **Passengers carried by air** include both domestic and international passengers of air carriers registered in the country.
- **Air freight** is the volume of freight, express, and diplomatic bags carried on each flight stage (operation of an aircraft from takeoff to its next landing), measured in metric tons times kilometers traveled.

## Data sources

Data on roads are from the IRF’s *World Road Statistics*, supplemented by World Bank staff estimates. Data on railways are from a database maintained by the World Bank’s Transport, Water, and Information and Communication Technologies Department, Transport Division, based on data from the International Union of Railways. Data on port container traffic are from Containerisation International’s *Containerisation International Yearbook*. Data on air transport are from the ICAO’s *Civil Aviation Statistics of the World* and ICAO staff estimates.





	Electric power		Telephones <sup>a</sup>								
	Consumption per capita kWh	Transmission and distribution losses % of output	Access and use				Quality		Affordability and efficiency		
			per 100 people		International voice traffic minutes per person		Population covered by mobile cellular network %	\$ per month		Telecommunications revenue % of GDP	Mobile cellular and fixed-line subscribers per employee
			Fixed lines	Mobile cellular subscriptions	Fixed lines	Total		Residential fixed-line tariff	Mobile cellular prepaid tariff		
2008	2008	2009	2009	2008	2008	2008	2009	2009	2008	2008	
Afghanistan	..	..	0	40	1	7	75	..	..	0.0	58
Albania	1,372	50	12	132	127	263	99	6.0	13.4	6.0	871
Algeria	957	18	7	94	15	34	82	4.2	6.3	2.5	285
Angola	189	15	2	44	..	..	40	16.6	11.0	..	..
Argentina	2,789	13	24	129	42	..	94	3.9	13.7	3.1	1,929
Armenia	1,578	15	20	85	..	..	88	4.1	5.8	4.5	..
Australia	11,217	7	41	111	..	..	99	26.0	34.9	3.4	346
Austria	8,218	5	39	141	..	..	99	27.3	6.8	1.7	843
Azerbaijan	2,317	13	16	88	..	77	99	2.5	4.4	2.4	484
Bangladesh	208	5	1	31	6	..	90	1.6	1.3	..	..
Belarus	3,427	11	41	100	..	..	99	1.0	3.4	2.1	..
Belgium	8,523	5	39	115	..	..	100	33.6	20.8	2.8	732
Benin	76	..	1	56	12	309	80	10.0	14.8	1.0	1,652
Bolivia	561	13	8	72	80	..	46	23.5	7.3	6.8	376
Bosnia and Herzegovina	2,467	17	27	86	109	..	99	8.8	9.4	5.5	567
Botswana	1,503	52	7	96	115	..	99	18.0	8.1	2.9	1,018
Brazil	2,232	17	21	90	..	..	91	13.4	34.6	4.5	358
Bulgaria	4,594	10	29	140	27	105	100	13.8	17.6	5.1	565
Burkina Faso	..	..	1	21	11	..	61	11.5	14.4	4.0	..
Burundi	..	..	0	10	..	..	80	..	..	3.1	492
Cambodia	113	13	0	38	..	..	87	7.8	5.0	..	1,712
Cameroon	263	10	2	38	4	..	58	14.1	14.0	3.1	1,050
Canada	17,061	8	54	68	..	..	98	18.3	17.7	2.5	..
Central African Republic	..	..	0	4	..	..	19	10.1	12.9	..	293
Chad	..	..	0	24	..	..	24	..	..	..	..
Chile	3,319	9	21	97	35	43	100	23.6	10.2	..	592
China	2,455	6	24	56	9	..	97	2.3	3.7	2.5 <sup>b</sup>	1,310
Hong Kong SAR, China	5,866	13	60	174	1,435	1,435	100	7.1	0.8	3.6	980
Colombia	974	19	16	92	142	..	83	5.7	9.5	3.7	..
Congo, Dem. Rep.	95	11	0	15	..	6	50	..	..	7.4	3,628
Congo, Rep.	150	77	1	59	..	..	53	..	..	..	..
Costa Rica	1,866	10	33	43	120	132	69	4.1	2.3	1.8	497
Côte d'Ivoire	186	24	1	63	..	..	59	21.7	11.5	5.5	3,274
Croatia	3,878	14	42	136	229	302	100	19.2	18.4	4.6	892
Cuba	1,327	16	10	4	..	..	77	13.2	22.7	..	..
Czech Republic	6,464	6	20	136	136	197	100	29.3	17.7	3.8	812
Denmark	6,460	6	37	134	210	357	..	24.5	6.5	2.4	543
Dominican Republic	1,377	11	10	86	..	..	..	12.3	8.5	..	..
Ecuador	1,137	20	15	100	3	..	84	1.3	9.4	4.1	513
Egypt, Arab Rep.	1,425	11	12	67	27	44	95	3.0	4.1	3.7	855
El Salvador	953	2	18	123	578	510	95	11.5	7.1	4.8	2,275
Eritrea	..	..	1	3	17	29	80	..	..	3.0	117
Estonia	6,348	11	37	203	..	..	100	13.2	12.3	4.5	742
Ethiopia	42	9	1	5	2	5	10	0.9	2.4	1.3	233
Finland	16,350	4	27	144	..	..	100	18.5	13.4	2.3	708
France	7,931	6	57	95	242	301	99	29.3	35.2	2.0	695
Gabon	1,158	18	2	93	..	..	79	..	..	2.0	..
Gambia, The	..	..	3	84	..	..	85	2.4	6.3	..	466
Georgia	1,678	13	15	67	44	268	98	3.5	7.6	6.9	355
Germany	7,149	5	59	128	..	..	99	32.7	9.5	2.5	787
Ghana	268	22	1	63	6	61	73	3.8	4.3	..	1,780
Greece	5,723	8	53	118	..	..	100	25.4	23.6	3.7	813
Guatemala	543	14	10	123	..	206	76	7.8	7.3	..	..
Guinea	..	..	0	56	..	..	80	3.0	3.1	..	..
Guinea-Bissau	..	..	0	35	..	..	65	..	..	..	..
Haiti	23	53	1	36	..	..	..	..	..	..	..
Honduras	708	21	11	103	39	224	90	..	..	7.2	391

# Power and communications

# 5.11

	Electric power		Telephones <sup>a</sup>								
	Consumption per capita kWh	Transmission and distribution losses % of output	Access and use				Quality		Affordability and efficiency		
			per 100 people		International voice traffic minutes per person		Population covered by mobile cellular network %	\$ per month		Telecommunications revenue % of GDP	Mobile cellular and fixed-line subscribers per employee
			Fixed lines	Mobile cellular subscriptions	Fixed lines	Total		Residential fixed-line tariff	Mobile cellular prepaid tariff		
2008	2008	2009	2009	2008	2008	2008	2009	2009	2008	2008	
Hungary	3,989	10	31	118	120	159	99	24.0	15.4	3.8	1,127
India	566	23	3	45	..	..	61	3.1	1.4	1.9	..
Indonesia	591	10	15	69	..	..	90	5.6	2.8	..	..
Iran, Islamic Rep.	2,423	18	35	72	..	..	95	0.2	3.6	..	913
Iraq	1,164	7	4	63	0	..	72	..	..	..	1,098
Ireland	6,301	8	47	109	..	..	99	43.8	20.9	2.5	..
Israel	7,054	2	44	121	413	..	100	17.0	13.8	4.0	..
Italy	5,661	7	35	150	..	..	100	28.2	18.4	2.9	1,657
Jamaica	2,552	12	11	110	39	224	95	9.6	5.6	1.4	..
Japan	8,071	5	35	90	..	..	100	22.8	44.3	3.1	12
Jordan	2,087	14	8	101	67	258	99	9.4	5.7	6.3	1,132 <sup>b</sup>
Kazakhstan	4,689	9	24	94	47	52	94	1.9	8.8	2.9	253
Kenya	155	15	2	49	3	6	83	10.1	7.5	6.4	2,354
Korea, Dem. Rep.	820	16	5	0	..	..	0	..	..	..	..
Korea, Rep.	8,853	4	40	98	33	64	94	5.2	12.2	4.7	657
Kosovo	..	..	..	..	..	..	..	..	..	..	..
Kuwait	16,747	12	20	107	..	..	100	8.6	7.8	..	..
Kyrgyz Republic	1,449	31	9	84	..	..	24	1.3	2.9	4.8	311
Lao PDR	..	..	2	51	..	..	..	3.8	3.5	..	748
Latvia	3,087	15	29	99	..	..	99	11.2	7.3	4.0	697
Lebanon	2,267	16	18	36	..	190	100	10.3	15.8	..	..
Lesotho	..	..	2	32	..	..	55	12.8	12.9	..	..
Liberia	..	..	0	21	..	..	..	..	..	8.2	..
Libya	3,909	14	17	78	65	..	71	..	..	..	1,717
Lithuania	3,557	8	22	149	57	132	100	14.3	8.6	2.8	402
Macedonia, FYR	3,723	23	22	95	159	256	100	13.4	13.4	6.3	1,065
Madagascar	..	..	1	31	1	8	23	12.2	10.5	3.9	2,427
Malawi	..	..	1	16	..	..	93	3.3	10.8	3.6	..
Malaysia	3,490	3	16	111	..	..	92	4.8	4.9	..	..
Mali	..	..	1	29	2	13	22	9.4	10.0	4.3	2,059
Mauritania	..	..	2	66	4	57	62	11.9	9.9	6.9	2,842
Mauritius	..	..	30	85	100	215	99	5.6	4.5	3.6	..
Mexico	2,020	17	18	78	174	..	100	17.3	8.6	2.7	838
Moldova	1,287	53	32	77	155	457	98	2.9	8.2	10.1	294
Mongolia	1,473	11	7	84	5	..	82 <sup>b</sup>	0.7	3.6	6.7 <sup>b</sup>	341 <sup>b</sup>
Morocco	736	11	11	79	21	87	98	23.5	22.2	5.1	..
Mozambique	461	9	0	26	..	..	44	13.1	8.0	1.2	..
Myanmar	97	27	2	1	..	3	10	0.9	12.8	..	90
Namibia	1,797	18	7	56	..	..	95	13.0	12.8	..	..
Nepal	89	19	3	26	..	..	60 <sup>b</sup>	3.0	1.2	1.0	565
Netherlands	7,226	4	44	128	..	..	98	27.8	29.7	0.7	..
New Zealand	9,492	7	43	109	310	..	97	33.1	27.9	2.9	605
Nicaragua	457	24	4	56	39	..	..	4.7	14.0	..	..
Niger	..	..	0	17	..	..	45	12.9	15.3	..	..
Nigeria	126	9	1	47	1	26	83	5.7	10.4	3.4	..
Norway	24,867	7	39	111	..	..	..	29.4	8.7	1.2	..
Oman	4,894	13	11	140	30	431	96	12.8	6.2	2.5	967
Pakistan	436	21	2	61	..	..	90	2.9	1.0	2.7	50
Panama	1,646	14	16	164	61	118	83	12.0	5.0	3.2	380
Papua New Guinea	..	..	1	13	..	..	..	4.0	17.8	..	..
Paraguay	1,002	5	6	88	35	..	..	6.6	5.3	4.8	799
Peru	1,032	8	10	85	..	113	95	14.3	8.9	3.1	624
Philippines	588	13	4	81	..	..	99	15.9	6.2	..	..
Poland	3,732	8	25	117	..	32	99	17.4	9.6	3.9	396
Portugal	4,822	9	38	143	..	..	99	27.5	9.2	4.5	1,534
Puerto Rico	..	..	22	68	..	..	..	..	..	..	..
Qatar	15,682	7	20	175	..	..	100	9.1	8.6	1.7	597



	Electric power		Telephones <sup>a</sup>								
	Consumption per capita kWh	Transmission and distribution losses % of output	Access and use				Quality		Affordability and efficiency		
			per 100 people		International voice traffic minutes per person		Population covered by mobile cellular network %	\$ per month		Telecommunications revenue % of GDP	Mobile cellular and fixed-line subscribers per employee
			Fixed lines	Mobile cellular subscriptions	Fixed lines	Total		Residential fixed-line tariff	Mobile cellular prepaid tariff		
2008	2008	2009	2009	2008	2008	2008	2009	2009	2008	2008	
Romania	2,488	11	25	118	41	124	98	19.3	10.6	3.4	564
Russian Federation	6,435	11	32	162	..	..	95	5.4	5.8	2.6	..
Rwanda	..	..	0	24	11	8	92	8.1	6.6	3.0	1,952
Saudi Arabia	7,527	9	16	177	..	..	98	9.2	7.4	2.7	1,618
Senegal	158	20	2	55	27	101	85	24.0	8.3	9.8	1,859
Serbia	4,284	16	42	135	136 <sup>b</sup>	203 <sup>b</sup>	94 <sup>b</sup>	3.9	5.2	4.9 <sup>b</sup>	883 <sup>b</sup>
Sierra Leone	..	..	1	20	..	..	70	..	..	..	..
Singapore	8,185	5	37	133	1,531	..	100	7.7	3.9	2.6	..
Slovak Republic	5,268	3	19	101	123	228	100	22.7	24.9	3.3	665
Slovenia	6,920	5	51	103	96	220	100	19.6	15.8	3.3	644
Somalia	..	..	1	7	..	..	..	..	..	..	..
South Africa	4,759	9	9	94	..	..	100	21.6	12.6	7.3	..
Spain	6,315	5	44	111	..	..	99	28.5	31.6	4.1	855
Sri Lanka	409	11	17	69	34	..	95	4.7	0.9	..	919
Sudan	96	12	1	36	6	13	66	3.9	3.4	3.2	2,168
Swaziland	..	..	4	55	..	41	91	4.9	12.8	4.5	1,118
Sweden	14,869	7	55	123	..	..	98	26.2	14.8	2.7	894
Switzerland	8,307	6	60	120	..	..	100	31.5	33.7	3.3	601
Syrian Arab Republic	1,521	24	18	46	78	..	96	1.3	7.6	3.0	409
Tajikistan	2,072	18	4	70	..	..	..	0.9	2.9	..	..
Tanzania	84	19	0	40	0	1	65	12.2	10.2	..	..
Thailand	2,079	6	10	123	..	..	38	8.3	2.4	4.0	1,957
Timor-Leste	..	..	..	..	..	..	..	..	..	7.9	..
Togo	99	..	3	33	6	28	85	12.8	12.4	7.4	1,059
Trinidad and Tobago	5,789	2	24	147	..	443	100	19.5	6.5	2.6	..
Tunisia	1,298	12	12	93	79	..	100 <sup>b</sup>	2.8	7.2	4.3	1,004
Turkey	2,308	14	22	84	39	60	100	13.8	23.9	2.3	2,145
Turkmenistan	2,273	14	9	29	..	..	14	..	..	..	..
Uganda	..	..	1	29	7	..	100	9.9	7.9	..	..
Ukraine	3,534	12	28	120	0	..	100	2.8	4.3	5.7	..
United Arab Emirates	16,891	12	34	232	..	..	100	4.1	4.1	3.1	924
United Kingdom	6,061	7	54	130	..	..	100	24.1	16.5	4.3	..
United States	13,654	6	50	97	..	216	100	12.8	15.3	2.8	416
Uruguay	2,393	20	29	114	..	125	100	12.5	12.7	3.2	692
Uzbekistan	1,646	9	7	59	..	..	93	1.1	1.1	2.5	739
Venezuela, RB	3,074	28	24	99	..	79	90	9.0	28.6	3.5	1,500
Vietnam	799	10	35	101	..	..	70	2.1	3.2	..	..
West Bank and Gaza	..	..	9	30	..	..	95	..	..	..	880
Yemen, Rep.	220	23	5	16	..	..	68	0.7	4.8	..	..
Zambia	602	23	1	34	..	..	50	24.6	12.7	2.6	..
Zimbabwe	1,022	6	3	24	22	19	75	..	..	..	711
<b>World</b>	<b>2,875 w</b>	<b>8 w</b>	<b>18 w</b>	<b>69 w</b>	<b>.. w</b>	<b>.. w</b>	<b>80 w</b>	<b>10.1 m</b>	<b>8.7 m</b>	<b>3.1 w</b>	<b>755 m</b>
<b>Low income</b>	231	15	1	27	..	..	53	8.8	8.0	..	..
<b>Middle income</b>	1,670	11	15	67	..	..	80	5.7	7.6	3.2	665
Lower middle income	1,318	10	13	58	..	..	77	4.7	7.1	3.0	..
Upper middle income	3,001	13	22	101	..	..	94	10.0	8.8	3.3	576
<b>Low &amp; middle income</b>	1,505	11	13	61	..	..	76	6.6	7.9	3.2	624
East Asia & Pacific	1,972	6	20	62	9	..	93	4.0	3.7	2.6	..
Europe & Central Asia	4,052	12	25	119	..	..	91	3.9	7.6	2.8	462
Latin America & Carib.	1,907	16	18	90	..	..	92	10.6	8.8	3.8	586
Middle East & N. Africa	1,494	15	16	67	27	..	93	3.0	6.3	..	880
South Asia	503	22	3	45	..	..	61	3.0	1.2	2.0	565
Sub-Saharan Africa	531	11	1	37	..	..	56	11.5	10.4	..	..
<b>High income</b>	9,518	6	45	111	..	..	99	22.8	14.8	3.0	765
Euro area	6,970	5	48	123	..	..	99	27.6	19.6	2.6	765

a. Data are from the International Telecommunication Union's (ITU) World Telecommunication Report database. Please cite ITU for third-party use of these data. b. Data are for 2009.

## About the data

The quality of an economy's infrastructure, including power and communications, is an important element in investment decisions for both domestic and foreign investors. Government effort alone is not enough to meet the need for investments in modern infrastructure; public-private partnerships, especially those involving local providers and financiers, are critical for lowering costs and delivering value for money. In telecommunications, competition in the marketplace, along with sound regulation, is lowering costs, improving quality, and easing access to services around the globe.

An economy's production and consumption of electricity are basic indicators of its size and level of development. Although a few countries export electric power, most production is for domestic consumption. Expanding the supply of electricity to meet the growing demand of increasingly urbanized and industrialized economies without incurring unacceptable social, economic, and environmental costs is one of the great challenges facing developing countries.

Data on electric power production and consumption are collected from national energy agencies by the International Energy Agency (IEA) and adjusted by the IEA to meet international definitions (for data on electricity production, see table 3.10). Electricity consumption is equivalent to production less power plants' own use and transmission, distribution, and transformation losses less exports plus imports. It includes consumption by auxiliary stations, losses in transformers that are considered integral parts of those stations, and electricity produced by pumping installations. Where data are available, it covers electricity generated by primary sources of energy—coal, oil, gas, nuclear, hydro, geothermal, wind, tide and wave, and combustible renewables. Neither production nor consumption data capture the reliability of supplies, including breakdowns, load factors, and frequency of outages.

Over the past decade new financing and technology, along with privatization and liberalization, have spurred dramatic growth in telecommunications in many countries. With the rapid development of mobile telephony and the global expansion of the Internet, information and communication technologies are increasingly recognized as essential tools of development, contributing to global integration and enhancing public sector effectiveness, efficiency, and transparency. The table presents telecommunications indicators covering access and use, quality, and affordability and efficiency.

Access to telephone services rose on an unprecedented scale over the past 15 years. This growth was driven primarily by wireless technologies and liberalization of telecommunications markets, which have enabled faster and less costly network rollout. In 2002 the number of mobile phones in the world surpassed the number of fixed telephones. The International Telecommunication Union (ITU) estimates that there were 5 billion mobile subscriptions globally in 2010. No technology has ever spread faster around the world. Mobile communications have a particularly important impact in rural areas. The mobility, ease of use, flexible deployment, and relatively low and declining rollout costs of wireless technologies enable them to reach rural populations with low levels of income and literacy. The next billion mobile subscribers will consist mainly of the rural poor.

Access is the key to delivering telecommunications services to people. If the service is not affordable to most people, then goals of universal usage will not be met. Two indicators of telecommunications affordability are presented in the table: fixed-line telephone service tariff and prepaid mobile cellular service tariff. Telecommunications efficiency is measured by total telecommunications revenue divided by GDP and by mobile cellular and fixed-line telephone subscribers per employee.

Operators have traditionally been the main source of telecommunications data, so information on subscribers has been widely available for most countries. This gives a general idea of access, but a more precise measure is the penetration rate—the share of households with access to telecommunications. During the past few years more information on information and communication technology use has become available from household and business surveys. Also important are data on actual use of telecommunications equipment. Ideally, statistics on telecommunications (and other information and communications technologies) should be compiled for all three measures: subscription and possession, access, and use. The quality of data varies among reporting countries as a result of differences in regulations covering data provision and availability.

## Definitions

- **Electric power consumption per capita** measures the production of power plants and combined heat and power plants less transmission, distribution, and transformation losses and own use by heat and power plants divided by midyear population.
- **Electric power transmission and distribution losses** are losses in transmission between sources of supply and points of distribution and in distribution to consumers, including pilferage.
- **Fixed telephone lines** are telephone lines connecting a subscriber to the telephone exchange equipment.
- **Mobile cellular telephone subscriptions** are subscriptions to a public mobile telephone service using cellular technology, which provide access to the public switched telephone network. Post-paid and prepaid subscriptions are included.
- **International voice traffic** is the sum of international incoming and outgoing telephone traffic (in minutes) divided by total population.
- **Population covered by mobile cellular network** is the percentage of people that live in areas served by a mobile cellular signal regardless of whether they use it.
- **Residential fixed-line tariff** is the monthly subscription charge plus the cost of 30 three-minute local calls (15 peak and 15 off-peak).
- **Mobile cellular prepaid tariff** is based on the Organisation for Economic Co-operation and Development's low-user definition, which includes the cost of monthly mobile use for 25 outgoing calls per month spread over the same mobile network, other mobile networks, and mobile to fixed-line calls and during peak, off-peak, and weekend times as well as 30 text messages per month.
- **Telecommunications revenue** is the revenue from the provision of telecommunications services such as fixed-line, mobile, and data divided by GDP.
- **Mobile cellular and fixed-line subscribers per employee** are telephone subscribers (fixed-line plus mobile) divided by the total number of telecommunications employees.

## Data sources

Data on electricity consumption and losses are from the IEA's *Energy Statistics and Balances of Non-OECD Countries 2010*, the IEA's *Energy Statistics of OECD Countries 2010*, and the United Nations Statistics Division's *Energy Statistics Yearbook*. Data on telecommunications are from the ITU's World Telecommunication Development Report database and TeleGeography.



	Daily newspapers per 1,000 people 2000-05 <sup>b</sup>	Households with television <sup>a</sup> % 2008	Personal computers and the Internet						Information and communications technology trade		
			Access and use		Quality		Affordability	Application	Exports	Imports	Services Exports
			per 100 people		Fixed broadband Internet subscribers <sup>a</sup>	International Internet bandwidth <sup>a</sup>	Fixed broadband Internet access tariff <sup>a</sup>	Secure Internet servers	% of total goods exports	% of total goods imports	% of total service exports
			Personal computers <sup>a</sup>	Internet users <sup>a</sup>	per 100 people	bits per second per capita	\$ per month	per million people	2009	2009	2009
							December 2010				
Afghanistan	..	..	0.4	3.4	0.00	550	..	1	..	0.4	..
Albania	24	..	4.6	41.2	2.85	1,902	22	9	1.1	5.4	5.7
Algeria	..	..	..	13.5	2.34	..	15	1	0.0	4.9	..
Angola	2	36	0.6	3.3	0.11	17	157	3	..	..	5.4
Argentina	36	..	..	30.4	8.80	2,320	31	26	0.4	11.2	12.2
Armenia	8	97	..	6.8	0.19	..	31	17	1.5	5.0	16.1
Australia	155	..	..	72.0	24.69	5,457	26	1,761	1.4	11.4	4.9
Austria	311	97	..	73.5	22.45	20,323	36	857	5.5	7.0	6.5
Azerbaijan	16	99	8.0	42.0	1.14	1,399	49	5	0.0	8.5	4.7
Bangladesh	..	30	2.3	0.4	0.03	4	50	0	0.6	5.7	11.5
Belarus	81	95	..	45.9	11.30	2,277	7	9	0.7	2.4	9.0
Belgium	165	99	..	75.2	29.05	24,945	29	490	2.8	4.3	9.8
Benin	0	25	0.7	2.2	0.02	35	118	0	..	..	0.7
Bolivia	..	69	..	11.2	2.86	225	35	8	0.0	4.6	12.6
Bosnia and Herzegovina	..	97	6.4	37.7	7.76	1,195	19	16	0.6	3.7	9.2
Botswana	41	..	6.2	6.2	0.77	220	62	9	0.4	5.5	3.3
Brazil	36	97	..	39.2	7.51	2,108	28	41	1.8	11.4	2.0
Bulgaria	79	98	11.0	44.8	12.91	37,657	15	73	3.6	6.4	5.6
Burkina Faso	..	18	0.6	1.1	0.04	15	91	0	0.0	2.0	11.6
Burundi	..	..	0.9	0.8	0.00	2	..	0	1.9	10.9	0.0
Cambodia	..	..	0.4	0.5	0.20	19	89	2	0.1	4.0	6.5
Cameroon	..	32	..	3.8	0.00	23	89	1	..	..	6.6
Canada	175	99	94.3	77.7	29.55	16,193	25	1,237	4.4	9.6	11.2
Central African Republic	..	..	..	0.5	0.00	..	1,329	0	..	..	..
Chad	..	..	..	1.7	0.00	1	..	..	..	..	..
Chile	51	100	..	34.0	9.81	4,076	48	53	0.2	6.8	2.8
China	74	..	5.7	28.8	7.78	651	18	2	29.5	24.0	6.0
Hong Kong SAR, China	222	99	69.3	61.4	29.42	560,989	13	455	44.6	43.6	1.7
Colombia	23	88	11.2	45.5	4.64	2,940	35	14	0.3	9.9	7.4
Congo, Dem. Rep.	..	14	..	0.6	0.00	1	..	0	..	..	..
Congo, Rep.	..	..	..	6.7	0.00	0	..	1	..	..	..
Costa Rica	65	96	..	34.5	6.01	4,333	6	108	18.7	17.9	21.9
Côte d'Ivoire	..	..	..	4.6	0.05	40	44	1	0.4	4.5	0.0
Croatia	..	97	..	50.4	15.45	15,892	21	168	5.1	6.3	3.6
Cuba	65	88	5.6	14.3	0.02	27	1,630	0	..	..	..
Czech Republic	183	..	..	63.7	19.26	7,075	43	318	15.6	16.7	8.9
Denmark	353	98	54.9	85.9	37.46	34,506	29	1,866	4.8	8.9	..
Dominican Republic	39	77	..	26.8	3.93	1,387	26	15	3.6	5.4	4.1
Ecuador	99	83	13.0	15.1	1.77	484	40	15	0.2	7.5	4.9
Egypt, Arab Rep.	..	97	3.9	20.0	1.30	1,172	8	2	1.8	4.4	4.7
El Salvador	38	83	..	14.4	2.42	243	20	13	2.9	5.5	16.9
Eritrea	..	..	1.0	4.9	0.00	6	..	..	..	..	..
Estonia	191	98	25.5	72.3	25.25	12,680	28	434	5.8	6.5	8.6
Ethiopia	5	..	0.7	0.5	0.00	3	487	0	0.7	9.5	5.3
Finland	431	93	..	83.9	29.33	17,221	39	1,246	12.6	11.3	25.4
France	164	97	65.2	71.3	30.98	29,356	36	306	5.6	7.8	4.3
Gabon	..	..	3.4	6.7	0.20	141	..	8	..	..	..
Gambia, The	..	..	3.5	7.6	0.02	38	307	3	0.4	4.0	17.8
Georgia	4	..	5.5	30.5	3.52	752	42	13	0.4	7.8	2.6
Germany	267	95	65.6	79.5	30.53	25,654	43	874	6.8	9.3	8.4
Ghana	..	43	1.1	5.4	0.11	97	44	2	0.1	7.3	0.0
Greece	..	100	9.4	44.1	16.99	4,537	24	124	3.0	5.9	2.2
Guatemala	..	69	..	16.3	0.78	186	34	10	0.7	6.3	14.1
Guinea	..	..	..	0.9	0.00	0	503	0	0.0	5.8	21.6
Guinea-Bissau	..	..	..	2.3	0.00	1	..	1	..	..	0.2
Haiti	..	25	5.1	10.0	0.00	16	..	1	..	..	2.5
Honduras	..	68	2.5	9.8	0.00	241	..	8	0.2	6.6	26.8

	Daily newspapers per 1,000 people 2000-05 <sup>b</sup>	Households with television <sup>a</sup> % 2008	Personal computers and the Internet						Information and communications technology trade			
			Access and use		Quality		Affordability	Application	Goods Exports % of total goods exports 2009	Imports % of total goods imports 2009	Services Exports % of total service exports 2009	
			per 100 people	per 100 people	Fixed broadband Internet subscribers <sup>a</sup> per 100 people	International Internet bandwidth <sup>a</sup> bits per second per capita	Fixed broadband Internet access tariff <sup>a</sup> \$ per month	Secure Internet servers per million people December 2010				
			Personal computers <sup>a</sup> 2008	Internet users <sup>a</sup> 2009	2009	2009	2009	2009	2009	2009	2009	
Hungary	217	99	25.6	61.6	18.76	5,987	30	166	24.6	18.8	8.8	
India	71	55	3.3	5.3	0.67	32	5	2	3.8	8.8	53.1	
Indonesia	..	69	2.0	8.7	0.74	110	21	2	5.7	9.7	8.4	
Iran, Islamic Rep.	..	..	10.6	38.3	0.55	151	30	1	..	..	..	
Iraq	..	..	..	1.0	0.00	3	..	0	..	..	0.6	
Ireland	182	98	58.2	68.4	21.94	15,261	36	1,005	11.5	14.0	37.1	
Israel	..	90	..	49.7	24.86	2,003	7	399	19.2	11.0	36.1	
Italy	137	94	..	48.5	19.59	12,989	29	154	3.0	6.7	2.4	
Jamaica	..	..	..	58.6	4.16	741	22	39	0.8	3.9	7.1	
Japan	551	99	..	77.7	24.86	5,770	37	650	14.7	12.0	1.2	
Jordan	..	97	7.6	29.3	3.42	1,811	30	20	3.1	5.4	..	
Kazakhstan	..	..	..	33.4	8.61	1,342	17	5	0.1	4.3	3.0	
Kenya	..	..	..	10.0	0.02	477	40	3	1.3	6.2	14.5	
Korea, Dem. Rep.	..	..	..	0.0	0.00	0	..	0	..	..	..	
Korea, Rep.	..	..	57.6	80.9	33.54	6,065	25	1,167	22.6	14.6	1.5	
Kosovo	..	..	..	..	..	..	..	..	..	..	..	
Kuwait	..	..	..	39.4	1.61	871	19	133	0.4	7.2	60.9	
Kyrgyz Republic	1	99	..	41.2	0.10	112	48	1	0.3	2.6	1.2	
Lao PDR	3	..	..	4.7	0.13	142	194	1	..	..	8.5	
Latvia	154	99	32.7	66.7	11.48	3,537	25	173	6.1	6.2	5.9	
Lebanon	54	..	10.2	23.7	5.26	223	23	28	3.0	3.5	2.9	
Lesotho	..	..	..	3.7	0.02	5	50	0	..	..	..	
Liberia	..	9	..	0.5	..	..	..	1	..	..	..	
Libya	..	..	..	5.5	0.16	50	..	1	..	..	2.6	
Lithuania	108	98	24.2	58.8	18.98	14,300	15	176	2.9	4.3	3.8	
Macedonia, FYR	89	99	36.8	51.8	10.59	17	14	24	0.5	5.5	14.3	
Madagascar	..	..	..	1.6	0.02	12	102	0	1.6	3.9	..	
Malawi	..	9	..	4.7	0.02	5	493	0	0.3	5.3	..	
Malaysia	109	97	23.1	57.6	6.09	5,097	19	42	38.1	32.0	7.0	
Mali	..	22	0.8	1.9	0.07	51	55	1	0.2	3.6	23.2	
Mauritania	..	..	4.5	2.3	0.27	76	58	2	..	1.6	..	
Mauritius	77	96	17.6	22.7	7.25	364	17	87	0.6	4.2	3.7	
Mexico	93	93	14.4	26.5	9.24	312	16	22	22.9	20.9	1.3	
Moldova	..	..	11.4	35.9	5.19	6,660	13	13	7.5	5.1	20.2	
Mongolia	20	88	24.6	13.1	0.91	2,920	8	11	0.1	5.1	3.0	
Morocco	12	..	5.7	32.2	1.49	1,600	17	3	4.6	6.0	7.5	
Mozambique	3	..	..	2.7	0.05	56	80	1	0.4	3.9	5.8	
Myanmar	..	..	0.9	0.2	0.03	20	28	0	..	..	..	
Namibia	28	37	23.9	5.9	0.02	27	47	14	0.6	4.9	2.4	
Nepal	..	33	..	2.1	0.26	5	22	2	0.2	5.6	..	
Netherlands	307	98	91.2	90.0	35.70	78,156	36	2,276	12.6	13.5	11.3	
New Zealand	182	99	52.6	83.4	22.73	4,544	29	1,489	1.8	9.4	4.8	
Nicaragua	..	67	..	3.5	0.82	144	34	8	0.4	4.4	7.2	
Niger	0	10	..	0.8	0.01	11	266	0	0.7	3.6	11.6	
Nigeria	..	39	..	28.4	0.05	5	105	1	0.0	7.2	1.6	
Norway	516	95	62.9	91.8	37.19	26,904	51	1,653	2.4	8.8	8.6	
Oman	..	88	16.9	43.5	1.44	1,365	31	27	1.5	3.2	..	
Pakistan	50	58	..	12.0	0.37	43	15	1	0.3	3.7	12.0	
Panama	65	83	6.3	27.8	5.82	15,964	17	127	0.0	7.3	4.8	
Papua New Guinea	9	..	..	1.9	0.00	2	142	3	..	..	1.2	
Paraguay	..	85	..	15.8	2.22	662	22	7	0.2	21.6	1.4	
Peru	..	73	..	27.7	2.79	2,646	36	14	0.1	8.3	3.5	
Philippines	79	71	7.2	6.5	1.87	113	22	7	54.2	34.5	16.2	
Poland	114	98	16.9	58.8	13.54	2,748	14	211	7.5	8.9	5.3	
Portugal	..	99	18.2	48.6	17.54	4,790	29	174	4.6	6.6	4.5	
Puerto Rico	..	..	..	25.2	10.78	1,764	..	84	..	..	..	
Qatar	..	..	15.7	28.3	9.22	2,044	55	99	0.0	8.2	..	



	Daily newspapers per 1,000 people 2000-05 <sup>b</sup>	Households with television <sup>a</sup> % 2008	Personal computers and the Internet						Information and communications technology trade		
			Access and use		Quality		Affordability	Application	Exports % of total goods exports 2009	Imports % of total goods imports 2009	Services Exports % of total service exports 2009
			Personal computers <sup>a</sup>	Internet users <sup>a</sup>	Fixed broadband Internet subscribers <sup>a</sup>	International Internet bandwidth <sup>a</sup> bits per second per capita	Fixed broadband Internet access tariff <sup>a</sup> \$ per month	Secure Internet servers per million people December 2010			
			per 100 people 2008	per 100 people 2009	per 100 people 2009	per 100 people 2009	per 100 people 2009	per million people December 2010			
Romania	70	97	19.2	36.2	13.05	18,271	7	40	8.4	9.3	18.9
Russian Federation	92	..	13.3	42.1	9.09	573	13	20	0.6	8.4	6.3
Rwanda	..	3	0.3	4.5	0.08	35	88	1	1.4	12.3	0.1
Saudi Arabia	..	..	69.3	38.6	5.66	1,731	27	18	0.3	4.6	..
Senegal	9	46	..	7.4	0.47	372	40	1	0.4	4.5	15.6
Serbia	..	..	25.8	56.1	8.07	12,660	14	20	2.2	5.4	8.0
Sierra Leone	..	10	..	0.3	0.00	..	..	0	..	..	2.2
Singapore	361	..	74.3	73.3	22.52	22,783	17	523	35.4	28.2	2.9
Slovak Republic	126	99	58.1	75.0	14.36	7,567	29	128	17.5	14.7	8.0
Slovenia	173	99	42.5	63.6	22.79	6,720	22	301	3.8	5.6	7.2
Somalia	..	..	..	1.2	0.00	..	..	0	..	..	..
South Africa	30	69	..	9.0	0.98	70	27	63	2.0	9.8	3.9
Spain	144	100	39.3	61.2	21.05	11,008	29	233	3.0	8.4	6.6
Sri Lanka	26	76	..	8.7	0.84	190	4	4	1.0	3.6	17.2
Sudan	..	..	10.7	9.9	0.11	322	23	0	0.0	4.7	1.2
Swaziland	24	35	3.7	7.6	0.13	35	858	10	0.1	3.6	11.3
Sweden	481	94	88.1	90.3	40.85	49,828	35	1,266	10.0	11.5	14.8
Switzerland	420	92	96.2	70.9	33.91	29,413	33	1,876	3.3	6.6	..
Syrian Arab Republic	..	..	9.0	18.7	0.16	261	31	0	0.2	1.4	4.4
Tajikistan	..	..	..	10.1	0.05	37	364	0	..	..	19.6
Tanzania	2	9	..	1.5	0.02	2	64	0	0.6	6.9	2.7
Thailand	..	92	..	25.8	1.47	818	19	13	19.8	18.1	..
Timor-Leste	..	..	..	..	..	..	..	1	..	..	..
Togo	2	..	..	5.4	0.04	23	186	2	0.1	4.2	18.6
Trinidad and Tobago	149	..	13.2	36.2	7.84	7,916	13	72	0.2	4.0	..
Tunisia	23	..	9.7	33.5	3.57	2,699	12	14	6.0	7.5	4.9
Turkey	..	98	6.1	35.3	8.54	4,323	18	95	2.3	5.9	1.9
Turkmenistan	9	..	..	1.6	0.05	48	..	0	..	..	..
Uganda	..	7	1.7	9.8	0.02	36	194	1	4.9	9.3	6.1
Ukraine	131	97	4.5	33.3	4.15	206	7	13	1.3	2.6	5.6
United Arab Emirates	..	94	33.1	82.2	15.01	13,233	41	243	2.0	5.3	..
United Kingdom	290	99	80.2	83.2	29.68	39,664	24	1,396	8.6	10.5	7.9
United States	193	..	80.5	78.1	27.78	11,279	20	1,443	13.0	15.1	4.6
Uruguay	..	91	..	55.5	7.33	903	18	45	0.1	7.0	9.5
Uzbekistan	..	..	3.1	16.9	0.32	46	199	0	..	..	..
Venezuela, RB	93	95	..	31.2	6.56	628	31	7	0.1	9.3	7.4
Vietnam	..	..	9.6	27.5	3.04	581	15	3	3.8	7.1	..
West Bank and Gaza	10	95	..	8.8	5.76	313	..	4	..	..	5.4
Yemen, Rep.	4	..	2.8	1.8	0.00	28	220	0	0.1	2.5	8.5
Zambia	5	24	..	6.3	0.06	8	51	1	0.1	3.7	8.0
Zimbabwe	..	31	7.6	11.4	0.14	17	..	1	0.6	4.8	..
<b>World</b>	<b>105 w</b>	<b>.. m</b>	<b>15.3 w</b>	<b>27.1 w</b>	<b>7.30 w</b>	<b>3,526 w</b>	<b>30 m</b>	<b>156 w</b>	<b>13.0 w</b>	<b>13.9 w</b>	<b>9.1 w</b>
<b>Low income</b>	..	..	..	2.7	0.04	7	90	1	0.6	..	6.5
<b>Middle income</b>	68	..	5.5	20.9	4.07	348	22	9	16.3	16.6	13.3
Lower middle income	71	..	4.5	17.2	3.37	151	30	3	21.3	18.4	19.9
Upper middle income	..	93	..	34.6	6.69	1,120	19	32	12.2	15.1	5.4
<b>Low &amp; middle income</b>	59	..	5.1	18.1	3.53	299	31	8	16.2	16.4	13.1
East Asia & Pacific	74	..	5.6	24.1	5.81	742	21	3	28.9	24.4	6.8
Europe & Central Asia	..	..	9.8	36.4	7.66	1,087	17	33	1.5	6.6	6.1
Latin America & Carib.	64	85	..	31.5	6.62	1,408	30	27	11.6	15.2	5.5
Middle East & N. Africa	..	..	5.7	21.5	1.25	323	23	2	..	..	..
South Asia	68	55	3.3	5.5	0.55	31	15	2	3.0	7.4	49.9
Sub-Saharan Africa	..	..	..	8.8	0.13	31	88	5	1.0	7.8	4.5
<b>High income</b>	255	98	65.4	72.3	25.78	19,521	29	906	12.2	13.3	8.1
Euro area	201	98	56.0	67.3	25.90	32,455	29	545	6.6	8.6	9.8

a. Data are from the International Telecommunication Union's (ITU) World Telecommunication Development Report database. Please cite the ITU for third party use of these data. b. Data are for the most recent year available.

**About the data**

The digital and information revolution has changed the way the world learns, communicates, does business, and treats illnesses. New information and communications technologies (ICT) offer vast opportunities for progress in all walks of life in all countries—opportunities for economic growth, improved health, better service delivery, learning through distance education, and social and cultural advances.

Comparable statistics on access, use, quality, and affordability of ICT are needed to formulate growth-enabling policies for the sector and to monitor and evaluate the sector's impact on development. Although basic access data are available for many countries, in most developing countries little is known about who uses ICT; what they are used for (school, work, business, research, government); and how they affect people and businesses. The global Partnership on Measuring ICT for Development is helping to set standards, harmonize information and communications technology statistics, and build statistical capacity in developing countries. For more information see [www.itu.int/ITU-D/ict/partnership/](http://www.itu.int/ITU-D/ict/partnership/).

Data on daily newspapers in circulation are from United Nations Educational, Scientific, and Cultural Organization (UNESCO) Institute for Statistics surveys on circulation, online newspapers, journalists, community newspapers, and news agencies.

Estimates of households with television are derived from household surveys. Some countries report only the number of households with a color television set, and so the true number may be higher than reported.

Estimates of personal computers are from an annual International Telecommunication Union (ITU) questionnaire sent to member states, supplemented by other sources. Many governments lack the capacity to survey all places where personal computers are used (homes, schools, businesses, government offices, libraries, Internet cafes) so most estimates are derived from the number of personal computers sold each year. Annual shipment data can also be multiplied by an estimated average useful lifespan before replacement to approximate the number of personal computers. There is no precise method for determining replacement rates, but in general personal computers are replaced every three to five years.

Data on Internet users and related indicators (broadband and bandwidth) are based on nationally reported data to the ITU. Some countries derive these data from surveys, but since survey questions and definitions differ, the estimates may not be strictly comparable. Countries without surveys generally derive their estimates by multiplying subscriber

counts reported by Internet service providers by a multiplier. This method may undercount actual users, particularly in developing countries, where many commercial subscribers rent out computers connected to the Internet or prepaid cards are used to access the Internet.

Broadband refers to technologies that provide Internet speeds of at least 256 kilobits a second of upstream and downstream capacity and includes digital subscriber lines, cable modems, satellite broadband Internet, fiber-to-home Internet access, ethernet local access networks, and wireless area networks. Bandwidth refers to the range of frequencies available for signals. The higher the bandwidth, the more information that can be transmitted at one time. Reporting countries may have different definitions of broadband, so data are not strictly comparable.

The number of secure Internet servers, from the Netcraft Secure Server Survey, indicates how many companies conduct encrypted transactions over the Internet. The survey examines the use of encrypted transactions through extensive automated exploration, tallying the number of Web sites using a secure socket layer (SSL). The country of origin of more than a third of the 1.5 million distinct valid third-party certificates is unknown. Some countries, such as the Republic of Korea, use application layers to establish the encryption channel, which is SSL equivalent; these data are reported in the table.

Information and communication technology goods exports and imports are defined by the Working Party on Indicators for the Information Society and are reported in the Organisation for Economic Co-operation and Development's *Guide to Measuring the Information Society* (2005). Information and communication technology service exports data are based on the International Monetary Fund's (IMF) *Balance of Payments Statistics Yearbook* classification.

**Definitions**

- **Daily newspapers** are newspapers issued at least four times a week that report mainly on events in the 24-hour period before going to press. The indicator is average circulation (or copies printed) per 1,000 people.
- **Households with television** are the percentage of households with a television set.
- **Personal computers** are self-contained computers designed for use by a single individual, including laptops and notebooks and excluding terminals connected to mainframe and minicomputers intended primarily for shared use and devices such as smart phones and personal digital assistants.
- **Internet users** are people with access to the worldwide network.
- **Fixed broadband Internet subscribers** are the number of broadband subscribers with a digital subscriber line, cable modem, or other high-speed technology.
- **International Internet bandwidth** is the contracted capacity of international connections between countries for transmitting Internet traffic.
- **Fixed broadband Internet access tariff** is the lowest sampled cost per 100 kilobits a second per month and are calculated from low- and high-speed monthly service charges. Monthly charges do not include installation fees or modem rentals.
- **Secure Internet servers** are servers using encryption technology in Internet transactions.
- **Information and communication technology goods exports and imports** include telecommunications, audio and video, computer and related equipment; electronic components; and other information and communication technology goods. Software is excluded.
- **Information and communication technology service exports** include computer and communications services (telecommunications and postal and courier services) and information services (computer data and news-related service transactions).

**Data sources**

Data on newspapers are compiled by the UNESCO Institute for Statistics. Data on televisions, personal computers, Internet users, Internet broadband users and cost, and Internet bandwidth are from the ITU's World Telecommunication Development Report database and TeleGeography. Data on secure Internet servers are from Netcraft ([www.netcraft.com/](http://www.netcraft.com/)) and official government sources. Data on information and communication technology goods trade are from the United Nations Statistics Division's Commodity Trade (Comtrade) database. Data on information and communication technology service exports are from the IMF's Balance of Payments Statistics database.





	Researchers in R&D	Technicians in R&D	Scientific and technical journal articles	Expenditures for R&D	High-technology exports		Royalty and license fees		Patent applications filed <sup>a,b</sup>		Trademark applications filed <sup>a,c</sup>
	per million people 2000-08 <sup>d</sup>	per million people 2000-08 <sup>d</sup>	2007	% of GDP 2000-08 <sup>d</sup>	\$ millions 2009	% of manu- factured exports 2009	\$ millions Receipts Payments 2009 2009		Residents 2009	Non- residents 2009	Total 2009
Afghanistan	..	..	4	..	..	..	..	..	..	..	..
Albania	..	..	12	..	10	1	6	14	..	..	3,072
Algeria	170	35	481	0.07	4	1	..	..	84	765	2,144
Angola	..	..	3	..	..	..	0	0	..	..	..
Argentina	980	196	3,362	0.51	1,548	9	106	1,331	..	..	73,717
Armenia	..	..	175	0.21	7	4	0	0	116	11	4,398
Australia	4,224	..	17,831	2.06	3,550	13	703	3,026	2,821	23,525	8,611
Austria	4,123	1,960	4,825	2.66	12,097	11	752	1,280	2,263	292	11,699
Azerbaijan	..	..	97	0.17	6	1	2	19	222	5	3,221
Bangladesh	..	..	235	..	97	1	0	11	29	270	8,232
Belarus	..	..	412	0.96	315	3	9	73	1,510	220	5,403
Belgium	3,435	1,407	7,071	1.92	29,676	10	2,376	2,144	669	148	25,566 <sup>e</sup>
Benin	..	..	43	..	0	0	0	3	..	..	..
Bolivia	120	..	51	0.28	15	5	3	19	..	..	6,081
Bosnia and Herzegovina	197	71	54	0.03	76	3	12	6	59	12	3,786
Botswana	..	..	62	0.50	24	1	1	12	..	..	712
Brazil	694	..	11,885	1.10	8,316	14	434	2,512	4,023	17,802	119,841
Bulgaria	1,499	476	801	0.49	714	8	9	117	242	24	7,904
Burkina Faso	..	..	43	0.11	0	1	0	0	..	..	..
Burundi	..	..	3	..	2	12	0	0	..	..	..
Cambodia	17	13	26	0.05	4	0	0	8	..	..	2,866
Cameroon	..	..	154	..	3	3	0	0	..	..	..
Canada	4,260	1,690	27,800	1.84	25,080	18	3,221	7,716	5,067	32,410	40,956
Central African Republic	..	..	4	..	..	..	..	..	..	..	..
Chad	..	..	3	..	..	..	..	..	..	..	..
Chile	833	302	1,740	0.68	266	4	59	461	531	3,421	33,026
China	1,071	..	56,806	1.44	348,295	31	429	11,065	229,096	85,477	808,546
Hong Kong SAR, China	2,650	459	..	0.81	1,849	31	380	1,610	149	11,708	24,754
Colombia	126	..	489	0.16	466	5	48	258	121	1,860	23,952
Congo, Dem. Rep.	..	..	7	0.48	..	..	..	..	..	..	..
Congo, Rep.	34	37	21	..	..	..	..	..	..	..	..
Costa Rica	122	..	100	0.32	1,682	41	1	65	..	..	11,754
Côte d'Ivoire	66	..	37	..	187	12	0	0	..	..	..
Croatia	1,514	605	1,102	0.90	756	11	32	213	250	68	5,990
Cuba	..	..	244	0.49	248	35	..	..	69	189	1,450
Czech Republic	2,886	1,466	3,689	1.47	15,200	16	96	726	789	92	11,047
Denmark	5,670	2,166	5,236	2.72	10,743	18	..	..	1,518	131	8,329
Dominican Republic	..	..	8	..	177	5	0	53	..	..	5,208
Ecuador	69	20	66	0.15	51	4	0	47	..	794	12,605
Egypt, Arab Rep.	617	378	1,934	0.23	95	1	0	285	490	1,452	2,828
El Salvador	49	..	5	0.09	136	5	0	26	..	..	..
Eritrea	..	..	8	..	..	..	..	..	..	..	..
Estonia	2,966	617	502	1.29	656	10	24	46	76	20	3,230
Ethiopia	21	12	149	0.17	7	4	2	3	12	25	719
Finland	7,707	..	4,989	3.46	8,599	18	1,738	1,282	1,806	127	5,564
France	3,496	1,880	30,740	2.02	83,827	23	9,397	5,274	14,295	1,809	84,213
Gabon	..	..	16	..	71	32	..	..	..	..	..
Gambia, The	..	..	17	..	0	1	0	0	..	..	327
Georgia	..	..	129	0.18	21	3	7	9	250	218	4,382
Germany	3,532	1,301	44,408	2.54	142,449	16	13,785	14,104	47,859	11,724	74,676
Ghana	..	..	109	..	6	1	0	0	..	..	677
Greece	1,873	764	4,980	0.57	1,212	11	48	654	698	22	2,458
Guatemala	29	37	22	0.06	141	5	13	86	7	322	11,003
Guinea	..	..	4	..	0	0	0	0	..	..	..
Guinea-Bissau	..	..	10	..	..	..	..	0	..	..	6
Haiti	..	..	4	..	..	..	3	0	..	..	..
Honduras	..	..	6	0.04	7	1	0	18	..	..	7,403

# Science and technology

# 5.13

	Researchers in R&D	Technicians in R&D	Scientific and technical journal articles	Expenditures for R&D	High-technology exports		Royalty and license fees		Patent applications filed <sup>a,b</sup>		Trademark applications filed <sup>a,c</sup>
	per million people 2000-08 <sup>d</sup>	per million people 2000-08 <sup>d</sup>	2007	% of GDP 2000-08 <sup>d</sup>	\$ millions 2009	% of manufactured exports 2009	\$ millions Receipts Payments 2009 2009		Residents 2009	Non-residents 2009	Total 2009
Hungary	1,733	512	2,452	0.96	17,444	26	862	1,369	757	30	6,671
India	137	94	18,194	0.80	10,143	9	193	1,860	5,314	23,626	130,172
Indonesia	205	..	198	0.05	5,940	13	38	1,530	282	4,324	52,649
Iran, Islamic Rep.	706	..	4,366	0.67	375	6	..	..	5,970	557	3,013
Iraq	..	..	73	..	0	0	1,312	396	..	..	..
Ireland	3,090	684	2,487	1.42	24,738	25	1,697	34,873	908	53	4,091
Israel	..	..	6,623	4.86	10,268	23	761	897	1,387	5,387	10,742
Italy	1,616	..	26,544	1.18	25,988	8	1,115	1,899	8,814	903	40,702
Jamaica	..	..	49	0.06	4	1	9	45	21	132	1,708
Japan	5,573	589	52,896	3.44	99,210	20	21,698	16,835	295,315	53,281	110,622
Jordan	..	..	344	0.34	49	1	0	0	59	507	9,145
Kazakhstan	..	..	106	0.22	1,802	30	0	64	11	162	3,500
Kenya	..	..	262	..	78	5	19	21	38	33	1,430
Korea, Dem. Rep.	..	..	10	..	..	..	..	..	7,956	55	1,351
Korea, Rep.	4,627	720	18,467	3.21	103,400	32	3,185	7,049	127,316	36,207	134,211
Kosovo	..	..	..	..	..	..	..	..	..	..	..
Kuwait	166	33	242	0.09	6	0	0	0	..	..	..
Kyrgyz Republic	..	..	16	0.23	11	5	4	12	135	3	2,580
Lao PDR	16	..	12	0.04	..	..	0	0	..	..	..
Latvia	1,935	543	147	0.61	363	8	7	26	114	37	3,566
Lebanon	..	..	238	..	138	7	0	1	..	..	..
Lesotho	10	11	3	0.06	..	..	18	..	..	..	634
Liberia	..	..	0	..	..	..	..	..	..	..	489
Libya	..	..	30	..	..	..	0	0	..	..	..
Lithuania	2,547	553	456	0.80	931	10	0	29	91	16	4,465
Macedonia, FYR	521	75	58	0.21	42	3	6	20	34	406	3,788
Madagascar	50	15	48	0.14	10	2	..	..	1	43	1,605
Malawi	..	..	63	..	3	3	..	..	..	..	804
Malaysia	372	44	808	0.64	51,560	47	266	1,133	818	4,485	24,070
Mali	42	13	19	..	3	3	0	2	..	..	..
Mauritania	..	..	3	..	..	..	..	..	..	..	..
Mauritius	..	..	18	0.37	13	1	0	5	2	22	24
Mexico	353	186	4,223	0.37	37,354	22	656	0	822	13,459	75,250
Moldova	726	117	70	0.55	10	5	4	11	134	5	5,046
Mongolia	..	..	21	0.23	7	8	0	1	103	110	1,399
Morocco	647	48	378	0.64	646	7	2	49	177	834	3,774
Mozambique	16	35	24	0.53	24	10	0	4	18	22	870
Myanmar	18	137	13	0.16	..	..	..	..	..	..	..
Namibia	..	..	14	..	21	1	0	6	..	..	858
Nepal	59	137	72	..	2	0	..	..	..	..	1,132
Netherlands	3,089	1,764	14,210	1.63	58,450	24	5,473	4,073	2,575	279	..
New Zealand	4,365	894	3,173	1.21	504	10	159	529	1,555	4,803	16,190
Nicaragua	..	..	11	0.05	7	6	0	0	..	..	5,975
Niger	8	10	22	..	2	8	0	0	..	..	..
Nigeria	..	..	427	..	46	3	0	208	..	..	..
Norway	5,468	..	4,079	1.62	4,694	20	637	553	1,140	4,280	13,607
Oman	..	..	129	..	7	0	..	..	..	..	2,103
Pakistan	152	64	741	0.67	227	2	6	90	170	1,375	14,872
Panama	144	106	78	0.21	0	0	0	25	..	371	8,553
Papua New Guinea	..	..	21	..	..	..	..	..	1	45	612
Paraguay	71	..	12	0.09	38	11	295	2	..	..	..
Peru	..	..	153	0.15	87	3	2	147	37	657	24,825
Philippines	81	10	195	0.12	21,531	66	2	421	216	3,095	14,912
Poland	1,623	191	7,136	0.61	7,172	5	103	1,542	2,899	241	17,877
Portugal	3,799	403	3,424	1.51	1,288	4	148	507	381	24	2,681
Puerto Rico	..	..	..	..	..	..	..	..	..	..	..
Qatar	..	..	48	..	0	0	..	..	..	..	..



# 5.13

## Science and technology

	Researchers in R&D	Technicians in R&D	Scientific and technical journal articles	Expenditures for R&D	High-technology exports		Royalty and license fees		Patent applications filed <sup>a,b</sup>		Trademark applications filed <sup>a,c</sup>
	per million people	per million people		% of GDP	\$ millions	% of manufactured exports	\$ millions		Residents	Non-residents	Total
	2000-08 <sup>d</sup>	2000-08 <sup>d</sup>	2007	2000-08 <sup>d</sup>	2009	2009	Receipts	Payments	2009	2009	2009
Romania	908	216	1,252	0.59	3,230	10	193	339	1,054	37	12,977
Russian Federation	3,191	493	13,953	1.03	4,576	9	494	4,107	25,598	12,966	49,189
Rwanda	..	..	12	..	11	31	0	1	..	..	238
Saudi Arabia	..	..	589	0.05	40	0	..	..	128	642	..
Senegal	276	..	68	0.09	104	14	0	9	..	..	..
Serbia	1,196	299	1,057	0.35	..	..	63	144	319	40	7,237
Sierra Leone	..	..	3	..	..	..	1	1	..	..	750
Singapore	6,088	529	3,792	2.52	97,207	49	1,340	11,686	750	7,986	15,332
Slovak Republic	2,331	392	971	0.47	3,171	5	92	155	176	63	5,534
Slovenia	3,490	1,696	1,280	1.66	1,264	7	36	290	373	12	4,073
Somalia	..	..	0	..	..	..	..	..	..	..	..
South Africa	393	123	2,805	0.93	1,418	6	48	1,658	..	10,753	26,621
Spain	2,944	1,143	20,981	1.34	10,841	5	1,041	3,449	3,596	207	46,711
Sri Lanka	93	65	125	0.17	44	1	0	0	201	264	5,916
Sudan	..	..	36	0.29	11	34	0	0	3	13	743
Swaziland	..	..	4	..	0	0	0	116	..	..	680
Sweden	5,239	1,871	9,914	3.75	17,059	17	4,709	1,832	2,549	306	12,706
Switzerland	3,436	2,317	9,190	2.90	38,556	25	..	..	1,684	394	28,945
Syrian Arab Republic	..	..	80	..	83	2	0	30	124	133	2,432
Tajikistan	..	..	22	0.06	..	..	1	0	11	1	2,496
Tanzania	..	..	123	..	24	4	0	0	..	..	556
Thailand	311	160	1,728	0.25	28,655	26	145	2,250	802	5,939	36,087
Timor-Leste	..	..	..	..	..	..	..	..	..	..	..
Togo	34	17	12	..	0	0	0	5	..	..	..
Trinidad and Tobago	..	..	67	0.06	3	0	..	..	..	551	..
Tunisia	1,588	43	757	1.02	663	6	25	14	..	..	..
Turkey	680	102	8,638	0.72	1,463	2	..	648	2,555	177	71,466
Turkmenistan	..	..	2	..	..	..	..	..	..	..	2,337
Uganda	..	..	164	0.39	5	1	3	3	6	1	..
Ukraine	1,458	325	1,847	0.85	1,519	3	112	644	2,434	2,380	8,568
United Arab Emirates	..	..	214	..	29	3	..	..	..	..	..
United Kingdom	4,269	893	47,121	1.88	57,178	23	12,928	9,498	15,985	6,480	33,542
United States	4,663	..	209,695	2.82	141,519	23	89,791	25,230	224,912	231,194	266,845
Uruguay	346	..	215	0.64	73	5	0	17	33	706	11,501
Uzbekistan	..	..	166	..	..	..	..	..	238	174	4,541
Venezuela, RB	187	..	497	..	66	4	0	352	..	..	..
Vietnam	115	..	283	0.19	1,685	5	..	..	..	..	4,187
West Bank and Gaza	..	..	..	..	..	..	0	1	..	..	..
Yemen, Rep.	..	..	18	..	0	0	33	-5	11	24	4,518
Zambia	..	..	36	0.03	6	2	0	0	..	..	795
Zimbabwe	..	..	80	..	7	1	..	..	..	..	..
<b>World</b>	<b>1,281 w</b>	<b>.. w</b>	<b>758,132 s</b>	<b>2.07 w</b>	<b>1,858,138 s</b>	<b>20 w</b>	<b>181,636 s</b>	<b>188,861 s</b>	<b>994,324 s</b>	<b>634,131 s</b>	<b>2,884,372 s</b>
<b>Low income</b>	..	..	1,690	..	..	3	34	67	..	..	..
<b>Middle income</b>	596	..	144,072	0.98	576,048	20	3,767	32,422	179,049	198,050	1,559,267
Lower middle income	479	..	85,227	1.19	414,058	25	1,336	18,747	134,475	131,207	955,629
Upper middle income	1,112	..	58,845	0.79	117,380	14	2,431	13,675	36,842	55,416	603,638
<b>Low &amp; middle income</b>	579	..	145,762	0.98	540,234	20	3,800	32,489	185,505	198,493	1,575,589
East Asia & Pacific	1,071	..	60,164	1.44	..	32	881	16,411	237,052	85,532	890,552
Europe & Central Asia	2,064	351	29,335	0.88	16,275	9	923	6,257	33,042	16,049	214,396
Latin America & Carib.	487	..	23,240	0.68	50,434	13	1,629	5,477	5,287	41,517	313,022
Middle East & N. Africa	..	..	8,700	..	1,571	2	60	343	..	..	14,191
South Asia	129	87	19,375	0.79	..	8	208	1,962	5,580	25,831	151,906
Sub-Saharan Africa	..	..	4,946	..	3,260	6	99	2,039	..	..	..
<b>High income</b>	3,945	..	612,370	2.29	1,116,596	19	177,835	156,372	764,583	406,316	1,104,532
Euro area	2,977	1,376	167,647	1.68	392,305	16	38,296	70,574	84,182	15,710	313,484

a. Original information was provided by the World Intellectual Property Organization (WIPO). The International Bureau of WIPO assumes no responsibility with respect to the transformation of these data. b. Excludes applications filed under the auspices of the African Intellectual Property Organization (448 by nonresidents), European Patent Office (134,580 by nonresidents), and the Eurasian Patent Organization (2,801 by nonresidents). c. Excludes applications filed under the auspices of the Office for Harmonization in the Internal Market (88,086). d. Data are for the most recent year available. e. Includes Luxembourg and the Netherlands.

**About the data**

The United Nations Educational, Scientific, and Cultural Organization (UNESCO) Institute for Statistics collects data on researchers, technicians, and expenditure on R&D through surveys and from other international sources. R&D covers basic research, applied research, and experimental development. Data on researchers and technicians are calculated as full-time equivalents.

Scientific and technical article counts are from journals classified by the Institute for Scientific Information's Science Citation Index (SCI) and Social Sciences Citation Index (SSCI). Counts are based on fractional assignments; articles with authors from different countries are allocated proportionately to each country (see Definitions for fields covered). The SCI and SSCI databases cover the core set of scientific journals but may exclude some of local importance and may reflect some bias toward English-language journals.

R&D expenditures include all expenditures for R&D performed within a country, including capital costs and current costs (wages and associated costs of researchers, technicians, and supporting staff and other current costs, including noncapital purchases of materials, supplies, and R&D equipment such as utilities, reference materials, subscriptions to libraries and scientific societies, and lab materials).

The method for determining high-technology exports was developed by the Organisation for Economic Co-operation and Development in collaboration with Eurostat. It takes a "product approach" (as distinguished from a "sectoral approach") based on R&D intensity (expenditure divided by total sales) for groups of products from Germany, Italy, Japan, the Netherlands, Sweden, and the United States. Because industrial sectors specializing in a few high-technology products may also produce low-technology products, the product approach is more appropriate for international trade. The method takes only R&D intensity into account, but other characteristics of high technology are also important, such as know-how, scientific personnel, and technology embodied in patents. Considering these characteristics would yield a different list (see Hatzichronoglou 1997).

A patent is an exclusive right granted for a specified period (generally 20 years) for a new way of doing something or a new technical solution to a problem—an invention. The invention must be of practical use and display a characteristic unknown in the existing body of knowledge in its field.

Most countries have systems to protect patentable inventions. The international Patent Cooperation Treaty (PCT) provides a two-phase system

for filing patent applications. An applicant files an international application for which the 142 eligible countries in 2009 are automatically designated. The application is searched and published, and, optionally, a supplementary international search or preliminary examination can be conducted. In the national or regional phase the applicant requests national processing of the application and initiates the national search and granting procedure in the countries where protection is sought. International applications under the treaty provide for a national patent grant only—there is no international patent. The national filing represents the applicant's seeking of patent protection for a given territory, whereas international filings, while representing a legal right, do not accurately reflect where patent protection is sought. Resident filings are those from residents of the country concerned. Nonresident filings are from applicants abroad. For regional offices such as the European Patent Office, applications from residents of any member state of the regional patent convention are considered nonresident filings. Some offices (notably the U.S. Patent and Trademark Office) use the residence of the inventor rather than the applicant to classify filings. For further information on the PCT, see the PCT Yearly Review at [http://www.wipo.int/export/sites/www/ipstats/en/statistics/pct/pdf/901e\\_2009.pdf](http://www.wipo.int/export/sites/www/ipstats/en/statistics/pct/pdf/901e_2009.pdf).

A trademark is a distinctive sign identifying goods or services as produced or provided by a specific person or enterprise. A trademark protects the owner of the mark by ensuring the exclusive right to use it to identify goods or services or to authorize another to use it. Period of protection varies, but a trademark can be renewed indefinitely for an additional fee. Detailed components of trademark filings, available on the *World Development Indicators* CD-ROM and WDI Online, include applications filed by direct residents (domestic applicants filing directly at a given national or regional intellectual property [IP] office); direct nonresident (applicants from abroad filing directly at a given national or regional IP office); aggregate direct (applicants not identified as direct resident or direct nonresident by the national or regional office); and Madrid (designations received by the national or regional IP office based on international applications filed via the World Intellectual Property Organization (WIPO)—administered Madrid System). Data are based on information supplied to WIPO by IP offices in annual surveys supplemented by data in national IP office reports. Data may be missing for some offices or periods.

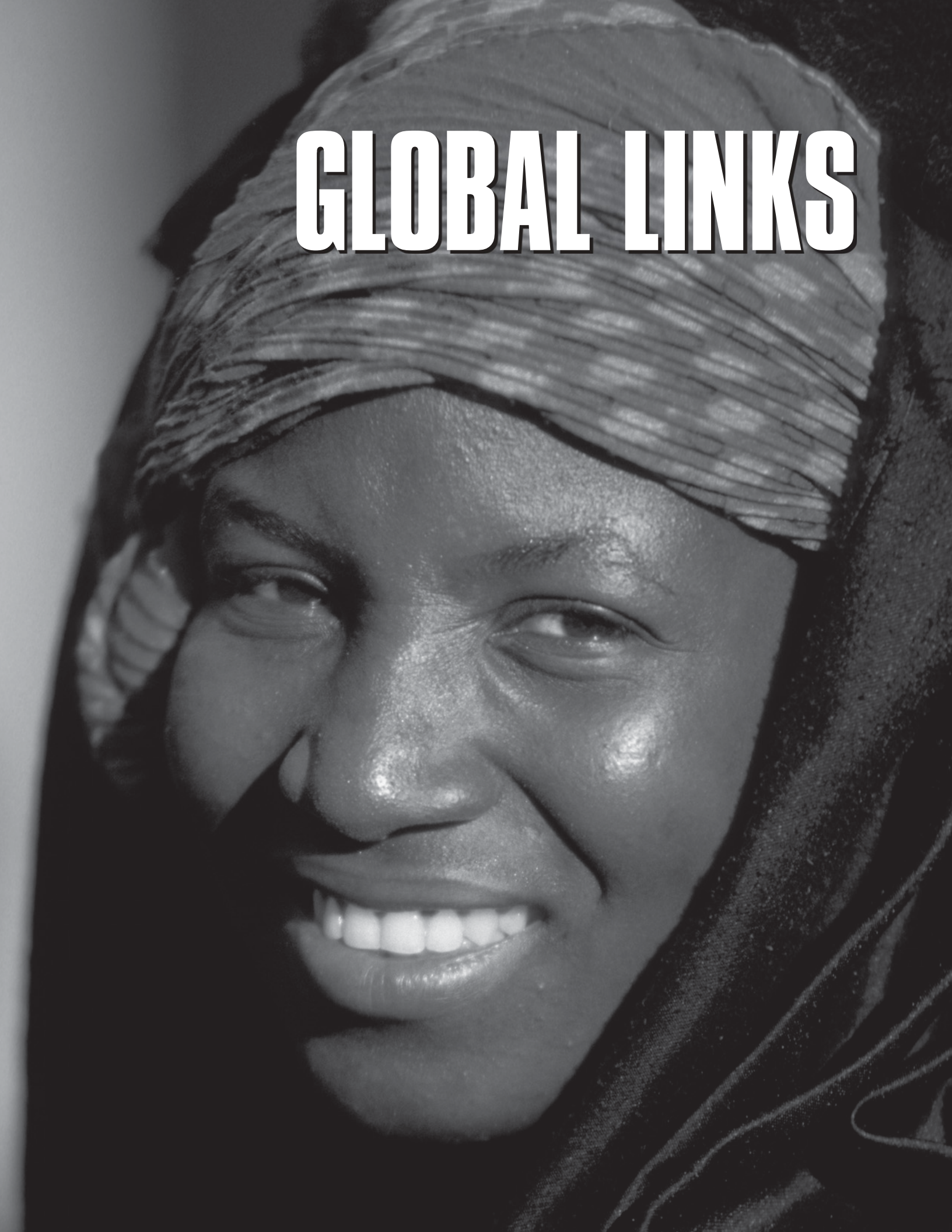
**Definitions**

- **Researchers in R&D** are professionals engaged in conceiving of or creating new knowledge, products, processes, methods, and systems and in managing the projects concerned. Postgraduate doctoral students (*ISCED97* level 6) engaged in R&D are considered researchers.
- **Technicians in R&D and equivalent staff** are people whose main tasks require technical knowledge and experience in engineering, physical and life sciences (technicians), and social sciences and humanities (equivalent staff). They engage in R&D by performing scientific and technical tasks involving the application of concepts and operational methods, normally under researcher supervision.
- **Scientific and technical journal articles** are published articles in physics, biology, chemistry, mathematics, clinical medicine, biomedical research, engineering and technology, and earth and space sciences.
- **Expenditures for R&D** are current and capital expenditures on creative work undertaken to increase the stock of knowledge, including on humanity, culture, and society, and the use of knowledge to devise new applications.
- **High-technology exports** are products with high R&D intensity, such as in aerospace, computers, pharmaceuticals, scientific instruments, and electrical machinery.
- **Royalty and license fees** are payments and receipts between residents and nonresidents for authorized use of intangible, nonproduced, nonfinancial assets and proprietary rights (such as patents, copyrights, trademarks, and industrial processes) and for the use, through licensing, of produced originals of prototypes (such as films and manuscripts).
- **Patent applications filed** are patent applications filed at a national or regional office; an international patent application (or PCT filing) is in the international phase of the PCT.
- **Trademark applications filed** are applications to register a trademark with a national or regional IP office.

**Data sources**

Data on R&D are provided by the UNESCO Institute for Statistics. Data on scientific and technical journal articles are from the U.S. National Science Board's *Science and Engineering Indicators 2010*. Data on high-technology exports are from the United Nations Statistics Division's Commodity Trade (Comtrade) database. Data on royalty and license fees are from the International Monetary Fund's *Balance of Payments Statistics Yearbook*. Data on patents and trademarks are from the World Intellectual Property Organization's *World Intellectual Property Indicators (2010)* and [www.wipo.int/econ\\_stat](http://www.wipo.int/econ_stat).

# GLOBAL LINKS



The past three years show dramatically how events in one part of the world can affect people in the rest of the world, though sometimes with a lag. The financial crisis that struck high-income economies in 2008 reached low- and middle-income economies in 2009. World exports of goods and services fell 20 percent, from \$19.6 trillion in 2008 to \$15.6 trillion in 2009, more in high-income economies and somewhat less in low- and middle-income economies. Developing economies' share of world exports increased by 1 percentage point over 2008, continuing a rising trend from 19 percent in 2000 to 27 percent in 2009. Imports of goods and services by high-income economies fell 22 percent, from \$14.0 trillion in 2008 to \$10.9 trillion in 2009; imports by low and middle income economies fell 19 percent.

The financial crisis also reduced the external financing available to developing economies from private sources, which dropped to \$521 billion in 2009 from the record high of \$932 billion in 2007. Net inflows of foreign direct investment dropped to \$359 billion in 2009 from a high of \$597 billion in 2008. In contrast, net inflows of portfolio equity investments rose to \$108 billion following net outflows of \$53 billion in 2008. Bond issuances, which dropped from \$88 billion in 2007 to \$24 billion in 2008, recovered in 2009 to reach \$51 billion. But commercial and trade-related lending, which declined from \$195 billion in 2007 to \$172 billion in 2008, dried up in 2009, dropping to \$1.7 billion. Total debt flows from private creditors fell 70 percent in 2009, to \$59 billion. But net flows from official creditors reached \$171 billion in 2009, a 50 percent increase over 2008, driven by such multilateral institutions as the International Monetary Fund (IMF) and the World Bank.

Global food prices soared again in 2010 and 2011, with some commodities exceeding their record high in 2008. The World Bank food price index (table 6.6) averaged 311 in February 2011, exceeding the June 2008 record of 293. Food price inflation has accelerated in several low- and middle-income economies, where consumers often spend more than half their income on food. During the 12 months ending in August 2010, food prices rose 13.2 percent a year in Indonesia, 10.4 percent a year in India, and 9.6 percent a year in Bangladesh.

The financial crisis has also demonstrated the need for more data and more frequently updated data to monitor global transactions. The World Development Indicators database contains more

than 400 indicators for monitoring exchanges between economies on an annual basis, and the topics covered have expanded each year. Many others are not included in the database because of their structure or limited country coverage, but they are necessary for understanding global links. Most high-income economies and some low- and middle-income economies now produce economic statistics on a quarterly or monthly basis. This introduction highlights some of these data.

### **Data sources for bilateral trade flows**

*World Development Indicators* publishes data on merchandise trade values by commodity groups (tables 4.4 and 4.5), values of trade in services (tables 4.6 and 4.7), intra- and extra-regional trade (table 6.5), merchandise trade indices (table 6.2), tariff rates (table 6.8), and indicators for measuring trade facilitation (table 6.9). Demand is rising for more detailed data, such as trade flows by partner economies and by commodities and sectors. Table 6a summarizes the main sources of data on bilateral trade flows. Some of these databases are accessible through the World Integrated Trade Solutions platform (<http://wits.worldbank.org>).

### **Barriers to trade in services**

Trade in services makes up 22 percent of world trade, up from 20 percent in 2000. In developing economies the nominal value of trade in services grew 16 percent a year over 2000–09, doubling the rate of growth over 1990–2000 and surpassing that of high-income economies, which grew at 11 percent a year over 2000–09. Despite this growing



### Source of data for bilateral trade flows

6a

Compiling organization	Name of publication and database	Country coverage	Data coverage	Periodicity	Links
International Monetary Fund	Direction of Trade Statistics database	Most developing and developed economies	Merchandise trade data, no breakdowns of sectors and partners. Available through subscription	Quarterly and annual	<a href="http://www2.imfstatistics.org/DOT/">http://www2.imfstatistics.org/DOT/</a> This is a link to a 5-day trial
United Nations Conference on Trade and Development	UNCTADstat Merchandise Trade Matrix	Most developing and developed economies	Merchandise trade by partner economies and by product groups	Annual	<a href="http://unctadstat.unctad.org/">http://unctadstat.unctad.org/</a>
United Nations Statistics Division	Commodity Trade Statistics (Comtrade)	Most developing and developed economies	Merchandise trade by partner economies and by commodity classifications	Annual	<a href="http://wits.worldbank.org/wits/">http://wits.worldbank.org/wits/</a>
Organisation for Economic Co-operation and Development (OECD)	Monthly Statistics of International Trade	OECD member economies	Total merchandise trade by partners	Monthly	<a href="http://stats.oecd.org/">http://stats.oecd.org/</a> Extract databases are available under "International Trade and balance of Payments" theme Full databases are subscription based
	International Trade by Commodity Statistics	OECD member economies plus EU	Merchandise trade by partners and by products	Annual	
	Trade in services	OECD member economies plus EU and a few more economies	Trade in services by partners and by service category	Annual	
Eurostat	External Trade database	27 EU members	Merchandise trade by partners and by products	Monthly, quarterly, and annual	<a href="http://epp.eurostat.ec.europa.eu/portal/page/portal/external_trade/data/database">http://epp.eurostat.ec.europa.eu/portal/page/portal/external_trade/data/database</a>

importance, little is known about policies affecting services trade, a major impediment to the analysis of trade policy and trade flows.

To address this gap, the World Bank has built the Services Policy Restrictiveness Database, with information on 102 countries for five major service sectors disaggregated by subsectors and relevant modes of supply in each subsector. So far, the information focuses mainly on discriminatory policy measures affecting foreign service providers. The full database will be released in the second quarter of 2011 at <http://econ.worldbank.org/programs/trade/services>.

Restrictiveness is assessed by the newly created Services Trade Restrictiveness Index score. The index reveals patterns of restrictiveness by major service sector and across

low- and middle-income and high-income economies (figure 6b). In both high-income and low- and middle-income economies, professional services (including the movement of individuals) face the highest trade barriers, followed by transportation services. High-income economies exhibit more open financial, telecommunications, and retail distribution sectors than do low- and middle-income economies (Borchert, Gootiz, and Mattoo forthcoming).

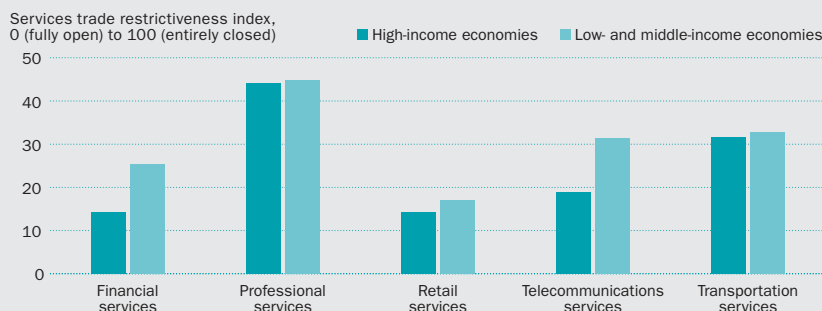
### Foreign direct investment

Countries are increasingly compiling more data on foreign direct investment (FDI) transactions and stocks. Despite recent improvements, however, deficiencies in coverage remain. For example, if recording of FDI transactions were complete and comparable, the total outflows of FDI from investing economies would equal the total inflows recorded by the recipient economies. But in 2009 the divergence between outflows and inflows of FDI at the global level was about \$82 billion (7 percent of global outflows; figure 6c). The discrepancies arise from differences in reporting practices. For example, some countries include reinvested earnings in their outflow statistics while others do not include them in their inflow statistics. Furthermore, corporate accounting practices and valuation methods may differ by reporters.

Discrepancies exist among FDI statistics published by various international agencies,

### Trade in professional services faces the highest barriers

6b



Note: Aggregate values are the simple average of individual country scores. Data are for 102 countries.  
Source: World Bank Services Policy Restrictiveness Database.

even when the agencies adopt common methodological standards. Such discrepancies may reflect differences in comparability and timing of FDI data reported by different countries, discrepancies in sector coverage, and lags in reporting revisions. Recognizing these issues, the IMF is leading a worldwide statistical data collection effort to improve the quality of FDI data (the Coordinated Direct Investment Survey; <http://cds.imf.org>). Preliminary results were released in December 2010.

Data on FDI are published in table 6.12. These data cover FDI net inflows received by the reporting economy from foreign residents, and FDI net outflows by the reporting economy residents. Breakdowns of FDI transactions and investment positions by sector and partner, increasingly sought by users, are not published in *World Development Indicators* but are available from other sources. Table 6d summarizes the availability of FDI statistics for some of the main data compilers.

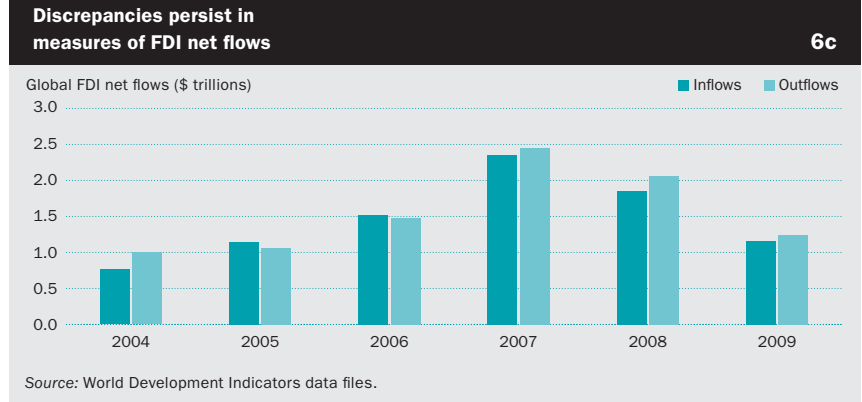
### Bilateral remittance flows

*World Development Indicators* publishes data on total workers' remittances and compensation of employees received and sent by the reporting economies (table 6.18). Data coverage and quality have been improving, but inconsistencies and lack of reporting remain. For example, if all economies reported completely and consistently, the sum of remittances flows recorded by receiving economies would equal the sum of remittance flows recorded by sending economies. But as of 2009 there was a discrepancy of \$127 billion (30 percent of total inflows; figure 6e). Large amounts of remittance flows are sent through private and informal channels that are not officially recorded.

No comprehensive dataset is available on the bilateral flow of remittances. Bilateral remittance flows estimated through approximation and allocation methods using the proportions of migrant stocks in destination and sending countries or the incomes of destination and sending countries are available at [www.worldbank.org/prospects/migrationandremittances](http://www.worldbank.org/prospects/migrationandremittances) (Ratha and Shaw 2007). The data shed light on patterns of remittance flows, but the estimates are sensitive to the assumptions and allocation method chosen.

### Bilateral migration stocks

Because migration data come mostly from destination countries, the quality of global migration



data depends on how well the destination countries survey migrants within their borders. Systematic recording of migrants is difficult, especially for countries with weak statistical capacity and for those affected by civil disorder and natural disasters. Moreover, ensuring the comparability of migration data is a long-standing challenge, in part because destination countries classify migrants using various criteria. Many countries compile migration data based on immigrants' nationality, while others collect data based on the immigrants' place of birth.

*World Development Indicators* publishes aggregate data on international migrant stocks and net migration estimated by the United Nations Population Division based on population censuses supplemented by border statistics, administrative records, surveys, and refugee registrations (tables 6.1 and 6.18).

Efforts to produce complete data on bilateral migration have been rare. A 2008 database on immigrants in OECD countries contains data on bilateral migrant stock for OECD members (<http://stats.oecd.org/>). The dataset includes sociodemographic information such as age, gender, education, and occupation. A series of studies have published data on OECD immigrants by educational attainment (Docquier and Marfouk 2006), gender and educational attainment (Docquier, Lowell, and Marfouk 2009), and age of entry and educational attainment (Beine, Docquier, and Marfouk 2006). Global bilateral databases have been constructed for the 2000 census round (Parsons and others 2007) and for bilateral migration and remittance flows (Ratha and Shaw 2007).

The United Nations Population Division in cooperation with the World Bank, the United Nations Statistics Division, and the Universities of Nottingham and Sussex created the Global




**Source of data on FDI**
**6d**

Compiling organization	Name of publication and database	Country coverage	Data coverage	Periodicity	Links
International Monetary Fund (IMF)	Balance of Payments Statistics Yearbook and database	Most developing and developed economies	Aggregate FDI flows and stock by reporting economy. By-partner, by-sector breakdowns are not available. Available through subscription	Quarterly and annual	<a href="http://www2.imfstatistics.org/BOP">http://www2.imfstatistics.org/BOP</a> This is a link to 5-day trial
United Nations Conference on Trade and Development (UNCTAD)	World Investment Report and Foreign Direct Investment database	Most developing and developed economies	Aggregate FDI flows and stock by reporting economy	Annual	<a href="http://unctadstat.unctad.org">http://unctadstat.unctad.org</a>
	Transnational Corporations Statistics database	Transnational Corporations Worldwide	Detailed data on transactions of transnational corporations and mergers and acquisitions, by partner and by sector; available through data extract service	Annual	<a href="http://www.unctad.org/Templates/Page.asp?intItemID=3159&amp;lang=1">www.unctad.org/Templates/Page.asp?intItemID=3159&amp;lang=1</a>
Organisation for Economic Co-operation and Development (OECD)	International Direct Investment database	32 OECD member economies	FDI stock (annual) and flows (annual and quarterly) by partner economies and by sectors. Full dataset is available to subscribers	Quarterly and annual	<a href="http://stats.oecd.org/">http://stats.oecd.org/</a> Extract databases are available under Globalisation theme
Eurostat	European Union Foreign Direct Investment Yearbook and database	27 EU members	Aggregate and bilateral FDI flows and stock, by partner and by sector	Annual	<a href="http://epp.eurostat.ec.europa.eu/portal/page/portal/balance_of_payments/data/database">http://epp.eurostat.ec.europa.eu/portal/page/portal/balance_of_payments/data/database</a>
Association of Southeast Asian Nations	Foreign Direct Investment Statistics	10 ASEAN member economies	Bilateral FDI inflows and outflows	Annual	<a href="http://www.aseansec.org/18144.htm">www.aseansec.org/18144.htm</a>
Centre d'Etudes Prospectives et d'Informations Internationales	Foreign Direct Investment database	96 countries of the GTAP 6.2 database for stocks and 70 countries for flows	Harmonized bilateral flows and stocks of FDI for 26 sectors. Data are gap filled using gravity-based regressions and raw data from IMF, UNCTAD, OECD, and Eurostat.	Annual for 2004 only	<a href="http://www.cepii.fr/anglaisgraph/bdd/fdi.htm">www.cepii.fr/anglaisgraph/bdd/fdi.htm</a>
Financial Times	FDI database FDI Intelligence	All countries with greenfield FDI projects;	Greenfield FDI projects since 2003; subscription based. Methodology differs significantly from balance of payments and international investment position standards. The data are based on press reports.	Daily	<a href="http://www.fdimarkets.com">www.fdimarkets.com</a>
Dealogic	M&A Analytics	Mergers and acquisitions activity worldwide covering an array of transactions	Information for mergers and acquisitions activity, including information on target and acquirer, deal value, and financials.	Monthly	<a href="http://www.dealogic.com">www.dealogic.com</a>

Migration database ([www.unmigration.org](http://www.unmigration.org)) in 2008. It contains all publicly available data from more than 230 destination countries and territories over the last five decades on international migrants, classified by age, gender, place of birth, and country of citizenship. However, it still does not include all raw data points needed for a global migration matrix.

These raw data were assembled to construct a global bilateral migration matrix using empirical methods to fill holes in the data (Özden and others forthcoming). The resulting database covers 226 origin and 226 destination countries

(forthcoming at [www.data.worldbank.org/data-catalog](http://www.data.worldbank.org/data-catalog)). Construction of such a matrix entails formidable challenges, including selecting the most relevant sources, allocating migrants who “originated” in aggregate geographic regions and migrants of unknown origins to specific countries, and accounting for varying survey dates and definitions. Of all cell-level values in the final matrix, about 12–14 percent are from raw census data, 40–60 percent are based primarily on raw data scaled to United Nations Population Division estimates of migrant stocks or augmented by the disaggregation of aggregate categories,

and the remaining 26–48 percent are estimated through interpolation and extrapolation.

This new dataset reveals that the total stock of migrants increased from 92 million in 1960 to 165 million in 2000. The number of migrants from high-income economies remained stable, while the number from low- and middle-income economies rose from 14 million in 1960 to 60 million in 2000 (figure 6f). The increase was driven largely by an increase in migrants residing in the United States (up 24 million) and Western Europe (up 22 million).

### Public sector debt

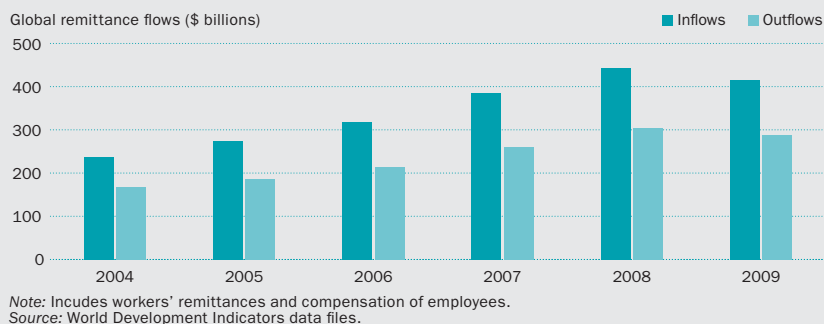
*World Development Indicators* publishes data on public and publicly guaranteed external debt (tables 6.10, 6.11, and 6.13). But these data present only a portion of total public sector debt, much of which is held by domestic creditors. Domestic debt data are important for economic policymaking because of the implications for local financial markets. To fill the gap, the World Bank and the IMF launched an online Quarterly Public Sector Debt database in 2009 (<http://data.worldbank.org/data-catalog>). The database provides data on clearly defined tiers of debt for central, state, and local government in developing or emerging market economies as well as on extrabudgetary agencies and funds. It also includes debt data by instruments, valuation methods, maturity types, and creditors.

The level and composition of public sector debt are affected by many external and domestic economic factors. The recent global financial crisis limited the private sector's ability to borrow. The public sector, usually more creditworthy, increased external borrowing to stimulate sluggish domestic economies. Most external financing for developing economies in 2009 was provided by official multilateral institutions such as the IMF and the World Bank. After the Asian financial crises in the late 1990s many governments switched from external to domestic borrowing to reduce their exposure to exchange rate fluctuations, dramatically increasing the size of domestic debt in emerging market economies. Today, domestic debt represents about 78 percent of the total general government debt in developing economies with data. Comparison with earlier period is not possible due to lack of data.

Emerging market economies have also issued local currency-denominated debt to correct currency and maturity mismatches. In September 2010 the estimated local currency

### At least 30 percent of remittance inflows go unrecorded by the sending economies

6e

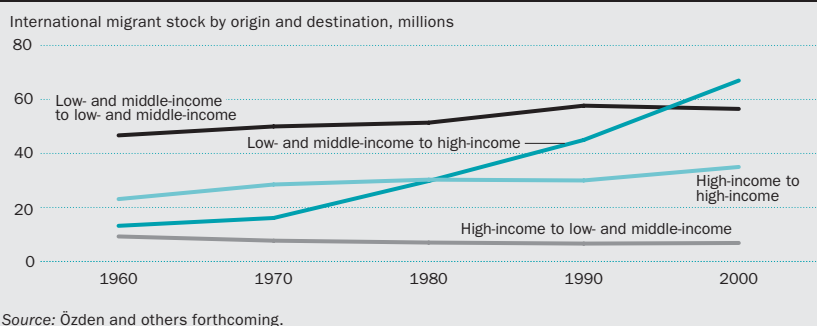


debt among developing economies averaged 67 percent of total government debt (excluding Brazil and China, with upwards of 96 percent).

Financing needed to support fiscal deficits led to a significant increase in the ratio of sovereign debt to GDP. Among developing economies, central government debt for 2009 averaged 46 percent of GDP, up from 42 percent in 2009. Brazil, which undertook aggressive countercyclical spending and tax cuts to stimulate the economy, had the highest share of gross debt in gross domestic product (about 70 percent; figure 6g).

### Migrants originating from low- and middle-income economies and residing in high-income economies rose fivefold over 1960–2000

6f



### The ratio of central government debt to GDP has increased for most economies, 2007–10

6g



a. Derived using 2009 GDP because 2010 GDP was not available.  
Source: World Bank Quarterly Public Sector Debt database



	Trade		International finance				Movement of people			Communication	
	% of GDP		Financing through international capital markets Gross inflows	% of GDP		Workers' remittances and compensation of employees received	Net migration thousands	International migrant stock % of total population	Emigration of people with tertiary education to OECD countries % of population age 25 and older with tertiary education	International voice traffic <sup>a</sup> minutes per person	International Internet bandwidth <sup>a</sup> bits per second per capita
	Merchandise	Services		Foreign direct investment Net inflows	Net outflows						
	2009	2009	2009	2009	2009	2005-10	2010	2000	2008	2009	
Afghanistan	31.3	..	0.0	1.3	..	..	1,000	0.3	22.6	7	550
Albania	46.9	38.6	0.0	8.1	0.3	11.0	-75	2.8	17.5	263	1,902
Algeria	60.1	..	0.0	2.0	..	1.5 <sup>b</sup>	-140	0.7	9.5	34	..
Angola	75.6	26.2	2.2	2.9	0.0	0.1	80	0.3	3.7	..	17
Argentina	30.7	7.4	0.2	1.3	0.2	0.2	30	3.6	2.8	..	2,320
Armenia	45.9	16.6	0.0	8.9	0.6	8.8	-75	10.5	8.9	..	..
Australia	34.6	9.0	..	2.4	3.7	0.4 <sup>b</sup>	500	21.1	2.7	..	5,457
Austria	73.8	24.1	..	2.3	1.4	0.9	160	15.6	13.5	..	20,323
Azerbaijan	64.2	11.9	0.1	1.1	0.8	3.0	-50	3.0	1.8	77	1,399
Bangladesh	41.3	6.0	0.2	0.8	0.0	11.8	-570	0.7	4.4	..	4
Belarus	101.6	11.3	0.5	3.8	0.2	0.7	0	11.3	3.2	..	2,277
Belgium	153.2	33.0	..	-8.2	-16.7	2.2	200	9.0	5.5	..	24,945
Benin	45.7	12.8	0.0	1.4	-0.1	3.6 <sup>b</sup>	50	2.5	8.7	309	35
Bolivia	53.4	8.8	0.0	2.4	0.0	6.2	-100	1.5	5.8	..	225
Bosnia and Herzegovina	74.5	11.9	0.0	1.4	-0.1	12.2	-10	0.7	20.3	..	1,195
Botswana	69.2	15.9	0.0	2.1	0.0	0.7	15	5.8	5.1	..	220
Brazil	18.0	4.7	3.9	1.6	-0.6	0.3	-229	0.4	2.0	..	2,108
Bulgaria	81.7	24.5	0.0	9.4	-0.3	3.2	-50	1.4	9.6	105	37,657
Burkina Faso	36.0	8.7	0.0	2.1	0.6	1.2 <sup>b</sup>	-65	6.4	2.6	..	15
Burundi	35.2	17.1	0.0	0.0	0.0	2.1	323	0.7	9.3	..	2
Cambodia	105.3	26.8	0.0	5.4	0.2	3.4	-5	2.2	21.5	..	19
Cameroon	32.7	15.2	0.6	1.5	1.8	0.7	-19	1.0	17.3	..	23
Canada	48.4	10.3	..	1.5	3.0	..	1,050	21.1	4.7	..	16,193
Central African Republic	20.9	..	0.0	2.1	..	..	5	1.8	7.3	..	..
Chad	69.5	..	0.0	6.8	..	..	-75	3.4	9.1	..	1
Chile	58.8	11.1	3.2	7.8	4.9	0.0	30	1.9	6.0	43	4,076
China	44.3	5.8	1.0	1.6	0.9	1.0 <sup>b</sup>	-1,731 <sup>c</sup>	0.1 <sup>c</sup>	3.8	..	651
Hong Kong SAR, China	323.7	62.1	..	24.9	30.4	0.2	113	38.9	29.6	1,435	560,989
Colombia	28.1	4.8	3.4	3.1	1.3	1.8	-120	0.2	10.4	..	2,940
Congo, Dem. Rep.	63.4	..	0.0	9.0	..	..	-100	0.7	14.9	6	1
Congo, Rep.	88.7	46.1	0.0	21.7	..	0.1 <sup>b</sup>	-50	3.8	28.2	..	0
Costa Rica	69.0	17.5	0.0	4.6	0.0	1.8	30	10.5	7.1	132	4,333
Côte d'Ivoire	64.2	14.8	0.0	1.6	0.0	0.8	-145	11.2	6.2	..	40
Croatia	50.3	25.0	..	4.7	2.1	2.3	10	15.8	24.6	302	15,892
Cuba	30.9	..	0.0	..	..	..	-194	0.1	28.8	..	27
Czech Republic	114.9	20.7	..	1.4	0.7	0.6	226	4.3	8.5	197	7,075
Denmark	56.9	34.3	..	0.9	2.1	0.3	30	8.7	7.8	357	34,506
Dominican Republic	37.9	14.6	0.0	4.4	0.0	7.4	-140	4.2	22.4	..	1,387
Ecuador	50.5	6.7	0.0	0.6	0.0	4.4	-350	2.9	9.5	..	484
Egypt, Arab Rep.	36.1	18.8	1.4	3.6	0.3	3.8	-340	0.3	4.7	44	1,172
El Salvador	52.4	9.9	0.0	2.0	-0.6	16.5	-280	0.7	31.7	510	243
Eritrea	29.6	..	0.0	0.0	..	..	55	0.3	35.2	29	6
Estonia	100.4	36.4	..	9.2	8.2	1.7	0	13.6	9.9	..	12,680
Ethiopia	33.5	14.4	0.0	0.8	0.0	0.9	-300	0.6	9.8	5	3
Finland	51.9	22.4	..	0.0	1.6	0.4	55	4.2	7.2	..	17,221
France	39.4	10.2	..	2.3	5.6	0.6	500	10.6	3.5	301	29,356
Gabon	66.0	..	0.4	0.3	..	0.1 <sup>b</sup>	5	18.9	14.6	..	141
Gambia, The	43.5	25.5	0.0	5.4	0.0	10.9	15	16.6	67.8	..	38
Georgia	51.3	21.3	0.0	6.1	0.0	6.6	-250	4.0	2.8	268	752
Germany	62.0	14.6	..	1.2	1.8	0.3	550	13.2	5.8	..	25,654
Ghana	52.1	18.0	4.7	6.4	0.0	0.4	-51	7.6	44.7	61	97
Greece	24.2	17.5	..	0.7	0.6	0.6	150	10.0	12.2	..	4,537
Guatemala	50.2	10.7	0.0	1.6	0.1	10.8	-200	0.4	23.9	206	186
Guinea	58.7	9.8	0.0	1.2	0.0	1.6	-300	3.8	4.7	..	0
Guinea-Bissau	41.2	15.2	0.0	1.7	-0.1	5.6	-12	1.2	27.7	..	1
Haiti	40.5	17.9	0.0	0.6	0.0	21.2	-140	0.4	83.4	..	16
Honduras	90.7	14.1	0.2	3.5	0.0	17.6	-100	0.3	24.8	224	241

	Trade		International finance				Movement of people			Communication	
	% of GDP		Financing through international capital markets Gross inflows	% of GDP		Workers' remittances and compensation of employees received	Net migration thousands	International migrant stock % of total population	Emigration of people with tertiary education to OECD countries % of population age 25 and older with tertiary education	International voice traffic <sup>a</sup> minutes per person	International Internet bandwidth <sup>a</sup> bits per second per capita
	Merchandise	Services		Net inflows	Net outflows						
	2009	2009	2009	2009	2009	2009	2005–10	2010	2000	2008	2009
Hungary	125.6	27.3	..	2.2	2.1	1.7	75	3.7	12.8	159	5,987
India	29.9	12.5	1.6	2.5	1.1	3.6	-1,000	0.5	4.3	..	32
Indonesia	39.1	7.7	2.3	0.9	0.5	1.3	-730	0.1	2.9	..	110
Iran, Islamic Rep.	38.8	..	0.0	0.9	..	0.3 <sup>b</sup>	-500	2.9	14.3	..	151
Iraq	116.2	11.5	0.0	1.6	0.0	0.1	-577	0.3	10.9	..	3
Ireland	77.9	86.9	..	11.1	10.6	0.3	200	20.2	33.7	..	15,261
Israel	49.8	20.0	..	2.0	0.6	0.6	85	38.8	7.8	..	2,003
Italy	38.7	10.4	..	1.4	2.1	0.1	1,650	7.4	9.7	..	12,989
Jamaica	52.9	37.5	9.0	4.5	0.5	15.8	-100	1.1	84.7	224	741
Japan	22.3	5.5	..	0.2	1.5	0.0	150	1.7	1.2	..	5,770
Jordan	81.5	33.3	0.0	9.5	0.3	14.3	250	48.8	7.4	258	1,811
Kazakhstan	62.1	12.4	2.1	11.8	2.7	0.1	-100	19.1	1.2	52	1,342
Kenya	49.8	16.1	0.2	0.5	0.2	5.7 <sup>b</sup>	-189	2.0	38.5	6	477
Korea, Dem. Rep.	..	..	..	..	..	..	0	0.2	..	..	0
Korea, Rep.	82.5	16.1	..	0.2	1.3	0.3	-30	1.1	7.5	64	6,065
Kosovo	..	..	0.0	7.5	..	..	..	..	..	..	..
Kuwait	75.9	18.0	..	0.0	6.1	..	120	73.3	7.1	..	871
Kyrgyz Republic	97.8	37.7	0.0	4.1	0.0	21.7 <sup>b</sup>	-75	4.2	0.9	..	112
Lao PDR	37.0	8.6	0.0	5.4	0.0	0.6	-75	0.3	37.2	..	142
Latvia	66.6	23.4	0.0	0.4	-0.2	2.3	-10	14.9	8.5	..	3,537
Lebanon	60.1	90.4	2.7	13.9	3.3	21.9	-13	17.8	43.9	190	223
Lesotho	171.0	12.5	0.0	4.0	0.0	26.2	-36	0.3	4.1	..	5
Liberia	80.1	162.0	0.0	24.9	0.0	6.2 <sup>b</sup>	248	2.3	44.3	..	..
Libya	73.4	8.7	0.0	2.7	1.9	0.0 <sup>b</sup>	20	10.4	4.3	..	50
Lithuania	93.2	18.4	6.4	0.6	0.5	3.1	-100	3.9	8.4	132	14,300
Macedonia, FYR	83.9	18.3	2.6	2.7	0.1	4.1	-10	6.3	29.4	256	17
Madagascar	51.1	..	0.0	6.3	..	0.1 <sup>b</sup>	-5	0.2	7.7	8	12
Malawi	55.4	..	0.0	1.3	..	0.0 <sup>b</sup>	-20	1.8	20.9	..	5
Malaysia	145.7	29.1	5.8	0.7	4.2	0.6	130	8.4	10.5	..	5,097
Mali	52.7	17.0	0.0	1.2	0.0	4.5 <sup>b</sup>	-202	1.2	14.8	13	51
Mauritania	92.6	..	0.0	-1.3	..	0.1 <sup>b</sup>	10	2.9	8.6	57	76
Mauritius	66.0	44.8	0.0	3.0	0.4	2.5 <sup>b</sup>	0	3.3	56.0	215	364
Mexico	53.9	4.5	3.1	1.7	0.9	2.5	-2,430	0.7	15.5	..	312
Moldova	84.5	25.6	0.0	2.4	0.1	22.4	-172	11.4	4.1	457	6,660
Mongolia	96.0	23.1	0.1	14.8	1.3	4.8	-10	0.4	7.4	..	2,920
Morocco	51.2	21.1	0.0	2.2	0.5	6.9	-425	0.2	18.6	87	1,600
Mozambique	60.4	17.1	0.6	9.0	0.0	1.1	-20	1.9	22.6	..	56
Myanmar	..	..	..	..	..	..	-500	0.2	3.9	3	20
Namibia	93.6	12.2	0.0	5.3	0.0	0.1	-1	6.3	3.4	..	27
Nepal	41.5	11.5	0.0	0.3	..	23.8	-100	3.2	4.0	..	5
Netherlands	119.2	22.6	..	4.2	3.5	0.5	100	10.5	9.6	..	78,156
New Zealand	39.8	12.5	..	-1.0	-0.5	0.5	50	22.0	21.8	..	4,544
Nicaragua	79.3	16.7	0.0	7.1	0.0	12.5	-200	0.7	30.2	..	144
Niger	44.6	13.7	0.0	13.7	0.5	1.7	-28	1.3	5.5	..	11
Nigeria	52.9	11.4	0.7	3.3	0.1	5.5 <sup>b</sup>	-300	0.7	10.5	26	5
Norway	49.8	19.8	..	3.0	7.1	0.2	135	9.9	6.2	..	26,904
Oman	99.0	15.9	..	4.8	0.9	0.1	20	28.4	0.4	431	1,365
Pakistan	30.5	6.4	0.2	1.5	0.0	5.4	-1,416	2.4	12.7	..	43
Panama	35.4	31.2	8.8	7.2	0.0	0.7	11	3.4	16.7	118	15,964
Papua New Guinea	95.4	26.9	58.3	5.4	0.1	0.2	0	0.4	27.8	..	2
Paraguay	71.0	13.9	0.0	1.4	0.1	4.3	-40	2.5	3.8	..	662
Peru	37.3	6.5	2.6	3.7	0.3	1.8	-625	0.1	5.8	113	2,646
Philippines	52.3	11.6	4.5	1.2	0.2	12.3	-900	0.5	13.6	..	113
Poland	65.4	12.4	3.8	3.2	1.2	1.9	-120	2.2	14.3	32	2,748
Portugal	48.6	15.9	..	1.2	0.5	1.5	200	8.6	19.0	..	4,790
Puerto Rico	..	..	..	..	..	..	-21	8.1	..	..	1,764
Qatar	64.6	..	..	..	..	..	562	86.5	2.1	..	2,044



# 6.1

## Integration with the global economy

	Trade		International finance				Movement of people			Communication	
	% of GDP		Financing through international capital markets Gross inflows	% of GDP		Workers' remittances and compensation of employees received	Net migration thousands	International migrant stock % of total population	Emigration of people with tertiary education to OECD countries % of population age 25 and older with tertiary education	International voice traffic <sup>a</sup> minutes per person	International Internet bandwidth <sup>a</sup> bits per second per capita
	Merchandise	Services		Foreign direct investment Net inflows	Net outflows						
	2009	2009	2009	2009	2009	2009	2005-10	2010	2000	2008	2009
Romania	58.9	12.4	0.1	3.9	0.1	3.1	-200	0.6	11.3	124	18,271
Russian Federation	40.2	8.4	2.4	3.0	3.6	0.4	250	8.7	1.4	..	573
Rwanda	27.2	16.5	0.0	2.3	0.0	1.8	15	4.5	31.7	8	35
Saudi Arabia	76.6	22.1	..	2.8	0.6	0.1	150	28.0	0.9	..	1,731
Senegal	53.8	20.6	2.8	1.6	1.0	10.6	-100	1.6	17.2	101	372
Serbia	55.7	16.2	0.0	4.5	0.1	12.6 <sup>b,d</sup>	0	7.2	..	203	12,660
Sierra Leone	38.7	8.7	0.0	3.8	0.0	2.4	60	1.8	49.2	..	..
Singapore	282.9	95.1	..	9.2	3.3	..	500	38.3	14.5	..	22,783
Slovak Republic	127.0	16.3	..	0.0	0.5	1.9	20	2.4	14.3	228	7,567
Slovenia	109.0	21.6	..	-1.2	0.3	0.6	22	7.9	11.0	220	6,720
Somalia	..	..	..	..	..	..	-250	0.2	34.5	..	..
South Africa	47.6	9.4	2.7	1.9	0.5	0.3	700	3.7	7.4	..	70
Spain	34.7	14.4	..	0.4	0.5	0.7	1,750	13.8	4.2	..	11,008
Sri Lanka	41.8	10.5	1.3	1.0	0.0	8.0	-300	1.7	28.2	..	190
Sudan	32.1	5.6	0.0	4.9	0.0	5.5 <sup>b</sup>	135	1.7	6.8	13	322
Swaziland	103.3	25.4	0.0	2.2	0.2	3.1	-6	3.4	5.4	41	35
Sweden	61.8	25.6	..	2.8	7.9	0.2	150	13.9	4.5	..	49,828
Switzerland	66.8	23.0	..	5.6	6.8	0.5	100	22.6	9.6	..	29,413
Syrian Arab Republic	51.2	13.3	0.1	2.7	0.0	2.6 <sup>b</sup>	800	10.2	6.2	..	261
Tajikistan	71.9	9.5	0.0	0.3	0.0	35.1	-200	4.0	0.6	..	37
Tanzania	44.2	16.7	0.0	1.9	0.0	0.1	-300	1.5	12.1	1	2
Thailand	108.5	25.7	0.3	1.9	1.6	0.6	300	1.7	2.2	..	818
Timor-Leste	..	..	0.0	..	..	..	10	1.2	16.5	..	..
Togo	80.6	22.2	19.9	1.8	-0.5	10.7 <sup>b</sup>	-5	2.7	16.5	28	23
Trinidad and Tobago	75.8	4.9	..	3.3	2.7	0.5 <sup>b</sup>	-20	2.6	78.9	443	7,916
Tunisia	84.8	21.4	0.1	4.0	0.2	5.0	-20	0.3	12.6	..	2,699
Turkey	39.5	8.2	1.7	1.4	0.3	0.2	-44	1.9	5.8	60	4,323
Turkmenistan	66.9	..	0.0	6.8	..	..	-25	4.0	0.4	..	48
Uganda	42.3	14.9	0.0	3.8	0.0	4.7	-135	1.9	36.0	..	36
Ukraine	75.0	22.3	0.9	4.2	0.1	4.5	-80	11.5	4.3	..	206
United Arab Emirates	136.8	..	..	..	..	..	343	70.0	0.7	..	13,233
United Kingdom	38.4	18.6	..	3.4	2.0	0.3	948	10.4	17.1	..	39,664
United States	18.8	6.1	..	1.0	1.9	0.0	5,052	13.8	0.5	216	11,279
Uruguay	39.0	10.5	1.6	4.0	0.0	0.3	-50	2.4	9.0	125	903
Uzbekistan	61.5	..	0.0	2.3	..	..	-400	4.2	0.8	..	46
Venezuela, RB	30.1	3.6	1.5	-1.0	0.6	0.0	40	3.5	3.8	79	628
Vietnam	141.0	14.1	1.5	8.4	0.8	7.4 <sup>b</sup>	-200	0.1	27.0	..	581
West Bank and Gaza	..	..	..	..	..	..	-10	46.3	12.0	..	313
Yemen, Rep.	53.5	12.8	0.0	0.5	0.0	4.4	-135	2.1	6.0	..	28
Zambia	63.3	7.4	0.5	5.5	0.0	0.3	-85	1.8	16.4	..	8
Zimbabwe	91.9	..	0.0	1.1	..	..	-700	2.9	13.1	19	17
<b>World</b>	<b>42.8 w</b>	<b>11.2 w</b>	<b>.. w</b>	<b>1.8 w</b>	<b>2.1 w</b>	<b>0.8 w</b>	<b>..<sup>e</sup> s</b>	<b>3.1 w</b>	<b>5.4 w</b>	<b>..</b>	<b>3,526 w</b>
<b>Low income</b>	48.9	13.3	0.6	2.7	0.0	6.6	-2,737	1.5	13.1	..	7
<b>Middle income</b>	44.7	8.9	1.8	2.2	0.9	1.8	-13,203	1.4	6.8	..	348
Lower middle income	46.7	9.2	1.2	2.0	0.8	2.4	-9,231	0.9	6.6	..	151
Upper middle income	42.3	8.5	2.5	2.4	1.1	1.1	-3,972	3.3	7.0	..	1,120
<b>Low &amp; middle income</b>	44.8	9.0	1.8	2.2	0.9	1.9	-15,941	1.4	7.1	..	299
East Asia & Pacific	51.5	7.9	1.4	1.6	1.0	1.4	-3,781	0.3	7.0	..	742
Europe & Central Asia	48.3	10.5	1.8	3.3	2.0	1.4	-1,671	6.8	3.4	..	1,087
Latin America & Carib.	33.6	5.9	2.9	1.9	0.3	1.4	-5,214	1.1	10.6	..	1,408
Middle East & N. Africa	53.5	..	0.3	2.6	..	3.2	-1,089	3.6	10.5	..	323
South Asia	31.0	11.5	1.3	2.3	0.9	4.5	-2,376	0.8	5.3	..	31
Sub-Saharan Africa	52.7	13.4	1.4	3.1	0.2	2.5	-1,810	2.1	12.6	..	31
<b>High income</b>	42.0	12.5	..	2.0	2.8	0.3	15,894	12.0	4.1	..	19,521
Euro area	57.1	16.9	..	3.0	3.8	0.5	5,607	11.0	7.1	..	32,455

a. Data are from the International Telecommunication Union's (ITU) World Telecommunication Development Report database. Please cite the ITU for third-party use of these data. b. World Bank estimate. c. Includes Taiwan, China. d. Includes Montenegro. e. World totals computed by the United Nations sum to zero, but because the aggregates shown here refer to World Bank definitions, regional and income group totals do not equal zero.

### About the data

Globalization—the integration of the world economy—has been a persistent theme of the past 25 years. Growth of cross-border economic activity has changed countries' economic structure and political and social organization. Not all effects of globalization can be measured directly. But the scope and pace of change can be monitored along four key dimensions: trade in goods and services, financial flows, movement of people, and communication.

Trade data are based on gross flows that capture the two-way flow of goods and services. In conventional balance of payments accounting, exports are recorded as a credit and imports as a debit. The data on merchandise trade are from the World Trade Organization (WTO), which obtains data from national statistical offices and the International Monetary Fund's (IMF) International Financial Statistics, supplemented by the Comtrade database and publications or databases of regional organizations, specialized agencies, economic groups, and private sources. Because of differences in timing and definitions, trade flow estimates from customs reports and balance of payments may differ. See tables 4.4 and 4.5 for data on the main trade components of merchandise trade and tables 4.6 and 4.7 for the same data on services trade.

Financing through international capital markets includes gross bond issuance, bank lending, and new equity placement as reported by Dealogic, a company specializing in the investment banking industry. In financial accounting inward investment is a credit and outward investment a debit. Gross flow is a better measure of integration than net flow because gross flow shows the total value of financial transactions over a period, while net flow is the sum of credits and debits and represents a balance in which many transactions are canceled out. Components of financing through international capital markets are reported in U.S. dollars by market sources.

Foreign direct investment (FDI) includes equity investment, reinvested earnings, and short- and long-term loans between parent firms and foreign affiliates. Distinguished from other kinds of international investment, FDI establishes a lasting interest in or effective management control over an enterprise in another country. FDI may be understated in developing countries because some fail to report reinvested earnings and because the definition of long-term loans differs by country. However, data quality and coverage are improving as a result of continuous efforts by international and national

statistics agencies (see *About the data* for table 6.12). FDI data are recorded on a directional basis, as an inward flow to the economy of the direct investment enterprise, and as an outward flow from the economy of the direct investor. Net flows refer to new investments during the reporting period netted against disinvestments.

The data on workers' remittances and compensation of employees are the sum of three items defined in the IMF's Balance of Payments Manual, 5th edition: workers' remittances, compensation of employees, and migrants' transfers. The distinction among these three items is not always consistent in the data reported by countries to the IMF. In some cases countries compile data on the basis of the citizenship of migrant workers rather than their residency status. Some countries also report remittances entirely as worker's remittances or compensation of employees. Following the fifth edition of the Balance of Payments Manual in 1993, migrants' transfers are considered a capital transaction, but previous editions regarded them as current transfers. For these reasons the figures presented in the table take all three items into account. See *About the data* for table 6.18 for more information.

Migration has increased in importance, accounting for a substantial part of global integration. Data on net migration are estimated by the United Nations Population Division, based on data on immigrant stock and on fertility and mortality assumptions, taking into account the migration history of a country or area, the migration policy of a country, and the influx of refugees in recent periods. The estimates of the international migrant stock are derived from data on people who reside in one country but were born in another, mainly from population censuses (see *About the data* and Definitions for table 6.18).

One negative effect of migration is "brain drain"—emigration of highly educated people. The table shows data on emigration of people with tertiary education, drawn from Docquier, Lowell, and Marfouk (2009), who analyzed skilled migration using data from censuses and registers of Organisation for Economic Development and Co-operation (OECD) countries and provide data disaggregated by gender for 1990 and 2000.

Well developed communications infrastructure attracts investments and allows investors to capitalize on benefits of the digital age. See *About the data* for tables 5.11 and 5.12 for more information.

### Definitions

- **Trade in merchandise** is the sum of merchandise exports and imports.
- **Trade in services** is the sum of services exports and imports.
- **Financing through international capital markets** is the sum of the absolute values of new bond issuance, syndicated bank lending, and new equity placements.
- **Foreign direct investment net inflows** and **outflows** are net inflows and outflows of FDI (equity capital, reinvestment of earnings, and other short- and long-term capital).
- **Workers' remittances and compensation of employees received** are current transfers by migrant workers and wages and salaries of nonresident workers.
- **Net migration** is the number of immigrants minus the number of emigrants, including citizens and noncitizens, for the five-year period.
- **International migrant stock** is the number of people born in a country other than that in which they live, including refugees.
- **Emigration of people with tertiary education to OECD countries** is adults ages 25 and older, residing in an OECD country other than that in which they were born, with at least one year of tertiary education.
- **International voice traffic** is the sum of international incoming and outgoing telephone traffic (in minutes) divided by total population.
- **International Internet bandwidth** is the contracted capacity of international connections between countries for transmitting Internet traffic.

### Data sources

Data on merchandise trade are from the WTO's *Annual Report*. Data on trade in services are from the International Monetary Fund's (IMF) Balance of Payments database. Data on international capital market financing are based on data from Dealogic. Data on FDI are based on balance of payments data from the IMF, supplemented by staff estimates using data from the United Nations Conference on Trade and Development and official national sources. Data on workers' remittances are World Bank staff estimates based on IMF balance of payments data. Data on net migration are from the United Nations Population Division's *World Population Prospects: The 2008 Revision*. Data on international migrant stock are from the United Nations Population Division's Trends in Total Migrant Stock: The 2008 Revision. Data on emigration of people with tertiary education are from Docquier, Lowell, and Marfouk's "A Gendered Assessment of Highly Skilled Emigration" (2009). Data on international voice traffic and international Internet bandwidth are from the International Telecommunication Union's World Telecommunication Development Report database.



# 6.2

## Growth of merchandise trade

	Export volume		Import volume		Export value		Import value		Net barter terms of trade index	
	average annual % growth		average annual % growth		average annual % growth		average annual % growth		2000 = 100	
	1990-2000	2000-09	1990-2000	2000-09	1990-2000	2000-09	1990-2000	2000-09	1995	2009
Afghanistan <sup>a</sup>	..	15.2	..	3.9	-0.2	24.0	20.6	9.4	..	107.6
Albania	..	..	..	..	..	..	..	..	..	..
Algeria	2.8	-0.1	-0.8	12.7	2.0	16.3	-1.3	18.8	57.9	161.0
Angola	6.2	12.9	7.1	20.1	6.2	30.7	7.8	24.6	80.8	170.8
Argentina	8.4	5.9	17.7	11.3	10.1	12.2	17.0	14.4	91.6	126.0
Armenia	..	..	..	..	..	..	..	..	..	..
Australia <sup>a</sup>	7.3	7.6	9.2	7.5	5.7	20.0	8.7	12.3	99.4	163.0
Austria <sup>a</sup>	6.2	4.9	5.6	4.2	..	..	..	..	..	..
Azerbaijan	..	..	..	..	..	..	..	..	..	..
Bangladesh	12.9	11.0	5.9	4.6	15.8	12.5	10.4	13.0	111.8	64.5
Belarus <sup>b</sup>	..	6.0	..	10.1	..	18.4	..	19.4	..	121.0
Belgium <sup>a</sup>	6.0	2.9	5.7	3.5	4.8	10.9	5.3	11.4	104.3	103.1
Benin	1.0	5.9	8.2	6.8	3.3	14.0	9.7	16.1	106.6	83.1
Bolivia	2.8	9.9	9.1	7.8	4.3	21.9	9.7	13.3	89.4	136.9
Bosnia and Herzegovina	..	..	..	..	..	..	..	..	..	..
Botswana	4.8	2.9	4.0	5.1	4.8	7.4	4.2	11.5	89.3	79.1
Brazil	5.1	7.6	16.7	7.2	5.9	16.2	12.6	14.3	110.4	107.8
Bulgaria	..	..	..	..	..	..	..	..	..	..
Burkina Faso	13.2	11.7	3.6	7.3	12.9	17.1	3.6	15.6	131.0	78.6
Burundi	8.6	-4.2	4.0	10.4	-4.3	6.2	-6.9	15.9	163.6	137.9
Cambodia	..	12.8	..	9.4	26.9	15.2	25.2	15.1	..	85.0
Cameroon	0.3	-1.8	5.0	3.7	-3.6	11.2	2.1	13.1	90.4	121.6
Canada <sup>a</sup>	9.1	-0.7	9.0	3.3	9.4	5.6	8.9	7.3	103.2	114.8
Central African Republic	20.0	-3.7	4.3	5.7	3.5	-0.5	0.2	12.7	193.0	78.5
Chad <sup>a</sup>	-0.9	31.7	2.0	6.5	-3.5	49.6	0.5	12.2	92.6	136.0
Chile	11.1	5.1	10.7	11.3	9.4	18.3	10.3	15.3	135.6	166.7
China <sup>†</sup>	13.8	21.9	12.8	15.4	14.5	23.7	13.0	21.6	101.9	79.7
Hong Kong SAR, China	8.4	7.1	8.9	6.9	8.3	7.9	8.8	8.2	99.1	97.6
Colombia	4.5	6.6	8.5	11.4	7.3	14.9	9.7	15.8	86.8	114.4
Congo, Dem. Rep.	-1.8	8.3	4.6	14.6	-7.2	18.8	-0.5	21.5	79.8	112.0
Congo, Rep.	6.6	1.2	4.9	17.7	7.5	16.9	8.7	24.4	52.0	147.5
Costa Rica	14.0	7.6	14.9	7.6	17.0	7.5	13.9	9.9	104.6	87.2
Côte d'Ivoire	5.0	0.9	-0.3	6.6	6.1	12.4	3.0	15.7	122.0	140.4
Croatia	..	..	..	..	..	..	..	..	..	..
Cuba	..	1.5	..	8.2	-1.7	11.9	2.5	13.7	..	111.1
Czech Republic	..	..	..	..	..	..	..	..	..	..
Denmark <sup>a</sup>	5.4	2.7	5.8	3.7	4.1	9.8	4.9	10.7	102.1	102.9
Dominican Republic	3.9	-0.7	11.6	2.7	4.2	2.3	12.0	6.4	98.2	96.8
Ecuador	6.3	8.2	5.9	12.3	6.8	17.3	7.8	17.8	80.6	109.7
Egypt, Arab Rep.	-0.2	10.2	1.8	8.8	0.7	24.6	4.7	17.2	116.3	128.1
El Salvador	2.9	2.4	7.6	4.2	9.0	4.7	10.9	7.3	121.1	99.1
Eritrea	-28.3	-8.7	-3.2	-5.2	-31.0	-5.1	-0.2	1.7	101.7	73.3
Estonia	..	..	..	..	..	..	..	..	..	..
Ethiopia	10.5	7.8	7.3	17.5	10.7	17.8	7.3	25.1	151.0	121.1
Finland <sup>a</sup>	..	..	..	..	..	..	..	..	110.6	83.1
France <sup>a</sup>	8.3	4.9	6.6	6.4	4.9	10.5	3.7	12.2	106.4	99.8
Gabon	5.2	-1.2	2.5	7.2	0.8	13.8	2.2	12.4	125.4	155.3
Gambia, The	-11.6	-3.0	0.1	2.2	-12.3	2.1	0.2	9.8	100.0	85.5
Georgia	..	..	..	..	..	..	..	..	..	..
Germany <sup>a</sup>	6.5	5.6	4.9	5.1	3.7	11.6	2.9	10.9	107.5	105.9
Ghana	7.7	4.8	8.6	10.0	9.0	16.6	8.3	16.5	106.7	178.4
Greece <sup>a</sup>	8.9	..	9.3	..	8.2	..	8.2	..	89.6	90.8
Guatemala	8.5	8.8	10.0	5.8	10.1	13.1	10.4	11.5	117.9	91.4
Guinea	5.0	-7.4	-1.4	3.4	0.6	6.6	-2.6	10.5	89.6	143.3
Guinea-Bissau <sup>a</sup>	12.2	3.6	-16.0	7.2	18.6	9.1	-15.7	17.5	102.7	66.0
Haiti	12.6	5.9	13.3	2.3	12.2	8.6	14.4	9.8	113.2	70.6
Honduras	2.5	3.5	12.7	4.3	5.3	5.8	12.8	9.3	96.3	81.9
<sup>†</sup> Data for Taiwan, China	3.1	7.6	4.8	2.3	7.2	8.0	8.5	7.8	89.9	69.2

# Growth of merchandise trade

# 6.2

	Export volume		Import volume		Export value		Import value		Net barter terms of trade index	
	average annual % growth		average annual % growth		average annual % growth		average annual % growth		2000 = 100	
	1990–2000	2000–09	1990–2000	2000–09	1990–2000	2000–09	1990–2000	2000–09	1995	2009
Hungary <sup>a</sup>	10.1	10.7	11.6	8.0	10.1	16.2	11.8	14.3	104.3	95.6
India	6.9	12.3	9.0	18.4	5.3	20.3	7.9	25.3	108.0	99.4
Indonesia	9.1	8.7	2.9	5.7	8.1	10.9	2.7	15.6	90.4	63.2
Iran, Islamic Rep.	..	2.4	..	10.8	1.2	18.0	-4.8	18.4	..	132.4
Iraq <sup>a</sup>	..	1.0	..	6.8	118.9	17.2	70.3	13.7	..	140.8
Ireland <sup>a</sup>	15.2	1.9	11.3	0.9	13.8	5.4	10.9	5.4	103.9	96.6
Israel <sup>a</sup>	9.7	3.7	8.9	1.8	10.0	8.7	8.2	7.1	92.1	102.7
Italy <sup>a</sup>	4.8	0.3	4.2	0.6	4.6	9.3	3.2	10.2	96.6	103.3
Jamaica	2.2	0.3	..	1.2	2.2	6.0	6.9	9.2	..	77.1
Japan <sup>a</sup>	2.6	2.4	5.3	1.7	2.1	3.2	5.2	8.0	114.9	74.4
Jordan	4.7	4.2	3.8	6.8	6.6	16.3	5.1	17.2	115.6	120.4
Kazakhstan <sup>a</sup>	..	..	..	..	..	..	..	..	..	..
Kenya	3.9	5.1	7.4	8.6	6.3	12.6	6.0	17.7	103.9	94.7
Korea, Dem. Rep. <sup>a</sup>	..	4.3	..	-3.1	-8.5	10.9	1.0	6.3	..	83.9
Korea, Rep.	15.8	12.4	10.0	7.2	10.1	12.7	7.1	13.0	138.5	68.6
Kosovo	..	..	..	..	..	..	..	..	..	..
Kuwait	..	4.6	..	9.8	16.5	20.5	5.5	14.4	..	156.1
Kyrgyz Republic	..	..	..	..	..	..	..	..	..	..
Lao PDR	..	9.9	..	7.7	15.4	18.3	12.7	14.5	..	103.9
Latvia <sup>a</sup>	7.2	..	..	..	11.8	..	..	..	..	..
Lebanon	..	12.9	..	4.0	4.6	21.7	8.7	11.9	..	109.1
Lesotho	13.3	14.7	3.1	7.7	12.4	15.0	2.0	12.4	100.0	78.3
Liberia <sup>a</sup>	..	-6.3	..	5.4	-14.5	-0.4	2.6	9.9	..	111.4
Libya	..	4.5	0.0	16.6	-2.6	21.2	-1.4	23.9	..	140.4
Lithuania	..	..	..	..	..	..	..	..	..	..
Macedonia, FYR	..	..	..	..	..	..	..	..	..	..
Madagascar	4.1	2.8	4.5	10.6	8.5	6.0	6.4	17.6	79.6	75.5
Malawi	2.7	5.7	-2.4	8.0	0.9	10.9	-0.6	15.4	105.7	94.2
Malaysia	13.6	5.8	10.6	5.2	12.2	9.6	9.5	8.7	108.6	99.7
Mali	10.3	2.0	6.4	8.7	6.3	15.4	4.7	17.1	109.6	165.4
Mauritania	1.9	10.4	4.2	11.9	-1.9	24.0	-1.6	18.7	102.2	150.9
Mauritius	2.7	3.2	3.4	6.6	2.2	3.1	3.3	9.5	88.5	81.3
Mexico	15.5	2.7	13.2	3.5	16.1	7.0	14.2	6.8	92.5	104.0
Moldova	..	..	..	..	..	..	..	..	..	..
Mongolia	..	4.5	..	12.0	0.7	21.3	0.5	20.6	..	170.2
Morocco	7.5	0.1	7.2	8.6	7.2	10.3	5.5	16.3	89.1	137.4
Mozambique	15.2	12.5	1.0	8.7	10.2	22.4	1.1	16.3	151.1	98.2
Myanmar	15.5	6.7	13.8	-1.0	14.4	17.2	22.6	6.5	214.3	117.1
Namibia	2.4	7.3	7.7	11.0	0.9	14.9	3.9	15.5	82.6	113.5
Nepal	..	-1.5	..	2.9	11.0	4.0	9.3	12.4	..	80.7
Netherlands <sup>a</sup>	8.0	4.6	8.4	4.5	5.7	11.5	5.5	11.1	97.6	102.5
New Zealand <sup>a</sup>	4.7	3.0	6.0	5.8	4.3	9.6	5.9	10.5	99.0	111.0
Nicaragua	10.4	9.1	9.3	5.7	10.3	12.2	11.6	11.0	128.9	83.9
Niger	3.1	-2.6	-2.1	10.0	0.0	15.9	0.8	18.6	121.4	185.2
Nigeria	3.3	3.2	2.5	14.6	2.9	19.7	3.1	21.7	55.6	145.3
Norway <sup>a</sup>	6.6	0.2	7.8	5.7	5.7	12.8	4.4	12.5	60.3	128.6
Oman	4.0	-1.3	..	11.8	5.7	14.7	6.1	18.1	..	150.1
Pakistan	2.5	7.0	2.4	8.0	4.3	10.0	3.1	18.3	119.2	63.4
Panama	6.0	1.5	7.8	9.7	9.4	3.4	8.7	13.6	100.0	92.4
Papua New Guinea	-7.7	-3.5	..	7.0	3.7	13.8	-0.8	15.8	..	164.1
Paraguay	-0.2	14.5	5.4	15.5	1.7	19.0	6.7	19.4	118.3	104.9
Peru	9.4	8.1	10.6	9.7	8.9	21.6	12.7	17.3	123.4	129.1
Philippines	16.0	2.6	11.3	0.6	18.8	3.0	12.5	5.6	80.2	72.0
Poland <sup>a</sup>	9.8	11.8	19.0	9.4	9.5	21.8	17.0	18.4	102.4	107.1
Portugal <sup>a</sup>	0.3	-2.0	0.5	-1.4	-3.0	4.0	-2.5	4.5	104.7	107.6
Puerto Rico	..	..	..	..	..	..	..	..	..	..
Qatar	..	4.8	..	25.6	10.1	21.4	7.4	30.9	..	173.1





## 6.2

## Growth of merchandise trade

	Export volume		Import volume		Export value		Import value		Net barter terms of trade index	
	average annual % growth		average annual % growth		average annual % growth		average annual % growth		2000 = 100	
	1990-2000	2000-09	1990-2000	2000-09	1990-2000	2000-09	1990-2000	2000-09	1995	2009
Romania	..	..	..	..	..	..	..	..	..	..
Russian Federation	..	..	..	..	..	..	..	..	..	..
Rwanda	-8.0	3.6	0.8	15.2	-4.0	17.8	-1.7	22.7	110.1	155.3
Saudi Arabia	2.9	0.5	..	11.4	3.1	17.6	0.8	17.0	..	175.6
Senegal	10.6	0.8	4.9	7.1	4.0	9.4	3.6	16.5	156.3	99.2
Serbia	..	..	..	..	..	..	..	..	..	..
Sierra Leone <sup>a</sup>	..	28.7	..	3.1	..	35.2	..	14.3	..	64.6
Singapore	11.7	10.9	8.3	8.0	9.9	12.6	7.8	12.0	104.4	82.6
Slovak Republic	..	..	..	..	..	..	..	..	..	..
Slovenia	..	..	..	..	..	..	..	..	..	..
Somalia <sup>a</sup>	..	0.4	..	5.4	2.3	8.3	4.5	13.0	..	101.3
South Africa	4.5	0.5	7.6	6.6	2.5	12.8	5.9	15.7	106.0	135.0
Spain <sup>a</sup>	11.4	3.1	9.3	4.7	8.6	10.6	6.2	11.8	104.3	107.2
Sri Lanka	7.4	3.1	8.0	1.7	11.3	6.3	8.9	9.1	99.0	78.5
Sudan	12.6	8.3	8.4	17.9	14.0	24.7	9.8	23.5	100.0	152.5
Swaziland	4.0	2.5	3.1	4.3	5.9	8.9	5.0	10.2	100.0	112.8
Sweden <sup>a</sup>	8.9	3.5	6.4	4.4	7.4	9.7	5.4	12.1	110.2	89.6
Switzerland <sup>a</sup>	3.7	3.7	4.2	2.5	4.4	5.7	3.6	4.4	96.4	106.6
Syrian Arab Republic	2.2	0.4	..	12.5	0.9	14.1	3.6	20.5	..	148.3
Tajikistan	..	..	..	..	..	..	..	..	..	..
Tanzania	6.0	6.4	-2.0	11.8	6.4	17.0	0.1	20.5	98.0	121.1
Thailand	9.6	7.4	2.6	7.8	10.5	12.6	5.0	13.0	116.0	97.1
Timor-Leste	..	..	..	..	..	..	..	..	..	..
Togo	9.1	3.2	6.0	-1.7	6.6	9.9	5.5	14.8	99.1	28.6
Trinidad and Tobago	..	2.8	..	2.8	6.8	17.9	12.1	12.1	..	131.0
Tunisia	5.7	7.7	4.3	5.0	6.0	13.4	5.2	11.7	95.8	94.3
Turkey	10.7	11.5	11.1	9.8	9.1	19.3	10.3	18.4	105.7	95.0
Turkmenistan	..	..	..	..	..	..	..	..	..	..
Uganda	17.8	15.7	22.4	8.8	15.6	25.9	21.0	16.0	197.2	120.4
Ukraine	..	..	..	..	..	..	..	..	..	..
United Arab Emirates	..	7.8	..	15.9	6.6	20.9	10.7	21.6	..	134.7
United Kingdom <sup>a</sup>	6.3	1.1	6.5	3.2	6.2	6.2	6.5	7.9	100.1	104.0
United States <sup>a</sup>	6.6	4.0	9.1	2.9	7.2	6.6	9.5	6.5	103.3	99.0
Uruguay	6.1	8.1	10.5	5.9	5.2	14.3	10.1	13.3	116.2	98.5
Uzbekistan	..	..	..	..	..	..	..	..	..	..
Venezuela, RB	5.2	-1.9	4.8	12.3	5.4	13.9	5.2	15.7	63.4	187.1
Vietnam	..	11.8	..	12.8	22.7	19.7	22.7	21.2	..	97.4
West Bank and Gaza	..	..	..	..	..	..	..	..	..	..
Yemen, Rep.	..	-4.7	4.4	9.5	20.6	9.9	0.6	18.4	..	126.6
Zambia	6.1	8.9	2.9	15.1	-4.6	25.7	1.3	21.8	189.7	155.9
Zimbabwe	8.8	-5.1	8.0	-2.1	3.4	2.8	1.9	7.4	96.8	90.9

a. Data are from the International Monetary Fund's International Financial Statistics database. b. Data are from national sources.

**About the data**

Data on international trade in goods are available from each country's balance of payments and customs records. While the balance of payments focuses on the financial transactions that accompany trade, customs data record the direction of trade and the physical quantities and value of goods entering or leaving the customs area. Customs data may differ from data recorded in the balance of payments because of differences in valuation and time of recording. The 1993 United Nations System of National Accounts and the fifth edition of the International Monetary Fund's (IMF) *Balance of Payments Manual* (1993) attempted to reconcile definitions and reporting standards for international trade statistics, but differences in sources, timing, and national practices limit comparability. Real growth rates derived from trade volume indexes and terms of trade based on unit price indexes may therefore differ from those derived from national accounts aggregates.

Trade in goods, or merchandise trade, includes all goods that add to or subtract from an economy's material resources. Trade data are collected on the basis of a country's customs area, which in most cases is the same as its geographic area. Goods provided as part of foreign aid are included, but goods destined for extraterritorial agencies (such as embassies) are not.

Collecting and tabulating trade statistics are difficult. Some developing countries lack the capacity to report timely data, especially landlocked countries and countries whose territorial boundaries are porous. Their trade has to be estimated from the data reported by their partners. (For further discussion of the use of partner country reports, see *About the data* for table 6.3.) Countries that belong to common customs unions may need to collect data through direct inquiry of companies. Economic or political concerns may lead some national authorities to suppress or misrepresent data on certain trade flows, such as oil, military equipment, or the exports of a dominant producer. In other cases reported trade data may be distorted by deliberate under- or overinvoicing to affect capital transfers or avoid taxes. And in some regions smuggling and black market trading result in unreported trade flows.

By international agreement customs data are reported to the United Nations Statistics Division, which maintains the Commodity Trade (Comtrade) and Monthly Bulletin of Statistics databases. The United Nations Conference on Trade and Development (UNCTAD) compiles international trade statistics, including price, value, and volume indexes,

from national and international sources such as the IMF's International Financial Statistics database, the United Nations Economic Commission for Latin America and the Caribbean, the U.S. Bureau of Labor Statistics, Japan Customs and Bank of Japan, and UNCTAD's Commodity Price Statistics. The IMF also compiles data on trade prices and volumes in its International Financial Statistics (IFS) database.

Unless otherwise noted, the growth rates and terms of trade in the table were calculated from index numbers compiled by UNCTAD. The growth rates and terms of trade for selected economies were calculated from index numbers compiled in the IMF's *International Financial Statistics*. In some cases price and volume indexes from different sources vary significantly as a result of differences in estimation procedures. Because the IMF does not publish trade value indexes, for selected economies the trade value indexes were derived from the volume and price indexes. All indexes are rescaled to a 2000 base year.

The terms of trade measures the relative prices of a country's exports and imports. There are several ways to calculate it. The most common is the net barter (or commodity) terms of trade index, or the ratio of the export price index to the import price index. When a country's net barter terms of trade index increases, its exports become more valuable or its imports cheaper.

**Definitions**

• **Export and import volumes** are indexes of the quantity of goods traded. They are derived from UNCTAD's volume index series and are the ratio of the export or import value indexes to the corresponding unit value indexes. Unit value indexes are based on data reported by countries that demonstrate consistency under UNCTAD quality controls, supplemented by UNCTAD's estimates using the previous year's trade values at the Standard International Trade Classification three-digit level as weights. To improve data coverage, especially for the latest periods, UNCTAD constructs a set of average prices indexes at the three-digit product classification of the Standard International Trade Classification revision 3 using UNCTAD's Commodity Price Statistics, international and national sources, and UNCTAD secretariat estimates and calculates unit value indexes at the country level using the current year's trade values as weights. For economies for which UNCTAD does not publish data, the export and import volume indexes (lines 72 and 73) in the IMF's *International Financial Statistics* are used to calculate the average annual growth rates. • **Export and import values** are the current value of exports (free on board, f.o.b.) or imports (cost, insurance, and freight, c.i.f.), converted to U.S. dollars and expressed as a percentage of the average for the base period (2000). UNCTAD's export or import value indexes are reported for most economies. For selected economies for which UNCTAD does not publish data, the value indexes are derived from export or import volume indexes (lines 72 and 73) and corresponding unit value indexes of exports or imports (lines 74 and 75) in the IMF's *International Financial Statistics*. • **Net barter terms of trade index** is calculated as the percentage ratio of the export unit value indexes to the import unit value indexes, measured relative to the base year 2000.

**Data sources**

Data on trade indexes are from UNCTAD's annual *Handbook of Statistics* for most economies and from the IMF's *International Financial Statistics* for selected economies.



## 6.3

## Direction and growth of merchandise trade

## Direction of trade

## High-income importers

% of world trade, 2009

Source of exports	European Union	Japan	United States	Other high-income	Total
High-income economies	28.5	2.3	6.5	13.1	50.4
European Union	21.9	0.4	2.3	4.6	29.2
Japan	0.6	..	0.8	1.5	2.8
United States	1.8	0.4	..	3.1	5.3
Other high-income economies	4.2	1.5	3.4	3.8	13.0
Low- and middle-income economies	6.5	1.6	5.4	6.2	19.7
East Asia & Pacific	2.3	1.3	2.3	4.2	10.2
China	1.8	0.8	1.8	2.9	7.3
Europe & Central Asia	1.9	0.1	0.1	0.6	2.7
Russian Federation	0.9	0.1	0.1	0.3	1.3
Latin America & Caribbean	0.7	0.1	2.2	0.5	3.5
Brazil	0.3	0.0	0.1	0.2	0.6
Middle East & N. Africa	0.8	0.1	0.2	0.2	1.3
Algeria	0.2	0.0	0.1	0.0	0.3
South Asia	0.4	0.0	0.2	0.5	1.1
India	0.3	0.0	0.1	0.4	0.9
Sub-Saharan Africa	0.4	0.1	0.3	0.2	1.0
South Africa	0.1	0.0	0.0	0.1	0.3
World	35.0	4.0	11.8	19.3	70.1

## Low- and middle-income importers

% of world trade, 2009

Source of exports	East Asia & Pacific	Europe & Central Asia	Latin America & Caribbean	Middle East & N. Africa	South Asia	Sub-Saharan Africa	Total
High-income economies	8.2	2.6	3.3	1.4	1.5	1.0	18.2
European Union	1.2	2.0	0.7	0.9	0.4	0.6	5.7
Japan	1.4	0.0	0.2	0.0	0.1	0.1	1.8
United States	0.8	0.1	1.8	0.1	0.2	0.1	3.2
Other high-income economies	4.8	0.4	0.5	0.4	0.9	0.3	7.5
Low- and middle-income economies	2.7	1.6	1.7	0.9	1.1	0.8	9.2
East Asia & Pacific	1.7	0.5	0.5	0.3	0.5	0.3	3.9
China	0.6	0.4	0.4	0.2	0.3	0.3	2.4
Europe & Central Asia	0.2	1.0	0.0	0.3	0.1	0.0	1.6
Russian Federation	0.2	0.3	0.0	0.1	0.0	0.0	0.6
Latin America & Caribbean	0.4	0.1	1.0	0.1	0.1	0.1	1.8
Brazil	0.2	0.0	0.3	0.0	0.0	0.0	0.6
Middle East & N. Africa	0.2	0.1	0.0	0.2	0.2	0.0	0.7
Algeria	0.0	0.0	0.0	0.0	0.0	0.0	0.1
South Asia	0.2	0.0	0.0	0.1	0.1	0.1	0.5
India	0.2	0.0	0.0	0.1	0.1	0.1	0.4
Sub-Saharan Africa	0.1	0.0	0.1	0.0	0.1	0.2	0.7
South Africa	0.1	0.0	0.0	0.0	0.0	0.1	0.2
World	11.7	4.3	5.2	2.3	2.5	1.8	27.5

## Nominal growth of trade

### High-income importers

average annual % growth, 1999–2009

Source of exports	European Union	Japan	United States	Other high-income	Total
High-income economies	9.1	6.6	3.8	9.1	8.1
European Union	9.3	4.5	5.8	10.8	9.1
Japan	2.8	..	-0.6	6.9	3.4
United States	5.4	0.1	..	5.5	5.0
Other high-income economies	11.3	9.9	3.9	11.8	8.6
Low- and middle-income economies	16.7	11.3	11.0	17.4	14.6
East Asia & Pacific	18.9	10.7	15.2	17.3	16.1
China	26.4	13.3	21.8	22.7	21.9
Europe & Central Asia	19.8	17.1	7.8	18.5	18.6
Russian Federation	20.3	16.9	4.6	17.5	18.3
Latin America & Caribbean	12.5	11.5	7.1	15.7	9.0
Brazil	12.6	10.5	7.3	19.8	12.0
Middle East & N. Africa	13.3	14.0	19.9	17.1	14.9
Algeria	13.8	22.9	26.4	25.1	17.5
South Asia	14.5	6.7	8.6	20.5	14.6
India	16.5	8.1	10.8	22.9	17.2
Sub-Saharan Africa	11.7	19.5	18.2	14.3	14.6
South Africa <sup>a</sup>	10.4	22.0	14.8	14.3	13.3
World	10.2	8.3	6.4	11.1	9.6

### Low- and middle-income importers

average annual % growth, 1999–2009

Source of exports	East Asia & Pacific	Europe & Central Asia	Latin America & Caribbean	Middle East & N. Africa	South Asia	Sub-Saharan Africa	Total
High-income economies	15.4	19.4	8.0	13.6	19.6	13.0	14.2
European Union	15.8	19.0	8.8	11.8	15.9	12.0	14.7
Japan	12.6	27.1	8.9	11.9	12.1	10.8	12.4
United States	12.0	13.5	6.5	12.1	20.3	13.1	8.8
Other high-income economies	17.0	22.7	12.6	19.2	22.5	15.6	17.5
Low- and middle-income economies	22.6	22.9	17.6	23.2	25.2	21.7	22.1
East Asia & Pacific	21.4	37.9	26.6	25.5	27.2	26.9	25.2
China	27.4	40.9	31.3	30.5	35.3	31.7	32.2
Europe & Central Asia	18.7	20.1	20.4	22.9	23.2	22.1	20.7
Russian Federation	19.0	19.3	21.0	21.5	19.8	14.6	19.6
Latin America & Caribbean	30.9	20.3	14.5	17.4	25.1	24.1	17.9
Brazil	32.2	21.9	16.6	20.8	20.3	26.8	20.6
Middle East & N. Africa	25.0	17.8	15.2	24.9	34.1	25.0	24.7
Algeria	42.4	12.5	8.4	21.6	60.7	10.1	17.2
South Asia	26.1	15.9	21.8	23.7	19.9	24.6	22.7
India	27.9	14.2	24.2	26.8	20.1	25.8	24.2
Sub-Saharan Africa	20.5	24.7	21.8	13.8	15.8	15.7	21.0
South Africa <sup>a</sup>	28.0	18.7	12.0	20.4	20.7	12.9	17.0
World	17.3	20.8	10.7	16.4	21.2	16.0	16.3

a. Data for 1999 are based on imports from South Africa reported by other economies because data on exports for South Africa were not available.

## About the data

The table provides estimates of the flow of trade in goods between groups of economies. The data are from the International Monetary Fund's (IMF) Direction of Trade database. All high-income economies and major developing economies report trade on a timely basis, covering about 85 percent of trade for recent years. Trade by less timely reporters and by countries that do not report is estimated using reports of trading partner countries. Because the largest exporting and importing countries are reliable reporters, a large portion of the missing trade flows can be estimated from partner reports. Partner country data may introduce discrepancies due to smuggling, confidentiality, different exchange rates, overreporting of transit trade, inclusion or exclusion of freight rates, and different points of valuation and times of recording.

In addition, estimates of trade within the European Union (EU) have been significantly affected by changes in reporting methods following the creation of a customs union. The current system for collecting data on trade between EU members—Intrastat, introduced in 1993—has less exhaustive coverage than the previous customs-based system and has resulted in some problems of asymmetry (estimated imports are about 5 percent less than exports). Despite these issues, only a small portion of world trade is estimated to be omitted from the IMF's *Direction of Trade Statistics Yearbook* and Direction of Trade database.

Most countries report their trade data in national currencies, which are converted into U.S. dollars using the IMF's published period average exchange rate (series rf or rh, monthly averages of the market or official rates) for the reporting country or, if unavailable, monthly average rates in New York. Because imports are reported at cost, insurance, and freight (c.i.f.) valuations, and exports at free on board (f.o.b.) valuations, the IMF adjusts country reports of import values by dividing them by 1.10 to estimate equivalent export values. The accuracy of this approximation depends on the set of partners and the items traded. Other factors affecting the accuracy of trade data include lags in reporting, recording differences across countries, and whether the country reports trade according to the general or special system of trade. (For further discussion of the measurement of exports and imports, see *About the data* for tables 4.4 and 4.5.)

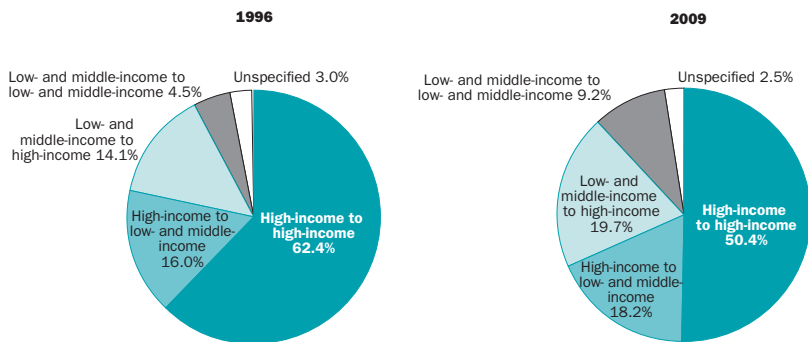
The regional trade flows in the table are calculated from current price values. The growth rates are in nominal terms; that is, they include the effects of changes in both volumes and prices.

## Definitions

- **Merchandise trade** includes all trade in goods; trade in services is excluded.
- **High-income economies** are those classified as such by the World Bank (see front cover flap).
- **European Union** is defined as all high-income EU members: Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Luxembourg, Malta, the Netherlands, Portugal, Slovak Republic, Slovenia, Spain, Sweden, and the United Kingdom.
- **Other high-income economies** include all high-income economies (both Organisation for Economic Co-operation and Development members and others) except the high-income European Union, Japan, and the United States.
- **Low- and middle-income regional groupings** are based on World Bank classifications (see back cover flap for regional groupings) and may differ from those used by other organizations.

**More than half of the world's merchandise trade takes place between high-income economies. But low- and middle-income economies' participation in the global trade has increased in the past 15 years**

6.3a



Trade among low- and middle-income economies accounted for about 9.2 percent of the world's merchandise trade in 2009, compared with 4.5 percent in 1996. The share of trade from low- and middle-income economies to high-income economies increased 9.8 percentage points between 1996 and 2009.

Source: World Bank staff calculations based on data from the International Monetary Fund's Direction of Trade database.

## Data sources

Data on the direction and growth of merchandise trade were calculated using the IMF's Direction of Trade database. Regional and income group classifications are according to the World Bank classification of economies as of July 1, 2010, and are as shown on the cover flaps of this report.

# High-income economy trade with low- and middle-income economies

# 6.4

GLOBAL LINKS

## Exports to low-income economies

	High-income economies		European Union		Japan		United States	
	1999	2009	1999	2009	1999	2009	1999	2009
<b>Total (\$ billions)</b>	<b>32.0</b>	<b>86.9</b>	<b>15.7</b>	<b>40.2</b>	<b>3.5</b>	<b>6.1</b>	<b>3.4</b>	<b>12.0</b>
<b>% of total exports</b>								
Food	12.5	10.5	14.2	9.8	0.4	0.3	25.2	17.2
Cereals	4.0	4.1	3.2	3.0	0.2	0.2	17.4	12.6
Agricultural raw materials	2.5	2.1	1.8	1.5	1.2	2.3	4.8	4.6
Ores and nonferrous metals	1.0	1.4	0.9	1.3	0.6	0.7	0.6	1.5
Fuels	4.9	11.5	3.1	15.6	0.3	0.3	1.8	5.9
Crude petroleum	0.1	0.4	0.1	0.0	0.0	0.0	0.0	0.0
Petroleum products	4.4	10.7	2.7	15.3	0.3	0.1	1.2	5.1
Manufactured goods	77.1	67.3	78.4	68.0	96.4	94.4	62.0	58.7
Chemical products	12.3	11.0	15.2	12.0	3.4	3.1	10.6	7.3
Iron and steel	2.6	2.9	2.3	2.2	6.9	8.1	0.8	1.2
Machinery and transport equipment	44.2	42.0	43.6	40.4	74.2	74.5	37.9	41.9
Furniture	0.4	0.3	0.6	0.4	0.1	0.1	0.3	0.2
Textiles	5.9	2.2	2.5	1.7	3.0	1.2	5.2	1.0
Footwear	0.2	0.1	0.2	0.2	0.0	0.0	0.2	0.2
Other	11.6	9.0	14.0	11.1	8.8	7.4	6.8	6.9
Miscellaneous goods	2.0	7.2	1.5	3.8	1.2	2.1	5.5	12.2

## Imports from low-income economies

	40.2	100.4	20.1	47.7	2.1	2.9	11.8	34.5
<b>Total (\$ billions)</b>								
<b>% of total imports</b>								
Food	23.0	15.1	31.9	22.0	37.1	23.7	7.5	4.3
Cereals	0.7	0.7	0.3	0.3	0.0	0.0	0.1	0.1
Agricultural raw materials	5.5	2.4	6.8	3.6	9.9	2.7	1.1	0.6
Ores and nonferrous metals	5.1	5.1	5.6	5.0	17.1	23.3	2.1	0.6
Fuels	23.3	39.5	13.3	29.6	8.9	23.0	41.4	64.3
Crude petroleum	21.2	34.1	12.5	23.5	7.6	5.3	36.3	61.2
Petroleum products	1.7	1.6	0.5	0.2	0.1	5.0	4.6	2.8
Manufactured goods	41.5	33.2	41.2	38.9	24.0	26.4	47.6	29.5
Chemical products	0.6	0.8	0.9	1.2	0.3	0.6	0.1	0.2
Iron and steel	0.5	0.1	0.4	0.1	2.3	0.8	0.4	0.0
Machinery and transport equipment	1.9	1.6	2.4	2.9	1.6	0.8	0.3	0.1
Furniture	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.3
Textiles	30.1	27.4	25.5	31.0	15.0	14.3	42.3	28.0
Footwear	0.4	0.7	0.5	0.9	1.7	7.6	0.0	0.1
Other	7.9	2.4	11.3	2.7	2.9	2.1	4.4	1.0
Miscellaneous goods	1.7	4.8	1.2	0.9	3.0	1.0	0.4	0.7

## Simple applied tariff rates on imports from low-income economies (%)<sup>a</sup>

	4.3	2.7	1.3	0.8	3.0	1.3	5.2	3.5
<b>Average</b>								
Food	6.8	3.0	3.1	0.7	9.1	2.6	3.8	2.3
Cereals	16.9	5.8	24.0	0.1	2.6	5.3	2.7	0.4
Agricultural raw materials	3.3	1.6	0.1	0.1	0.7	0.1	0.4	0.2
Ores and nonferrous metals	1.2	1.1	0.2	0.2	1.3	0.0	0.1	0.1
Fuels	3.1	1.2	0.2	0.0	2.0	0.5	0.4	0.2
Crude petroleum	1.3	0.5	0.0	0.0	1.2	0.0	0.3	0.0
Petroleum products	4.5	1.6	0.4	0.0	6.3	1.1	0.9	0.4
Manufactured goods	4.1	2.8	1.1	0.9	2.1	1.3	5.9	4.0
Chemical products	2.7	2.1	1.2	0.3	1.1	0.2	0.3	0.1
Iron and steel	4.2	2.4	0.8	0.2	0.2	0.0	0.4	0.0
Machinery and transport equipment	1.7	1.3	0.4	0.2	0.1	0.0	0.2	0.1
Furniture	3.2	2.2	0.1	0.1	0.0	0.0	0.6	0.9
Textiles	7.5	4.5	2.5	2.4	3.6	1.6	10.7	7.3
Footwear	7.2	4.4	2.9	1.7	6.4	4.4	12.5	8.7
Other	2.1	1.6	0.6	0.2	0.7	1.1	1.0	0.7
Miscellaneous goods	0.7	0.8	0.2	0.2	0.0	0.0	0.4	0.0



# 6.4 | High-income economy trade with low- and middle-income economies

## Exports to middle-income economies

	High-income economies		European Union		Japan		United States	
	1999	2009	1999	2009	1999	2009	1999	2009
<b>Total (\$ billions)</b>	<b>646.4</b>	<b>1845.4</b>	<b>224.9</b>	<b>700.5</b>	<b>89.0</b>	<b>222.8</b>	<b>184.4</b>	<b>346.7</b>
<b>% of total exports</b>								
Food	6.7	6.5	8.1	6.1	0.4	0.4	8.2	12.8
Cereals	1.7	1.4	1.5	1.1	0.1	0.0	3.0	2.8
Agricultural raw materials	1.8	1.9	1.3	1.5	1.0	1.1	2.1	3.6
Ores and nonferrous metals	2.0	4.5	1.5	2.7	1.9	3.8	1.5	3.9
Fuels	3.1	6.2	1.7	3.2	0.5	1.6	2.1	7.1
Crude petroleum	0.5	0.5	0.2	0.1	0.0	0.0	0.0	0.0
Petroleum products	1.9	4.4	1.3	2.7	0.4	1.4	1.5	5.4
Manufactured goods	83.8	75.2	85.7	82.5	93.3	88.2	81.6	63.4
Chemical products	11.7	14.0	13.7	14.6	8.2	9.9	10.5	14.4
Iron and steel	2.5	3.4	2.4	3.3	5.9	6.8	1.0	1.5
Machinery and transport equipment	48.8	41.8	46.3	45.4	63.9	58.0	50.0	33.2
Furniture	0.5	0.4	0.9	0.7	0.1	0.3	0.7	0.3
Textiles	6.2	2.6	5.4	3.3	3.6	1.7	5.7	1.9
Footwear	0.1	0.2	0.3	0.4	0.0	0.0	0.1	0.0
Other	14.1	13.3	16.7	14.8	11.6	11.6	13.7	12.1
Miscellaneous goods	2.6	5.7	1.6	4.0	2.9	4.8	4.4	9.3

## Imports from middle-income economies

	1,010.3	2,816.6	285.1	998.3	106.5	243.4	364.4	796.0
<b>Total (\$ billions)</b>								
<b>% of total imports</b>								
Food	10.0	7.6	14.2	9.4	15.6	9.2	6.5	5.9
Cereals	0.4	0.5	0.3	0.4	0.4	0.3	0.2	0.3
Agricultural raw materials	2.3	1.1	3.4	1.3	4.3	2.0	1.2	0.7
Ores and nonferrous metals	4.8	3.7	6.3	3.3	8.8	8.7	2.7	1.8
Fuels	13.3	19.8	18.8	25.6	13.8	16.6	11.3	19.1
Crude petroleum	9.0	12.7	13.0	16.2	6.6	7.0	8.9	15.8
Petroleum products	1.9	3.6	2.5	3.8	1.1	1.8	2.1	2.9
Manufactured goods	67.8	64.0	56.4	56.9	56.2	62.0	75.5	69.6
Chemical products	2.9	3.6	3.7	3.7	2.7	4.1	2.0	2.9
Iron and steel	1.9	1.7	2.1	1.8	1.0	1.0	1.6	1.0
Machinery and transport equipment	29.2	31.8	18.6	24.6	21.6	27.8	36.9	36.2
Furniture	1.7	1.8	1.4	1.6	1.5	1.7	2.4	2.7
Textiles	13.9	9.5	15.3	11.0	14.9	12.0	12.6	9.4
Footwear	2.6	1.7	2.1	2.0	1.7	1.4	3.2	2.1
Other	15.7	14.2	13.3	12.3	12.7	14.0	16.8	15.3
Miscellaneous goods	1.8	3.8	0.9	3.4	1.3	1.6	2.8	2.8

## Simple applied tariff rates on imports from middle-income economies (%)<sup>a</sup>

	5.6	3.2	3.9	1.1	2.9	2.2	3.4	2.5
<b>Average</b>								
Food	10.3	4.3	9.7	2.9	13.5	6.9	3.6	2.9
Cereals	15.2	6.7	22.1	0.7	10.0	10.5	2.3	1.1
Agricultural raw materials	2.5	1.9	1.0	0.4	0.9	0.5	0.5	0.4
Ores and nonferrous metals	1.9	1.3	1.4	0.5	0.1	0.0	0.3	0.4
Fuels	2.8	1.5	0.9	0.1	1.3	0.2	0.6	1.3
Crude petroleum	1.5	0.4	0.0	0.0	1.2	0.0	0.5	0.0
Petroleum products	5.5	2.1	2.9	0.1	4.2	0.6	1.7	3.0
Manufactured goods	5.2	3.1	3.4	1.0	1.6	1.8	3.6	2.5
Chemical products	3.6	2.0	3.3	0.6	0.6	0.3	1.2	1.1
Iron and steel	3.6	1.6	2.3	0.1	0.1	0.2	2.0	0.3
Machinery and transport equipment	3.0	1.9	1.6	0.2	0.0	0.0	0.4	0.5
Furniture	5.0	3.2	0.7	0.0	0.0	0.1	0.3	0.4
Textiles	9.7	6.0	7.6	3.3	4.2	4.9	10.3	6.8
Footwear	11.6	6.4	8.6	3.4	19.7	16.9	13.3	8.0
Other	3.8	2.3	2.3	0.3	0.4	0.7	0.9	0.8
Miscellaneous goods	1.7	0.9	1.2	0.5	0.0	0.0	0.5	0.3

a. Includes ad valorem equivalents of specific rates.

## About the data

Developing economies are becoming increasingly important in the global trading system. Since the early 1990s trade between high-income economies and low- and middle-income economies has grown faster than trade among high-income economies. The increased trade benefits consumers and producers. But as was apparent at the World Trade Organization's (WTO) Ministerial Conferences in Doha, Qatar, in October 2001; Cancun, Mexico, in September 2003; and Hong Kong SAR, China, in December 2005, achieving a more pro-development outcome from trade remains a challenge. Doing so will require strengthening international consultation. After the Doha meetings negotiations were launched on services, agriculture, manufactures, WTO rules, the environment, dispute settlement, intellectual property rights protection, and disciplines on regional integration. At the most recent negotiations in Hong Kong SAR, China, trade ministers agreed to eliminate subsidies of agricultural exports by 2013; to abolish cotton export subsidies and grant unlimited export access to selected cotton-growing countries in Sub-Saharan Africa; to cut more domestic farm supports in the European Union, Japan, and the United States; and to offer more aid to developing countries to help them compete in global trade.

Trade flows between high-income and low- and middle-income economies reflect the changing mix of exports to and imports from developing economies. While food and primary commodities have continued to fall as a share of high-income economies' imports, manufactures as a share of goods imports from both low- and middle-income economies have grown. And

trade between developing economies has grown substantially over the past decade, a result of their increasing share of world output and liberalization of trade, among other influences.

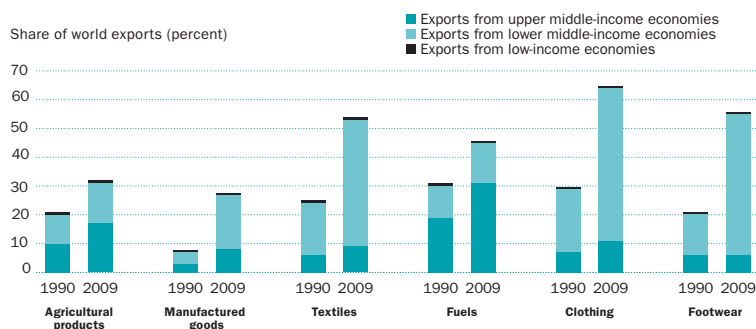
Yet trade barriers remain high. The table includes information about tariff rates by selected product groups. Applied tariff rates are the tariffs in effect for partners in preferential trade agreements such as the North American Free Trade Agreement. When these rates are unavailable, most favored nation rates are used. The difference between most favored nation and applied rates can be substantial. Simple averages of applied rates are shown because they are generally a better indicator of tariff protection than weighted average rates are.

The data on trade flows are from the United Nations Statistics Division's Commodity Trade (Comtrade) database. Partner country reports by high-income economies were used for both exports and imports. Because of differences in sources of data, timing, and treatment of missing data, the numbers in the table may not be fully comparable with those used to calculate the direction of trade statistics in tables 6.3 and 6.5 or the aggregate flows in tables 4.4, 4.5, and 6.2. Tariff data are from United Nations Conference on Trade and Development (UNCTAD)'s Trade Analysis and Information System (TRAINS) database. Tariff line data were matched to Standard International Trade Classification (SITC) revision 2 codes to define commodity groups. For further discussion of merchandise trade statistics, see *About the data* for tables 4.4, 4.5, 6.2, 6.3, and 6.5, and for information about tariff barriers, see table 6.8.

## Definitions

The product groups in the table are defined in accordance with SITC revision 2: **food** (0, 1, 22, and 4) and **cereals** (04); **agricultural raw materials** (2 excluding 22, 27, and 28); **ores and nonferrous metals** (27, 28, and 68); **fuels** (3), **crude petroleum** (crude petroleum oils and oils obtained from bituminous minerals; 333), and **petroleum products** (noncrude petroleum and preparations; 334); **manufactured goods** (5–8 excluding 68), **chemical products** (5), **iron and steel** (67), **machinery and transport equipment** (7), **furniture** (82), **textiles** (65 and 84), **footwear** (85), and **other manufactured goods** (6 and 8 excluding 65, 67, 68, 82, 84, and 85); and **miscellaneous goods** (9). • **Exports** are all merchandise exports by high-income economies to low-income and middle-income economies as recorded in the United Nations Statistics Division's Comtrade database. Exports are recorded free on board (f.o.b.). • **Imports** are all merchandise imports by high-income economies from low-income and middle-income economies as recorded in the United Nations Statistics Division's Commodity Trade (Comtrade) database. Imports include insurance and freight charges (c.i.f.). • **High-, middle-, and low-income economies** are those classified as such by the World Bank as of July 1, 2010 (see front cover flap). • **European Union** is defined as all high-income EU members: Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Luxembourg, Malta, the Netherlands, Portugal, Slovak Republic, Slovenia, Spain, Sweden, and the United Kingdom.

## Low-income economies have a small market share in the global market of various commodities

**6.4a**


Low-income economies specialize in labor-intensive sectors, but their share in the global market of labor intensive products is very small. Lower middle-income economies provided most of the textiles, clothing, and footwear traded globally in 2009. High-income economies accounted for the majority of trade in agricultural products and manufactured goods. Source: World Bank staff estimates, based on data from United Nations Statistics Division's Comtrade database.

## Data sources

Data on trade values are from United Nations Statistics Division's Comtrade database. Data on tariffs are from UNCTAD's TRAINS database and are calculated by World Bank staff using the World Integrated Trade Solution system, available at <http://wits.worldbank.org>.





	Exports						Imports					
	% of total merchandise exports						% of total merchandise imports					
	To developing economies				To high-income economies		From developing economies				From high-income economies	
	Within region		Outside region		1999	2009	Within region		Outside region		1999	2009
	1999	2009	1999	2009	1999	2009	1999	2009	1999	2009	1999	2009
<b>East Asia &amp; Pacific</b>	<b>8.1 w</b>	<b>11.9 w</b>	<b>7.2 w</b>	<b>15.5 w</b>	<b>83.9 w</b>	<b>73.7 w</b>	<b>11.0 w</b>	<b>15.9 w</b>	<b>8.9 w</b>	<b>18.0 w</b>	<b>80.5 w</b>	<b>64.1 w</b>
Cambodia	7.4	3.6	0.3	1.4	60.5	96.5	38.0	54.6	1.8	2.7	60.0	44.0
China	4.2	6.6	8.6	17.7	87.2	77.9	6.8	9.1	8.0	17.1	82.8	65.4
Fiji	8.9	19.6	0.1	1.5	80.6	51.2	8.0	18.7	2.2	3.4	89.1	76.0
Indonesia	11.1	22.4	8.1	14.1	80.8	64.0	14.6	26.4	7.9	10.0	76.8	63.4
Korea, Dem. Rep.	7.5	50.8	42.0	35.7	50.5	13.7	34.8	43.2	25.4	50.3	39.8	6.5
Lao PDR	..	..	0.6	0.2	32.1	18.0	81.8	83.5	1.0	1.7	16.0	13.5
Malaysia	9.9	23.8	6.6	10.9	83.5	65.5	12.7	28.1	3.1	6.6	82.8	64.7
Mongolia	..	..	14.5	4.1	28.4	34.3	19.1	27.0	37.1	41.1	53.8	32.0
Myanmar	20.1	57.6	13.4	22.1	53.2	14.3	49.2	66.7	1.7	4.8	49.0	28.4
Papua New Guinea	8.0	10.1	0.1	1.3	63.3	50.4	11.6	24.3	1.7	1.2	85.8	73.3
Philippines	8.7	16.2	1.8	2.5	88.2	79.7	12.4	26.2	4.2	5.1	82.2	68.7
Thailand	13.2	27.0	6.0	11.9	79.2	60.7	14.7	27.0	7.3	7.1	76.0	64.3
Vietnam	20.7	20.2	6.2	6.7	72.0	69.1	17.8	37.2	4.9	7.8	77.0	53.5
<b>Europe &amp; Central Asia</b>	<b>22.5 w</b>	<b>19.9 w</b>	<b>11.3 w</b>	<b>14.2 w</b>	<b>64.0 w</b>	<b>55.7 w</b>	<b>27.9 w</b>	<b>26.1 w</b>	<b>12.9 w</b>	<b>14.7 w</b>	<b>61.1 w</b>	<b>54.6 w</b>
Albania	3.3	5.1	0.1	6.9	96.6	87.7	12.3	16.8	1.1	8.3	86.5	72.9
Armenia	24.8	35.7	10.5	7.0	56.6	56.3	32.4	43.1	13.6	19.2	50.4	37.7
Azerbaijan	31.0	12.4	5.3	12.6	62.3	77.3	46.3	46.2	7.6	14.7	45.7	39.5
Belarus	65.6	46.5	11.3	10.6	22.8	42.9	66.5	65.5	3.4	6.3	30.1	26.8
Bosnia and Herzegovina	5.6	5.9	..	..	91.7	92.4	4.0	9.9	..	..	95.8	89.2
Bulgaria	25.8	27.4	5.7	6.9	66.5	64.7	28.4	33.1	7.1	7.8	64.0	59.1
Georgia	58.3	66.3	5.8	4.4	35.6	29.4	55.7	53.8	3.4	9.1	40.9	37.8
Kazakhstan	29.0	26.1	14.6	18.1	49.5	43.2	46.9	41.7	6.6	27.7	46.4	30.7
Kyrgyz Republic	42.7	80.0	..	..	47.8	9.5	46.6	22.6	10.1	71.5	41.7	6.0
Lithuania	19.5	24.5	1.3	3.6	79.1	72.8	25.3	33.9	4.0	4.4	69.1	62.4
Macedonia, FYR	29.0	31.5	1.6	1.8	68.8	55.2	31.2	33.3	4.3	11.2	64.5	55.6
Moldova	66.4	62.3	1.7	1.9	32.0	34.9	59.6	51.5	1.6	11.0	38.9	37.6
Romania	11.7	16.0	8.1	6.6	79.7	77.9	12.9	15.5	5.4	8.7	80.3	77.1
Russian Federation	20.0	14.5	11.5	12.2	67.2	55.9	29.7	12.8	13.8	23.4	56.1	62.2
Serbia	..	32.3	..	1.9	..	57.4	..	20.6	..	4.7	..	64.6
Tajikistan	46.1	36.7	..	..	50.7	15.1	78.9	62.2	..	..	18.6	15.8
Turkey	8.7	13.3	11.6	24.1	74.9	59.1	11.2	21.0	12.2	23.1	72.9	55.6
Turkmenistan	52.1	45.2	..	..	25.2	36.3	51.9	42.8	..	..	35.0	35.4
Ukraine	38.5	42.9	21.8	26.0	39.6	29.8	60.0	48.1	5.3	12.0	34.5	40.3
Uzbekistan	51.4	69.3	..	..	40.2	13.1	33.9	41.9	..	..	63.4	36.9
<b>Latin America &amp; Carib.</b>	<b>14.4 w</b>	<b>18.8 w</b>	<b>4.0 w</b>	<b>13.9 w</b>	<b>77.6 w</b>	<b>66.0 w</b>	<b>14.3 w</b>	<b>19.2 w</b>	<b>3.5 w</b>	<b>12.8 w</b>	<b>78.0 w</b>	<b>62.1 w</b>
Argentina	45.1	42.3	15.3	23.6	39.5	32.6	30.4	40.1	9.4	17.5	58.4	38.1
Bolivia	38.4	64.4	0.6	3.7	59.4	31.5	41.8	67.2	2.3	4.6	55.7	28.0
Brazil	23.0	22.4	10.9	28.2	64.3	48.0	19.0	17.1	9.9	26.8	71.0	56.1
Chile	20.3	16.3	5.3	28.7	67.9	51.4	28.1	29.5	8.6	14.9	49.9	45.0
Colombia	24.1	29.3	1.1	6.7	73.4	63.1	25.9	25.9	4.4	15.8	68.7	55.0
Costa Rica	12.4	26.2	0.7	12.1	26.9	61.3	20.1	22.5	3.3	9.6	41.1	63.5
Cuba	8.8	24.9	36.0	31.6	55.3	43.5	17.0	43.5	17.5	23.2	65.5	33.4
Dominican Republic	2.8	17.4	0.5	2.6	96.5	71.1	17.5	25.1	1.7	7.6	80.7	63.6
Ecuador	21.6	42.3	5.5	6.4	72.2	50.7	32.7	39.9	4.4	11.7	61.9	47.3
El Salvador	60.9	44.0	1.5	1.2	37.1	58.3	40.0	41.4	2.1	6.2	56.3	61.4
Guatemala	22.2	37.7	1.0	2.2	74.2	56.7	29.3	34.6	3.9	8.9	65.7	55.0
Haiti	2.5	9.7	0.8	2.1	96.9	87.9	15.2	34.8	3.9	11.4	80.5	53.7
Honduras	7.7	29.0	0.1	3.0	82.6	68.0	15.1	44.4	2.8	7.8	72.2	47.8
Jamaica	2.9	5.0	7.1	3.9	89.5	89.9	11.7	24.5	3.7	7.3	81.4	66.2
Mexico	3.2	6.3	0.3	1.9	96.1	94.5	2.3	4.3	3.4	18.5	93.7	80.7
Nicaragua	31.9	47.7	0.1	0.6	62.4	50.9	48.6	53.5	0.4	12.1	45.4	35.5
Panama	23.6	45.9	0.8	10.7	73.6	43.0	24.4	9.2	1.2	15.7	60.7	68.5
Paraguay	62.0	69.6	0.6	14.4	30.3	14.1	54.9	48.5	3.2	32.7	41.7	18.4
Peru	16.2	15.5	8.6	17.9	75.1	81.2	30.4	33.5	3.3	23.2	66.2	48.1
Uruguay	53.0	44.1	9.2	22.2	36.8	33.5	47.8	52.6	8.9	20.6	42.8	28.3
Venezuela, RB	15.2	12.0	..	10.5	63.2	56.0	18.2	38.4	0.2	10.9	69.4	47.3

# Direction of trade of developing economies

# 6.5

GLOBAL LINKS

	Exports						Imports					
	% of total merchandise exports						% of total merchandise imports					
	To developing economies				To high-income economies		From developing economies				From high-income economies	
	Within region	Outside region			1999	2009	Within region	Outside region			1999	2009
1999	2009	1999	2009	1999	2009	1999	2009	1999	2009	1999	2009	
<b>Middle East &amp; N. Africa</b>	<b>3.2 w</b>	<b>8.0 w</b>	<b>13.0 w</b>	<b>25.8 w</b>	<b>78.2 w</b>	<b>61.1 w</b>	<b>3.5 w</b>	<b>7.4 w</b>	<b>12.3 w</b>	<b>22.1 w</b>	<b>72.7 w</b>	<b>59.9 w</b>
Algeria	1.8	3.0	15.1	15.6	83.1	81.4	1.5	3.2	17.2	32.9	81.4	64.5
Egypt, Arab Rep.	7.2	21.1	11.9	22.8	65.6	52.9	1.1	2.9	21.7	34.7	69.3	60.9
Iran, Islamic Rep.	..	2.1	13.7	42.1	73.4	39.8	..	0.6	22.3	38.8	65.6	59.5
Iraq	4.1	2.4	5.9	29.0	90.0	68.6	12.8	22.9	37.1	42.5	50.1	34.7
Jordan	20.8	31.2	35.4	22.2	40.8	44.6	15.3	10.7	17.1	28.2	65.4	60.9
Lebanon	17.6	40.5	12.2	10.5	69.4	48.3	6.0	14.2	18.5	26.1	73.9	58.6
Libya	4.1	3.7	8.5	14.1	87.4	82.1	11.4	11.9	9.9	27.9	78.6	60.1
Morocco	2.4	3.3	10.4	22.3	80.7	73.1	1.7	6.2	9.0	18.3	79.0	75.8
Syrian Arab Republic	8.5	52.5	11.9	5.7	76.2	41.8	4.8	17.4	26.8	36.2	45.9	46.5
Tunisia	5.7	11.8	5.9	7.5	84.1	77.9	4.4	8.6	7.8	16.0	85.9	74.8
Yemen, Rep.	0.9	2.7	62.0	73.5	35.8	22.8	4.0	3.9	20.7	43.9	72.8	51.3
<b>South Asia</b>	<b>4.3 w</b>	<b>5.4 w</b>	<b>14.7 w</b>	<b>25.1 w</b>	<b>78.8 w</b>	<b>67.4 w</b>	<b>3.8 w</b>	<b>3.6 w</b>	<b>10.7 w</b>	<b>15.5 w</b>	<b>66.8 w</b>	<b>58.1 w</b>
Afghanistan	46.6	48.3	17.6	19.3	35.8	32.4	24.8	30.1	35.2	24.5	40.0	45.5
Bangladesh	1.9	2.6	4.4	6.8	78.7	76.8	13.5	14.3	16.4	36.1	52.5	43.5
India	4.2	4.5	17.5	27.4	78.2	65.3	0.9	0.6	29.6	39.7	69.5	59.4
Nepal	29.6	64.6	..	..	60.2	29.6	14.0	52.9	..	..	45.1	15.8
Pakistan	4.5	12.4	12.0	23.8	81.2	61.9	2.3	4.2	23.3	31.8	72.8	63.1
Sri Lanka	3.1	5.7	10.4	16.0	82.4	115.8	10.1	19.9	14.3	35.5	61.4	61.2
<b>Sub-Saharan Africa</b>	<b>13.3 w</b>	<b>13.7 w</b>	<b>13.8 w</b>	<b>27.9 w</b>	<b>66.4 w</b>	<b>57.9 w</b>	<b>12.0 w</b>	<b>11.8 w</b>	<b>12.7 w</b>	<b>22.7 w</b>	<b>70.3 w</b>	<b>52.3 w</b>
Angola	1.0	3.9	8.9	47.1	90.1	49.0	11.5	5.1	12.7	32.7	75.8	62.7
Benin	5.9	30.8	68.7	54.7	25.1	14.5	24.3	7.2	16.9	58.4	58.5	34.5
Burkina Faso	10.2	15.5	31.6	37.9	55.8	43.1	39.5	37.2	5.1	13.8	51.1	44.5
Burundi	2.1	8.8	..	12.5	72.3	66.7	23.8	24.2	8.1	18.9	57.8	46.9
Cameroon	6.9	12.8	8.4	18.1	84.1	68.4	20.0	18.6	10.7	26.5	68.1	55.1
Central African Republic	1.4	9.2	14.6	32.8	84.0	58.0	18.0	14.9	7.9	14.3	57.9	43.8
Chad	5.5	0.4	..	..	81.3	96.0	31.6	19.1	..	..	62.4	55.9
Comoros	..	..	..	..	93.4	66.5	..	..	..	..	51.4	46.4
Congo, Dem. Rep.	1.1	21.0	0.6	46.9	98.0	31.9	50.6	48.1	5.6	15.2	41.5	36.7
Congo, Rep.	1.6	1.3	8.1	33.2	88.0	65.3	12.9	4.7	9.0	30.0	64.3	63.9
Cote d'Ivoire	24.8	27.6	16.5	7.7	58.7	84.4	16.8	26.8	14.3	26.3	63.0	53.3
Ethiopia	1.7	5.1	18.4	24.9	70.5	55.1	2.3	2.7	19.1	35.1	70.5	33.8
Gabon	0.9	3.2	10.1	24.9	83.3	56.0	5.7	9.7	2.6	16.8	90.9	72.3
Gambia, The	18.1	5.9	4.7	61.7	77.2	32.4	8.4	16.3	24.2	53.4	67.4	30.4
Ghana	7.8	10.3	12.1	24.6	74.0	53.2	23.9	24.5	15.0	33.0	60.4	41.8
Guinea	4.7	2.6	1.1	24.1	90.0	51.8	11.1	5.8	16.3	17.3	72.5	33.6
Guinea-Bissau	1.6	26.8	..	..	16.8	2.4	15.4	18.7	..	..	44.1	36.6
Kenya	30.7	34.3	16.2	14.8	51.9	42.9	9.5	12.2	15.2	33.6	74.6	53.4
Liberia	2.4	18.3	9.3	8.9	88.3	72.9	4.6	0.9	1.8	19.0	93.5	80.1
Madagascar	5.8	4.8	8.5	11.0	74.6	76.2	8.7	8.4	22.1	46.7	59.5	37.2
Malawi	19.4	19.7	9.0	32.6	71.2	47.3	67.5	56.4	6.3	16.1	25.1	27.7
Mali	5.7	9.2	32.3	50.9	60.1	28.3	23.7	27.2	5.8	10.9	38.6	32.9
Mauritania	11.3	14.1	9.0	46.9	78.6	37.8	6.3	5.4	17.2	35.6	68.3	49.8
Mauritius	6.7	14.2	0.9	3.5	92.4	82.4	13.9	11.4	24.1	46.0	62.0	42.6
Mozambique	45.1	16.5	13.2	8.3	40.6	63.2	29.9	36.6	7.1	18.8	20.2	32.1
Niger	39.1	26.9	0.3	0.5	60.6	72.8	31.0	17.6	21.1	31.7	46.2	51.0
Nigeria	10.6	10.9	27.6	24.8	61.2	63.1	3.8	4.7	24.6	27.2	71.3	52.0
Rwanda	4.8	56.5	14.7	19.8	43.3	23.0	27.8	42.0	6.2	12.4	47.3	44.7
Senegal	25.5	44.3	18.8	11.7	49.1	37.9	12.3	15.9	19.6	32.8	66.5	74.0
Sierra Leone	..	9.3	..	11.0	66.9	75.7	11.4	24.5	11.9	32.9	72.0	38.2
Somalia	0.7	4.2	30.9	21.4	68.4	74.4	12.9	8.5	61.1	65.0	15.0	14.1
South Africa	16.3	18.7	8.5	21.8	60.1	60.3	3.7	7.0	14.4	35.3	81.7	58.0
Sudan	10.4	1.6	24.2	77.0	65.2	21.3	4.0	6.5	37.1	48.7	58.8	41.3
Tanzania	16.7	18.1	24.1	28.4	57.3	44.6	18.8	16.2	23.4	39.5	57.7	40.7
Togo	24.0	58.8	30.5	32.5	41.1	8.1	21.4	16.0	9.7	31.6	65.2	50.5
Uganda	3.1	46.8	5.0	7.3	92.0	43.2	49.4	25.2	10.3	23.1	39.7	51.8
Zambia	35.6	22.8	12.2	16.0	32.0	63.8	55.8	60.2	4.5	9.7	35.3	30.2
Zimbabwe	29.1	49.1	14.5	20.6	54.8	30.4	46.0	73.3	6.6	8.7	39.1	14.0

Note: Bilateral trade data are not available for Timor-Leste, Kosovo, West Bank and Gaza, Botswana, Eritrea, Lesotho, Namibia, and Swaziland. Components may not sum to 100 percent because of trade with unspecified partners or with economies not covered by World Bank classification.



# 6.5

## Direction of trade of developing economies

### About the data

Developing economies are an increasingly important part of the global trading system. Their share of world trade rose from 15 percent in 1990 to 30 percent in 2009. And trade between high-income economies and low- and middle-income economies has grown faster than trade between high-income economies. This increased trade benefits both producers and consumers in developing and high-income economies.

The table shows trade in goods between developing economies in the same region and other regions and between developing economies and high-income economies. Data on exports and imports are from the International Monetary Fund's (IMF) Direction of Trade database and should be broadly consistent with data from other sources, such as the United Nations Statistics Division's Commodity Trade (Comtrade) database. All high-income economies and major developing economies report trade to the IMF on a timely basis, covering about 85 percent of trade for recent years. Trade by less timely reporters and by countries that do not report is estimated using reports of trading partner countries. Therefore, data on trade between developing and high-income economies shown in the table should be generally complete. But trade flows between many developing economies—particularly

those in Sub-Saharan Africa—are not well recorded, and the value of trade among developing economies may be understated. The table does not include some developing economies because data on their bilateral trade flows are not available. Data on the direction of trade between selected high-income economies are presented and discussed in tables 6.3 and 6.4.

At the regional level most exports from developing economies are to high-income economies, but the share of intraregional trade is increasing. Geographic patterns of trade vary widely by country and commodity. Larger shares of exports from oil- and resource-rich economies are to high-income economies.

The relative importance of intraregional trade is higher for both landlocked countries and small countries with close trade links to the largest regional economy. For most developing economies—especially smaller ones—there is a “geographic bias” favoring intraregional trade. Despite the broad trend toward globalization and the reduction of trade barriers, the relative share of intraregional trade increased for most economies between 1999 and 2009. This is due partly to trade-related advantages, such as proximity, lower transport costs, increased knowledge from repeated interaction, and cultural and historical

affinity. The direction of trade is also influenced by preferential trade agreements that a country has made with other economies. Though formal agreements on trade liberalization do not automatically increase trade, they nevertheless affect the direction of trade between the participating economies. Table 6.7 illustrates the size of existing regional trade blocs that have formal preferential trade agreements.

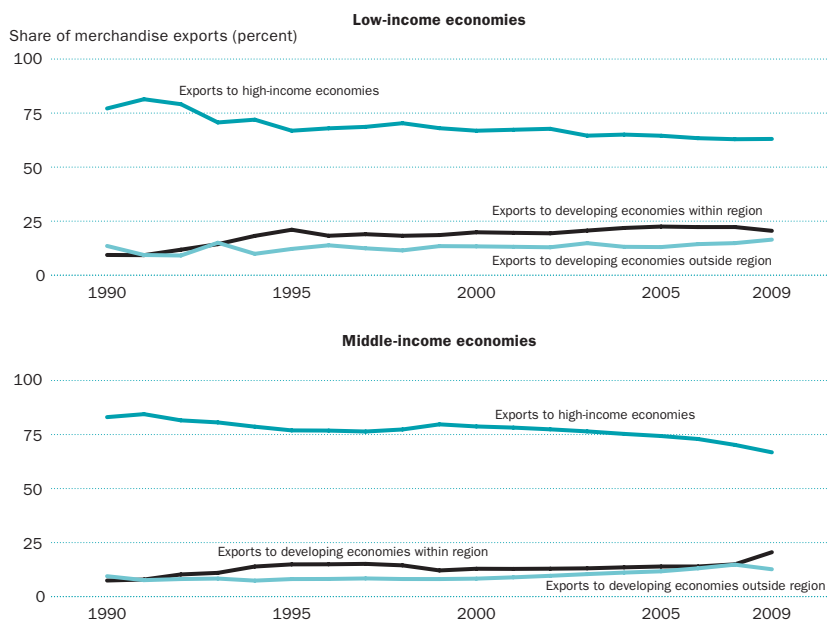
Although global integration has increased, developing economies still face trade barriers when accessing other markets (see table 6.8).

### Definitions

- **Exports to developing economies within region** are the sum of merchandise exports from the reporting economy to other developing economies in the same World Bank region as a percentage of total merchandise exports by the economy.
- **Exports to developing economies outside region** are the sum of merchandise exports from the reporting economy to other developing economies in other World Bank regions as a percentage of total merchandise exports by the economy.
- **Exports to high-income economies** are the sum of merchandise exports from the reporting economy to high-income economies as a percentage of total merchandise exports by the economy.
- **Imports from developing economies within region** are the sum of merchandise imports by the reporting economy from other developing economies in the same World Bank region as a percentage of total merchandise imports by the economy.
- **Imports from developing economies outside region** are the sum of merchandise imports by the reporting economy from other developing economies in other World Bank regions as a percentage of total merchandise imports by the economy.
- **Imports from high-income economies** are the sum of merchandise imports by the reporting economy from high-income economies as a percentage of total merchandise imports by the economy.

### Developing economies are trading more with other developing economies

6.5a



Share of merchandise exports to high-income economies have been declining for both low- and middle-income economies. On the other hand, their exports to other developing economies have increased, especially exports to developing economies within the same region.

Source: World Bank staff calculations based on data from International Monetary Fund's Direction of Trade database.

### Data sources

Data on merchandise trade flows are published in the IMF's *Direction of Trade Statistics Yearbook* and *Direction of Trade Statistics Quarterly*; the data in the table were calculated using the IMF's Direction of Trade database. Regional and income group classifications are according to the World Bank classification of economies as of July 1, 2010, and are as shown on the cover flaps of this report.

	1970	1980	1990	1995	2000	2004	2005	2006	2007	2008	2009	2010
<b>World Bank commodity price index (2000= 100)</b>												
Energy	19	153	79	53	100	123	171	197	209	274	179	225
Nonenergy commodities	183	177	115	117	100	121	135	172	192	218	178	224
Agriculture	188	195	113	122	100	118	121	134	154	184	165	192
Beverages	230	273	117	136	100	109	125	130	145	168	184	210
Food	201	199	116	117	100	123	121	131	158	198	171	186
Fats and oils	237	196	105	126	100	134	120	123	178	222	181	203
Grains	204	199	121	124	100	115	115	134	161	225	179	179
Other food	151	205	124	101	100	117	129	140	127	142	152	170
Raw materials	136	143	105	125	100	109	119	143	149	157	141	197
Timber	97	92	88	105	100	90	100	113	117	120	116	119
Other raw materials	179	198	124	146	100	129	140	177	185	196	168	282
Fertilizers	82	177	98	110	100	125	148	151	205	453	245	232
Metals and minerals	185	141	122	106	100	126	162	251	268	261	197	288
Base metals	200	145	124	112	100	127	152	253	272	230	174	247
Steel products <sup>a</sup>	..	134	131	118	100	153	170	162	155	231	190	190
<b>Commodity prices (2000 prices)</b>												
<b>Energy</b>												
Coal, Australian (\$/mt)	..	49	39	33	26	48	43	44	56	102	60	82
Natural gas, Europe (\$/mmBtu)	..	5.21	2.48	2.26	3.86	3.88	5.74	7.57	7.30	10.72	7.27	6.87
Natural gas, U.S. (\$/mmBtu)	0.57	1.91	1.65	1.43	4.31	5.35	8.09	6.01	5.96	7.09	3.30	3.64
Natural gas, liquefied, Japan (\$/mmBtu)	..	7.02	3.54	2.86	4.71	4.66	5.44	6.32	6.56	10.04	7.46	9.00
Petroleum, avg., spot (\$/bbl)	4	45	22	14	28	34	48	57	61	78	52	66
<b>Beverages (cents/kg)</b>												
Cocoa	233	321	123	119	91	141	140	142	167	206	241	260
Coffee, Arabica	397	427	192	277	192	161	230	225	232	247	265	358
Coffee, robusta	316	400	115	230	91	72	101	133	163	186	137	144
Tea, avg., 3 auctions	289	205	200	124	188	153	150	168	174	194	227	239
Tea, Colombo auctions	217	137	182	118	179	162	167	171	215	223	262	273
Tea, Kolkata auctions	343	253	273	145	181	156	147	157	164	180	210	233
Tea, Mombasa auctions	307	224	144	108	203	141	134	175	142	177	210	212
<b>Food</b>												
<b>Fats and oils (\$/mt)</b>												
Coconut oil	1,376	831	327	556	450	600	560	542	784	979	606	932
Copra <sup>a</sup>	779	558	224	364	305	409	376	360	518	653	401	622
Groundnut oil	1,312	1,059	937	823	714	1,054	963	867	1,154	1,705	988	1,164
Palm oil	901	719	282	521	310	428	383	427	666	759	570	747
Palmkernel oil <sup>a</sup>	..	..	..	..	444	588	569	519	758	904	585	982
Soybeans	405	365	240	215	212	278	249	240	328	418	365	373
Soybean meal	355	324	195	164	189	219	195	187	263	340	340	314
Soybean oil	992	737	435	519	338	559	495	535	752	1,007	709	833
<b>Grains (\$/mt)</b>												
Barley	..	96	78	86	77	90	86	104	147	160	107	131
Maize	202	154	106	103	89	102	90	109	140	178	138	154
Rice, Thailand, 5%	438	506	263	266	202	216	260	272	279	520	463	405
Rice, Thailand, 25% <sup>a</sup>	..	..	254	247	173	205	241	248	262	425	382	366
Rice, Thailand, A1 <sup>a</sup>	..	..	152	218	143	186	198	196	232	386	273	318
Sorghum <sup>a</sup>	179	159	101	99	88	100	87	110	139	166	126	137
Wheat, Canada <sup>a</sup>	218	235	152	172	147	169	179	194	256	364	251	259
Wheat, U.S., hard red winter	190	213	132	147	114	142	138	172	218	261	187	185
Wheat, U.S., soft red winter <sup>a</sup>	197	208	125	139	99	131	123	142	204	217	155	190



	1970	1980	1990	1995	2000	2004	2005	2006	2007	2008	2009	2010
<b>Commodity prices (continued)</b>												
<b>(2000 prices)</b>												
<b>Food (continued)</b>												
Other food												
Bananas, U.S. (\$/mt)	573	467	526	369	424	476	547	605	577	675	707	720
Beef (cents/kg)	452	340	249	158	193	228	238	228	222	251	220	278
Chicken meat (cents/kg)	..	85	96	92	119	138	135	124	134	136	143	143
Fishmeal (\$/mt) <sup>a</sup>	682	621	401	411	413	589	664	1,040	1,005	906	1,027	1,399
Oranges (\$/mt)	582	482	516	441	363	780	794	741	817	886	759	857
Shrimp, Mexico (cents/kg)	..	1,420	1,039	1,253	1,515	928	939	915	862	855	789	1,033
Sugar, EU domestic (cents/kg)	39	60	57	57	56	61	60	58	58	56	44	37
Sugar, U.S. domestic (cents/kg)	57	82	50	42	43	41	43	44	39	37	46	66
Sugar, world (cents/kg)	29	78	27	24	18	14	20	29	19	23	33	39
<b>Agricultural raw materials</b>												
Cotton A index (cents/kg)	219	252	177	177	130	124	110	113	119	126	115	189
Logs, Cameroon (\$/cu. m) <sup>a</sup>	149	310	334	282	275	301	304	285	325	421	352	355
Logs, Malaysia (\$/cu. m)	149	241	172	212	190	179	184	214	229	234	240	231
Rubber, Singapore (cents/kg)	141	176	84	131	67	116	135	186	193	207	160	303
Rubber, TSR 20 (cents/kg) <sup>a</sup>	..	..	..	..	63	110	126	174	184	202	150	280
Plywood (cents/sheet) <sup>a</sup>	357	338	345	485	448	422	462	532	547	516	471	472
Sawnwood, Malaysia (\$/cu. m)	608	489	518	614	595	528	599	670	688	711	673	703
Tobacco (\$/mt) <sup>a</sup>	3,727	2,806	3,297	2,194	2,976	2,488	2,533	2,653	2,830	2,871	3,541	3,570
Woodpulp (\$/mt) <sup>a</sup>	615	661	792	708	664	582	577	624	655	656	513	719
<b>Fertilizers (\$/mt)</b>												
Diammonium phosphate	187	274	167	180	154	201	224	233	369	774	270	415
Phosphate rock	38	58	39	29	44	37	38	40	61	276	102	102
Potassium chloride	109	143	95	98	123	113	144	156	171	456	526	275
Triple superphosphate	147	222	128	124	138	169	183	180	289	703	215	317
Urea	63	237	116	155	101	159	199	199	264	394	208	239
<b>Metals and minerals</b>												
Aluminum (\$/mt)	1,926	1,795	1,593	1,499	1,549	1,558	1,724	2,297	2,252	2,058	1,390	1,802
Copper (\$/mt)	4,904	2,690	2,586	2,437	1,813	2,602	3,340	6,007	6,076	5,564	4,300	6,248
Gold (\$/toz) <sup>a</sup>	125	750	373	319	279	372	404	540	595	697	812	1,016
Iron ore (cents/dmtu)	34	35	32	24	29	34	59	69	72	112	84	134
Iron ore, spot, cfr China (\$/dmtu)	..	..	..	..	..	..	..	..	108	125	69	126
Lead (cents/kg)	105	112	79	52	45	80	89	115	220	167	144	178
Nickel (\$/mt)	9,860	8,037	8,614	6,830	8,638	12,551	13,387	21,675	31,778	16,888	12,237	18,084
Silver (cents/toz) <sup>a</sup>	614	2,544	475	431	500	607	666	1,034	1,145	1,200	1,227	1,675
Tin (cents/kg)	1,273	2,068	591	516	544	773	670	785	1,241	1,481	1,133	1,692
Zinc (cents/kg)	102	94	147	86	113	95	125	293	277	150	138	179
<b>MUV G-5 index</b>	<b>29</b>	<b>81</b>	<b>103</b>	<b>120</b>	<b>100</b>	<b>110</b>	<b>110</b>	<b>112</b>	<b>117</b>	<b>125</b>	<b>120</b>	<b>121</b>

Note: bbl = barrel, cu. m = cubic meter, dmtu = dry metric ton unit, kg = kilogram, mmBtu = million British thermal unit, mt = metric ton, toz = troy ounce.

a. Series not included in the nonenergy index.

## Primary commodity prices

## About the data

Primary commodities—raw or partially processed materials that will be transformed into finished goods—are often developing countries' most important exports, and commodity revenues can affect living standards. Price data are collected from various sources, including international commodity study groups, government agencies, industry trade journals, and Bloomberg and Datastream. Prices are compiled in U.S. dollars or converted to U.S. dollars when quoted in local currencies.

The table is based on frequently updated price reports. Prices are those received by exporters when available, or the prices paid by importers or trade unit values. Annual price series are generally simple averages based on higher frequency data. The constant price series in the table are deflated by the manufactures unit value (MUV) index for the Group of Five (G-5) countries (see below).

Commodity price indexes are calculated as Laspeyres index numbers; the fixed weights are the 2002–04 average export values for low- and middle-income economies (based on 2001 gross national income) rebased to 2000. Data for exports are from the United Nations Statistics Division's Commodity Trade Statistics (Comtrade) database Standard International Trade Classification (SITC) revision 3, the Food and Agriculture Organization's FAOSTAT database, the International Energy Agency database, BP's *Statistical Review of World Energy*, the World Bureau of Metal Statistics, and World Bank staff estimates.

Each index in the table represents a fixed basket of primary commodity exports over time. The nonenergy

commodity price index contains 41 price series for 34 nonenergy commodities.

Separate indexes are compiled for energy and steel products, which are not included in the nonenergy commodity price index.

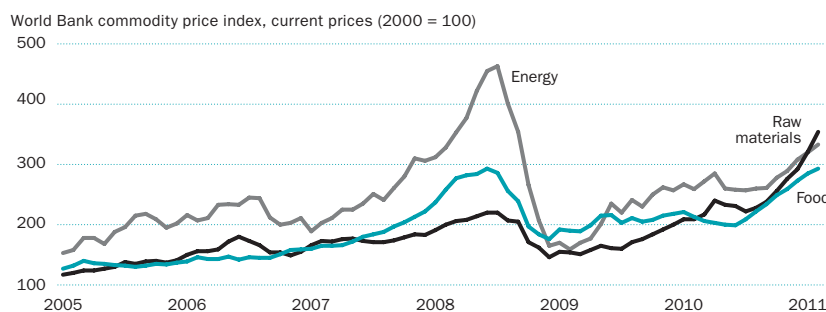
The MUV index is a composite index of prices for manufactured exports from the five major (G-5) industrial economies (France, Germany, Japan, the United Kingdom, and the United States) to low- and middle-income economies, valued in U.S. dollars. The index covers products in groups 5–8 of SITC revision 1. For the MUV G-5 index, unit value indexes in local currency for each country are converted to U.S. dollars using market exchange rates and are combined using weights determined by each country's export share in the base year (1995). The export shares were 8.2 percent for France, 17.4 percent for Germany, 35.6 percent for Japan, 6.6 percent for the United Kingdom, and 32.2 percent for the United States.

## Definitions

- **Energy price index** is the composite price index for coal, petroleum, and natural gas, weighted by exports of each commodity from low- and middle-income countries.
- **Nonenergy commodity price index** covers the 34 nonenergy primary commodities that make up the agriculture, fertilizer, and metals and minerals indexes.
- **Agriculture** includes beverages, food, and agricultural raw materials.
- **Beverages** include cocoa, coffee, and tea.
- **Food** includes fats and oils, grains, and other food items. Fats and oils include coconut oil, groundnut oil, palm oil, soybeans, soybean oil, and soybean meal. Grains include barley, maize, rice, and wheat. Other food items include bananas, beef, chicken meat, oranges, shrimp, and sugar.
- **Agricultural raw materials** include timber and other raw materials. Timber includes tropical hard logs and sawwood. Other raw materials include cotton, natural rubber, and tobacco.
- **Fertilizers** include phosphate, phosphate rock, potassium, and nitrogenous products.
- **Metals and minerals** include base metals and iron ore.
- **Base metals** include aluminum, copper, lead, nickel, tin, and zinc.
- **Steel products price index** is the composite price index for eight steel products based on quotations free on board (f.o.b.) Japan excluding shipments to the United States for all years and to China prior to 2001, weighted by product shares of apparent combined consumption (volume of deliveries) for Germany, Japan, and the United States.
- **Commodity prices**—for definitions and sources, see "Commodity price data" (also known as the "Pink Sheet") at the World Bank Prospects for Development website ([www.worldbank.org/prospects](http://www.worldbank.org/prospects), click on Products).
- **MUV G-5 index** is the manufactures unit value index for G-5 country exports to low- and middle-income economies.

## Primary commodity prices soared again in 2010

6.6a



The food commodity price index started rising again in the beginning of 2009, and by the end of February 2011 exceeded the record high in June 2008. The price index for raw materials reached new highs, and the energy price index also rose throughout 2009 and 2010.

Source: World Bank commodity price data.

## Data sources

Data on commodity prices and the MUV G-5 index are compiled by the World Bank's Development Prospects Group. Monthly updates of commodity prices are available at [www.worldbank.org/prospects](http://www.worldbank.org/prospects) and <http://data.worldbank.org/data-catalog>.



## Merchandise exports within bloc

	Year of creation	Year of entry into force of the most recent agreement	Type of most recent agreement <sup>a</sup>	\$ millions						
				1990	1995	2000	2005	2007	2008	2009
<b>High-income and low- and middle-income economies</b>										
APEC <sup>b</sup>	1989		None	901,560	1,688,708	2,261,791	3,318,699	4,192,784	4,606,339	3,738,989
EEA	1994	1994	EIA	1,079,711	1,463,232	1,714,018	3,037,759	4,025,418	4,446,686	3,392,597
EFTA	1960	2002	EIA	782	925	831	1,252	2,196	2,910	2,006
European Union	1957	1958	EIA, CU	1,032,397	1,404,255	1,641,609	2,905,551	3,846,547	4,233,112	3,237,024
NAFTA	1994	1994	FTA	226,273	394,472	676,141	824,359	951,258	1,013,245	768,820
SPARTECA	1981	1981	PTA	5,299	9,135	8,579	15,201	18,617	20,263	17,079
Trans-Pacific SEP	2006	2006	EIA, FTA	1,110	2,614	1,438	2,345	3,290	4,262	3,548
<b>East Asia and Pacific and South Asia</b>										
APTA	1975	1976	PTA	2,429	21,728	37,895	127,340	193,951	233,617	204,745
ASEAN	1967	1992	FTA	27,365	79,544	98,060	165,458	216,727	251,285	198,915
MSG	1993	1994	PTA	5	18	22	51	78	89	78
PICTA	2001	2003	FTA	4	4	8	22	34	38	34
SAARC	1985	2006	FTA	945	2,081	2,894	8,619	12,747	13,177	11,095
<b>Europe, Central Asia, and Middle East</b>										
Agadir Agreement	2004		NNA	156	226	294	635	1,046	1,913	2,075
CEFTA	1992	1994	FTA	..	619	1,187	2,847	6,160	7,543	5,083
CEZ	2003	2004	FTA	..	10,154	13,283	23,469	43,003	47,731	19,094
CIS	1991	1994	FTA	..	31,277	28,422	58,113	98,050	123,052	60,389
EAEC	1997	2000	CU	..	10,919	13,936	24,818	45,714	51,186	21,872
ECO	1985	2003	PTA	1,243	4,746	4,518	12,579	22,064	26,739	18,412
GCC	1981	2003 <sup>c</sup>	CU	6,906	6,832	8,029	15,408	24,372	31,514	21,849
PAFTA (GAFTA)	1997	1998	FTA	13,204	12,948	16,188	41,659	61,100	82,267	61,881
UMA	1989	1994 <sup>c</sup>	NNA	958	1,109	1,041	1,885	2,695	4,570	3,422
<b>Latin America and the Caribbean</b>										
Andean Community	1969	1988	CU	544	1,788	2,046	4,572	5,926	7,029	5,785
CACM	1961	1961	CU	667	1,594	2,655	4,311	5,637	6,475	5,287
CARICOM	1973	1997	EIA	456	877	1,078	2,235	3,112	3,808	2,716
LAIA (ALADI)	1980	1981	PTA	13,350	35,986	44,253	71,711	110,006	143,283	98,510
MERCOSUR	1991	2005	EIA	4,127	14,199	17,829	21,128	32,421	46,657	32,689
OECS	1981	1981 <sup>c</sup>	NNA	29	39	38	68	104	118	104
<b>Sub-Saharan Africa</b>										
CEMAC	1994	1999	CU	139	120	96	201	305	355	300
CEPGL	1976		NNA	7	8	10	20	29	73	64
COMESA	1994	1994	FTA	1,146	1,367	1,443	2,695	4,021	6,676	6,114
EAC	1996	2000	CU	335	628	689	1,075	1,385	1,797	1,572
ECCAS	1983	2004 <sup>c</sup>	NNA	160	157	182	255	385	449	378
ECOWAS	1975	1993	PTA	1,532	1,875	2,715	5,497	6,717	9,355	7,312
Indian Ocean Commission	1984	2005 <sup>c</sup>	NNA	63	113	106	162	214	217	183
SADC	1992	2000	FTA	1,655	3,615	4,427	7,799	12,051	16,011	11,697
UEMOA	1994	2000	CU	621	560	741	1,390	1,735	2,281	1,927

**Note:** Regional bloc memberships are as follows: **Agadir Agreement**, the Arab Republic of Egypt, Jordan, Morocco, and Tunisia; **Andean Community**, Bolivia, Colombia, Ecuador, and Peru; **Arab Maghreb Union (UMA)**, Algeria, Libyan Arab Republic, Mauritania, Morocco, and Tunisia; **Asia Pacific Economic Cooperation (APEC)**, Australia, Brunei Darussalam, Canada, Chile, China, Hong Kong SAR, China, Indonesia, Japan, the Republic of Korea, Malaysia, Mexico, New Zealand, Papua New Guinea, Peru, the Philippines, the Russian Federation, Singapore, Taiwan (China), Thailand, the United States, and Vietnam; **Asia-Pacific Trade Agreement (APTA; formerly Bangkok Agreement)**, Bangladesh, China, India, the Republic of Korea, the Lao People's Democratic Republic, and Sri Lanka; **Association of South East Asian Nations (ASEAN)**, Brunei Darussalam, Cambodia, Indonesia, the Lao People's Democratic Republic, Malaysia, Myanmar, the Philippines, Singapore, Thailand, and Vietnam; **Caribbean Community and Common Market (CARICOM)**, Antigua and Barbuda, the Bahamas, Barbados, Belize, Dominica, Grenada, Guyana, Haiti, Jamaica, Montserrat, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, Suriname, and Trinidad and Tobago; **Central American Common Market (CACM)**, Costa Rica, El Salvador, Guatemala, Honduras, and Nicaragua; **Central European Free Trade Area (CEFTA)**, Albania, Bosnia and Herzegovina, Croatia, Kosovo, Macedonia, Moldova, Montenegro, and Serbia; **Common Economic Zone (CEZ)**, Belarus, Kazakhstan, and the Russian Federation; **Common Market for Eastern and Southern Africa (COMESA)**, Burundi, Comoros, the Democratic Republic of Congo, Djibouti, the Arab Republic of Egypt, Eritrea, Ethiopia, Kenya, Libyan Arab Republic, Madagascar, Malawi, Mauritius, Rwanda, Seychelles, Sudan, Swaziland, Uganda, Zambia, and Zimbabwe; **Commonwealth of Independent States (CIS)**, Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Kyrgyz Republic, Moldova, the Russian Federation, Tajikistan, Turkmenistan, Ukraine, and Uzbekistan; **East African Community (EAC)**, Burundi, Kenya, Rwanda, Tanzania, and Uganda; **Economic and Monetary Community of Central Africa (CEMAC; formerly Central African Customs and Economic Union [UDEAC])**, Cameroon, the Central African Republic, Chad, the Republic of Congo, Equatorial Guinea, and Gabon; **Economic Community of Central African States (ECCAS)**, Angola, Burundi, Cameroon, the Central African Republic, Chad, the Democratic Republic of Congo, the Republic of Congo, Equatorial Guinea, Gabon, and São Tomé and Príncipe; **Economic Community of the Great Lakes Countries (CEPGL)**, Burundi, the Democratic Republic of Congo, and Rwanda; **Economic Community of West African States (ECOWAS)**, Benin, Burkina Faso, Cape Verde, Côte d'Ivoire, the Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone, and Togo; **Economic Cooperation Organization (ECO)**, Afghanistan, Azerbaijan, the Islamic Republic of Iran, Kazakhstan, the Kyrgyz Republic, Pakistan, Tajikistan, Turkey, Turkmenistan, and

## Merchandise exports within bloc

	Year of creation	Year of entry into force of the most recent agreement	Type of most recent agreement <sup>a</sup>	% of total bloc exports						
				1990	1995	2000	2005	2007	2008	2009
<b>High-income and low- and middle-income economies</b>										
APEC <sup>b</sup>	1989		None	68.3	71.7	73.0	70.8	67.3	65.2	66.3
EEA	1994	1994	EIA	68.8	67.9	69.0	73.0	73.3	72.8	71.9
EFTA	1960	2002	EIA	0.8	0.7	0.6	0.5	0.7	0.8	0.7
European Union	1957	1958	EIA, CU	67.3	66.5	67.7	71.6	71.9	71.4	70.4
NAFTA	1994	1994	FTA	41.4	46.2	55.7	55.7	51.3	49.5	48.0
SPARTECA	1981	1981	PTA	10.5	12.9	10.7	11.4	10.5	8.9	9.1
Trans-Pacific SEP	2006	2006	EIA, FTA	1.5	1.7	0.8	0.8	0.8	1.0	1.0
<b>East Asia and Pacific and South Asia</b>										
APTA	1975	1976	PTA	1.6	6.8	8.0	11.0	11.0	11.4	11.6
ASEAN	1967	1992	FTA	18.9	24.4	23.0	25.3	25.2	25.5	24.5
MSG	1993	1994	PTA	0.3	0.4	0.6	0.8	0.8	0.8	0.8
PICTA	2001	2003	FTA	0.3	0.1	0.3	0.4	0.4	0.4	0.4
SAARC	1985	2006	FTA	3.5	4.5	4.6	6.6	6.6	5.9	5.4
<b>Europe, Central Asia, and Middle East</b>										
Agadir Agreement	2004		NNA	1.3	1.4	1.4	1.8	2.0	2.7	3.8
CEFTA	1992	1994	FTA	..	9.0	14.5	16.3	21.2	22.4	20.2
CEZ	2003	2004	FTA	..	11.6	11.0	8.4	10.4	8.8	5.6
CIS	1991	1994	FTA	..	28.4	19.8	17.7	20.1	18.0	14.8
EAEC	1997	2000	CU	..	12.3	11.5	8.9	10.9	9.3	6.3
ECO	1985	2003	PTA	3.2	7.9	5.6	6.9	8.0	6.8	7.2
GCC	1981	2003 <sup>c</sup>	CU	8.0	6.8	4.9	4.4	5.0	4.5	5.1
PAFTA (GAFTA)	1997	1998	FTA	10.2	9.8	7.2	9.2	9.4	8.9	10.6
UMA	1989	1994 <sup>c</sup>	NNA	2.9	3.8	2.2	1.9	2.0	2.5	3.1
<b>Latin America and the Caribbean</b>										
Andean Community	1969	1988	CU	4.0	8.6	7.7	9.0	7.8	7.5	7.5
CACM	1961	1961	CU	15.3	21.8	19.6	23.2	23.5	24.8	22.3
CARICOM	1973	1997	EIA	8.0	12.0	14.4	12.1	13.1	12.9	13.7
LAIA (ALADI)	1980	1981	PTA	11.6	17.3	13.2	13.6	15.3	16.5	15.5
MERCOSUR	1991	2005	EIA	8.9	20.3	20.0	12.9	14.7	14.7	15.2
OECS	1981	1981 <sup>c</sup>	NNA	8.1	12.6	10.0	11.5	12.1	12.0	13.0
<b>Sub-Saharan Africa</b>										
CEMAC	1994	1999	CU	2.3	2.1	1.0	0.9	1.1	0.8	1.2
CEPGL	1976		NNA	0.5	0.5	0.8	1.2	1.4	1.9	2.2
COMESA	1994	1994	FTA	4.7	6.1	4.6	4.6	4.5	5.3	7.2
EAC	1996	2000	CU	17.7	19.5	22.6	18.0	17.8	19.2	18.9
ECCAS	1983	2004 <sup>c</sup>	NNA	1.4	1.5	1.0	0.6	0.6	0.4	0.6
ECOWAS	1975	1993	PTA	8.0	9.0	7.6	9.3	7.8	8.5	9.9
Indian Ocean Commission	1984	2005 <sup>c</sup>	NNA	3.9	5.9	4.4	4.9	5.8	5.7	5.8
SADC	1992	2000	FTA	6.6	10.2	9.5	9.3	10.2	10.3	11.0
UEMOA	1994	2000	CU	13.0	10.3	13.1	13.4	14.9	15.9	13.2

Uzbekistan; **Eurasian Economic Community (EAEC)**, Belarus, Kazakhstan, Kyrgyz Republic, the Russian Federation, Tajikistan, and Uzbekistan; **European Economic Area (EEA)**, European Union plus Iceland, Liechtenstein, and Norway; **European Free Trade Association (EFTA)**, Iceland, Liechtenstein, Norway, and Switzerland; **European Union (EU; formerly European Economic Community and European Community)**, Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Poland, Portugal, Romania, Slovak Republic, Slovenia, Spain, Sweden, and the United Kingdom; **Gulf Cooperation Council (GCC)**, Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirates; **Indian Ocean Commission**, Comoros, Madagascar, Mauritius, Réunion, and Seychelles; **Latin American Integration Association (LAIA; formerly Latin American Free Trade Area)**, Argentina, Bolivia, Brazil, Chile, Colombia, Cuba, Ecuador, Mexico, Paraguay, Peru, Uruguay, and Bolivarian Republic of Venezuela; **Melanesian Spearhead Group (MSG)**, Fiji, Papua New Guinea, Solomon Islands, and Vanuatu; **North American Free Trade Agreement (NAFTA)**, Canada, Mexico, and the United States; **Organization of Eastern Caribbean States (OECS)**, Anguilla, Antigua and Barbuda, British Virgin Islands, Dominica, Grenada, Montserrat, St. Kitts and Nevis, St. Lucia, and St. Vincent and the Grenadines; **Pacific Island Countries Trade Agreement (PICTA)**, Cook Islands, Kiribati, Nauru, Niue, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu, and Vanuatu; **Pan-Arab Free Trade Area (PAFTA; also known as Greater Arab Trade Area (GAFTA))**, Bahrain, Egypt, Iraq, Jordan, Kuwait, Lebanon, Libya, Morocco, Oman, Qatar, Saudi Arabia, Sudan, Syrian Arab Republic, Tunisia, the United Arab Emirates, and Yemen; **South Asian Association for Regional Cooperation (SAARC)**, Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, and Sri Lanka; **South Pacific Regional Trade and Economic Cooperation Agreement (SPARTECA)**, Australia, Cook Islands, Fiji, Kiribati, Marshall Islands, Federated States of Micronesia, Nauru, New Zealand, Niue, Papua New Guinea, Solomon Islands, Tonga, Tuvalu, Vanuatu, and Western Samoa; **Southern African Development Community (SADC)**, Angola, Botswana, the Democratic Republic of Congo, Lesotho, Madagascar, Malawi, Mauritius, Mozambique, Namibia, Seychelles, South Africa, Swaziland, Tanzania, Zambia, and Zimbabwe; **Southern Common Market (MERCOSUR)**, Argentina, Brazil, Paraguay, Uruguay, and Bolivarian Republic of Venezuela; **Trans-Pacific Strategic Economic Partnership (Trans-Pacific SEP)**, Brunei Darussalam, Chile, New Zealand, and Singapore; **West African Economic and Monetary Union (WAEMU or UEMOA)**, Benin, Burkina Faso, Côte d'Ivoire, Guinea-Bissau, Mali, Niger, Senegal, and Togo.





# 6.7 | Regional trade blocs

## Merchandise exports by bloc

	Year of creation	Year of entry into force of the most recent agreement	Type of most recent agreement <sup>a</sup>	% of world exports						
				1990	1995	2000	2005	2007	2008	2009
<b>High-income and low- and middle-income economies</b>										
APEC <sup>b</sup>	1989		None	39.0	46.4	48.5	45.1	44.8	44.1	45.7
EEA	1994	1994	EIA	46.4	42.4	38.9	40.1	39.5	38.1	38.3
EFTA	1960	2002	EIA	2.9	2.4	2.2	2.3	2.3	2.3	2.4
European Union	1957	1958	EIA, CU	45.3	41.5	38.0	39.1	38.5	37.0	37.3
NAFTA	1994	1994	FTA	16.2	16.8	19.0	14.3	13.4	12.8	13.0
SPARTECA	1981	1981	PTA	1.5	1.4	1.3	1.3	1.3	1.4	1.5
Trans-Pacific SEP	2006	2006	EIA, FTA	2.2	3.0	2.7	2.9	2.9	2.8	2.9
<b>East Asia and Pacific and South Asia</b>										
APTA	1975	1976	PTA	4.5	6.3	7.5	11.2	12.7	12.8	14.3
ASEAN	1967	1992	FTA	4.3	6.4	6.7	6.3	6.2	6.1	6.6
MSG	1993	1994	PTA	0.1	0.1	0.1	0.1	0.1	0.1	0.1
PICTA	2001	2003	FTA	0.0	0.1	0.0	0.1	0.1	0.1	0.1
SAARC	1985	2006	FTA	0.8	0.9	1.0	1.3	1.4	1.4	1.7
<b>Europe, Central Asia, and Middle East</b>										
Agadir Agreement	2004		NNA	0.3	0.3	0.3	0.3	0.4	0.4	0.4
CEFTA	1992	1994	FTA	..	0.1	0.1	0.2	0.2	0.2	0.2
CEZ	2003	2004	FTA	..	1.7	1.9	2.7	3.0	3.4	2.8
CIS	1991	1994	FTA	..	2.2	2.2	3.2	3.5	4.3	3.3
EAEC	1997	2000	CU	..	1.7	1.9	2.7	3.0	3.4	2.8
ECO	1985	2003	PTA	1.1	1.2	1.3	1.8	2.0	2.5	2.1
GCC	1981	2003 <sup>c</sup>	CU	2.6	2.0	2.6	3.3	3.5	4.3	3.5
PAFTA (GAFTA)	1997	1998	FTA	3.8	2.6	3.5	4.4	4.7	5.8	4.7
UMA	1989	1994 <sup>c</sup>	NNA	1.0	0.6	0.8	0.9	1.0	1.1	0.9
<b>Latin America and the Caribbean</b>										
Andean Community	1969	1988	CU	0.4	0.4	0.4	0.5	0.5	0.6	0.6
CACM	1961	1961	CU	0.1	0.1	0.2	0.2	0.2	0.2	0.2
CARICOM	1973	1997	EIA	0.2	0.1	0.1	0.2	0.2	0.2	0.2
LAIA (ALADI)	1980	1981	PTA	3.4	4.1	5.3	5.1	5.2	5.4	5.2
MERCOSUR	1991	2005	EIA	1.4	1.4	1.4	1.6	1.6	2.0	1.7
OECS	1981	1981 <sup>c</sup>	NNA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Sub-Saharan Africa</b>										
CEMAC	1994	1999	CU	0.2	0.1	0.1	0.2	0.2	0.3	0.2
CEPGL	1976		NNA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
COMESA	1994	1994	FTA	0.7	0.4	0.5	0.6	0.6	0.8	0.7
EAC	1996	2000	CU	0.1	0.1	0.0	0.1	0.1	0.1	0.1
ECCAS	1983	2004 <sup>c</sup>	NNA	0.3	0.2	0.3	0.4	0.5	0.7	0.5
ECOWAS	1975	1993	PTA	0.6	0.4	0.6	0.6	0.6	0.7	0.6
Indian Ocean Commission	1984	2005 <sup>c</sup>	NNA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SADC	1992	2000	FTA	0.7	0.7	0.7	0.8	0.9	1.0	0.9
UEMOA	1994	2000	CU	0.1	0.1	0.1	0.1	0.1	0.1	0.1

a. CU is customs union; EIA is economic integration agreement; FTA is free trade agreement; PTA is preferential trade agreement; and NNA is not notified agreement, which refers to preferential trade arrangements established among member countries that are not notified to the World Trade Organization (these agreements may be functionally equivalent to any of the other agreements). b. No preferential trade agreement. c. Years of the most recent agreement are collected from the official website of the trade bloc.

**About the data**

Trade blocs are groups of countries that have established preferential arrangements governing trade between members. Although in some cases the preferences—such as lower tariff duties or exemptions from quantitative restrictions—may be no greater than those available to other trading partners, such arrangements are intended to encourage exports by bloc members to one another—sometimes called intratrade.

Most countries are members of a regional trade bloc, and more than a third of the world's trade takes place within such arrangements. While trade blocs vary in structure, they all have the same objective: to reduce trade barriers between member countries. But effective integration requires more than reducing tariffs and quotas. Economic gains from competition and scale may not be achieved unless other barriers that divide markets and impede the free flow of goods, services, and investments are lifted. For example, many regional trade blocs retain contingent protections on intrabloc trade, including antidumping, countervailing duties, and “emergency protection” to address balance of payments problems or protect an industry from import surges. Other barriers include differing product standards, discrimination in public procurement, and cumbersome border formalities.

Membership in a regional trade bloc may reduce the frictional costs of trade, increase the credibility of reform initiatives, and strengthen security among partners. But making it work effectively is challenging. All economic sectors may be affected, and some may expand while others contract, so it is important to weigh the potential costs and benefits of membership.

The table shows the value of merchandise intratrade (service exports are excluded) for important regional trade blocs and the size of intratrade relative to each bloc's exports of goods and the share of the bloc's exports in world exports. Although the Asia Pacific Economic Cooperation (APEC) has no

preferential arrangements, it is included because of the volume of trade between its members.

The data on country exports are from the International Monetary Fund's (IMF) *Direction of Trade* database and should be broadly consistent with those from sources such as the United Nations Statistics Division's Commodity Trade (Comtrade) database. All high-income economies and major developing economies report trade to the IMF on a timely basis, covering about 85 percent of trade for recent years. Trade by less timely reporters and by countries that do not report is estimated using reports of trading partner countries. Therefore, data on trade between developing and high-income economies shown in the table should be generally complete. But trade flows between many developing countries—particularly those in Sub-Saharan Africa—are not well recorded, and the value of trade among developing countries may be understated.

Membership in the trade blocs shown is based on the most recent information available (see Data sources). Other types of preferential trade agreements may have entered into force earlier than those shown in the table and may still be effective. Unless otherwise indicated in the footnotes, information on the type of agreement and date of enforcement are based on the World Trade Organization's (WTO) list of regional trade agreements. Information on trade agreements not notified to the WTO was collected from the Global Preferential Trade Agreements database (box 6.7a) and from official websites of the trade blocs.

Although bloc exports have been calculated back to 1990 on the basis of current membership, several blocs came into existence after that and membership may have changed over time. For this reason, and because systems of preferences also change over time, intratrade in earlier years may not have been affected by the same preferences as in recent years. In addition, some countries belong to more than

one trade bloc, so shares of world exports exceed 100 percent. Exports include all commodity trade, which may include items not specified in trade bloc agreements. Differences from previously published estimates may be due to changes in membership or revisions in underlying data.

**Definitions**

• **Merchandise exports within bloc** are the sum of merchandise exports by members of a trade bloc to other members of the bloc. They are shown both in U.S. dollars and as a percentage of total merchandise exports by the bloc. • **Merchandise exports by bloc** as a share of world exports are the bloc's total merchandise exports (within the bloc and to the rest of the world) as a share of total merchandise exports by all economies in the world. • **Type of most recent agreement** includes customs union, under which members substantially eliminate all tariff and nontariff barriers among themselves and establish a common external tariff for nonmembers; economic integration agreement, which liberalizes trade in services among members and covers a substantial number of sectors, affects a sufficient volume of trade, includes substantial modes of supply, and is nondiscriminatory (in the sense that similarly situated service suppliers are treated the same); free trade agreement, under which members substantially eliminate all tariff and nontariff barriers but set tariffs on imports from nonmembers; preferential trade agreement, which is an agreement notified to the WTO that is not a free trade agreement, a customs union, or an economic integration agreement; and not notified agreement, which is a preferential trade arrangement established among member countries that is not notified to the World Trade Organization (the agreement may be functionally equivalent to any of the other agreements).

**Global Preferential Trade Agreements Database****6.7a**

The **Global Preferential Trade Agreement Database (GPTAD)** provides information on preferential trade agreements around the world, including those not notified to the World Trade Organization (WTO). It is designed to help trade policymakers, scholars, and business operators better understand and navigate the world of preferential trade agreements. The GPTAD is updated regularly and currently comprises more than 330 preferential trade agreements in their original language, which have been indexed by WTO criteria and can be downloaded as PDFs. Users can search by provision or keyword, compare provisions across multiple agreements, and sort agreements by membership, date of signature, in-force status, and other key criteria. The database was developed jointly by the World Bank and the Center for International Business at the Tuck School of Business at Dartmouth College. It is supported by the Multidonor Trust Fund for Trade and Development with financing from the governments of Finland, Norway, Sweden, and the United Kingdom. The GPTAD is integrated with the World Integrated Trade Solution database and is part of the World Bank's Open Data initiative (<http://wits.worldbank.org/gptad/>).

**Data sources**

Data on merchandise trade flows are published in the IMF's *Direction of Trade Statistics Yearbook* and *Direction of Trade Statistics Quarterly*; the data in the table were calculated using the IMF's *Direction of Trade* database. Data on trade bloc membership are from the World Bank Policy Research Report *Trade Blocs* (2000), UNCTAD's *Trade and Development Report 2007*, WTO's Regional Trade Agreements Information System, and the World Bank and the Center for International Business at the Tuck School of Business at Dartmouth College's Global Preferential Trade Agreements Database.



	Most recent year	All products %						Primary products %		Manufactured products %	
		Binding coverage	Simple mean bound rate	Simple mean tariff	Weighted mean tariff	Share of tariff lines with international peaks	Share of tariff lines with specific rates	Simple mean tariff	Weighted mean tariff	Simple mean tariff	Weighted mean tariff
Afghanistan	2008	..	..	6.2	6.4	4.4	0.0	7.0	6.7	6.1	6.3
Albania	2009	100.0	7.1	5.7	5.1	0.0	0.0	6.8	5.4	5.5	4.9
Algeria	2009	..	..	14.2	8.6	53.2	0.0	14.5	7.8	14.0	8.8
Angola	2009	100.0	59.2	7.4	7.4	23.4	0.0	11.6	13.9	6.7	5.9
Antigua and Barbuda	2009	97.9	58.7	13.8	14.6	49.4	0.0	17.2	14.8	13.0	14.5
Argentina	2010	100.0	31.9	11.4	6.2	24.3	0.0	7.5	1.6	11.8	7.0
Armenia	2008	100.0	8.5	3.7	2.3	0.0	0.3	5.6	2.2	3.5	2.4
Australia	2010	97.0	10.0	2.9	1.9	0.0	0.0	1.3	0.4	3.1	2.5
Azerbaijan	2009	..	..	8.3	3.9	46.5	0.0	9.5	3.8	8.0	3.9
Bahamas, The	2006	..	..	28.5	23.9	77.4	0.0	24.4	15.1	29.4	29.7
Bahrain	2009	73.6	34.8	4.3	3.6	0.2	0.0	6.7	6.9	4.0	3.1
Bangladesh	2008	15.9	169.9	13.9	13.0	38.0	0.0	16.3	8.8	13.5	14.0
Barbados	2007	97.8	78.1	15.1	14.8	44.9	0.6	26.3	21.9	13.4	12.2
Belarus	2009	..	..	8.0	2.3	27.2	0.0	6.8	0.6	8.2	4.3
Belize	2009	97.9	58.4	11.2	5.9	30.1	0.0	17.2	4.0	10.1	9.3
Benin	2010	39.5	28.7	13.3	15.4	50.2	0.0	15.5	12.4	12.9	17.0
Bermuda	2009	..	..	18.1	27.8	66.7	0.0	10.0	16.1	19.5	28.8
Bhutan	2007	..	..	18.2	17.8	50.7	0.0	43.5	44.9	15.6	16.0
Bolivia	2010	100.0	40.0	9.6	5.4	11.9	0.0	8.4	5.8	9.6	5.2
Bosnia and Herzegovina	2009	..	..	3.7	2.0	5.7	0.0	1.6	1.3	3.9	2.5
Botswana	2010	96.1	19.0	8.8	5.2	20.2	0.0	6.1	0.5	9.0	6.6
Brazil	2010	100.0	31.4	13.4	7.6	26.4	0.0	8.1	1.5	13.9	9.6
Brunei Darussalam	2010	95.3	24.1	3.8	4.1	20.8	0.0	0.2	0.1	4.4	5.0
Burkina Faso	2010	39.4	42.5	12.4	8.8	44.5	0.0	11.4	8.1	12.5	9.2
Burundi	2010	22.3	67.8	9.8	5.5	29.8	0.0	15.4	9.4	9.1	4.5
Cambodia	2008	100.0	19.1	12.4	9.9	19.7	0.0	13.8	11.8	12.1	9.6
Cameroon	2009	13.7	79.9	18.4	15.0	52.5	0.0	20.5	12.9	18.1	16.0
Canada	2010	99.7	5.2	3.3	1.0	7.2	0.0	2.1	0.3	3.5	1.3
Cape Verde	2010	100.0	15.8	14.7	11.6	44.3	0.0	16.2	12.2	14.3	10.9
Central African Republic	2007	62.5	36.0	17.5	13.6	47.4	0.0	18.9	13.8	17.3	13.3
Chad	2009	13.9	79.9	17.6	14.7	47.4	0.0	22.5	17.2	16.7	13.8
Chile	2010	100.0	25.1	4.9	4.0	0.0	0.0	4.4	2.7	4.9	4.8
China†	2009	100.0	10.0	8.2	4.2	13.4	0.0	8.1	1.7	8.1	5.5
Hong Kong SAR, China	2010	45.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Macao SAR, China	2010	28.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Colombia	2010	100.0	43.1	11.2	8.9	19.8	0.0	10.9	8.8	11.2	8.8
Comoros	2008	..	..	7.8	7.8	42.8	0.0	4.2	3.8	8.7	10.3
Congo, Dem. Rep.	2009	100.0	96.2	12.9	11.0	42.5	0.0	14.2	10.8	12.6	11.1
Congo, Rep.	2007	16.5	27.4	18.6	14.7	52.6	0.0	21.9	18.6	18.1	14.1
Costa Rica	2009	100.0	43.2	4.8	2.4	0.7	0.0	6.3	3.3	4.6	2.0
Côte d'Ivoire	2010	33.8	11.2	13.1	7.3	47.9	0.0	15.1	5.4	12.8	9.3
Croatia	2010	100.0	6.0	2.4	1.2	4.1	0.0	4.5	1.9	2.1	0.9
Cuba	2010	31.7	21.4	10.5	8.7	11.6	0.0	11.1	6.2	10.4	9.8
Djibouti	2009	100.0	41.2	20.6	15.2	69.4	0.0	15.9	8.7	21.4	18.6
Dominica	2007	94.7	58.7	11.9	7.9	43.3	0.0	19.2	5.7	10.5	9.3
Dominican Republic	2008	100.0	34.9	9.0	4.9	28.8	0.0	11.6	4.5	8.6	5.2
Ecuador	2010	100.0	21.7	9.3	6.0	20.2	0.0	9.0	4.3	9.3	6.7
Egypt, Arab Rep.	2009	99.3	37.3	12.6	8.0	18.3	0.0	37.5	6.2	9.3	9.1
El Salvador	2010	100.0	36.9	5.1	5.5	1.9	0.0	8.4	7.4	4.7	4.2
Equatorial Guinea	2007	..	..	18.3	15.6	52.3	0.0	21.5	21.4	17.7	14.3
Eritrea	2006	..	..	9.6	5.4	22.4	0.0	9.2	3.5	9.5	7.1
Ethiopia	2009	..	..	18.1	9.7	55.4	0.0	19.2	5.6	17.9	12.8
European Union	2010	100.0	4.2	1.8	1.4	1.1	0.0	2.4	0.6	1.6	1.9
Fiji	2009	51.4	40.1	11.9	10.1	20.9	0.0	13.7	7.7	11.6	12.8
French Polynesia	2009	..	..	6.8	4.2	28.1	0.0	4.1	2.7	7.3	5.2
Gabon	2009	100.0	21.4	18.7	14.5	53.1	0.0	21.2	15.1	18.3	14.3
Gambia, The	2009	13.7	101.8	18.7	14.8	91.2	0.0	16.9	12.8	19.1	16.9
Georgia	2009	100.0	7.2	0.5	0.4	0.0	0.0	4.0	1.0	0.1	0.0
Ghana	2009	14.4	92.5	13.0	8.6	40.5	0.0	16.6	8.9	12.4	8.5
†Data for Taiwan, China	2010	100.0	6.0	5.3	2.5	6.0	0.0	8.4	2.0	4.7	2.7

	Most recent year	All products %						Primary products %		Manufactured products %	
		Binding coverage	Simple mean bound rate	Simple mean tariff	Weighted mean tariff	Share of tariff lines with international peaks	Share of tariff lines with specific rates	Simple mean tariff	Weighted mean tariff	Simple mean tariff	Weighted mean tariff
Grenada	2008	100.0	56.8	10.6	8.8	43.3	0.0	14.1	9.9	10.0	8.4
Guatemala	2009	100.0	42.3	4.4	2.7	18.1	0.0	4.9	2.1	4.3	3.1
Guinea	2009	38.6	20.3	13.5	11.9	56.1	0.0	15.6	13.9	13.2	10.2
Guinea-Bissau	2010	97.6	48.6	13.3	9.9	51.8	0.0	14.6	10.0	12.9	9.7
Guyana	2008	100.0	56.8	10.7	6.8	41.3	0.0	17.7	5.9	9.7	7.3
Haiti	2009	89.8	17.6	3.0	5.1	5.1	0.0	5.8	4.1	2.5	5.9
Honduras	2009	100.0	32.5	6.4	6.5	0.5	0.0	9.9	8.1	5.9	5.4
Iceland	2009	95.0	13.5	1.9	0.9	5.7	0.0	2.4	1.1	1.8	0.8
India	2009	74.5	50.2	10.2	7.9	6.6	0.0	20.0	7.3	8.7	8.0
Indonesia	2009	96.6	37.5	5.2	3.1	11.4	0.0	5.6	2.0	5.2	3.5
Iran, Islamic Rep.	2008	..	..	24.8	19.6	56.5	0.0	21.7	12.5	24.8	21.1
Iraq	..	..	..	..	..	..	..	..	..	..	..
Israel	2009	75.2	22.0	5.5	3.2	1.1	0.0	5.5	2.2	5.4	3.6
Jamaica	2007	100.0	49.7	9.2	9.0	36.1	0.0	16.1	8.6	8.3	9.3
Japan	2010	99.7	3.0	2.6	1.6	8.6	0.0	5.1	1.6	2.1	1.6
Jordan	2009	100.0	16.3	9.7	5.2	29.5	0.0	14.2	3.9	8.9	5.9
Kazakhstan	2008	..	..	4.3	2.7	8.8	11.5	7.3	1.3	4.0	3.1
Kenya	2010	15.2	95.3	12.1	9.2	36.6	0.0	16.0	12.6	11.7	6.6
Korea, Dem. Rep.	..	..	..	..	..	..	..	..	..	..	..
Korea, Rep.	2010	95.1	16.1	10.3	8.7	7.0	0.0	26.3	12.7	7.3	5.0
Kosovo	..	..	..	..	..	..	..	..	..	..	..
Kuwait	2009	99.9	100.0	4.1	4.2	0.0	0.0	3.2	3.1	4.2	4.4
Kyrgyz Republic	2009	99.9	7.5	3.6	8.4	0.9	0.0	4.4	1.3	3.5	9.4
Lao PDR	2008	..	..	9.3	13.2	20.4	0.0	16.0	14.2	8.4	12.6
Lebanon	2007	..	..	5.6	4.8	11.6	0.0	8.2	5.0	5.2	5.0
Lesotho	2010	100.0	78.9	9.5	10.5	21.6	0.0	9.2	1.6	9.5	10.9
Liberia	..	..	..	..	..	..	..	..	..	..	..
Libya	2006	..	..	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Macedonia, FYR	2009	100.0	6.9	4.3	3.2	14.5	0.0	7.6	6.0	3.9	2.4
Madagascar	2008	30.5	27.3	12.1	8.3	41.1	0.0	13.9	4.2	11.9	10.4
Malawi	2009	32.0	75.9	13.0	7.0	47.5	0.0	14.8	8.6	12.7	6.5
Malaysia	2009	83.9	14.6	5.3	3.1	16.3	0.0	2.4	2.1	5.8	3.6
Maldives	2009	97.0	37.2	21.7	20.6	88.1	0.0	17.5	18.4	22.8	22.6
Mali	2010	40.5	28.9	12.8	8.4	47.9	0.0	12.8	7.9	12.8	8.7
Mauritania	2007	39.4	19.6	12.6	10.1	49.0	0.0	11.1	9.2	12.8	11.0
Mauritius	2009	17.7	98.3	2.0	1.0	10.4	0.0	1.2	0.3	2.1	1.6
Mayotte	2009	..	..	5.3	1.8	2.6	0.0	3.8	1.3	5.5	2.1
Mexico	2010	100.0	35.1	7.8	6.1	6.4	0.0	10.7	11.5	7.4	4.6
Moldova	2008	99.9	6.7	4.2	3.0	7.7	3.4	6.6	3.6	3.8	2.7
Mongolia	2009	100.0	17.5	4.9	5.1	0.1	0.0	5.2	5.4	4.9	4.9
Montenegro	2009	..	..	2.2	3.2	5.4	0.0	6.2	5.2	1.6	2.4
Morocco	2009	100.0	41.3	9.1	7.1	23.6	0.0	18.0	8.9	8.2	5.7
Mozambique	2009	14.0	97.4	7.7	4.5	25.4	0.0	8.2	4.4	7.5	4.3
Myanmar	2008	17.6	83.8	4.0	3.2	4.1	0.0	5.1	2.7	3.9	3.4
Namibia	2010	96.1	19.4	6.3	1.8	16.7	0.0	4.1	2.1	6.7	1.6
Nepal	2009	99.4	26.2	12.8	14.3	50.4	0.0	15.6	11.0	12.5	16.5
New Zealand	2010	100.0	10.0	2.5	1.6	0.0	0.0	1.4	0.4	2.6	2.1
Nicaragua	2009	100.0	41.7	4.4	2.6	17.1	0.0	5.9	3.0	4.2	2.2
Niger	2010	96.6	44.9	13.0	9.1	48.9	0.0	14.0	10.7	12.8	7.6
Nigeria	2010	19.5	119.4	10.9	10.6	34.9	0.0	11.8	9.1	10.7	10.8
Norway	2009	100.0	3.0	0.4	0.3	0.5	0.0	1.8	1.0	0.3	0.2
Oman	2009	100.0	13.9	3.6	3.2	0.2	0.0	4.4	3.3	3.5	3.2
Pakistan	2009	98.6	60.0	14.8	9.5	45.3	0.0	14.2	6.4	14.7	12.1
Palau	2006	..	..	2.6	2.2	0.5	0.0	0.5	0.6	3.1	3.2
Panama	2009	99.9	23.5	7.6	7.6	2.8	0.0	11.5	8.4	7.1	7.2
Papua New Guinea	2008	100.0	31.5	4.8	2.6	24.4	0.7	15.2	3.3	3.4	2.2
Paraguay	2010	100.0	33.5	8.1	3.7	18.3	0.0	5.8	0.8	8.2	4.8
Peru	2010	100.0	30.1	4.8	2.5	10.0	0.0	3.8	1.3	4.9	3.0
Philippines	2010	67.2	25.8	5.3	4.8	5.4	0.0	6.8	5.1	5.0	4.6
Puerto Rico	..	..	..	..	..	..	..	..	..	..	..



	Most recent year	All products %						Primary products %		Manufactured products %	
		Binding coverage	Simple mean bound rate	Simple mean tariff	Weighted mean tariff	Share of tariff lines with international peaks	Share of tariff lines with specific rates	Simple mean tariff	Weighted mean tariff	Simple mean tariff	Weighted mean tariff
Qatar	2009	100.0	16.0	4.2	3.8	0.2	0.0	5.0	4.0	4.1	3.8
Russian Federation	2009	..	..	8.1	5.9	24.6	0.0	7.7	4.4	8.2	6.2
Rwanda	2010	100.0	89.3	9.9	6.0	31.4	0.0	11.5	6.4	9.7	5.9
Saudi Arabia	2009	100.0	10.8	4.0	3.9	0.0	0.0	3.3	2.8	4.1	4.2
Senegal	2010	100.0	30.0	13.4	8.9	50.5	0.0	14.1	7.7	13.2	10.2
Serbia	2005 <sup>a</sup>	..	..	8.1	6.0	17.8	0.0	10.9	4.5	7.8	6.8
Seychelles	2007	..	..	6.5	28.3	12.8	0.0	14.0	50.5	4.8	6.4
Sierra Leone	2004	100.0	47.4	..	..	..	..	..	..	..	..
Singapore	2010	69.6	7.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Solomon Islands	2008	100.0	78.7	9.9	17.3	2.6	0.8	14.8	23.3	9.2	8.8
Somalia	..	..	..	..	..	..	..	..	..	..	..
South Africa	2010	96.1	19.4	7.6	4.4	17.9	0.0	5.4	1.9	7.8	5.6
Sri Lanka	2009	38.1	30.1	10.1	6.4	42.7	0.0	15.3	8.4	9.4	5.2
St. Kitts and Nevis	2009	97.9	75.9	14.3	13.7	43.1	0.0	16.5	13.5	13.7	13.7
St. Lucia	2007	99.6	61.9	9.6	9.0	39.9	0.0	12.7	4.9	9.1	12.2
St. Vincent & Grenadines	2007	99.7	62.5	11.3	8.4	44.4	0.2	15.1	7.8	10.5	8.6
Sudan	2009	..	..	13.4	7.9	25.4	0.0	15.9	7.7	13.0	7.9
Suriname	2010	27.6	18.1	11.6	11.9	36.2	0.0	18.3	15.0	10.4	10.4
Swaziland	2010	96.1	19.4	10.9	10.2	26.2	0.0	9.7	1.3	11.1	15.9
Switzerland	2010	99.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Syrian Arab Republic	2010	..	..	6.7	6.1	27.6	0.0	6.5	6.1	6.5	5.7
Tajikistan	2006	..	..	4.9	3.8	0.1	0.7	5.4	2.1	4.9	5.3
Tanzania	2010	13.8	120.0	12.9	8.2	39.9	0.0	17.5	8.7	12.4	8.0
Thailand	2009	74.7	26.1	10.8	4.9	19.3	0.0	14.0	2.7	10.2	5.9
Timor-Leste	..	..	..	..	..	..	..	..	..	..	..
Togo	2010	14.3	80.0	12.8	14.2	47.3	0.0	14.4	12.4	12.6	14.9
Tonga	2009	100.0	17.6	10.8	7.3	64.7	0.0	12.1	5.5	10.5	9.0
Trinidad and Tobago	2008	100.0	55.8	8.7	10.0	43.6	0.4	16.6	3.1	7.6	17.2
Tunisia	2008	58.3	58.0	21.9	16.0	57.8	0.0	26.8	12.0	21.2	17.9
Turkey	2009	50.3	29.2	2.4	2.3	4.6	0.0	13.8	4.3	1.2	1.4
Turkmenistan	2002	..	..	5.4	2.9	14.8	2.8	14.7	12.6	3.8	1.1
Uganda	2010	16.1	73.5	12.1	8.2	37.5	0.0	15.7	8.8	11.6	7.9
Ukraine	2010	100.0	5.8	4.5	2.8	1.1	0.0	5.9	2.5	4.3	3.0
United Arab Emirates	2009	100.0	14.8	4.3	3.7	0.2	0.0	4.5	2.7	4.2	4.2
United States	2010	100.0	3.7	2.9	1.8	3.4	0.0	2.6	1.2	3.0	2.0
Uruguay	2010	100.0	31.6	9.6	3.6	29.3	0.0	5.6	1.1	9.9	5.2
Uzbekistan	2009	..	..	11.8	6.9	20.1	0.0	12.6	3.9	11.7	7.3
Vanuatu	2009	..	..	16.8	15.0	65.0	0.0	19.5	16.9	16.1	14.2
Venezuela, RB	2010	100.0	36.5	13.1	10.6	21.9	0.0	12.2	10.0	13.1	10.7
Vietnam	2008	100.0	11.5	8.0	5.2	19.8	0.0	10.7	4.1	7.4	5.7
West Bank and Gaza	..	..	..	..	..	..	..	..	..	..	..
Yemen, Rep.	2009	..	..	5.5	4.2	1.4	0.0	7.1	3.8	5.2	4.6
Zambia	2009	17.1	106.9	10.8	3.8	51.2	0.0	9.2	3.1	10.9	4.1
Zimbabwe	2007 <sup>b</sup>	22.2	91.4	16.7	17.3	38.8	0.0	17.4	20.4	16.1	14.7
<b>World</b>		<b>77.8 w</b>	<b>27.3 w</b>	<b>6.2 w</b>	<b>2.5 w</b>	<b>10.8 w</b>	<b>0.0 w</b>	<b>6.6 w</b>	<b>2.4 w</b>	<b>6.1 w</b>	<b>2.5 w</b>
<b>Low income</b>		42.2	57.7	12.1	10.0	40.6	0.0	14.4	9.4	11.8	10.2
<b>Middle income</b>		86.6	30.3	8.9	6.3	16.0	0.0	8.6	5.4	8.9	6.5
Lower middle income		84.7	31.8	8.4	5.8	15.4	0.0	9.7	4.8	8.2	6.2
Upper middle income		88.3	29.0	9.2	6.4	16.3	0.0	7.9	5.6	9.3	6.6
<b>Low &amp; middle income</b>		73.9	35.5	9.5	6.4	18.5	0.0	9.8	5.7	9.4	6.6
East Asia & Pacific		67.2	25.8	5.3	4.8	5.4	0.0	6.8	5.1	5.0	4.6
Europe & Central Asia		100.0	5.8	4.5	2.8	1.1	0.0	5.9	2.5	4.3	3.0
Latin America & Carib.		90.0	32.5	9.2	6.6	15.7	0.0	8.6	6.2	9.2	6.7
Middle East & North Africa		99.9	30.4	6.7	6.1	27.6	0.0	6.5	6.1	6.5	5.7
South Asia		81.5	41.6	13.0	8.2	37.4	0.0	17.1	7.3	12.3	8.4
Sub-Saharan Africa		61.7	41.8	11.1	7.5	33.6	0.0	12.1	5.9	10.9	8.1
<b>High income</b>		87.9	7.9	2.7	1.8	3.5	0.0	4.2	1.9	2.5	1.8
OECD		99.0	10.7	3.6	2.2	4.0	0.0	5.3	2.3	3.3	2.1
Non-OECD		73.1	9.1	1.8	0.6	3.2	0.0	2.5	0.7	1.6	0.6

a. Includes Montenegro. b. Rates are most favored nation rates.

### About the data

Poor people in developing countries work primarily in agriculture and labor-intensive manufactures, sectors that confront the greatest trade barriers. Removing barriers to merchandise trade could increase growth in these countries—even more if trade in services.

In general, tariffs in high-income countries on imports from developing countries, though low, are twice those collected from other high-income countries. But protection is also an issue for developing countries, which maintain high tariffs on agricultural commodities, labor-intensive manufactures, and other products and services.

Countries use a combination of tariff and nontariff measures to regulate imports. The most common form of tariff is an ad valorem duty, based on the value of the import, but tariffs may also be levied on a specific, or per unit, basis or may combine ad valorem and specific rates. Tariffs may be used to raise fiscal revenues or to protect domestic industries from foreign competition—or both. Nontariff barriers, which limit the quantity of imports of a particular good, include quotas, prohibitions, licensing schemes, export restraint arrangements, and health and quarantine measures. Because of the difficulty of combining nontariff barriers into an aggregate indicator, they are not included in the table.

Unless specified as most favored nation rates, the tariff rates used in calculating the indicators in the table are effectively applied rates. Effectively applied rates are those in effect for partners in preferential trade arrangements such as the North American Free Trade Agreement. The difference between most favored nation and applied rates can be substantial. Because more countries now report their free trade agreements, suspensions of tariffs, and other special preferences, this year's *World Development Indicators* includes effectively applied rates for most countries. All estimates are calculated using the most recent information, which is not necessarily revised every year. As a result, data for the same year may differ from data in last year's edition.

Three measures of average tariffs are shown: simple bound rates and the simple and the weighted tariffs. Bound rates are based on all products in a country's tariff schedule, while the most favored nation or applied rates are calculated using all traded items. Weighted mean tariffs are weighted by the value of the country's trade with each trading partner. Simple averages are often a better indicator of tariff protection than weighted averages, which are biased downward because higher tariffs discourage

trade and reduce the weights applied to these tariffs. Bound rates result from trade negotiations incorporated into a country's schedule of concessions and are thus enforceable.

Some countries set fairly uniform tariff rates across all imports. Others are selective, setting high tariffs to protect favored domestic industries. The share of tariff lines with international peaks provides an indication of how selectively tariffs are applied. The effective rate of protection—the degree to which the value added in an industry is protected—may exceed the nominal rate if the tariff system systematically differentiates among imports of raw materials, intermediate products, and finished goods.

The share of tariff lines with specific rates shows the extent to which countries use tariffs based on physical quantities or other, non-ad valorem measures. Some countries such as Switzerland apply mainly specific duties. To the extent possible, these specific rates have been converted to their ad valorem equivalent rates and have been included in the calculation of simple and weighted tariffs.

Data are classified using the Harmonized System at the six- or eight-digit level. Tariff data are from the United Nations Conference on Trade and Development's (UNCTAD) Trade Analysis and Information System (TRAINS) database and the World Trade Organization's (WTO) Integrated Data Base (IDB) and Consolidated Tariff Schedules (CTS) database. Tariff line data were matched to Standard International Trade Classification (SITC) revision 2 codes to define commodity groups and import weights. Import weights were calculated using the United Nations Statistics Division's Commodity Trade (Comtrade) database. The table shows tariff rates for three commodity groups: all products, primary products, and manufactured products. Effectively applied rates at the six- and eight-digit product level are averaged for products in each commodity group. When an effectively applied rate is not available, the most favored nation rate is used instead.

Data are shown only for the last year for which complete data are available and for all economies with populations of 1 million or more and for economies with populations of less than 1 million when available. EU member countries apply a common tariff schedule that is listed under European Union and are thus not listed separately.

### Definitions

- **Binding coverage** is the percentage of product lines with an agreed bound rate.
- **Simple mean bound rate** is the unweighted average of all the lines in the tariff schedule in which bound rates have been set.
- **Simple mean tariff** is the unweighted average of effectively applied rates or most favored nation rates for all products subject to tariffs calculated for all traded goods.
- **Weighted mean tariff** is the average of effectively applied rates or most favored nation rates weighted by the product import shares corresponding to each partner country.
- **Share of tariff lines with international peaks** is the share of lines in the tariff schedule with tariff rates that exceed 15 percent.
- **Share of tariff lines with specific rates** is the share of lines in the tariff schedule that are set on a per unit basis or that combine ad valorem and per unit rates.
- **Primary products** are commodities classified in SITC revision 2 sections 0–4 plus division 68 (nonferrous metals).
- **Manufactured products** are commodities classified in SITC revision 2 sections 5–8 excluding division 68.

### Data sources

All indicators in the table were calculated by World Bank staff using the World Integrated Trade Solution system, available at <http://wits.worldbank.org>. Data on tariffs were provided by UNCTAD's TRAINS database and the WTO's IDB and CTS database. Data on global imports are from the United Nations Statistics Division's Comtrade database.



	Logistics Performance Index	Burden of customs procedures	Lead time		Documents		Liner Shipping Connectivity Index	Quality of port infrastructure	Freight costs to the United States
	1-5 (worst to best)	1-7 (worst to best)	days		number		0-100 (low to high)	1-7 (worst to best)	1 kilogram DHL nondocument air package <sup>a</sup> \$
	2009	2009-10 <sup>b</sup>	To export 2009	To import 2009	To export June 2010	To import June 2010	2010	2009-10 <sup>b</sup>	2011
Afghanistan	2.24	..	2.0	4.0	12	11	..	..	143.10
Albania	2.46	4.0	1.7	2.0	7	9	4.3	3.5	155.85
Algeria	2.36	3.2	4.6	7.1	8	9	31.4	3.2	157.10
Angola	2.25	2.8	6.0	8.0	11	8	10.7	2.1	157.10
Argentina	3.10	2.7	3.7	3.8	9	7	27.6	3.8	90.75
Armenia	2.52	2.6	..	..	3	6	..	2.9 <sup>c</sup>	143.10
Australia	3.84	5.0	2.6	2.8	6	5	28.1	4.9	98.00
Austria	3.76	5.3	2.0	3.7	4	5	..	4.8 <sup>c</sup>	129.45
Azerbaijan	2.64	3.5	7.0	3.0	9	14	..	4.2 <sup>c</sup>	155.85
Bangladesh	2.74	3.4	1.4	1.4	6	8	7.5	3.4	98.00
Belarus	2.53	..	..	..	8	8	..	..	155.85
Belgium	3.94	4.6	1.7	1.6	4	5	84.0	6.4	112.50
Benin	2.79	4.2	3.0	7.0	7	7	11.5	4.0	157.10
Bolivia	2.51	2.7	15.0	28.3	8	7	..	2.9 <sup>c</sup>	90.75
Bosnia and Herzegovina	2.66	3.6	2.0	2.0	5	7	..	1.6	155.85
Botswana	2.32	4.7	..	..	6	9	..	3.8 <sup>c</sup>	157.10
Brazil	3.20	3.3	2.8	3.9	8	7	31.7	2.9	90.75
Bulgaria	2.83	3.5	2.0	3.9	5	7	5.5	3.8	155.85
Burkina Faso	2.23	4.4	4.0	14.0	10	10	..	3.9 <sup>c</sup>	157.10
Burundi	2.29	3.0	..	..	9	10	..	3.0 <sup>c</sup>	157.10
Cambodia	2.37	3.5	1.3	4.0	10	10	4.5	3.9	95.70
Cameroon	2.55	3.8	3.4	8.9	11	12	11.3	3.3	157.10
Canada	3.87	4.9	2.8	3.7	3	4	42.4	5.7	72.20
Central African Republic	..	..	..	..	9	17	..	..	157.10
Chad	2.49	2.7	74.0	35.0	6	10	..	2.6 <sup>c</sup>	157.10
Chile	3.09	5.7	3.5	3.0	6	7	22.1	5.5	90.75
China	3.49	4.5	2.8	2.6	7	5	143.6	4.3	84.55
Hong Kong SAR, China	3.88	6.5	1.7	1.6	4	4	113.6	6.8	90.45
Colombia	2.77	4.1	7.0	7.0	6	8	26.1	3.5	90.75
Congo, Dem. Rep.	2.68	..	2.0	3.0	8	9	5.2	..	157.10
Congo, Rep.	2.48	..	..	..	11	10	10.5	..	157.10
Costa Rica	2.91	4.0	2.0	2.0	6	7	12.8	2.7	90.75
Côte d'Ivoire	2.53	3.8	1.0	1.0	10	9	17.5	5.0	157.10
Croatia	2.77	4.1	1.0	1.0	7	8	9.0	4.0	155.85
Cuba	2.07	..	..	..	..	..	6.6	..	75.05
Czech Republic	3.51	4.6	2.5	3.5	4	7	0.4	4.6 <sup>c</sup>	155.85
Denmark	3.85	5.6	1.0	1.0	4	3	26.8	6.1	129.45
Dominican Republic	2.82	4.7	2.2	3.5	6	7	22.2	4.3	75.05
Ecuador	2.77	3.5	2.1	3.4	9	7	18.7	3.7	90.75
Egypt, Arab Rep.	2.61	4.5	1.3	3.1	6	6	47.5	4.2	143.10
El Salvador	2.67	4.2	2.0	2.0	8	8	9.6	4.1	90.75
Eritrea	1.70	..	3.0	3.0	9	13	0.0	..	157.10
Estonia	3.16	5.3	4.0	4.0	3	4	5.7	5.6	155.85
Ethiopia	2.41	3.6	5.0	6.0	8	8	..	4.4 <sup>c</sup>	157.10
Finland	3.89	5.7	1.6	1.8	4	5	8.4	6.4	129.45
France	3.84	4.9	3.2	4.5	2	2	74.9	5.9	112.50
Gabon	2.41	..	4.3	13.0	7	8	8.5	..	157.10
Gambia, The	2.49	5.4	4.6	3.5	6	8	5.4	5.1	157.10
Georgia	2.61	4.7	..	..	4	4	4.0	4.0	155.85
Germany	4.11	5.1	3.6	2.4	4	5	90.9	6.4	112.50
Ghana	2.47	3.8	2.9	6.8	6	7	17.3	4.5	157.10
Greece	2.96	4.1	3.0	3.5	5	6	34.3	4.0	129.45
Guatemala	2.63	4.2	2.6	3.4	10	10	13.3	4.5	90.75
Guinea	2.60	..	3.5	3.9	7	9	6.3	..	157.10
Guinea-Bissau	2.10	..	..	..	6	6	3.5	..	157.10
Haiti	2.59	..	4.2	5.3	8	10	7.6	..	75.05
Honduras	2.78	4.2	2.4	3.2	6	10	9.1	5.3	90.75

	Logistics Performance Index 1-5 (worst to best) 2009	Burden of customs procedures 1-7 (worst to best) 2009-10 <sup>b</sup>	Lead time days		Documents number		Liner Shipping Connectivity Index 0-100 (low to high) 2010	Quality of port infrastructure 1-7 (worst to best) 2009-10 <sup>b</sup>	Freight costs to the United States 1 kilogram DHL nondocument air package <sup>a</sup> \$ 2011
			To export 2009	To import 2009	To export June 2010	To import June 2010			
Hungary	2.99	4.3	3.5	5.0	5	7	..	4.0 <sup>c</sup>	155.85
India	3.12	4.0	2.3	5.3	8	9	41.4	3.9	98.00
Indonesia	2.76	3.9	2.1	5.4	5	6	25.6	3.6	98.00
Iran, Islamic Rep.	2.57	3.5	2.6	28.3	7	8	30.7	3.9	143.10
Iraq	2.11	..	..	..	10	10	4.2	..	143.10
Ireland	3.89	5.2	1.0	1.0	4	4	7.6	4.4	112.00
Israel	3.41	4.3	2.0	2.0	5	4	33.2	4.6	143.10
Italy	3.64	4.2	2.6	3.0	4	4	59.6	3.9	112.50
Jamaica	2.53	3.8	10.0	10.0	6	6	33.1	5.3	75.05
Japan	3.97	4.6	1.0	1.0	4	5	67.4	5.2	120.80
Jordan	2.74	4.5	3.2	4.6	7	7	17.8	4.4	143.10
Kazakhstan	2.83	3.5	2.8	11.5	10	12	..	3.3 <sup>c</sup>	155.85
Kenya	2.59	3.3	3.0	5.9	8	7	13.1	3.8	157.10
Korea, Dem. Rep.	..	..	..	..	..	..	..	..	95.70
Korea, Rep.	3.64	4.5	1.6	2.0	3	3	82.6	5.5	98.00
Kosovo	..	..	..	..	8	8	..	..	..
Kuwait	3.28	4.1	2.0	3.0	8	10	8.3	4.4	143.10
Kyrgyz Republic	2.62	3.0	2.0	..	7	7	..	1.4 <sup>c</sup>	155.85
Lao PDR	2.46	..	..	..	9	10	..	..	95.70
Latvia	3.25	4.1	1.3	1.6	5	6	6.0	4.7	155.85
Lebanon	3.34	3.5	3.4	2.2	5	7	30.3	4.5	143.10
Lesotho	2.30	3.8	..	..	6	8	..	3.1 <sup>c</sup>	157.10
Liberia	2.38	..	4.0	5.0	10	9	5.9	..	157.10
Libya	2.33	3.5	3.2	10.0	..	..	5.4	3.2	157.10
Lithuania	3.13	4.8	2.0	2.3	6	6	9.5	4.7	155.85
Macedonia, FYR	2.77	4.3	..	..	6	6	..	3.7 <sup>c</sup>	155.85
Madagascar	2.66	3.9	..	..	4	9	7.4	3.4	157.10
Malawi	2.42	3.9	4.2	3.7	11	10	..	3.6 <sup>c</sup>	157.10
Malaysia	3.44	4.8	2.6	2.8	7	7	88.1	5.6	98.00
Mali	2.27	4.1	5.0	4.0	7	10	..	3.7 <sup>c</sup>	157.10
Mauritania	2.63	4.5	2.0	3.0	11	11	5.6	3.6	157.10
Mauritius	2.72	4.6	3.0	2.4	5	6	16.7	4.5	157.10
Mexico	3.05	3.9	2.1	2.5	5	4	36.3	3.7	58.80
Moldova	2.57	3.4	..	..	6	7	..	2.9	155.85
Mongolia	2.25	3.3	14.0	12.0	8	8	..	3.3 <sup>c</sup>	95.70
Morocco	2.38	4.3	2.0	3.2	7	10	49.4	4.4	157.10
Mozambique	2.29	3.7	..	..	7	10	8.2	3.5	157.10
Myanmar	2.33	..	4.6	8.4	..	..	3.7	..	95.70
Namibia	2.02	4.2	3.0	3.0	11	9	14.4	5.6	157.10
Nepal	2.20	3.4	1.8	6.3	9	10	..	2.9 <sup>c</sup>	95.70
Netherlands	4.07	5.2	1.8	1.9	4	5	90.0	6.6	112.50
New Zealand	3.65	5.8	1.3	1.6	7	5	18.4	5.4	98.00
Nicaragua	2.54	3.6	3.2	3.2	5	5	8.7	2.9	90.75
Niger	2.54	..	..	..	8	10	..	..	157.10
Nigeria	2.59	3.1	2.5	4.1	10	9	18.3	3.0	157.10
Norway	3.93	5.2	1.0	2.0	4	4	7.9	5.7	129.45
Oman	2.84	5.2	..	..	9	9	48.5	5.3	143.10
Pakistan	2.53	3.6	2.3	1.6	9	8	29.5	4.0	143.10
Panama	3.02	4.4	1.4	1.4	3	4	41.1	6.0	90.75
Papua New Guinea	2.41	..	..	..	7	9	6.4	..	95.70
Paraguay	2.75	3.8	1.0	4.0	8	10	0.0	3.4 <sup>c</sup>	90.75
Peru	2.80	4.5	2.0	3.8	6	8	21.8	3.3	90.75
Philippines	3.14	3.0	1.8	5.0	8	8	15.2	2.8	98.00
Poland	3.44	4.3	3.0	3.6	5	5	26.2	3.3	155.85
Portugal	3.34	4.9	2.5	5.0	4	5	38.1	4.9	129.45
Puerto Rico	..	4.7	..	..	7	10	..	5.4	..
Qatar	2.95	4.9	3.8	2.3	5	7	7.7	5.4	143.10





	Logistics Performance Index	Burden of customs procedures	Lead time		Documents		Liner Shipping Connectivity Index	Quality of port infrastructure	Freight costs to the United States
	1-5 (worst to best)	1-7 (worst to best)	days		number		0-100 (low to high)	1-7 (worst to best)	1 kilogram DHL nondocument air package <sup>a</sup> \$
	2009	2009-10 <sup>b</sup>	To export 2009	To import 2009	To export June 2010	To import June 2010	2010	2009-10 <sup>b</sup>	2011
Romania	2.84	3.9	2.0	2.0	5	6	15.5	3.0	155.85
Russian Federation	2.61	2.9	4.0	2.9	8	13	20.9	3.7	155.85
Rwanda	2.04	4.8	..	..	8	8	..	2.8	157.10
Saudi Arabia	3.22	4.9	2.3	6.3	5	5	50.4	5.2	143.10
Senegal	2.86	4.7	1.4	2.7	6	5	13.0	4.7	157.10
Serbia	2.69 <sup>d</sup>	3.6	2.0 <sup>d</sup>	3.0 <sup>d</sup>	6	6	3.0 <sup>d</sup>	2.8	155.85
Sierra Leone	1.97	..	2.0	32.0	7	7	5.8	..	157.10
Singapore	4.09	6.3	2.2	1.8	4	4	103.8	6.8	90.45
Slovak Republic	3.24	4.4	3.0	5.0	6	8	..	4.0 <sup>c</sup>	155.85
Slovenia	2.87	5.2	1.0	2.0	6	8	20.6	5.3	155.85
Somalia	1.34	..	..	..	..	..	4.2	..	157.10
South Africa	3.46	4.4	2.3	3.3	8	9	32.5	4.7	157.10
Spain	3.63	4.6	4.0	7.1	6	7	74.3	5.6	129.45
Sri Lanka	2.29	4.2	1.3	2.5	8	6	40.2	4.9	98.00
Sudan	2.21	..	39.0	5.0	6	6	10.1	..	157.10
Swaziland	..	3.5	..	..	9	10	..	4.2	157.10
Sweden	4.08	5.8	1.0	2.6	3	3	30.6	6.2	129.45
Switzerland	3.97	5.1	2.6	2.6	4	5	2.6	5.2 <sup>c</sup>	129.45
Syrian Arab Republic	2.74	2.8	2.5	3.2	8	9	15.2	3.1	143.10
Tajikistan	2.35	3.6	7.0	..	10	9	..	1.9 <sup>c</sup>	155.85
Tanzania	2.60	3.4	3.2	7.1	5	7	10.6	3.0	157.10
Thailand	3.29	4.1	1.6	2.6	4	3	43.8	5.0	98.00
Timor-Leste	1.71	3.6	..	..	6	7	..	2.5	95.70
Togo	2.60	..	..	..	6	8	14.2	..	157.10
Trinidad and Tobago	..	3.1	..	..	5	6	15.8	4.3	75.05
Tunisia	2.84	4.7	1.7	7.0	4	7	6.5	5.0	157.10
Turkey	3.22	3.8	2.2	3.8	7	8	36.1	4.1	143.10
Turkmenistan	2.49	..	3.0	..	..	..	..	..	155.85
Uganda	2.82	4.1	5.5	14.0	6	8	..	3.5 <sup>c</sup>	157.10
Ukraine	2.57	3.0	1.7	7.0	6	8	21.1	3.6	155.85
United Arab Emirates	3.63	5.8	2.5	2.0	4	5	63.4	6.2	143.10
United Kingdom	3.95	4.8	3.3	1.9	4	4	87.5	5.5	112.50
United States	3.86	4.5	2.8	4.0	4	5	83.8	5.5	..
Uruguay	2.75	4.0	3.0	3.0	10	10	24.5	5.2	90.75
Uzbekistan	2.79	..	1.4	2.0	7	9	..	..	155.85
Venezuela, RB	2.68	2.2	9.4	12.1	8	9	18.6	2.4	90.75
Vietnam	2.96	3.6	1.4	1.7	6	8	31.4	3.6	98.00
West Bank and Gaza	..	..	..	..	6	6	..	..	..
Yemen, Rep.	2.58	..	3.1	3.6	6	9	12.5	..	143.10
Zambia	2.28	4.2	9.2	4.0	6	8	..	3.6 <sup>c</sup>	157.10
Zimbabwe	2.29	3.6	25.0	18.0	7	9	..	4.4 <sup>c</sup>	157.10
<b>World</b>	<b>2.87<sup>e</sup> u</b>	<b>4.2 u</b>	<b>3.8<sup>e</sup> u</b>	<b>4.6<sup>e</sup> u</b>	<b>7 u</b>	<b>7 u</b>	<b>..</b>	<b>4.3 u</b>	<b>..</b>
<b>Low income</b>	2.38	3.8	6.8	7.2	8	9	..	3.5	..
<b>Middle income</b>	2.69	3.8	3.8	5.0	7	8	..	3.8	..
Lower middle income	2.62	3.7	4.4	5.1	7	8	..	3.8	..
Upper middle income	2.75	3.9	3.1	4.9	7	8	..	3.9	..
<b>Low &amp; middle income</b>	2.59	3.8	4.6	5.6	7	8	..	3.7	..
East Asia & Pacific	2.73	3.8	3.6	4.9	7	7	..	3.8	..
Europe & Central Asia	2.68	3.7	2.9	3.1	7	8	..	3.3	..
Latin America & Carib.	2.74	3.8	3.9	5.5	7	7	..	3.9	..
Middle East & N. Africa	2.60	3.8	2.7	7.2	7	8	..	4.0	..
South Asia	2.49	3.7	1.9	3.3	9	9	..	3.8	..
Sub-Saharan Africa	2.42	3.9	8.1	7.0	8	9	..	3.8	..
<b>High income</b>	3.54	4.9	2.1	2.7	5	5	..	5.3	..
Euro area	3.57	4.9	2.2	2.9	4	5	..	5.3	..

a. Transportation charges only; excludes fuel, assessorial/surcharges, duties and taxes. b. Average of the 2009 and 2010 survey ratings. c. Landlocked country. d. Includes Montenegro. e. Aggregates are computed according to the World Bank classification of economies as of July 1, 2010 and may differ from data published in the original source.

### About the data

Broadly defined, trade facilitation encompasses customs efficiency and other physical and regulatory environments where trade takes place, harmonization of standards and conformance to international regulations, and the logistics of moving goods and associated documentation through countries and ports. Though collection of trade facilitation data has improved over the last decade, data that allow meaningful evaluation, especially for developing economies, are lacking. Data on trade facilitation are drawn from research by private and international agencies. Most data are perception-based evaluations by business executives and professionals. Because of different backgrounds, values, and personalities, those surveyed may evaluate the same situation quite differently. Caution should thus be used when interpreting perception-based indicators. Nevertheless, they convey much needed information on trade facilitation.

The table presents data from Logistics Performance Surveys conducted by the World Bank in partnership with academic and international institutions and private companies and individuals engaged in international logistics. The Logistics Performance Index assesses logistics performance across six aspects of the logistics environment (see *Definitions*), based on more than 5,000 country assessments by nearly 1,000 international freight forwarders. Respondents evaluate eight markets on six core dimensions on a scale from 1 (worst) to 5 (best). The markets are chosen based on the most important export and import markets of the respondent's country, random selection, and, for landlocked countries, neighboring countries that connect them with international markets. Scores for the six areas are averaged across all respondents and aggregated to a single score. Details of the survey methodology and index construction methodology are in Arvis and others (2010).

Data on the burden of customs procedures are from the World Economic Forum's Executive Opinion Survey. The 2010 round included more than 15,000 respondents from 139 countries. Sampling follows a dual stratification based on company size and the sector of activity. Data are collected online or through in-person interviews. Responses are aggregated using sector-weighted averaging. The data for the latest year are combined with the data for the previous year to create a two-year moving average. Respondents evaluated the efficiency of customs procedures in their country. The lowest value (1) rates the customs procedure as extremely inefficient, and the highest score (7) as extremely efficient.

The direct costs of cross-border trade include freight, customs, and storage fees. Indirect costs

include the value of time to import or export and the risk of delay or loss of shipments. Long lead times and burdensome regulatory procedures may lower competitiveness. Data on lead time are from the LPI survey. Respondents provided separate values for the best case (10 percent of shipments) and the median case (50 percent of shipments). The data are exponentiated averages of the logarithm of single value responses and of midpoint values of range responses for the median case.

Data on the number of documents needed to export or import are from the World Bank's Doing Business surveys, which compile procedural requirements for exporting and importing a standardized cargo of goods by ocean transport from local freight forwarders, shipping lines, customs brokers, port officials, and banks. To make the data comparable across economies, several assumptions about the business and the traded goods are used (see [www.doingbusiness.org](http://www.doingbusiness.org)).

Access to global shipping and air freight networks and the quality and accessibility of ports and roads affect logistics performance. The table shows two indicators related to trade and transport service infrastructure: the Liner Shipping Connectivity Index and the quality of port infrastructure rating. The Liner Shipping Connectivity Index captures how well countries are connected to global shipping networks. It is computed by the United Nations Conference on Trade and Development (UNCTAD) based on five components of the maritime transport sector: number of ships, their container-carrying capacity, maximum vessel size, number of services, and number of companies that deploy container ships in a country's ports. For each component a country's value is divided by the maximum value of each component in 2004, the five components are averaged for each country, and the average is divided by the maximum average for 2004 and multiplied by 100. The index generates a value of 100 for the country with the highest average index in 2004.

The quality of port infrastructure measures business executives' perception of their country's port facilities. Values range from 1 (port infrastructure considered extremely underdeveloped) to 7 (port infrastructure considered efficient by international standards). Respondents in landlocked countries were asked: "How accessible are port facilities (1 = extremely inaccessible; 7 = extremely accessible.)"

The costs of transport services are a crucial determinant of export competitiveness. The proxy indicator in the table is the shipping rates to the United States of an international freight moving business.

### Definitions

- **Logistics Performance Index** reflects perceptions of a country's logistics based on efficiency of customs clearance process, quality of trade- and transport-related infrastructure, ease of arranging competitively priced shipments, quality of logistics services, ability to track and trace consignments, and frequency with which shipments reach the consignee within the scheduled time. The index ranges from 1 to 5, with a higher score representing better performance.
- **Burden of customs procedure** measures business executives' perceptions of their country's efficiency of customs procedures. Values range from 1 to 7, with a higher rating indicating greater efficiency.
- **Lead time to export** is the median time (the value for 50 percent of shipments) from shipment point to port of loading.
- **Lead time to import** is the median time (the value for 50 percent of shipments) from port of discharge to arrival at the consignee.
- **Documents to export** and **documents to import** are all documents required per shipment by government ministries, customs authorities, port and container terminals, health and technical control agencies, and banks to export or import goods. Documents renewed annually and not requiring renewal per shipment are excluded.
- **Liner Shipping Connectivity Index** indicates how well countries are connected to global shipping networks based on the status of their maritime transport sector. The highest value in 2004 is 100.
- **Quality of port infrastructure** measures business executives' perceptions of their country's port facilities. Values range from 1 to 7, with a higher rating indicating better development of port infrastructure.
- **Freight costs to the United States** is the DHL international U.S. inbound worldwide priority express rate for a 1 kilogram nondocument air package. Fuel, assessorial/surcharges, duties, and taxes are excluded.

### Data sources

Data on the Logistics Performance Index and lead time to export and import are from Arvis and others' *Connecting to Compete: Trade Logistics in the Global Economy 2010*. Data on the burden of customs procedure and quality of port infrastructure ratings are from the World Economic Forum's *Global Competitiveness Report 2010–2011*. Data on number of documents to export and import are from the World Bank's Doing Business project ([www.doingbusiness.org](http://www.doingbusiness.org)). Data on the Liner Shipping Connectivity Index are from UNCTAD's *Review of Maritime Transport 2010*. Freight costs to the United States are based on DHL's "DHL Express Standard Rate Guideline 2011" (2011).



	Total external debt		Long-term debt						Short-term debt		Use of IMF credit	
	\$ millions		\$ millions						\$ millions		\$ millions	
	1995	2009	Public and publicly guaranteed		IBRD loans and IDA credits		Private nonguaranteed		1995	2009	1995	2009
			Total	2009	1995	2009	1995	2009				
Afghanistan	..	2,328	..	2,203	..	471	..	0	..	20	..	106
Albania	456	4,719	330	2,829	109	874	0	983	62	835	65	71
Algeria	33,053	5,345	31,314	2,871	2,049	10	0	982	261	1,492	1,478	0
Angola	11,500	16,715	9,543	13,722	81	385	0	0	1,958	2,634	0	359
Argentina	98,465	120,183	54,913	72,923	4,913	5,305	16,066	27,723	21,355	19,537	6,131	0
Armenia	371	4,935	298	2,376	96	1,214	0	1,461	2	512	70	587
Australia	..	..	..	..	..	..	..	..	..	..	..	..
Austria	..	..	..	..	..	..	..	..	..	..	..	..
Azerbaijan	321	4,865	206	3,403	30	939	0	590	14	810	101	62
Bangladesh	15,726	23,820	14,905	21,206	5,692	10,746	0	0	199	1,939	622	675
Belarus	1,694	17,158	1,301	4,758	116	256	0	1,504	110	8,024	283	2,871
Belgium	..	..	..	..	..	..	..	..	..	..	..	..
Benin	1,398	1,073	1,267	990	498	309	0	0	47	45	84	39
Bolivia	5,272	5,745	4,459	2,545	865	316	239	2,647	307	554	268	0
Bosnia and Herzegovina	..	9,583	..	3,569	472	1,520	..	4,051	..	1,677	48	286
Botswana	717	1,617	707	1,388	108	5	0	0	10	229	0	0
Brazil	160,469	276,932	98,260	87,317	6,038	10,065	30,830	149,826	31,238	39,789	142	0
Bulgaria	10,379	40,582	8,808	4,772	444	1,509	342	17,232	512	18,578	717	0
Burkina Faso	1,271	1,835	1,140	1,725	608	721	0	0	56	0	75	110
Burundi	1,162	518	1,099	420	591	147	0	0	15	7	48	91
Cambodia	2,284	4,364	2,110	4,099	65	566	0	0	102	265	72	0
Cameroon	10,950	2,941	9,620	2,128	1,082	303	288	615	991	23	51	175
Canada	..	..	..	..	..	..	..	..	..	..	..	..
Central African Republic	946	396	854	250	414	9	0	0	57	67	35	78
Chad	843	1,743	777	1,711	379	896	0	0	17	4	49	29
Chile	22,038	71,646	7,178	9,282	1,383	216	11,429	44,888	3,431	17,476	0	0
China	118,090	428,442	94,674	93,125	14,248	22,226	1,090	94,808	22,325	240,509	0	0
Hong Kong SAR, China	..	..	..	..	..	..	..	..	..	..	..	..
Colombia	25,044	52,223	13,946	35,364	2,559	6,571	5,553	12,749	5,545	4,110	0	0
Congo, Dem. Rep.	13,239	12,183	9,636	10,788	1,413	2,497	0	0	3,118	596	485	800
Congo, Rep.	5,887	5,041	4,867	4,785	279	298	0	0	1,002	213	19	43
Costa Rica	3,766	8,070	3,097	3,190	303	58	214	2,538	430	2,341	24	0
Côte d'Ivoire	18,899	11,701	11,902	10,979	2,386	1,823	2,660	271	3,910	99	427	352
Croatia	..	..	..	..	..	..	..	..	..	..	..	..
Cuba	..	..	..	..	..	..	..	..	..	..	..	..
Czech Republic	..	..	..	..	..	..	..	..	..	..	..	..
Denmark	..	..	..	..	..	..	..	..	..	..	..	..
Dominican Republic	4,447	11,003	3,653	7,714	300	756	19	843	616	1,679	160	767
Ecuador	13,877	12,930	11,951	6,910	1,108	542	440	4,600	1,312	1,419	173	0
Egypt, Arab Rep.	33,475	33,257	30,687	30,622	2,356	3,250	313	74	2,372	2,561	103	0
El Salvador	2,509	11,384	1,979	6,131	327	578	5	3,139	525	2,114	0	0
Eritrea	37	1,019	37	1,013	24	477	0	0	0	6	0	0
Estonia	..	..	..	..	..	..	..	..	..	..	..	..
Ethiopia	10,322	5,025	9,788	4,812	1,470	1,422	0	0	460	45	73	168
Finland	..	..	..	..	..	..	..	..	..	..	..	..
France	..	..	..	..	..	..	..	..	..	..	..	..
Gabon	4,361	2,130	3,977	2,022	110	18	0	0	287	108	97	0
Gambia, The	426	520	385	449	162	64	0	0	15	42	26	29
Georgia	1,240	4,231	1,039	2,596	84	1,253	0	518	85	330	116	786
Germany	..	..	..	..	..	..	..	..	..	..	..	..
Ghana	5,495	5,720	4,200	4,126	2,434	1,581	27	0	620	1,323	648	271
Greece	..	..	..	..	..	..	..	..	..	..	..	..
Guatemala	3,282	13,801	2,328	4,931	158	1,112	142	7,644	811	1,226	0	0
Guinea	3,248	2,926	2,991	2,827	847	1,269	0	0	164	40	94	59
Guinea-Bissau	895	1,111	794	950	210	304	0	0	95	151	6	10
Haiti	821	1,244	766	1,078	389	39	0	0	27	0	29	166
Honduras	4,851	3,675	4,247	2,446	828	502	123	880	382	317	99	32

	Total external debt		Long-term debt						Short-term debt		Use of IMF credit	
	\$ millions		\$ millions						\$ millions		\$ millions	
	1995	2009	Public and publicly guaranteed		IBRD loans and IDA credits		Private nonguaranteed		1995	2009	1995	2009
			Total	2009	1995	2009	1995	2009				
Hungary	..	..	..	..	..	..	..	..	..	..	..	..
India	95,174	237,692	81,091	76,531	27,348	34,028	6,618	118,211	5,049	42,950	2,416	0
Indonesia	124,413	157,517	65,323	86,020	13,259	10,111	33,123	52,834	25,966	18,662	0	0
Iran, Islamic Rep.	21,565	13,435	15,116	7,524	316	836	0	0	6,449	5,911	0	0
Iraq	..	..	..	..	..	..	..	..	..	..	..	..
Ireland	..	..	..	..	..	..	..	..	..	..	..	..
Israel	..	..	..	..	..	..	..	..	..	..	..	..
Italy	..	..	..	..	..	..	..	..	..	..	..	..
Jamaica	4,581	10,959	3,721	6,664	595	398	128	3,241	492	1,054	240	0
Japan	..	..	..	..	..	..	..	..	..	..	..	..
Jordan	7,661	6,615	6,624	5,445	806	1,109	0	0	785	1,158	251	12
Kazakhstan	3,750	109,873	2,834	2,487	295	547	103	98,710	381	8,676	432	0
Kenya	7,309	8,005	5,857	6,543	2,412	3,156	445	0	634	1,011	374	451
Korea, Dem. Rep.	..	..	..	..	..	..	..	..	..	..	..	..
Korea, Rep.	..	..	..	..	..	..	..	..	..	..	..	..
Kosovo	..	359	..	359	..	359	..	0	..	0	..	0
Kuwait	..	..	..	..	..	..	..	..	..	..	..	..
Kyrgyz Republic	609	2,900	472	2,320	141	656	0	332	13	81	124	167
Lao PDR	2,155	5,539	2,091	2,923	285	680	0	2,601	0	0	64	16
Latvia	..	..	..	..	..	..	..	..	..	..	..	..
Lebanon	2,974	24,864	1,559	20,979	113	318	50	670	1,365	3,096	0	119
Lesotho	684	705	642	681	207	313	0	0	4	0	38	24
Liberia	2,466	1,660	1,153	677	269	69	0	0	978	92	336	891
Libya	..	..	..	..	..	..	..	..	..	..	..	..
Lithuania	769	31,717	430	9,059	62	23	29	16,708	49	5,949	262	0
Macedonia, FYR	1,277	5,589	788	1,874	181	653	289	1,816	143	1,900	57	0
Madagascar	4,302	2,213	3,687	1,846	1,121	1,105	0	4	542	262	73	101
Malawi	2,238	1,093	2,078	899	1,306	213	0	0	44	67	116	127
Malaysia	34,343	66,390	16,023	21,364	1,059	39	11,046	21,332	7,274	23,695	0	0
Mali	2,958	2,667	2,739	2,592	863	698	0	0	72	32	147	44
Mauritania	2,396	2,029	2,127	1,851	347	282	0	0	169	163	100	16
Mauritius	1,416	742	1,148	661	157	212	267	81	1	0	0	0
Mexico	165,379	192,008	93,902	99,374	13,823	10,143	18,348	69,299	37,300	23,335	15,828	0
Moldova	695	3,457	450	783	152	443	9	1,203	6	1,318	230	154
Mongolia	531	2,212	472	1,817	59	392	0	141	12	72	47	182
Morocco	23,771	23,752	23,190	19,219	3,999	2,557	331	2,354	198	2,179	52	0
Mozambique	7,458	4,168	5,209	3,354	890	1,356	1,769	0	279	643	202	171
Myanmar	5,771	8,186	5,378	6,320	777	777	0	0	393	1,866	0	0
Namibia	..	..	..	..	..	..	..	..	..	..	..	..
Nepal	2,410	3,683	2,339	3,563	1,023	1,483	0	0	23	44	48	76
Netherlands	..	..	..	..	..	..	..	..	..	..	..	..
New Zealand	..	..	..	..	..	..	..	..	..	..	..	..
Nicaragua	10,396	4,420	8,572	2,461	341	418	0	1,093	1,785	716	39	150
Niger	1,604	991	1,347	909	598	266	133	7	72	18	52	57
Nigeria	34,092	7,846	28,140	4,157	3,489	2,852	301	175	5,651	3,514	0	0
Norway	..	..	..	..	..	..	..	..	..	..	..	..
Oman	..	..	..	..	..	..	..	..	..	..	..	..
Pakistan	30,169	53,710	23,727	41,484	6,403	11,844	1,593	3,265	3,235	1,466	1,613	7,495
Panama	6,098	12,418	3,781	11,282	175	435	0	1,136	2,207	0	111	0
Papua New Guinea	2,506	1,555	1,668	1,037	407	231	711	397	78	121	50	0
Paraguay	2,574	4,323	1,453	2,308	189	296	338	1,263	784	752	0	0
Peru	30,833	29,593	18,931	20,791	1,729	2,846	1,288	4,073	9,659	4,730	955	0
Philippines	39,379	62,911	28,525	41,738	5,185	2,669	4,847	17,171	5,279	4,002	728	0
Poland	..	..	..	..	..	..	..	..	..	..	..	..
Portugal	..	..	..	..	..	..	..	..	..	..	..	..
Puerto Rico	..	..	..	..	..	..	..	..	..	..	..	..
Qatar	..	..	..	..	..	..	..	..	..	..	..	..



	Total external debt		Long-term debt						Short-term debt		Use of IMF credit	
	\$ millions		\$ millions						\$ millions		\$ millions	
	1995	2009	Public and publicly guaranteed		IBRD loans and IDA credits		Private nonguaranteed		1995	2009	1995	2009
			Total	2009	1995	2009	1995	2009				
Romania	6,832	117,511	3,957	17,904	844	2,995	534	69,031	1,303	21,032	1,038	9,544
Russian Federation	121,401	381,339	101,582	99,990	1,524	3,211	0	250,725	10,201	30,624	9,617	0
Rwanda	1,029	747	971	725	512	254	0	0	32	6	26	15
Saudi Arabia	..	..	..	..	..	..	..	..	..	..	..	..
Senegal	3,916	3,503	3,266	2,961	1,160	921	44	357	260	18	347	167
Serbia	10,785 <sup>a</sup>	33,402	6,788 <sup>a</sup>	8,725	1,252 <sup>a</sup>	2,459	1,773 <sup>a</sup>	19,076	2,139 <sup>a</sup>	4,000	84 <sup>a</sup>	1,601
Sierra Leone	1,220	444	1,028	371	234	124	0	0	27	0	165	73
Singapore	..	..	..	..	..	..	..	..	..	..	..	..
Slovak Republic	..	..	..	..	..	..	..	..	..	..	..	..
Slovenia	..	..	..	..	..	..	..	..	..	..	..	..
Somalia	2,678	2,973	1,961	1,987	432	448	0	0	551	810	166	176
South Africa	25,358	42,101	9,837	15,063	0	21	4,935	13,764	9,673	13,274	913	0
Spain	..	..	..	..	..	..	..	..	..	..	..	..
Sri Lanka	8,395	17,208	7,175	13,647	1,512	2,487	90	967	535	1,873	595	721
Sudan	17,603	20,139	9,779	12,998	1,279	1,306	496	0	6,368	6,739	960	403
Swaziland	249	418	238	391	25	10	0	0	11	27	0	0
Sweden	..	..	..	..	..	..	..	..	..	..	..	..
Switzerland	..	..	..	..	..	..	..	..	..	..	..	..
Syrian Arab Republic	21,897	5,236	16,955	4,480	471	16	0	0	4,942	756	0	0
Tajikistan	634	2,514	590	1,603	0	373	0	855	43	15	0	41
Tanzania	7,365	7,325	6,204	4,637	2,269	2,598	0	1,016	964	1,342	197	329
Thailand	100,039	58,755	16,826	11,185	1,906	133	39,117	19,689	44,095	27,881	0	0
Timor-Leste	..	..	..	..	..	..	..	..	..	..	..	..
Togo	1,476	1,640	1,286	1,502	541	586	0	0	85	47	105	91
Trinidad and Tobago	..	..	..	..	..	..	..	..	..	..	..	..
Tunisia	10,818	21,709	9,022	14,837	1,766	1,405	193	2,070	1,310	4,801	293	0
Turkey	73,781	251,372	50,317	84,875	5,069	9,816	7,079	118,814	15,701	39,725	685	7,958
Turkmenistan	402	576	385	463	1	13	0	38	17	75	0	0
Uganda	3,609	2,490	3,089	2,245	1,792	1,379	0	0	103	235	417	9
Ukraine	8,429	93,153	6,581	10,449	491	3,294	84	51,857	223	19,873	1,542	10,974
United Arab Emirates	..	..	..	..	..	..	..	..	..	..	..	..
United Kingdom	..	..	..	..	..	..	..	..	..	..	..	..
United States	..	..	..	..	..	..	..	..	..	..	..	..
Uruguay	5,318	12,159	3,833	10,955	513	1,099	127	80	1,336	1,124	21	0
Uzbekistan	1,799	4,109	1,415	3,238	157	368	15	727	212	144	157	0
Venezuela, RB	35,744	54,503	28,428	35,184	1,639	0	2,013	3,310	3,063	16,009	2,239	0
Vietnam	25,428	28,674	21,778	23,403	231	6,270	0	0	3,272	5,186	377	84
West Bank and Gaza	..	..	..	..	..	..	..	..	..	..	..	..
Yemen, Rep.	6,251	6,356	5,562	5,861	827	2,187	0	0	689	442	0	53
Zambia	6,958	3,049	5,291	1,210	1,434	407	13	1,020	415	474	1,239	345
Zimbabwe	4,989	5,015	3,462	3,742	896	985	381	89	685	1,068	461	116
<b>World</b>	<b>.. S</b>	<b>.. S</b>	<b>.. S</b>	<b>.. S</b>	<b>.. S</b>	<b>.. S</b>	<b>.. S</b>	<b>.. S</b>	<b>.. S</b>	<b>.. S</b>	<b>.. S</b>	<b>.. S</b>
<b>Low income</b>	130,267	135,593	109,551	110,863	33,428	39,578	2,818	5,946	11,139	12,833	6,760	5,951
<b>Middle income</b>	1,729,983	3,409,521	1,151,625	1,296,127	144,453	185,309	205,673	1,346,264	319,724	720,903	52,961	46,227
Lower middle income	841,940	1,417,085	578,607	597,241	97,821	123,481	94,497	394,555	156,647	402,423	12,188	22,866
Upper middle income	888,043	1,992,436	573,018	698,886	46,632	61,827	111,176	951,710	163,077	318,479	40,772	23,361
<b>Low &amp; middle income</b>	1,860,250	3,545,114	1,261,176	1,406,990	177,881	224,887	208,491	1,352,210	330,863	733,736	59,721	52,179
East Asia & Pacific	455,544	825,602	255,399	293,956	37,604	44,253	89,982	208,994	108,826	322,361	1,337	291
Europe & Central Asia	246,178	1,126,252	189,044	269,524	11,522	33,110	10,256	656,239	31,250	165,385	15,628	35,103
Latin America & Carib.	608,666	912,980	371,875	432,115	38,485	41,907	87,303	340,984	122,856	138,637	26,632	1,243
Middle East & N. Africa	161,737	141,321	140,298	112,569	12,751	11,847	887	6,150	18,375	22,402	2,177	200
South Asia	152,282	339,983	129,636	159,965	42,036	61,257	8,301	122,442	9,051	48,495	5,293	9,081
Sub-Saharan Africa	235,842	198,976	174,924	138,861	35,483	32,512	11,760	17,399	40,504	36,456	8,654	6,261
<b>High income</b>	..	..	..	..	..	..	..	..	..	..	..	..
Euro area	..	..	..	..	..	..	..	..	..	..	..	..

a. Includes Montenegro.

### About the data

External indebtedness affects a country's creditworthiness and investor perceptions. Data on external debt are gathered through the World Bank's Debtor Reporting System. Indebtedness is calculated using loan-by-loan reports submitted by countries on long-term public and publicly guaranteed borrowing and information on short-term debt collected by the countries or from creditors through the reporting systems of the Bank for International Settlements (BIS). These data are supplemented by information from major multilateral banks and official lending agencies in major creditor countries and by estimates by World Bank and International Monetary Fund (IMF) staff. The table includes data on long-term private nonguaranteed debt reported to the World Bank or estimated by its staff.

Data coverage, quality, and timeliness vary by country. Coverage varies for debt instruments and borrowers. The widening spectrum of debt instruments and investors alongside the expansion of private nonguaranteed borrowing makes comprehensive coverage of external debt more complex. Reporting countries differ in their capacity to monitor debt, especially private nonguaranteed debt. Even data on public and publicly guaranteed debt are affected by coverage and reporting accuracy—because of monitoring capacity and sometimes because of unwillingness to provide information. A key part often underreported is military debt. Currently, 128 developing countries report to the Debtor Reporting System (DRS). Nonreporting countries might have outstanding debt with the World Bank, other international financial institutions, and private creditors.

Debt data, normally reported in the currency of repayment, are converted into U.S. dollars to produce summary tables. Stock figures (amount of debt outstanding) are converted using end-of-period exchange rates, as published in the IMF's *International Financial Statistics* (line ae). Flow figures are converted at annual average exchange rates (line rf). Projected debt service is converted using end-of-period exchange rates. Debt repayable in multiple currencies, goods, or services and debt with a provision for maintenance of the value of the currency of repayment are shown at book value.

Because flow data are converted at annual average exchange rates and stock data at end-of-period exchange rates, year-to-year changes in debt outstanding and disbursed are sometimes not equal to net flows (disbursements less principal repayments); similarly, changes in debt outstanding, including undisbursed debt, differ from commitments less repayments. Discrepancies are particularly notable when exchange rates have moved sharply during the year. Cancellations and reschedulings of other liabilities into long-term public debt also contribute to the differences.

Variations in reporting rescheduled debt also affect cross-country comparability. For example, rescheduling of official Paris Club creditors may be subject to lags between completion of the general rescheduling agreement and completion of the specific bilateral agreements that define the terms of the rescheduled debt. Other areas of inconsistency include country treatment of arrears and of nonresident national deposits denominated in foreign currency.

Aggregate data on long-term private nonguaranteed debt are reported annually. DRS countries recognize the importance of monitoring borrowing by their private sector, particularly when it accounts for a significant share of total external debt, but many find doing so difficult. Detailed data are available only from countries with registration requirements for private nonguaranteed debt, most commonly in connection with exchange controls. Where formal registration of private nonguaranteed debt is not mandatory, compilers must rely on balance of payments data and financial surveys. The data on private nonguaranteed debt in the table are as reported or estimated for countries where this type of external debt is known to be significant. Estimates are based on national data on quarterly external debt statistics.

The DRS encourages debtor countries to voluntarily provide information on their short-term external obligations. By its nature, short-term external debt is difficult to monitor: loan-by-loan registration is normally impractical, and monitoring systems typically rely on information requested periodically by the central bank from the banking sector. The World Bank regards the debtor country as the authoritative source of information on its short-term debt. Where such information is not available from the debtor country, data from creditor sources may be used as an indication of the magnitude of a country's short-term external debt. These data are derived from BIS data on international bank lending based on time remaining to original maturity. The data are reported based on residual maturity, but an estimate of short-term external liabilities by original maturity can be derived by deducting from claims due in one year those that, 12 months earlier, had a maturity of between one and two years. However, not all commercial banks report to the BIS in a way that allows the full maturity distribution to be determined, and the BIS data include liabilities only to banks within the BIS reporting area. The results should thus be interpreted with caution.

Data related to the operations of the IMF are provided by the IMF Treasurer's Department. They are converted from special drawing rights into U.S. dollars using end-of-period exchange rates for stocks and average-over-the-period exchange rates for flows. The IMF's loan instruments have changed over time to address the specific circumstances of its members.

### Definitions

- **Total external debt** is debt owed to nonresident creditors and repayable in foreign currencies, goods, or services by public and private entities in the country. It is the sum of long-term external debt, short-term debt, and use of IMF credit. Debt repayable in domestic currency is excluded.
- **Long-term debt** is debt that has an original or extended maturity of more than one year. It has three components: public, publicly guaranteed, and private nonguaranteed debt.
- **Public and publicly guaranteed debt** comprises the long-term external obligations of public debtors, including the national government and political subdivisions (or an agency of either) and autonomous public bodies, and the external obligations of private debtors that are guaranteed for repayment by a public entity.
- **IBRD loans and IDA credits** are extended by the World Bank. The International Bank for Reconstruction and Development (IBRD) lends at market rates. The International Development Association (IDA) provides credits at concessional rates.
- **Private nonguaranteed debt** consists of the long-term external obligations of private debtors that are not guaranteed for repayment by a public entity.
- **Short-term debt** is debt owed to nonresidents having an original maturity of one year or less and interest in arrears on long-term debt and on the use of IMF credit.
- **Use of IMF credit** denotes members' drawings on the IMF other than those drawn against the country's reserve tranche position and includes purchases and drawings under the Extended Credit Facility, Standby Credit Facility, Rapid Credit Facility, Stand-By Arrangements, Flexible Credit Line, and the Extended Fund Facility.

### Data sources

Data on external debt are mainly from reports to the World Bank through its Debtor Reporting System from member countries that have received IBRD loans or IDA credits, with additional information from the files of the World Bank, the IMF, the African Development Bank and African Development Fund, the Asian Development Bank and Asian Development Fund, and the Inter-American Development Bank. Summary tables of the external debt of developing countries are published annually in the World Bank's *Global Development Finance*, *Global Development Finance* CD-ROM, and Global Development Finance database.



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## Ratios for external debt

	Total external debt		Total debt service		Multilateral debt service		Short-term debt				Present value of debt	
	% of GNI		% of exports of goods and services and income <sup>a</sup>		% of public and publicly guaranteed debt service		% of total debt		% of total reserves		% of exports of goods, services, and income <sup>a</sup>	
	1995	2009	1995	2009	1995	2009	1995	2009	1995	2009	2009	2009
Afghanistan	..	..	..	0.4	..	73.4	..	0.9	..	..	5	25
Albania	18.5	40.3	2.8	6.9	11.4	43.1	13.7	17.7	23.5	35.2	31	96
Algeria	83.5	3.8	..	..	17.7	0.4	0.8	27.9	6.3	1.0	3	5
Angola	311.9	28.2	12.0	8.4	0.6	0.3	17.0	15.8	919.7	19.3	24	21
Argentina	38.9	40.1	30.2	17.3	21.6	44.7	21.7	16.3	133.6	40.7	41	156
Armenia	25.3	55.3	3.2	20.9	69.8	55.6	0.6	10.4	1.9	25.5	36	148
Australia	..	..	..	..	..	..	..	..	..	..	..	..
Austria	..	..	..	..	..	..	..	..	..	..	..	..
Azerbaijan	10.6	12.1	1.3	1.7	21.8	28.4	4.4	16.6	11.6	15.1	10	14
Bangladesh	40.2	24.0	16.1	5.6	28.0	70.2	1.3	8.1	8.4	18.8	17	90
Belarus	12.2	35.6	3.4	5.0	55.4	3.1	6.5	46.8	29.2	142.3	30	51
Belgium	..	..	..	..	..	..	..	..	..	..	..	..
Benin	71.2	16.1	7.5	..	54.6	74.5	3.4	4.2	23.7	3.6	12 <sup>b</sup>	62 <sup>b</sup>
Bolivia	81.2	34.5	29.5	14.4	75.5	84.0	5.8	9.6	30.5	6.5	16 <sup>b</sup>	34 <sup>b</sup>
Bosnia and Herzegovina	..	54.6	..	10.5	..	72.7	..	17.5	..	51.7	45	106
Botswana	15.1	14.1	3.1	1.2	76.0	59.6	1.4	14.2	0.2	2.6	8	16
Brazil	21.2	17.9	38.5	23.4	18.5	28.3	19.5	14.4	60.7	16.7	17	125
Bulgaria	81.9	90.4	16.5	21.3	10.5	55.1	4.9	45.8	31.3	100.3	85	132
Burkina Faso	53.6	22.9	..	..	76.7	65.0	4.4	0.0	16.1	0.0	17 <sup>b</sup>	154 <sup>b</sup>
Burundi	117.6	38.9	27.6	..	70.6	95.8	1.3	1.4	6.9	2.3	13 <sup>b</sup>	143 <sup>b</sup>
Cambodia	67.6	45.0	0.7	0.8	11.9	75.1	4.5	6.1	53.1	8.1	38	60
Cameroon	133.4	13.6	21.0	7.4	61.0	37.3	9.0	0.8	6,444.5	0.6	4 <sup>b</sup>	12 <sup>b</sup>
Canada	..	..	..	..	..	..	..	..	..	..	..	..
Central African Republic	85.9	20.0	..	..	100.0	65.0	6.0	17.0	24.0	31.9	12 <sup>b</sup>	75 <sup>b</sup>
Chad	58.5	28.6	..	2.8	86.1	85.3	2.0	0.2	11.6	0.6	22 <sup>b</sup>	41 <sup>b</sup>
Chile	32.1	46.7	24.5	22.6	76.2	3.7	15.6	24.4	23.1	69.1	43	84
China	16.5	8.7	9.9	2.9	7.6	27.2	18.9	56.1	27.8	9.8	9	25
Hong Kong SAR, China	..	..	..	..	..	..	..	..	..	..	..	..
Colombia	27.5	23.6	33.5	22.4	32.7	36.6	22.1	7.9	65.6	16.4	20	111
Congo, Dem. Rep.	271.4	121.4	..	..	..	35.5	23.6	4.9	1,980.9	36.9	24 <sup>b</sup>	71 <sup>b</sup>
Congo, Rep.	479.3	83.8	13.5	..	21.1	18.4	17.0	4.2	1,575.1	5.6	20 <sup>b</sup>	18 <sup>b</sup>
Costa Rica	32.8	28.1	14.2	9.6	50.6	25.4	11.4	29.0	40.5	57.5	27	50
Côte d'Ivoire	188.7	53.0	23.1	9.5	59.3	96.0	20.7	0.8	739.1	3.0	46 <sup>b</sup>	88 <sup>b</sup>
Croatia	..	..	..	..	..	..	..	..	..	..	..	..
Cuba	..	..	..	..	..	..	..	..	..	..	..	..
Czech Republic	..	..	..	..	..	..	..	..	..	..	..	..
Denmark	..	..	..	..	..	..	..	..	..	..	..	..
Dominican Republic	28.5	24.6	7.0	12.1	39.8	25.2	13.8	15.3	165.3	57.8	22	73
Ecuador	72.0	23.3	26.6	40.8	32.0	12.9	9.5	11.0	73.4	37.4	23	59
Egypt, Arab Rep.	55.8	17.6	16.0	6.5	26.3	30.2	7.1	7.7	13.9	7.3	16	53
El Salvador	26.4	54.3	13.4	25.2	55.1	67.9	20.9	18.6	55.9	67.7	49	162
Eritrea	6.3	..	0.1	..	100.0	56.1	0.0	0.6	0.0	..	34 <sup>b</sup>	811 <sup>b</sup>
Estonia	..	..	..	..	..	..	..	..	..	..	..	..
Ethiopia	136.8	17.6	18.5	3.1	41.9	45.8	4.5	0.9	56.5	2.5	12 <sup>b</sup>	89 <sup>b</sup>
Finland	..	..	..	..	..	..	..	..	..	..	..	..
France	..	..	..	..	..	..	..	..	..	..	..	..
Gabon	101.6	22.3	15.3	8.1	17.9	16.9	6.6	5.1	187.8	5.4	19	18
Gambia, The	113.0	75.3	15.5	..	49.1	51.4	3.5	8.1	14.0	18.9	30 <sup>b</sup>	81 <sup>b</sup>
Georgia	48.2	40.0	..	7.3	0.4	47.4	6.9	7.8	43.0	15.7	28	80
Germany	..	..	..	..	..	..	..	..	..	..	..	..
Ghana	86.9	37.3	24.2	2.9	48.4	18.7	11.3	23.1	77.1	..	27 <sup>b</sup>	60 <sup>b</sup>
Greece	..	..	..	..	..	..	..	..	..	..	..	..
Guatemala	22.6	38.8	12.5	18.4	47.5	74.9	24.7	8.9	103.6	23.6	33	126
Guinea	90.0	48.3	24.9	..	30.5	62.8	5.0	1.4	188.9	..	44 <sup>b</sup>	152 <sup>b</sup>
Guinea-Bissau	379.4	253.2	52.4	..	86.3	100.0	10.6	13.6	469.2	89.5	203 <sup>b</sup>	647 <sup>b</sup>
Haiti	..	..	51.0	4.6	92.2	81.0	3.2	0.0	13.4	0.0	15 <sup>b</sup>	113 <sup>b</sup>
Honduras	132.9	25.9	34.7	6.8	55.9	44.0	7.9	8.6	141.7	..	13 <sup>b</sup>	25 <sup>b</sup>

# Ratios for external debt

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GLOBAL LINKS

	Total external debt		Total debt service		Multilateral debt service		Short-term debt				Present value of debt	
	% of GNI		% of exports of goods and services and income <sup>a</sup>		% of public and publicly guaranteed debt service		% of total debt		% of total reserves		% of exports of goods, services, and income <sup>a</sup>	
	1995	2009	1995	2009	1995	2009	1995	2009	1995	2009	2009	2009
Hungary	..	..	..	..	..	..	..	..	..	..	..	..
India	27.0	18.2	34.4	5.9	24.2	31.9	5.3	18.1	22.1	15.1	17	71
Indonesia	63.4	30.2	30.3	18.4	28.4	25.3	20.9	11.8	174.2	28.2	30	99
Iran, Islamic Rep.	23.9	4.1	29.7	..	1.3	4.2	29.9	44.0	..	..	4	..
Iraq	..	..	..	..	..	..	..	..	..	..	..	..
Ireland	..	..	..	..	..	..	..	..	..	..	..	..
Israel	..	..	..	..	..	..	..	..	..	..	..	..
Italy	..	..	..	..	..	..	..	..	..	..	..	..
Jamaica	82.3	77.8	18.8	33.9	40.6	17.6	10.7	9.6	72.2	50.8	82	178
Japan	..	..	..	..	..	..	..	..	..	..	..	..
Jordan	118.8	28.3	16.7	4.8	33.5	50.7	10.2	17.5	34.4	9.5	27	46
Kazakhstan	18.5	113.0	3.9	80.2	7.8	45.7	10.2	7.9	23.0	37.4	96	157
Kenya	83.8	26.5	25.3	5.0	32.5	40.7	8.7	12.6	164.9	26.3	19	72
Korea, Dem. Rep.	..	..	..	..	..	..	..	..	..	..	..	..
Korea, Rep.	..	..	..	..	..	..	..	..	..	..	..	..
Kosovo	..	6.4	..	20.8	..	100.0	..	0.0	..	0.0	4	25
Kuwait	..	..	..	..	..	..	..	..	..	..	..	..
Kyrgyz Republic	37.5	65.8	13.3	14.0	59.0	78.1	2.1	2.8	9.7	5.1	36 <sup>b</sup>	62 <sup>b</sup>
Lao PDR	122.6	95.5	6.1	..	37.4	79.7	0.0	0.0	0.0	0.0	78	233
Latvia	..	..	..	..	..	..	..	..	..	..	..	..
Lebanon	24.4	70.7	..	18.0	13.5	5.7	45.9	12.5	16.9	7.9	80	105
Lesotho	55.8	33.2	6.1	3.0	60.3	81.7	0.6	0.0	0.9	..	19	27
Liberia	..	257.5	..	..	..	30.3	39.6	5.5	3,481.0	..	316 <sup>b</sup>	347 <sup>b</sup>
Libya	..	..	..	..	..	..	..	..	..	..	..	..
Lithuania	9.8	85.3	1.3	31.0	31.8	8.9	6.4	18.8	6.0	89.4	72	120
Macedonia, FYR	29.0	62.2	..	14.8	99.9	63.9	11.2	34.0	51.9	83.0	59	100
Madagascar	143.3	..	7.7	2.3	74.3	61.9	12.6	11.8	497.1	23.0	17 <sup>b</sup>	59 <sup>b</sup>
Malawi	165.8	24.7	24.9	..	51.4	33.4	1.9	6.1	37.8	41.0	16 <sup>b</sup>	65 <sup>b</sup>
Malaysia	40.6	35.8	7.0	5.2	15.5	1.9	21.2	35.7	29.5	24.5	31	27
Mali	122.3	29.6	16.1	..	45.5	57.5	2.4	1.2	22.2	2.0	14 <sup>b</sup>	51 <sup>b</sup>
Mauritania	175.3	66.6	23.1	..	49.6	58.1	7.1	8.0	187.9	68.4	83 <sup>b</sup>	153 <sup>b</sup>
Mauritius	35.2	8.4	8.7	2.7	34.5	35.6	0.1	0.0	0.1	0.0	7	11
Mexico	60.5	22.3	28.1	16.0	19.5	9.3	22.6	12.2	218.8	23.4	18	61
Moldova	40.3	59.7	7.9	14.9	79.1	43.1	0.9	38.1	2.3	89.0	55	109
Mongolia	44.2	55.8	10.2	4.8	2.8	29.9	2.2	3.3	7.4	5.4	35	57
Morocco	75.1	26.4	40.4	12.5	30.3	49.8	0.8	9.2	5.1	9.2	23	65
Mozambique	360.6	43.0	34.5	1.6	17.4	71.4	3.7	15.4	142.8	..	18 <sup>b</sup>	53 <sup>b</sup>
Myanmar	..	..	18.9	..	15.0	8.4	6.8	22.8	60.4	..	..	..
Namibia	..	..	..	..	..	..	..	..	..	..	..	..
Nepal	54.7	28.7	7.9	10.4	54.2	77.6	0.9	1.2	3.5	..	23	154
Netherlands	..	..	..	..	..	..	..	..	..	..	..	..
New Zealand	..	..	..	..	..	..	..	..	..	..	..	..
Nicaragua	368.6	76.2	43.1	17.2	30.3	49.8	17.2	16.2	1,256.8	45.5	36 <sup>b</sup>	68 <sup>b</sup>
Niger	87.6	18.8	17.1	4.5	95.5	92.0	4.5	1.9	75.6	2.8	13 <sup>b</sup>	67 <sup>b</sup>
Nigeria	131.7	5.1	14.7	0.8	45.4	61.0	16.6	44.8	330.7	7.7	4	8
Norway	..	..	..	..	..	..	..	..	..	..	..	..
Oman	..	..	..	..	..	..	..	..	..	..	..	..
Pakistan	49.4	31.3	30.9	15.0	43.2	50.5	10.7	2.7	128.0	10.8	24	157
Panama	80.9	52.5	3.4	5.5	52.7	22.5	36.2	0.0	282.4	0.0	54	66
Papua New Guinea	57.3	19.9	20.8	11.7	31.7	58.0	3.1	7.8	29.1	4.6	18	21
Paraguay	31.5	29.5	5.8	6.1	48.0	52.6	30.4	17.4	70.8	19.5	26	48
Peru	60.3	24.8	17.3	11.8	49.9	33.2	31.3	16.0	111.6	14.2	23	78
Philippines	51.7	39.2	16.3	18.5	29.2	13.5	13.4	6.4	67.8	9.1	35	90
Poland	..	..	..	..	..	..	..	..	..	..	..	..
Portugal	..	..	..	..	..	..	..	..	..	..	..	..
Puerto Rico	..	..	..	..	..	..	..	..	..	..	..	..
Qatar	..	..	..	..	..	..	..	..	..	..	..	..





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## Ratios for external debt

	Total external debt		Total debt service		Multilateral debt service		Short-term debt				Present value of debt	
	% of GNI		% of exports of goods and services and income <sup>a</sup>		% of public and publicly guaranteed debt service		% of total debt		% of total reserves		% of exports of goods, services, and income <sup>a</sup>	
	1995	2009	1995	2009	1995	2009	1995	2009	1995	2009	2009	2009
Romania	19.4	71.6	10.5	31.4	21.3	44.1	19.1	17.9	49.7	47.4	53	166
Russian Federation	31.0	31.9	6.3	17.7	9.7	4.7	8.4	8.0	56.6	7.0	26	74
Rwanda	79.2	14.9	20.5	4.7	99.0	70.4	3.1	0.8	32.3	0.9	8 <sup>b</sup>	64 <sup>b</sup>
Saudi Arabia	..	..	..	..	..	..	..	..	..	..	..	..
Senegal	82.9	27.1	17.8	..	62.2	59.1	6.6	0.5	95.6	0.8	20 <sup>b</sup>	73 <sup>b</sup>
Serbia	..	79.7	..	37.1	100.0 <sup>c</sup>	51.9	19.8 <sup>c</sup>	12.0	..	26.3	71	223
Sierra Leone	149.0	23.4	63.6	2.2	8.4	62.9	2.2	0.0	77.8	0.0	20 <sup>b</sup>	104 <sup>b</sup>
Singapore	..	..	..	..	..	..	..	..	..	..	..	..
Slovak Republic	..	..	..	..	..	..	..	..	..	..	..	..
Slovenia	..	..	..	..	..	..	..	..	..	..	..	..
Somalia	..	..	..	..	..	..	20.6	27.2	..	..	..	..
South Africa	17.1	15.1	9.5	9.3	0.0	2.5	38.1	31.5	216.7	33.5	15	44
Spain	..	..	..	..	..	..	..	..	..	..	..	..
Sri Lanka	65.3	41.5	9.3	15.6	14.0	20.0	6.4	10.9	25.3	35.0	35	136
Sudan	136.3	40.5	10.1	5.8	100.0	22.3	36.2	33.5	3,898.2	615.9	73 <sup>b</sup>	352 <sup>b</sup>
Swaziland	14.0	15.4	1.5	2.1	64.0	82.8	4.5	6.5	3.7	2.8	13	16
Sweden	..	..	..	..	..	..	..	..	..	..	..	..
Switzerland	..	..	..	..	..	..	..	..	..	..	..	..
Syrian Arab Republic	188.9	10.3	4.5	..	55.3	30.2	22.6	14.4	1,102.7	4.1	9	24
Tajikistan	53.6	51.2	..	38.4	..	39.8	6.8	0.6	..	..	39	114
Tanzania	143.5	34.0	17.4	3.5	66.7	69.6	13.1	18.3	356.6	38.7	13 <sup>b</sup>	57 <sup>b</sup>
Thailand	60.5	23.3	11.6	6.8	20.9	4.8	44.1	47.5	119.4	20.1	22	28
Timor-Leste	..	..	..	..	..	..	..	..	..	..	..	..
Togo	116.7	57.5	6.2	..	75.5	98.3	5.8	2.9	65.1	6.7	50 <sup>b</sup>	136 <sup>b</sup>
Trinidad and Tobago	..	..	..	..	..	..	..	..	..	..	..	..
Tunisia	63.0	58.2	18.3	10.1	45.2	41.7	12.1	22.1	77.6	42.5	54	80
Turkey	44.4	41.2	30.1	41.6	20.7	13.4	21.3	15.8	113.0	53.0	35	144
Turkmenistan	16.1	3.0	..	..	1.9	2.2	4.3	13.0	1.5	..	3	4
Uganda	63.3	16.2	19.8	2.0	69.7	66.0	2.8	9.4	22.4	7.9	8 <sup>b</sup>	34 <sup>b</sup>
Ukraine	17.8	83.8	6.6	36.2	13.6	16.9	2.6	21.3	20.9	75.0	62	123
United Arab Emirates	..	..	..	..	..	..	..	..	..	..	..	..
United Kingdom	..	..	..	..	..	..	..	..	..	..	..	..
United States	..	..	..	..	..	..	..	..	..	..	..	..
Uruguay	28.0	34.5	22.1	21.0	27.3	22.3	25.1	9.2	73.7	14.0	37	121
Uzbekistan	13.5	12.5	..	..	1.9	21.6	11.8	3.5	..	..	12	29
Venezuela, RB	49.0	16.7	22.9	6.4	11.6	13.4	8.6	29.4	28.6	46.6	19	66
Vietnam	124.0	32.3	..	1.8	2.9	18.3	12.9	18.1	247.2	31.5	27	34
West Bank and Gaza	..	..	..	..	..	..	..	..	..	..	..	..
Yemen, Rep.	169.9	25.5	4.6	..	78.3	58.7	11.0	7.0	107.9	6.3	17	47
Zambia	215.1	26.8	..	3.8	50.6	48.6	6.0	15.6	186.2	25.1	10 <sup>b</sup>	24 <sup>b</sup>
Zimbabwe	73.5	..	..	..	33.6	0.0	13.7	21.3	77.2	..	..	335
<b>World</b>	<b>.. W</b>	<b>.. W</b>	<b>.. W</b>	<b>.. W</b>	<b>.. W</b>	<b>.. W</b>	<b>.. W</b>	<b>.. W</b>	<b>.. W</b>	<b>.. W</b>	<b>..</b>	<b>..</b>
<b>Low income</b>	88.4	30.9	..	3.9	40.2	57.1	8.6	9.5	96.0	16.2	..	..
<b>Middle income</b>	36.8	21.8	18.0	11.6	22.5	20.2	18.5	21.1	72.7	14.9	..	..
Lower middle income	40.4	15.6	17.2	6.2	25.5	27.9	18.6	28.4	70.4	12.2	..	..
Upper middle income	33.9	30.3	18.6	19.5	20.0	15.4	18.4	16.0	74.8	21.0	..	..
<b>Low &amp; middle income</b>	38.8	22.1	18.0	11.3	23.0	21.0	17.8	20.7	73.3	15.0	..	..
East Asia & Pacific	35.5	13.2	12.7	4.8	18.2	18.4	23.9	39.0	64.9	11.3	..	..
Europe & Central Asia	32.7	44.7	10.9	26.9	16.6	13.3	12.7	14.7	67.6	24.4	..	..
Latin America & Carib.	35.8	23.7	27.3	17.9	26.2	23.3	20.2	15.2	88.6	25.0	..	..
Middle East & N. Africa	59.2	15.4	21.1	..	19.7	23.3	11.4	15.9	31.1	..	..	..
South Asia	32.2	20.7	29.7	6.8	27.4	38.4	5.9	14.3	29.5	15.4	..	..
Sub-Saharan Africa	76.1	22.9	16.2	5.9	35.0	25.1	17.2	18.3	193.5	21.3	..	..
<b>High income</b>	..	..	..	..	..	..	..	..	..	..	..	..
Euro area	..	..	..	..	..	..	..	..	..	..	..	..

a. The numerator refers to 2009, whereas the denominator is a three-year average of 2007–09 data. b. Data are from debt sustainability analyses for low-income countries. Present value estimates for these countries are for public and publicly guaranteed debt only. c. Includes Montenegro.

## About the data

A country's external debt burden, both debt outstanding and debt service, affects its creditworthiness and vulnerability. The table shows total external debt relative to a country's size—gross national income (GNI). Total debt service is contrasted with countries' ability to obtain foreign exchange through exports of goods, services, income, and workers' remittances.

Multilateral debt service (shown as a share of the country's total public and publicly guaranteed debt service) are obligations to international financial institutions, such as the World Bank, the International Monetary Fund (IMF), and regional development banks. Multilateral debt service takes priority over private and bilateral debt service, and borrowers must stay current with multilateral debts to remain creditworthy. While bilateral and private creditors often write off debts, international financial institution bylaws prohibit granting debt relief or canceling debts directly. However, the recent decrease in multilateral debt service ratios for some countries reflects debt relief from special programs, such as the Heavily Indebted Poor Countries (HIPC) Debt Initiative and the Multilateral Debt Relief Initiative (MDRI) (see table 1.4.) Other countries have accelerated repayment of debt outstanding. Indebted countries may also apply to the Paris and London Clubs to renegotiate obligations to public and private creditors.

Because short-term debt poses an immediate burden and is particularly important for monitoring vulnerability, it is compared with the total debt and foreign exchange reserves that are instrumental in providing coverage for such obligations. The present

value of external debt provides a measure of future debt service obligations.

The present value of external debt is calculated by discounting the debt service (interest plus amortization) due on long-term external debt over the life of existing loans. Short-term debt is included at face value. The data on debt are in U.S. dollars converted at official exchange rates (see *About the data* for table 6.10). The discount rate on long-term debt depends on the currency of repayment and is based on commercial interest reference rates established by the Organisation for Economic Co-operation and Development. Loans from the International Bank for Reconstruction and Development (IBRD), credits from the International Development Association (IDA), and obligations to the IMF are discounted using a special drawing rights reference rate. When the discount rate is greater than the loan interest rate, the present value is less than the nominal sum of future debt service obligations.

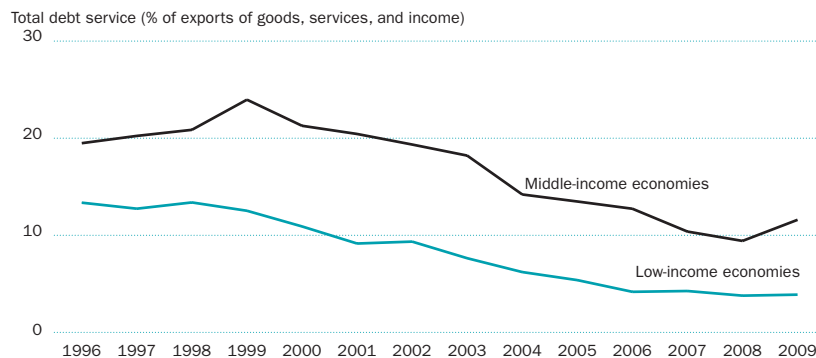
Debt ratios are used to assess the sustainability of a country's debt service obligations, but no absolute rules determine what values are too high. Empirical analysis of developing countries' experience and debt service performance shows that debt service difficulties become increasingly likely when the present value of debt reaches 200 percent of exports. Still, what constitutes a sustainable debt burden varies by country. Countries with fast-growing economies and exports are likely to be able to sustain higher debt levels.

## Definitions

- **Total external debt** is debt owed to nonresidents and comprises public, publicly guaranteed, and private nonguaranteed long-term debt, short-term debt, and use of IMF credit. It is presented as a share of GNI.
- **Total debt service** is the sum of principal repayments and interest actually paid in foreign currency, goods, or services on long-term debt; interest paid on short-term debt; and repayments (repurchases and charges) to the IMF.
- **Exports of goods, services, and income** are the total value of exports of goods and services, receipts of compensation of nonresident workers, and investment income from abroad.
- **Multilateral debt service** is the repayment of principal and interest to the World Bank, regional development banks, and other multilateral and inter-governmental agencies.
- **Short-term debt** includes all debt having an original maturity of one year or less and interest in arrears on long-term debt.
- **Total reserves** comprise holdings of monetary gold, special drawing rights, reserves of IMF members held by the IMF, and holdings of foreign exchange under the control of monetary authorities.
- **Present value of debt** is the sum of short-term external debt plus the discounted sum of total debt service payments due on public, publicly guaranteed, and private nonguaranteed long-term external debt over the life of existing loans.

## Ratio of debt services to exports for middle-income economies have sharply increased in 2009 as export revenues declined

6.11a



Due to global financial crisis, export revenues in 2009 declined by 20 percent for middle-income economies, and by 8 percent for low-income economies. Reduction in export revenues caused sharp raise in the ratio of debt service to exports, which has been declining since 2000 thanks to debt reduction efforts and export growth.

Source: Global Development Finance data files.

## Data sources

Data on external debt are mainly from reports to the World Bank through its Debtor Reporting System from member countries that have received IBRD loans or IDA credits, with additional information from the files of the World Bank, the IMF, the African Development Bank and African Development Fund, the Asian Development Bank and Asian Development Fund, and the Inter-American Development Bank. Data on GNI, exports of goods and services, and total reserves are from the World Bank's national accounts files and the IMF's Balance of Payments and International Financial Statistics databases. Summary tables of the external debt of developing countries are published annually in the World Bank's *Global Development Finance*, *Global Development Finance* CD-ROM, and *Global Development Finance* database.



	Equity flows				Debt flows			
	\$ millions							
	Foreign direct investment		Portfolio equity		Bonds		Commercial bank and other lending	
1995	2009	1995	2009	1995	2009	1995	2009	
Afghanistan	0	185	..	..	..	0	..	0
Albania	70	978	0	4	0	0	0	451
Algeria	..	2,847	..	..	-278	0	788	-607
Angola	472	2,205	0	0	0	0	123	156
Argentina	5,609	3,902	1,552	-212	3,705	-1,114	754	-1,849
Armenia	25	777	..	1	0	0	0	42
Australia	12,026	22,572	2,585	..	..	..	..	..
Austria	1,901	8,714	1,262	498	..	..	..	..
Azerbaijan	330	473	..	0	0	0	0	400
Bangladesh	2	674	-15	-154	0	0	-20	-13
Belarus	15	1,884	..	1	0	0	103	-31
Belgium	10,689 <sup>a</sup>	-38,860	6,505 <sup>a</sup>	-3,242	..	..	..	..
Benin	13	93	0	..	0	0	0	0
Bolivia	393	423	0	0	0	-10	41	-156
Bosnia and Herzegovina	..	235	..	..	..	0	..	-40
Botswana	70	252	6	18	0	0	-6	-1
Brazil	4,859	25,949	2,775	37,071	2,636	19,111	8,283	4,731
Bulgaria	90	4,595	0	8	-6	-372	-93	304
Burkina Faso	10	171	..	..	0	0	0	-3
Burundi	2	0	0	..	0	0	-1	0
Cambodia	151	530	..	0	0	0	13	0
Cameroon	7	340	0	0	0	0	-65	-12
Canada	9,319	19,898	-3,077	23,349	..	..	..	..
Central African Republic	6	42	..	..	0	0	0	0
Chad	33	462	..	..	0	0	0	0
Chile	2,957	12,702	-249	316	489	1,900	1,773	2,572
China	35,849	78,193	0	28,161	317	-39	4,696	-12,050
Hong Kong SAR, China	..	52,395	..	9,492	..	..	..	..
Colombia	968	7,207	165	67	1,008	6,768	1,250	-1,018
Congo, Dem. Rep.	-22	951	0	..	0	0	0	-61
Congo, Rep.	125	2,083	0	..	0	0	-53	-1
Costa Rica	337	1,347	0	0	-4	-225	-20	538
Côte d'Ivoire	211	381	1	-9	0	0	14	-143
Croatia	108	2,951	4	23	..	..	..	..
Cuba	..	..	..	..	..	..	..	..
Czech Republic	2,568	2,666	1,236	-311	..	..	..	..
Denmark	4,139	2,905	..	8,152	..	..	..	..
Dominican Republic	414	2,067	..	0	0	-125	-31	-213
Ecuador	452	316	13	2	0	-2,987	59	-997
Egypt, Arab Rep.	598	6,712	0	393	0	0	-311	-33
El Salvador	38	431	0	0	0	0	-31	175
Eritrea	..	0	..	..	0	0	0	0
Estonia	201	1,751	10	-131	..	..	..	..
Ethiopia	14	221	..	0	0	0	-48	1,019
Finland	1,044	60	2,027	-273	..	..	..	..
France	23,736	59,989	6,823	68,285	..	..	..	..
Gabon	-315	33	..	..	0	-44	-75	74
Gambia, The	8	39	..	0	0	0	0	0
Georgia	..	658	..	13	0	0	0	135
Germany	11,985	39,153	-1,513	11,806	..	..	..	..
Ghana	107	1,685	0	0	0	0	38	224
Greece	1,053	2,419	0	764	..	..	..	..
Guatemala	75	600	..	0	44	-50	-34	-574
Guinea	1	50	..	0	0	0	-15	4
Guinea-Bissau	0	14	..	..	0	0	0	0
Haiti	7	38	..	0	0	0	0	0
Honduras	50	500	0	0	-13	50	38	222

# Global private financial flows

	Equity flows				Debt flows			
	\$ millions							
	Foreign direct investment		Portfolio equity		Bonds		Commercial bank and other lending	
	1995	2009	1995	2009	1995	2009	1995	2009
Hungary	4,804	2,783	-62	954	..	..	..	..
India	2,144	34,577	1,590	21,112	285	1,822	955	8,343
Indonesia	4,346	4,877	1,493	787	2,248	5,112	60	5,872
Iran, Islamic Rep.	17	3,016	0	..	0	0	-37	-1,417
Iraq	2	1,070	..	..	..	..	..	..
Ireland	1,447	25,233	0	29,184	..	..	..	..
Israel	1,350	3,894	991	2,122	..	..	..	..
Italy	4,842	28,976	5,358	20,915	..	..	..	..
Jamaica	147	541	0	0	13	740	15	-62
Japan	39	11,834	50,597	12,432	..	..	..	..
Jordan	13	2,382	0	-30	0	-2	-201	-3
Kazakhstan	964	13,619	..	46	0	-2,108	240	6,554
Kenya	42	141	5	3	0	0	-163	24
Korea, Dem. Rep.	..	..	..	..	..	..	..	..
Korea, Rep.	1,776	1,506	4,219	25,661	..	..	..	..
Kosovo	..	406	..	0	..	0	..	0
Kuwait	7	145	0	0	..	..	..	..
Kyrgyz Republic	96	189	..	1	0	0	0	29
Lao PDR	95	319	0	0	0	0	0	387
Latvia	180	94	0	-8	..	..	..	..
Lebanon	..	4,804	..	929	350	789	333	-41
Lesotho	275	63	..	..	0	0	12	-1
Liberia	5	218	..	0	0	0	0	-32
Libya	-88	1,711	..	0	..	..	..	..
Lithuania	73	230	6	-2	0	2,488	55	-1,971
Macedonia, FYR	9	248	..	-14	0	244	0	244
Madagascar	10	543	..	..	0	0	-4	0
Malawi	6	60	..	..	0	0	-23	0
Malaysia	4,178	1,387	0	-449	2,440	143	1,231	-1,592
Mali	111	109	..	..	0	0	0	1
Mauritania	7	-38	0	..	0	0	0	-1
Mauritius	19	257	22	-33	150	0	126	29
Mexico	9,526	14,462	519	4,169	3,758	7,499	1,401	-9,314
Moldova	26	128	-1	2	0	-6	24	-18
Mongolia	10	624	0	4	0	0	-14	46
Morocco	92	1,970	20	-4	0	0	158	-61
Mozambique	45	881	0	0	0	0	24	20
Myanmar	280	323	..	..	0	0	36	0
Namibia	153	490	46	4	..	..	..	..
Nepal	..	38	0	..	0	0	-5	-1
Netherlands	12,206	33,287	-743	19,256	..	..	..	..
New Zealand	3,316	-1,259	..	967	..	..	..	..
Nicaragua	89	434	0	0	0	0	-81	-75
Niger	7	739	..	..	0	0	-24	-7
Nigeria	1,079	5,787	0	522	0	0	-448	-55
Norway	2,393	11,271	636	2,470	..	..	..	..
Oman	46	2,210	0	326	..	..	..	..
Pakistan	723	2,387	10	-37	0	-500	317	26
Panama	223	1,773	0	0	0	1,323	-12	70
Papua New Guinea	455	423	..	..	-32	0	-311	25
Paraguay	103	205	0	0	0	0	-16	425
Peru	2,557	4,760	171	47	0	2,828	43	-258
Philippines	1,478	1,948	0	-1,096	1,110	3,527	-215	-783
Poland	3,659	13,796	219	1,579	..	..	..	..
Portugal	685	2,808	-179	1,616	..	..	..	..
Puerto Rico	..	..	..	..	..	..	..	..
Qatar	..	..	..	..	..	..	..	..



	Equity flows				Debt flows			
	\$ millions							
	Foreign direct investment		Portfolio equity		Bonds		Commercial bank and other lending	
	1995	2009	1995	2009	1995	2009	1995	2009
Romania	419	6,310	0	7	0	32	413	7,022
Russian Federation	2,065	36,751	47	3,369	-810	-1,968	444	7,328
Rwanda	2	119	0	0	0	0	0	0
Saudi Arabia	-1,875	10,499	0	..	..	..	..	..
Senegal	32	208	4	..	0	200	-25	157
Serbia	45 <sup>b</sup>	1,921	..	23	0	0	0	104
Sierra Leone	7	74	0	6	0	0	-28	0
Singapore	11,535	16,809	-159	2,058	..	..	..	..
Slovak Republic	236	-31	-16	182	..	..	..	..
Slovenia	150	-579	..	31	..	..	..	..
Somalia	1	108	..	..	0	0	0	0
South Africa	1,248	5,354	2,914	9,364	731	1,750	748	2,291
Spain	8,086	6,451	4,216	9,378	..	..	..	..
Sri Lanka	56	404	..	-382	0	400	103	238
Sudan	12	2,682	0	0	0	0	0	0
Swaziland	52	66	1	-7	0	0	0	0
Sweden	14,939	11,538	1,853	1,400	..	..	..	..
Switzerland	4,158	27,588	5,851	9,241	..	..	..	..
Syrian Arab Republic	100	1,434	0	..	0	0	-1	0
Tajikistan	10	16	..	0	0	0	0	-54
Tanzania	120	415	0	3	0	0	18	84
Thailand	2,068	4,976	2,253	1,334	2,123	-341	3,702	-1,134
Timor-Leste	..	..	..	..	..	..	..	..
Togo	26	50	0	..	0	0	0	0
Trinidad and Tobago	299	709	17	..	..	..	..	..
Tunisia	264	1,595	12	-89	588	-313	-96	30
Turkey	885	8,403	195	2,827	627	1,152	174	-12,036
Turkmenistan	233	1,355	..	..	0	0	20	-24
Uganda	121	604	0	122	0	0	-9	0
Ukraine	267	4,816	..	105	-200	-1,115	-19	-1,605
United Arab Emirates	..	..	..	..	..	..	..	..
United Kingdom	21,731	72,924	8,070	78,845	..	..	..	..
United States	57,800	134,710	16,523	160,534	..	..	..	..
Uruguay	157	1,262	0	-12	144	-420	39	-19
Uzbekistan	-24	750	..	..	0	0	201	-118
Venezuela, RB	985	-3,105	270	121	-468	4,992	-216	-322
Vietnam	1,780	7,600	..	128	0	-20	356	-1
West Bank and Gaza	123	..	0	..	..	..	..	..
Yemen, Rep.	-218	129	..	0	0	0	-2	-1
Zambia	97	699	..	-13	0	0	-37	-36
Zimbabwe	118	60	..	..	-30	0	140	0
<b>World</b>	<b>340,573 s</b>	<b>1,163,874 s</b>	<b>127,074 s</b>	<b>744,295 s</b>	<b>.. s</b>	<b>.. s</b>	<b>.. s</b>	<b>.. s</b>
<b>Low income</b>	1,540	10,950	-10	-33	-30	0	-107	1,601
<b>Middle income</b>	93,318	348,451	13,835	108,577	20,954	51,121	26,661	88
Lower middle income	54,045	177,583	5,397	50,913	6,470	8,555	8,991	-2,246
Upper middle income	39,273	170,868	8,438	57,663	14,484	42,566	17,670	2,335
<b>Low &amp; middle income</b>	94,858	359,401	13,824	108,544	20,924	51,121	26,554	1,689
East Asia & Pacific	50,797	101,428	3,746	28,868	8,206	8,383	9,554	-9,217
Europe & Central Asia	5,599	86,067	248	6,386	-389	-1,653	1,563	6,921
Latin America & Carib.	30,212	76,629	5,216	41,570	11,311	40,290	13,240	-6,172
Middle East & N. Africa	907	27,766	32	1,200	660	473	632	-2,132
South Asia	2,931	38,414	1,585	20,539	285	1,722	1,350	8,575
Sub-Saharan Africa	4,411	29,096	2,998	9,981	851	1,906	214	3,715
<b>High income</b>	245,715	804,473	113,249	635,751	..	..	..	..
Euro area	89,322	371,020	23,747	296,975	..	..	..	..

a. Includes Luxembourg. b. Includes Montenegro.

## About the data

Private financial flows—equity and debt—account for the bulk of development finance. Equity flows comprise foreign direct investment (FDI) and portfolio equity. Debt flows are financing raised through bond issuance, bank lending, and supplier credits. Data on equity flows are based on balance of payments data reported by the International Monetary Fund (IMF). FDI data are supplemented by staff estimates using data from the United Nations Conference on Trade and Development and official national sources.

The internationally accepted definition of FDI (from the fifth edition of the IMF's Balance of Payments Manual [1993]), includes three components: equity investment, reinvested earnings, and short- and long-term loans between parent firms and foreign affiliates. Distinguished from other kinds of international investment, FDI is made to establish a lasting interest in or effective management control over an enterprise in another country. A lasting interest in investment enterprise typically involves establishing warehouses, manufacturing facilities, and other permanent or long-term organizations abroad. Direct investments may take the form of greenfield investment, where the investor starts a new venture in a foreign country by constructing new operational facilities; joint venture, where the investor enters into a partnership agreement with a company abroad to establish a new enterprise; or merger and acquisition, where the investor acquires an existing enterprise abroad. The IMF suggests that investments should account for at least 10 percent of voting stock to be counted as FDI. In practice many countries set a higher threshold. Many countries fail to report reinvested earnings, and the definition of long-term loans differs among countries.

FDI data do not give a complete picture of international investment in an economy. Balance of payments data on FDI do not include capital raised locally, an important source of investment financing in some developing countries. In addition, FDI data omit nonequity cross-border transactions such as intrafirm flows of goods and services. For a detailed discussion of the data issues, see the World Bank's World Debt Tables 1993–94 (vol. 1, chap. 3).

Statistics on bonds, bank lending, and supplier credits are produced by aggregating transactions of public and publicly guaranteed debt and private nonguaranteed debt. Data on public and publicly guaranteed debt are reported through the Debtor Reporting System by World Bank member economies that have received loans from the International Bank for Reconstruction and Development or credits from the

International Development Association. The reports are cross-checked with data from market sources that include transactions data. Information on private nonguaranteed bonds and bank lending is collected from market sources when data are not reported by countries to the Debtor Reporting System.

Data on equity flows are shown for all countries for which data are available. Debt flows are shown only for 128 developing countries that report to the Debtor Reporting System; nonreporting countries may also receive debt flows.

The volume of global private financial flows reported by the World Bank generally differs from that reported by other sources because of differences in sources, classification of economies, and method used to adjust and disaggregate reported information. In addition, particularly for debt financing, differences may also reflect how some installments of the transactions and certain offshore issuances are treated.

## Definitions

• **Foreign direct investment** is net inflows of investment to acquire a lasting interest in or management control over an enterprise operating in an economy other than that of the investor. It is the sum of equity capital, reinvested earnings, other long-term capital, and short-term capital, as shown in the balance of payments. Net inflows refer to new investments made during the reporting period netted against disinvestments. • **Portfolio equity** includes net inflows from equity securities other than those recorded as direct investment and including shares, stocks, depository receipts, and direct purchases of shares in local stock markets by foreign investors • **Bonds** are securities issued with a fixed rate of interest for a period of more than one year. They include net flows through cross-border public and publicly guaranteed and private nonguaranteed bond issues. • **Commercial bank and other lending** includes net commercial bank lending (public and publicly guaranteed and private nonguaranteed) and other private credits.

## Data sources

Data on equity and debt flows are compiled from a variety of public and private sources, including the World Bank's Debtor Reporting System, the IMF's International Financial Statistics and Balance of Payments databases, and Dealogic. These data are also published annually in the World Bank's *Global Development Finance*, Global Development Finance CD-ROM, and Global Development Finance database.