

2008 | WORLD DEVELOPMENT INDICATORS

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THE WORLD BANK

PREFACE

Release of the final report of the International Comparison Program (ICP) and publication of new estimates of purchasing power parities (PPPs) in *World Development Indicators 2008* are an important statistical milestone. The estimates offer a consistent and comprehensive set of data on the cost of living in developed and developing countries, the first since 1997, when the results of the previous ICP data collection were published in *World Development Indicators*. The 2005 data cover 146 countries and territories, 29 more than the last round in 1993—and many for the first time.

Collecting data on thousands of products sold through a multitude of outlets, the 2005 ICP is the largest international statistical program ever undertaken. New methods were used to describe the products being priced, record the data, and analyze the results. Countries in Africa took the opportunity to review their national accounts and adopt new standards and methods. In all regions regional coordinators worked closely with national statistical offices to collect and validate the data. The result is a genuine global effort, with an extensive capacity building component.

More work will follow from the ICP. First is the revision of the international (\$1 a day) poverty line and estimation of the corresponding poverty rates, certain to change our view of the absolute level of poverty in the world. PPPs have many applications in economic analysis. They are used to determine the relative size of countries and their obligations to international institutions. The publication of new estimates will inspire a new wave of academic studies. And as all of this work goes on, planning for the next round of the ICP will be getting under way.

There is much of interest in this year's *World Development Indicators* besides the ICP results. The Millennium Development Goal targets have been expanded to include new ones for reproductive health, protection of biodiversity, access to treatment for HIV/AIDS, and full and productive employment and decent work for all. Measuring the associated indicators consistently and reporting on progress pose new challenges for statisticians. The World Development Indicators database includes as many of these indicators as possible. The introduction to the *People* section looks at the importance of reproductive health for the well-being of women and children. The *Environment* section considers today's great environmental challenge: climate change.

Governance—the performance of public officials and the quality of government institutions—has long been recognized as an important determinant of development success. But to understand how governance, good or bad, affects development, it must be measured. And to provide guidance for improved performance, it must be measured in ways that are sensible to politicians, citizens, and others responsible for improving governance. The *States and Markets* section discusses how to measure governance and the problems frequently encountered in doing so. The tables provide a selection of governance indicators and other measures of the interaction of states and markets.

World Development Indicators remains a rich source of information on the world's people, their economies, and the environment. To make it more useful, we have expanded the *Primary data documentation* section. As always, we could not bring it to you without the help of our many partners and the work of hundreds of thousands of statisticians and others in developed and developing countries who gather the primary data on which these statistics are based.

Shaida Badiee
Director
Development Data Group

ACKNOWLEDGMENTS

This book and its companion volumes, *The Little Data Book* and *The Little Green Data Book*, are prepared by a team led by David Cieslikowski under the supervision of Eric Swanson and comprising Awatif Abuzeid, Mehdi Akhlaghi, Azita Amjadi, Uranbileg Batjargal, Sebastien Dessus, Richard Fix, Masako Hiraga, Kiyomi Horiuchi, Soong Sup Lee, Ibrahim Levent, Raymond Muhula, Kyoko Okamoto, M.H. Saeed Ordoubadi, Sulekha Patel, Beatriz Prieto-Oramas, Changqing Sun, and K.M. Vijayalakshmi, working closely with other teams in the Development Economics Vice Presidency's Development Data Group. The CD-ROM development team included Azita Amjadi, Ramgopal Erabelly, Reza Farivari, Buyant Erdene Khaltarkhuu, and William Prince. The work was carried out under the management of Shaida Badiiee.

The choice of indicators and text content was shaped through close consultation with and substantial contributions from staff in the World Bank's four thematic networks—Financial and Private Sector Development, Human Development, Poverty Reduction and Economic Management, and Sustainable Development—and staff of the International Finance Corporation and the Multilateral Investment Guarantee Agency. Most important, the team received substantial help, guidance, and data from external partners. For individual acknowledgments of contributions to the book's content, please see *Credits*. For a listing of key partners, see *Partners*.

Communications Development Incorporated provided overall design direction, editing, and layout, led by Meta de Coquereaumont, Bruce Ross-Larson, and Christopher Trott. Elaine Wilson created the graphics and typeset the book. Amye Kenall and Joseph Caponio provided proofreading and production assistance. Communications Development's London partner, Peter Grundy of Peter Grundy Art & Design, provided art direction and design. Staff from External Affairs oversaw printing and dissemination of the book.

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PARTNERS

Defining, gathering, and disseminating international statistics is a collective effort of many people and organizations. The indicators presented in *World Development Indicators* are the fruit of decades of work at many levels, from the field workers who administer censuses and household surveys to the committees and working parties of the national and international statistical agencies that develop the nomenclature, classifications, and standards fundamental to an international statistical system. Nongovernmental organizations and the private sector have also made important contributions, both in gathering primary data and in organizing and publishing their results. And academic researchers have played a crucial role in developing statistical methods and carrying on a continuing dialogue about the quality and interpretation of statistical indicators. All these contributors have a strong belief that available, accurate data will improve the quality of public and private decisionmaking.

The organizations listed here have made *World Development Indicators* possible by sharing their data and their expertise with us. More important, their collaboration contributes to the World Bank's efforts, and to those of many others, to improve the quality of life of the world's people. We acknowledge our debt and gratitude to all who have helped to build a base of comprehensive, quantitative information about the world and its people.

For easy reference, Web addresses are included for each listed organization. The addresses shown were active on March 1, 2008. Information about the World Bank is also provided.

International and government agencies

Carbon Dioxide Information Analysis Center

The Carbon Dioxide Information Analysis Center (CDIAC) is the primary global climate change data and information analysis center of the U.S. Department of Energy. The CDIAC's scope includes anything that would potentially be of value to those concerned with the greenhouse effect and global climate change, including concentrations of carbon dioxide and other radiatively active gases in the atmosphere; the role of the terrestrial biosphere and the oceans in the biogeochemical cycles of greenhouse gases; emissions of carbon dioxide to the atmosphere; long-term climate trends; the effects of elevated carbon dioxide on vegetation; and the vulnerability of coastal areas to rising sea levels.

For more information, see <http://cdiac.esd.ornl.gov/>.

Deutsche Gesellschaft für Technische Zusammenarbeit

The Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ) GmbH is a German government-owned corporation for international cooperation with worldwide operations. GTZ's aim is to positively shape political, economic, ecological, and social development in partner countries, thereby improving people's living conditions and prospects.

For more information, see www.gtz.de/.



Food and Agriculture Organization

The Food and Agriculture Organization, a specialized agency of the United Nations, was founded in October 1945 with a mandate to raise nutrition levels and living standards, to increase agricultural productivity, and to better the condition of rural populations. The organization provides direct development assistance; collects, analyzes, and disseminates information; offers policy and planning advice to governments; and serves as an international forum for debate on food and agricultural issues.

For more information, see www.fao.org/.



International Civil Aviation Organization

The International Civil Aviation Organization (ICAO), a specialized agency of the United Nations, is responsible for establishing international standards and recommended practices and procedures for the technical, economic, and legal aspects of international civil aviation operations. ICAO's strategic objectives include enhancing global aviation safety and security and the efficiency of aviation operations, minimizing the adverse effect of global civil aviation on the environment, maintaining the continuity of aviation operations, and strengthening laws governing international civil aviation.

For more information, see www.icao.int/.



International Labour Organization

The International Labour Organization (ILO), a specialized agency of the United Nations, seeks the promotion of social justice and internationally recognized human and labor rights. As part of its mandate, the ILO maintains an extensive statistical publication program.

For more information, see www.ilo.org/.



International Monetary Fund

The International Monetary Fund (IMF) is the world's central organization for international monetary cooperation. Its 184 member countries work together to promote sustainable economic growth and rising living standards by ensuring the stability of the international monetary system—the system of exchange rates and international payments that enables countries (and their citizens) to buy goods and services from each other. The IMF reviews national, regional, and global economic and financial developments, provides financial advice to member countries, and serves as a forum where they can discuss the national, regional, and global consequences of their policies.

The IMF also makes financing temporarily available to member countries to help them address balance of payments problems and provides technical assistance and training to help countries build the expertise and institutions they need for economic stability and growth.

For more information, see www.imf.org/.



International Telecommunication Union

The International Telecommunication Union (ITU) is the leading UN agency for information and communication technologies. ITU's mission is to enable the growth and sustained development of telecommunications and information networks and to facilitate universal access so that people everywhere can participate in, and benefit from, the emerging information society and global economy. A key priority lies in bridging the so-called Digital Divide by building information and communication infrastructure, promoting adequate capacity building, and developing confidence in the use of cyberspace through enhanced online security. ITU also concentrates on strengthening emergency communications for disaster prevention and mitigation.

For more information, see www.itu.int/.



PARTNERS

National Science Foundation

The National Science Foundation (NSF) is an independent U.S. government agency whose mission is to promote the progress of science; to advance the national health, prosperity, and welfare; and to secure the national defense. NSF's goals—discovery, learning, research infrastructure, and stewardship—provide an integrated strategy to advance the frontiers of knowledge, cultivate a world-class, broadly inclusive science and engineering workforce, expand the scientific literacy of all citizens, build the nation's research capability through investments in advanced instrumentation and facilities, and support excellence in science and engineering research and education through a capable and responsive organization.

For more information, see www.nsf.gov/.



Organisation for Economic Co-operation and Development

The Organisation for Economic Co-operation and Development (OECD) includes 30 member countries sharing a commitment to democratic government and the market economy to support sustainable economic growth, boost employment, raise living standards, maintain financial stability, assist other countries' economic development, and contribute to growth in world trade. With active relationships with some 100 other countries it has a global reach. It is best known for its publications and statistics, which cover economic and social issues from macroeconomics to trade, education, development, and science and innovation.

The Development Assistance Committee (DAC, www.oecd.org/dac/) is one of the principal bodies through which the OECD deals with issues related to cooperation with developing countries. The DAC is a key forum of major bilateral donors, who work together to increase the effectiveness of their common efforts to support sustainable development. The DAC concentrates on two key areas: the contribution of international development to the capacity of developing countries to participate in the global economy and the capacity of people to overcome poverty and participate fully in their societies.

For more information, see www.oecd.org/.



Stockholm International Peace Research Institute

The Stockholm International Peace Research Institute (SIPRI) conducts research on questions of conflict and cooperation of importance for international peace and security, with the aim of contributing to an understanding of the conditions for peaceful solutions to international conflicts and for a stable peace. SIPRI's main publication, *SIPRI Yearbook*, is an authoritative and independent source on armaments and arms control and other conflict and security issues.

For more information, see www.sipri.org/.



Understanding Children's Work

As part of broader efforts to develop effective and long-term solutions to child labor, the International Labor Organization, the United Nations Children's Fund (UNICEF), and the World Bank initiated the joint interagency research program "Understanding Children's Work and Its Impact" in December 2000. The Understanding Children's Work (UCW) project was located at UNICEF's Innocenti Research Centre in Florence, Italy, until June 2004, when it moved to the Centre for International Studies on Economic Growth in Rome.

The UCW project addresses the crucial need for more and better data on child labor. UCW's online database contains data by country on child labor and the status of children.

For more information, see www.ucw-project.org/.

United Nations

The United Nations currently has 192 member states. The purposes of the United Nations, as set forth in the Charter, are to maintain international peace and security; to develop friendly relations among nations; to cooperate in solving international economic, social, cultural, and humanitarian problems and in promoting respect for human rights and fundamental freedoms; and to be a center for harmonizing the actions of nations in attaining these ends.

For more information, see www.un.org/.



United Nations Centre for Human Settlements, Global Urban Observatory

The Urban Indicators Programme of the United Nations Human Settlements Programme was established to address the urgent global need to improve the urban knowledge base by helping countries and cities design, collect, and apply policy-oriented indicators related to development at the city level.

With the Urban Indicators and Best Practices programs, the Global Urban Observatory is establishing a worldwide information, assessment, and capacity building network to help governments, local authorities, the private sector, and nongovernmental and other civil society organizations.

For more information, see www.unhabitat.org/.

United Nations Children's Fund

The United Nations Children's Fund (UNICEF) works with other UN bodies and with governments and nongovernmental organizations to improve children's lives in more than 190 countries through various programs in education and health. UNICEF focuses primarily on five areas: child survival and development, basic Education and gender equality (including girls' education), child protection, HIV/AIDS, and policy advocacy and partnerships.

For more information, see www.unicef.org/.



United Nations Conference on Trade and Development

The United Nations Conference on Trade and Development (UNCTAD) is the principal organ of the United Nations General Assembly in the field of trade and development. Its mandate is to accelerate economic growth and development, particularly in developing countries. UNCTAD discharges its mandate through policy analysis; intergovernmental deliberations, consensus building, and negotiation; monitoring, implementation, and follow-up; and technical cooperation.

For more information, see www.unctad.org/.



United Nations Educational, Scientific, and Cultural Organization, Institute for Statistics

The United Nations Educational, Scientific, and Cultural Organization is a specialized agency of the United Nations that promotes "collaboration among nations through education, science, and culture in order to



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further universal respect for justice, for the rule of law, and for the human rights and fundamental freedoms . . . for the peoples of the world, without distinction of race, sex, language, or religion.”

For more information, see www.uis.unesco.org/.

United Nations Environment Programme

The mandate of the United Nations Environment Programme is to provide leadership and encourage partnership in caring for the environment by inspiring, informing, and enabling nations and people to improve their quality of life without compromising that of future generations.

For more information, see www.unep.org/.



United Nations Industrial Development Organization

The United Nations Industrial Development Organization was established to act as the central coordinating body for industrial activities and to promote industrial development and cooperation at the global, regional, national, and sectoral levels. Its mandate is to help develop scientific and technological plans and programs for industrialization in the public, cooperative, and private sectors.

For more information, see www.unido.org/.



The UN Refugee Agency

The UN Refugee Agency (UNHCR) is mandated to lead and coordinate international action to protect refugees and resolve refugee problems worldwide. Its primary purpose is to safeguard the rights and well-being of refugees. UNHCR also collects and disseminates statistics on refugees.

For more information, see www.unhcr.org



World Bank Group

The World Bank is one of the world's largest sources of funding and knowledge for developing countries. Its main focus is on helping the poorest people and the poorest countries. It uses its financial resources, staff, and extensive experience to help developing countries reduce poverty, increase economic growth, and improve their quality of life. The Bank brings a mix of money and knowledge to encourage economic and social development and help countries achieve the internationally agreed Millennium Development Goals. The World Bank supports projects that help countries to invest in many different areas: health and education, fighting corruption, boosting agricultural production, building roads and ports, and protecting the environment. Since resources are scarce, assessing the effect of projects the Bank supports is essential in developing countries and is part of its focus on actual results for poor people. The World Bank Group has 185 member countries.

For more information, see www.worldbank.org/data/.



World Health Organization

The objective of the World Health Organization (WHO), a specialized agency of the United Nations, is the attainment by all people of the highest possible level of health. The WHO carries out a wide range of functions, including coordinating international health work; helping governments strengthen health services;



providing technical assistance and emergency aid; working for the prevention and control of disease; promoting improved nutrition, housing, sanitation, recreation, and economic and working conditions; promoting and coordinating biomedical and health services research; promoting improved standards of teaching and training in health and medical professions; establishing international standards for biological, pharmaceutical, and similar products; and standardizing diagnostic procedures.

For more information, see www.who.int/.

World Intellectual Property Organization

The World Intellectual Property Organization (WIPO) is a specialized agency of the United Nations dedicated to developing a balanced and accessible international intellectual property (IP) system, which rewards creativity, stimulates innovation, and contributes to economic development while safeguarding the public interest. WIPO carries out a wide variety of tasks related to the protection of IP rights. These include assisting governments and organizations to develop the policies, structures and skills needed to harness the potential of IP for economic development; working with member states to develop international IP law; administering treaties; running global registration systems for trademarks, industrial designs, and appellations of origin and a filing system for patents; delivering dispute resolution services; and providing a forum for informed debate and for the exchange of expertise.

For more information, see www.wipo.int/.



World Tourism Organization

The World Tourism Organization is an intergovernmental body entrusted by the United Nations with promoting and developing tourism. It serves as a global forum for tourism policy issues and a source of tourism know-how.

For more information, see www.unwto.org/.



World Trade Organization

The World Trade Organization (WTO) is the only international organization dealing with the global rules of trade between nations. Its main function is to ensure that trade flows as smoothly, predictably, and freely as possible. It does this by administering trade agreements, acting as a forum for trade negotiations, settling trade disputes, reviewing national trade policies, assisting developing countries in trade policy issues—through technical assistance and training programs—and cooperating with other international organizations. At the heart of the system—known as the multilateral trading system—are the WTO's agreements, negotiated and signed by a large majority of the world's trading nations and ratified by their parliaments.

For more information, see www.wto.org/.



Private and nongovernmental organizations

Containerisation International

Containerisation International Yearbook is one of the most authoritative reference books on the container industry. The information can be accessed on the Containerisation International Web site, which also provides a comprehensive online daily business news and information service for the container industry.

For more information, see www.ci-online.co.uk/.



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International Institute for Strategic Studies

The International Institute for Strategic Studies (IISS) provides information and analysis on strategic trends and facilitates contacts between government leaders, business people, and analysts that could lead to better public policy in international security and international relations. The IISS is a primary source of accurate, objective information on international strategic issues.

For more information, see www.iiss.org/.



International Road Federation

The International Road Federation (IRF) is a unique global platform that brings together public and private entities committed to road development. Working together with its members and associates, the IRF promotes social and economic benefits that flow from well planned and environmentally sound transportation networks. The IRF serves as a catalyst for public and private partnership to organize, promote, and develop international road programs. The main objectives include promoting the understanding of the social, economic, and environmental benefits derived from developing modern road networks, road transport systems, and road traffic control; improving road safety; planning and executing economically and environmentally sound programs for the improvement and extension of road networks; conducting educational and training programs relating to the development and maintenance of road and road transport systems; facilitating the exchange of experience with national, regional, and international institutions; and harmonizing standards, research, and dissemination of road related information.

For more information, see www.irfnet.org/.



Netcraft

Netcraft is an Internet services company and a respected authority on the market share of web servers, operating systems, hosting providers, Internet service providers, encrypted transactions, electronic commerce, scripting languages, and content technologies on the Internet. Netcraft provides Internet security services, including antifraud and antiphishing services, application testing, code reviews, and automated penetration testing as well as research data and analysis on many aspects of the Internet.

For more information, see www.netcraft.com/.

PricewaterhouseCoopers

PricewaterhouseCoopers provides industry-focused assurance, tax, human resources, transactions, performance improvement, and crisis management services to help address client and stakeholder issues.

For more information, see www.pwc.com/.

Standard & Poor's

Standard & Poor's is the world's foremost provider of independent credit ratings, indexes, risk evaluation, investment research, and data. S&P's *Global Stock Markets Factbook* draw on data from S&P's Emerging Markets Database (EMDB) and other sources covering data on more than 100 markets with comprehensive market profiles for 82 countries. Drawing a sample of stocks in each EMDB market, Standard & Poor's calculates indices to serve as benchmarks that are consistent across national boundaries. Standard &



Poor's calculates one index, the S&P/IFCG (Global) index, that reflects the perspective of local investors and those interested in broad trends in emerging markets and another, the S&P/IFCI (Investable) index, that provides a broad, neutral, and historically consistent benchmark for the growing emerging market investment community.

For more information, see www.standardandpoors.com/.

World Conservation Monitoring Centre

The World Conservation Monitoring Centre provides information on the conservation and sustainable use of the world's living resources and helps others to develop information systems of their own. It works in close collaboration with a wide range of people and organizations to increase access to the information needed for wise management of the world's living resources.

For more information, see www.unep-wcmc.org/.



World Information Technology and Services Alliance

The World Information Technology and Services Alliance (WITSA) is a consortium of more than 60 information technology (IT) industry associations from economies around the world. WITSA members represent over 90 percent of the world IT market. As the global voice of the IT industry, WITSA has an active role in international public policy issues affecting the creation of a robust global information infrastructure, including advocating policies that advance the industry's growth and development, facilitating international trade and investment in IT products and services, increasing competition through open markets and regulatory reform, strengthening national industry associations through the sharing of knowledge, protecting intellectual property, encouraging cross-industry and government cooperation to enhance information security, bridging the education and skills gap, and safeguarding the viability and continued growth of the Internet and electronic commerce.

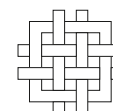
For more information, see www.witsa.org/.



World Resources Institute

The World Resources Institute is an independent center for policy research and technical assistance on global environmental and development issues. The institute provides—and helps other institutions provide—objective information and practical proposals for policy and institutional change that will foster environmentally sound, socially equitable development. The institute's current areas of work include trade, forests, energy, economics, technology, biodiversity, human health, climate change, sustainable agriculture, resource and environmental information, and national strategies for environmental and resource management.

For more information, see www.wri.org/.



USERS GUIDE

Tables

The tables are numbered by section and display the identifying icon of the section. Countries and economies are listed alphabetically (except for Hong Kong, China, which appears after China). Data are shown for 153 economies with populations of more than 1 million, as well as for Taiwan, China, in selected tables. Table 1.6 presents selected indicators for 56 other economies—small economies with populations between 30,000 and 1 million and smaller economies if they are members of the International Bank for Reconstruction and Development (IBRD) or, as it is commonly known, the World Bank. The term *country*, used interchangeably with *economy*, does not imply political independence, but refers to any territory for which authorities report separate social or economic statistics. When available, aggregate measures for income and regional groups appear at the end of each table.

Indicators are shown for the most recent year or period for which data are available and, in most tables, for an earlier year or period (usually 1990 or 1995 in this edition). Time-series data are available on the *World Development Indicators* CD-ROM and in *WDI Online*.

Known deviations from standard definitions or breaks in comparability over time or across countries are either footnoted in the tables or noted in *About the data*. When available data are deemed to be too weak to provide reliable measures of levels and trends or do not adequately adhere to international standards, the data are not shown.

Aggregate measures for income groups

The aggregate measures for income groups include 209 economies (the economies listed in the main tables plus those in table 1.6) whenever data are available. To maintain consistency in the aggregate measures over time and between tables, missing data are imputed where possible. The aggregates are totals (designated by a *t* if the aggregates include gap-filled estimates for missing data and by an *s*, for simple totals, where they do not), median values (*m*), weighted averages (*w*), or simple averages (*u*).

Gap filling of amounts not allocated to countries may result in discrepancies between subgroup aggregates and overall totals. For further discussion of aggregation methods, see *Statistical methods*.

Aggregate measures for regions

The aggregate measures for regions cover only low- and middle-income economies, including economies with populations of less than 1 million listed in table 1.6.

The country composition of regions is based on the World Bank's analytical regions and may differ from common geographic usage. For regional classifications, see the map on the inside back cover and the list on the back cover flap. For further discussion of aggregation methods, see *Statistical methods*.

Statistics

Data are shown for economies as they were constituted in 2006, and historical data are revised to reflect current political arrangements. Exceptions are noted throughout the tables.

Additional information about the data is provided in *Primary data documentation*. That section summarizes national and international efforts to improve basic data collection and gives country-level information on primary sources, census years, fiscal years, statistical methods and concepts used, and other background information. *Statistical methods* provides technical information on some of the general calculations and formulas used throughout the book.

Data consistency, reliability, and comparability

Considerable effort has been made to standardize the data, but full comparability cannot be assured, and care must be taken in interpreting the indicators. Many factors affect data availability, comparability, and reliability: statistical systems in many developing economies are still weak; statistical methods, coverage, practices, and definitions differ widely; and cross-country and intertemporal comparisons involve complex technical and conceptual problems that cannot be resolved unequivocally. Data coverage may not be complete because of special circumstances

affecting the collection and reporting of data, such as problems stemming from conflicts.

For these reasons, although data are drawn from the sources thought to be most authoritative, they should be construed only as indicating trends and characterizing major differences among economies rather than as offering precise quantitative measures of those differences. Discrepancies in data presented in different editions of *World Development Indicators* reflect updates by countries as well as revisions to historical series and changes in methodology. Thus readers are advised not to compare data series between editions of *World Development Indicators* or between different World Bank publications. Consistent time-series data for 1960–2006 are available on the *World Development Indicators* CD-ROM and in *WDI Online*.

Except where otherwise noted, growth rates are in real terms. (See *Statistical methods* for information on the methods used to calculate growth rates.) Data for some economic indicators for some economies are presented in fiscal years rather than calendar years; see *Primary data documentation*. All dollar figures are current U.S. dollars unless otherwise stated. The methods used for converting national currencies are described in *Statistical methods*.

Country notes

- Unless otherwise noted, data for China do not include data for Hong Kong, China; Macao, China; or Taiwan, China.
- Data for Indonesia include Timor-Leste through 1999 unless otherwise noted
- Montenegro declared independence from Serbia and Montenegro on June 3, 2006. When available, data for each country are shown separately. However, some indicators for Serbia continue to include data for Montenegro through 2005; these data are footnoted in the tables. Moreover, data for most indicators from 1999 onward for Serbia exclude data for Kosovo, a territory within Serbia that is currently under international administration pursuant to UN Security Council Resolution 1244 (1999); any exceptions are noted.

Classification of economies

For operational and analytical purposes the World Bank's main criterion for classifying economies is gross national income (GNI) per capita (calculated by the *World Bank Atlas* method). Every economy is classified as low income, middle income (subdivided into lower middle and upper middle), or high income. For income classifications see the map on the inside front cover and the list on the front cover flap. Low- and middle-income economies are sometimes referred to as developing economies. The term is used for convenience; it is not intended to imply that all economies in the group are experiencing similar development or that other economies have reached a preferred or final stage of development. Note that classification by income does not necessarily reflect development status. Because GNI per capita changes over time, the country composition of income groups may change from one edition of *World Development Indicators* to the next. Once the classification is fixed for an edition, based on GNI per capita in the most recent year for which data are available (2006 in this edition), all historical data presented are based on the same country grouping.

Low-income economies are those with a GNI per capita of \$905 or less in 2006. Middle-income economies are those with a GNI per capita of more than \$905 but less than \$11,116. Lower middle-income and upper middle-income economies are separated at a GNI per capita of \$3,595. High-income economies are those with a GNI per capita of \$11,116 or more. The 15 participating member countries of the euro area are presented as a subgroup under high-income economies. Note that Cyprus and Malta joined the euro area on January 1, 2008.

Symbols

.. means that data are not available or that aggregates cannot be calculated because of missing data in the years shown.

0 or 0.0

means zero or small enough that the number would round to zero at the displayed number of decimal places.

/

in dates, as in 2003/04, means that the period of time, usually 12 months, straddles two calendar years and refers to a crop year, a survey year, or a fiscal year.

\$

means current U.S. dollars unless otherwise noted.

>

means more than.

<

means less than.

Data presentation conventions

- A blank means not applicable or, for an aggregate, not analytically meaningful.
- A billion is 1,000 million.
- A trillion is 1,000 billion.
- Figures in italics refer to years or periods other than those specified or to growth rates calculated for less than the full period specified.
- Data for years that are more than three years from the range shown are footnoted.

The cutoff date for data is February 1, 2008.

WORLD VIEW

1



V

iewing the world at purchasing power parity

Comparable measures of economic activity and living standards are useful for many purposes. Foreign investors, traders, and potential immigrants want to know an economy's market size, productivity, and prices. The globalization of markets for goods, services, finance, labor, and ideas reinforces the interdependence of economies and the need to measure them on a common scale. Countries cannot share responsibilities for global public goods—the environment, security, development assistance, and global governance—without meaningful assessments of the real size of their economies and the well-being of their people.

But comparing the real size of economies is not easy. Even in an integrated global economy large differences in the costs of goods and services persist. Exchange rates can be used to convert values in one currency to another, but since they do not fully reflect differences in price levels they cannot measure the real volume of output. Exchange rates are determined by the demand for and supply of currencies used in international transactions, ignoring domestic economic sectors where prices are set in relative isolation from the rest of the world. Thus the familiar experience of international travelers, who discover that they can buy more, or less, of the same goods in different countries when converting their money using the prevailing exchange rates.

To measure the real size of the world's economy and to compare costs of living across countries, we need to adjust for differences in purchasing power. Finding a way to adjust for those differences has given rise to the efforts to measure purchasing power parties (PPPs), which convert local currencies to a common currency, such as the U.S. dollar.

Since 1970 the International Comparison Program (ICP) has conducted eight rounds of PPP estimates for the major components of countries' gross domestic product (GDP)—the most recent for 2005. The PPP process calls for the systematic collection of price data on hundreds of representative and carefully defined products and services consumed in each country, requiring the full cooperation of national statistical agencies and international organizations.

High-income countries regularly take part in such programs, but 2005 was the first time since 1993 that comprehensive price surveys were carried out in developing economies. An unprecedented number, 101, took part. These new PPPs provide a better and more complete view of the world economy. They show that in 2005 developing country economies were on average 2.2 times larger when measured by PPPs than by exchange rates. They also reveal that past estimates of the real size of the economies of developing countries based on the 1993 ICP round were often too large.

This section reports the major findings of the 2005 ICP round and explores some of the implications. In doing so, it aims to provide a better picture of today's important issues, highlighting the diversity—and the commonality—of development patterns and outcomes.

Country participation and population coverage

The eighth round of the ICP included 146 economies—101 of them classified by the World Bank as low and middle income based on gross national income per capita at market exchange rates—covering more than 95 percent of the world's people (figure 1a). This was the first global price collection since 1993, although some European economies have carried out regular price comparisons, the last in 2002. Some large economies, such as China, and many smaller ones in Africa, took part for the first time. India took part for the first time since 1985.

Noteworthy is that the two poorest developing regions, South Asia and Sub-Saharan Africa, have the best population coverage—more than 98 percent (figure 1b). Latin America and the Caribbean and the Middle East and North Africa recorded less coverage, both below 87 percent. Caribbean countries and Algeria, Libya, and West Bank and Gaza did not participate in the 2005 round. Many fragile and conflict-beset states were underrepresented (with coverage around 50 percent), with weak statistical capacity and conditions inimical to data collection.

The new ICP round, with its expanded coverage, provides a more complete view of the world economy and, not surprisingly, a different picture of its size and structure.

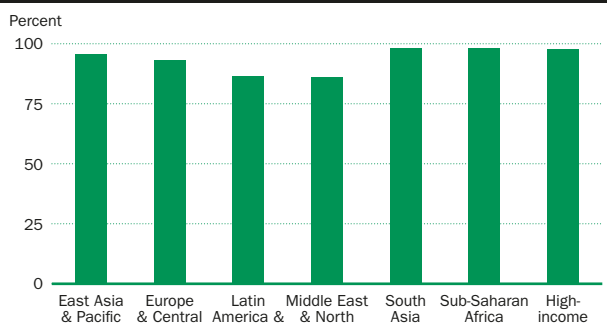
Participation in the International Comparison Program has been growing

1a



The 2005 International Comparison Program's population coverage was above 85 percent in every region

1b



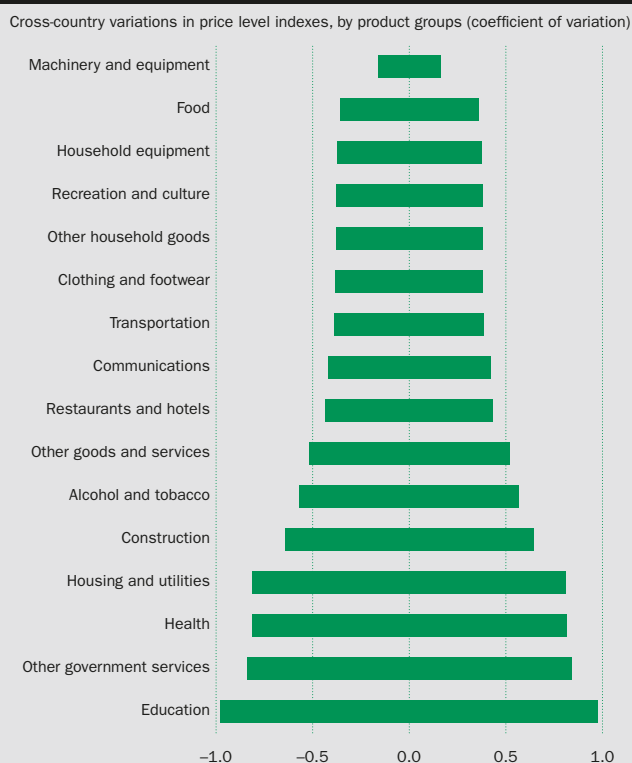
Measuring price differences

Purchasing power parities are needed because similar goods and services have widely varying prices across countries when converted to a common currency using market exchange rates. Differences are greatest in sectors not commonly traded internationally, such as housing, construction, and health and education services (figure 1c). Price differences are smaller for widely traded products, such as machinery and equipment, after allowing for taxes, distributor margins, and transport costs. PPPs include the prices of tradable and nontradable goods, using weights that reflect their relative importance in total GDP.

Comparing prices across economies is complicated by tension between comparability and representativeness. Goods and services should have similar characteristics (comparable) and be consumed everywhere (representative). To compensate for noncomparability of representative products, the ICP conducted parallel programs: selecting items at the regional level, where consumption patterns are broadly similar across countries, and selecting items for global comparison among a few countries from each region. The results of the second program were used to link the results of the first into a single set of global PPPs. For details see the *ICP Global Report* (World Bank 2008).

Nontradable goods and services show wider variation in prices

1c



The size of the global economy

Converting GDP and its components to a common currency using PPPs leads to dramatic revisions in size and structure of world economies. Generally, the poorer an economy, the greater the upward revision of estimates based on market exchange rates. The GDPs of low-income economies are on average revised upward 160 percent and those of middle-income economies 120 percent (figure 1d). The GDPs of high-income economies are revised upward only 10 percent. But the results are not uniform. Within each group, particularly low-income economies, the diversity of patterns is great.

Viewed through PPPs, low-income economies produced 7 percent of global GDP in 2005, compared with 3 percent at market exchange rates. Middle-income economies produced 33 percent, compared with 19 percent at market exchange rates. High-income economies produced 60 percent of world GDP at PPPs, compared with 78 percent at market exchange rates.

East Asia and Pacific has the largest upward revision—from 7 percent of world GDP to 13 percent (figure 1e). But South Asia and the Middle East and North Africa have the largest relative increases. Sub-Saharan Africa produced 2 percent of world GDP at PPPs in 2005, twice that at market exchange rates.

Purchasing power parities transform the size of developing economies' GDP in 2005 . . .

1d

Unweighted average and standard deviation of GDP correction from market exchange rates to purchasing power parities (%)

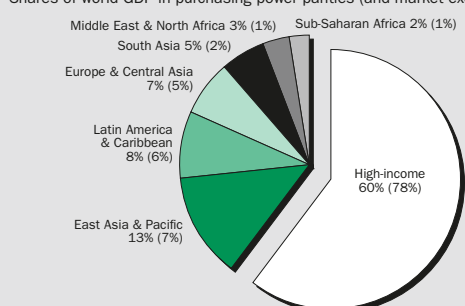


Source: World Bank staff estimates.

. . . and their shares of world GDP

1e

Shares of world GDP in purchasing power parities (and market exchange rates), 2005



Source: World Development Indicators data files.

What has changed since the 1993 round?

The PPPs previously published in *World Development Indicators* and used to estimate international poverty rates were extrapolated from the benchmark results of the 1993 ICP. Data for economies participating in the more recent price collection by Eurostat were updated through 2002 and then extrapolated forward and backward. The extrapolation method assumes that an economy's PPP conversion factor adjusts according to the different rates of inflation for its economy and the base economy, the United States. A good approximation in the short run, but over a longer period changes in the relative prices of goods and services and in the structure of economies—what they produce and consume—distort this relationship, and new measurements must be made. New methods of data collection, differences in country participation, and changes in analytical methods all add to the differences between new PPPs and old.

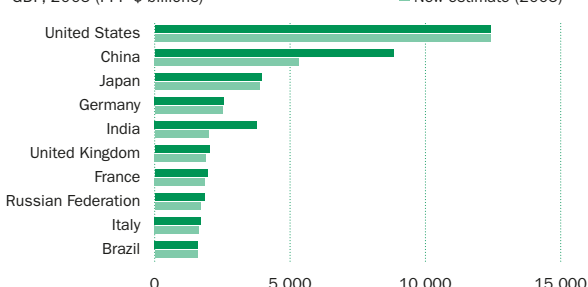
Under the new PPPs the aggregate GDP of developing economies in 2005 is 21 percent smaller than previously estimated, corresponding to a 7 percentage point reduction in their share of world GDP—from 47 percent to 40 percent.

The largest revisions are for developing economies. Among the 20 economies with the largest revisions are 14 Sub-Saharan African countries, 10 fragile states, and 10 economies that did not participate in the 1993 ICP. In absolute terms the largest changes were for China and India, which did not participate in the 1993 ICP. China's estimated GDP in 2005 was revised downward 40 percent and India's 36 percent, accounting for a large part of the net decrease in developing economy GDP (figure 1f). The smaller share of world GDP attributed to developing economies increases high-income economies' shares. The United States—as the base country, unaffected by any revision—increased its share from 20.6 percent to 22.1 percent.

China and India's economies, revised downward, remain large

1f

GDP, 2005 (PPP \$ billions)



Source: World Bank staff estimates.

The global distribution of income

From a global perspective income inequality has two sources: inequalities within countries and inequalities between countries. PPPs provide a clearer picture of both.

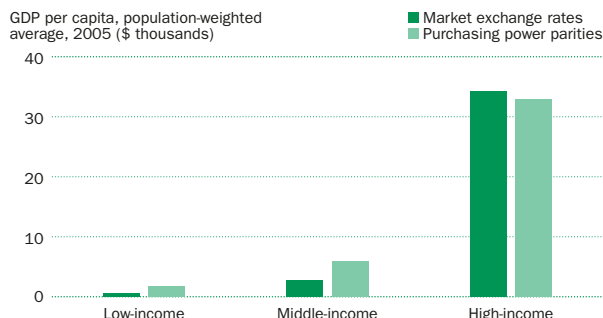
The distribution of income between economies can be measured by differences in their average GDP per capita. Because PPPs tend to increase the value of output from poorer economies, inequality between economies is less when measured in PPPs.

In 2005 PPP GDP per capita in high-income economies was more than five times higher than that in middle-income economies and more than 19 times higher than that in low-income economies (figure 1g). At market exchange rates the inequalities would have been greater.

The use of PPPs also leads to a reordering of regions by GDP per capita. South Asia, the poorest region at market exchange rates, surpasses Sub-Saharan Africa at PPPs (figure 1h). Average incomes in Europe and Central Asia are higher than those in Latin America and the Caribbean at PPPs, and the gap between the Middle East and North Africa and East Asia and Pacific widens under PPPs compared with the gap under market exchange rates.

Income disparities remain wide . . .

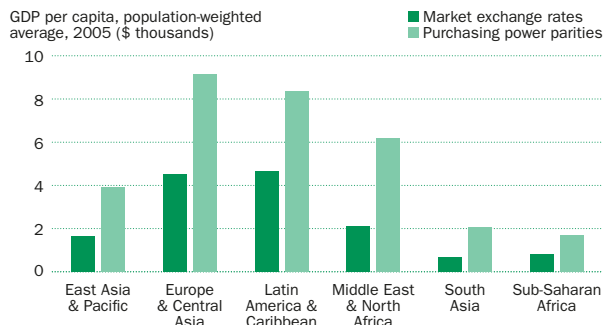
1g



Source: World Development Indicators data files.

. . . and regional rankings change under purchasing power parities

1h



Source: World Development Indicators data files.

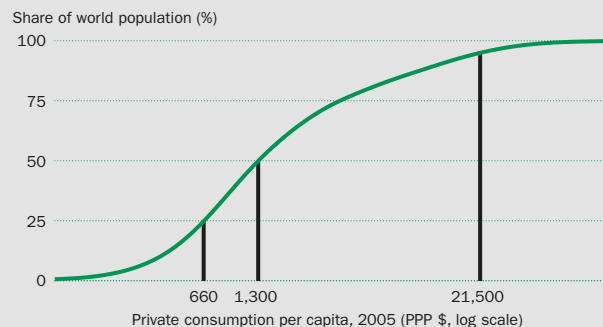
Combining inequalities within and between countries

Inequality within countries is measured using household survey data on income or consumption per capita. Common inequality measures include the Gini coefficient and the ratio of income or consumption of the richest 20 percent of the population to that of the poorest 20 percent (table 2.7). At the low end of the inequality range the Gini may be 25–30 and the ratio of the richest to poorest less than 4 (many countries in Eastern Europe). At the high end the Gini may be as high as 60 and the ratio of the richest to poorest more than 15 (many countries in Latin America and parts of Africa).

Under PPPs both sources of inequalities—between and within countries—can be combined. PPPs are used to compare incomes of individuals from different countries and create a global income distribution curve. Including inequalities within countries widens already highly unequal income distribution between countries. Based on countries with data (90 percent of the world's population), half the world's people consumed less than PPP \$1,300 a year and the bottom quarter less than PPP \$660 in 2005 (figure 1i). The richest 20 percent of the world's population spent more than 75 percent of the world total, while the poorest 20 percent spent less than 2 percent (figure 1j).

Half the people in the world consumed less than PPP \$1,300 a year in 2005

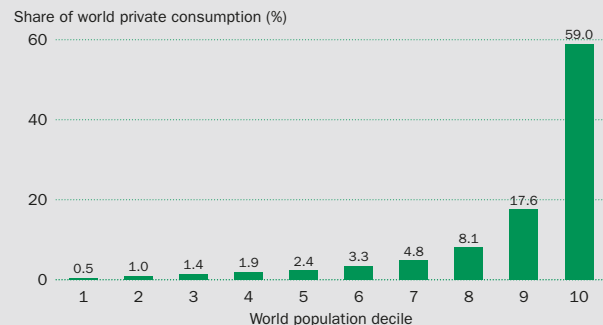
1i



Source: World Bank staff estimates.

The global distribution of consumption is highly uneven

1j



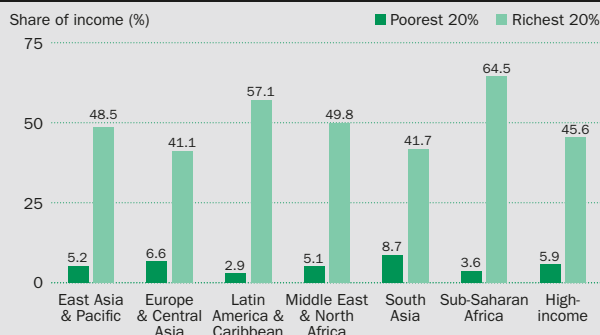
Source: World Bank staff estimates.

Regional inequalities

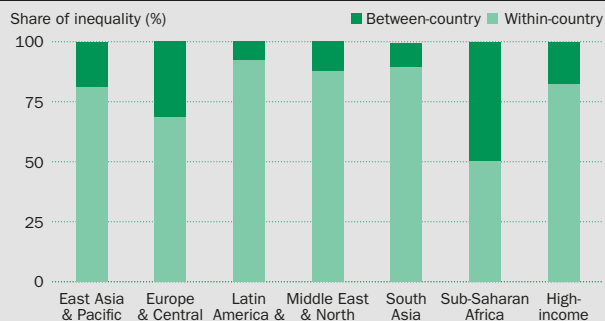
Inequalities between individuals are high in Latin America and the Caribbean and Sub-Saharan Africa, where the income share of the richest 20 percent of the population is at least 18 times that of the poorest 20 percent, and lower in South Asia and Europe and Central Asia, where the ratio falls below 7 (figure 1k). East Asia and Pacific and the Middle East and North Africa stand in between, but the estimate for the Middle East and North Africa is less reliable because many countries have no household surveys for estimating income distribution.

Half of Sub-Saharan Africa's inequalities can be attributed to differences in average incomes between countries, reflecting the region's low economic integration. Its average per capita private consumption is the lowest of all regions, but there are large differences across countries. By contrast, less than 20 percent of inequality in South Asia, East Asia and Pacific, and Latin American and the Caribbean can be attributed to different country patterns (figure 1l). There are different reasons for similar patterns. South Asia and East Asia and Pacific are each dominated by one large economy. In contrast, Latin America and the Caribbean has more equally sized economies with similar consumption per capita.

Latin America and the Caribbean and Sub-Saharan Africa have the most unequal income distributions 1k



Inequality within countries is greatest in Latin America and the Caribbean and lowest in Sub-Saharan Africa 1l



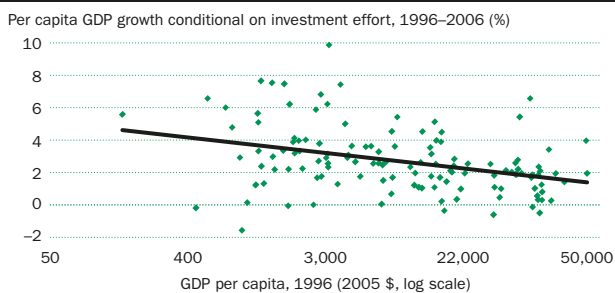
Convergence in incomes?

Have income inequalities across countries declined? Although developing economies have grown faster than high-income economies, PPP data show that economies starting from a lower GDP per capita did not systematically grow more rapidly between 1996 and 2006. The reason: large, high-performing economies, such as China and India, raise their group averages.

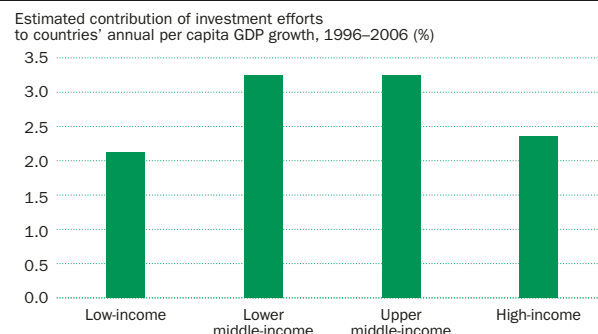
But after controlling for investment in 1996 (PPP per capita expenditure in education and gross fixed capital formation), initial GDP per capita had a substantial effect on future growth: for the same investment poorer countries grew faster than richer ones over the decade (figure 1m). This emphasizes the importance of improving the investment climate in developing economies; an effectively invested dollar generates much higher growth in poor countries.

Yet low-income countries did not systematically catch up with richer ones, as their investments in human and physical capital were on average much smaller. From 1996 to 2006 the average yield of these expenditures is about 2 percentage points of annual per capita GDP growth in low-income countries, compared with more than 3 percentage points in middle-income countries (figure 1n).

For similar investment efforts poor countries grew faster between 1996 and 2006 . . . 1m



. . . but investment efforts in low-income countries were insufficient to match the growth of richer countries 1n



Comparing standards of living

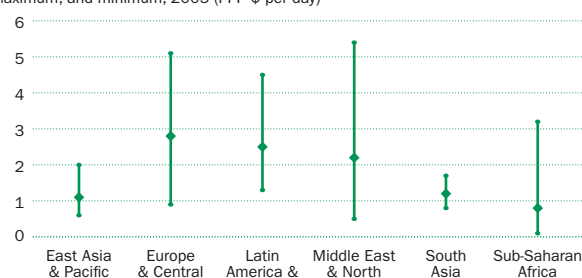
The 2005 ICP estimated PPPs for subcomponents of GDP, including expenditures on food, health, and education. As has long been observed, differences in spending on food are smaller than differences in income or overall consumption. South Asia's GDP per capita is one-sixteenth that of high-income economies; per capita food consumption, only one-fifth. And despite wide differences in income per capita, food expenditures in South Asia and East Asia and Pacific are almost the same (figure 1o). These two regions also have the smallest range between maximum and minimum average food.

Within developing countries per capita food consumption is strongly correlated with malnutrition, accounting for more than half the differences across countries. But even at similar average food per capita consumption, differences in malnutrition rates remain significant. Average expenditures conceal inequalities in the food consumption measure, specific diets, geographic conditions, and the absence of complementary factors that can prevent malnutrition (micronutrients, health care, education). In South Asia five of seven countries have malnutrition rates much above the average of developing economies at similar food consumption levels.

Regional differences in food consumption are less than differences in income

1o

Per capita food consumption, unweighted average, maximum, and minimum, 2005 (PPP \$ per day)

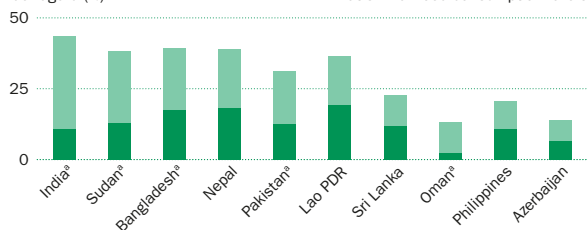


Source: World Bank staff estimates.

For similar levels of food consumption, malnutrition is particularly high in South Asia

1p

Underweight children under age 5 (%)



Note: Calculations based on countries that took part in the 2005 International Comparison Program. The relationship between malnutrition and food consumption is estimated for a sample of 77 developing countries with data.
a. Economy deviates significantly from the sample average.
Source: World Bank staff estimates.

Health and education

Similar cross-country comparisons can be made for the relative impact of health and education expenditures on selected outcomes, such as life expectancy at birth and the youth literacy rate. Both public and private expenditures contribute to the improvement of these and of many other indicators. And many factors other than spending affect life expectancy and literacy outcomes. But it is still interesting to observe that among countries with similar expenditures per capita, there is a large range of outcomes.

Among developing economies with similar per capita health spending, Southern African countries have much lower life expectancy, which must to some extent be the consequence of high HIV/AIDS prevalence (figure 1q). In contrast, most developing regions have some countries that record above-average life expectancies.

Compared with developing countries at similar per capita education expenditures, West African countries record particularly low literacy rates for youth ages 15–24 (figure 1r). Again, while worst performers are concentrated geographically, best performers are from diverse regions, including Sub-Saharan Africa.

Health spending has less impact on life expectancy in Sub-Saharan Africa

1q

Life expectancy at birth, 2005 (years)



Note: Calculations based on countries that took part in the 2005 International Comparison Program. The relationship between life expectancy and health spending is estimated for a sample of 105 developing countries with data.
a. Economy deviates significantly from the sample average.
Source: World Bank staff estimates.

For similar education spending youth literacy rates are much lower in West Africa

1r

Youth literacy rate (% ages 15–24)



Note: Calculations based on countries that took part in the 2005 International Comparison Program. The relationship between youth literacy and education spending is estimated for a sample of 86 developing countries with data.
a. Economy deviates significantly from the sample average.
Source: World Bank staff estimates.

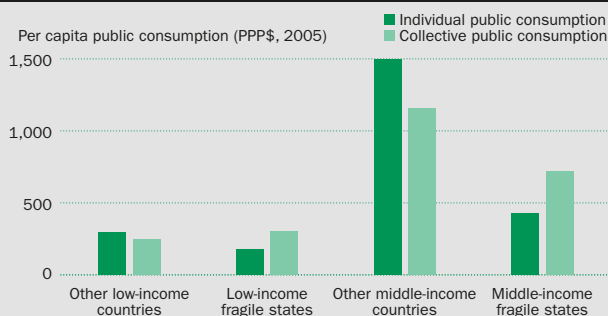
Public goods

Governments finance the provision of services destined to individuals, such as public health and education, and the provision of public goods, such as security, justice, and the environment. Countries at similar levels of development devote different amounts to collective consumption, most to financing public institutions through recurrent administrative expenditures. While fragile states spend relatively more on collective goods than do nonfragile states at similar levels of development (figure 1s), interpreting this result is difficult. It might reflect a response to the poor quality and prior underfunding of general administration, poor governance that yields less value for money, or the diversion of resources into conflict-related expenditures, such as security and defense.

Energy consumption has a strong impact on the local and global environment. Regions differ in energy efficiency (PPP GDP per unit of energy consumed), but all increased energy efficiency between 1995 and 2005, except the Middle East and North Africa (figure 1t). In 2005 \$1 of GDP was produced with 13 percent less energy than in 1995. But the world's GDP grew 42 percent in that same period, for a net increase of 24 percent in global energy consumption.

Fragile states spend more on collective goods

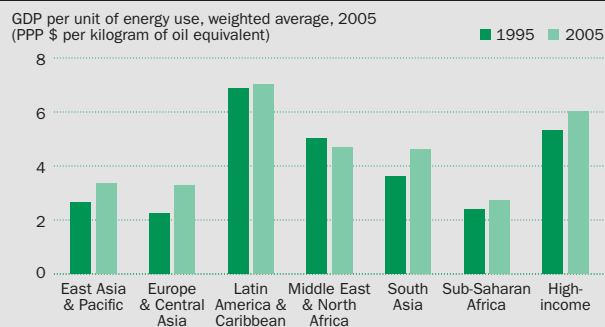
1s



Source: World Bank staff estimates.

The world economy is becoming more energy efficient, but too slowly to stabilize energy consumption

1t



Source: World Development Indicators data files.

Foreign resources

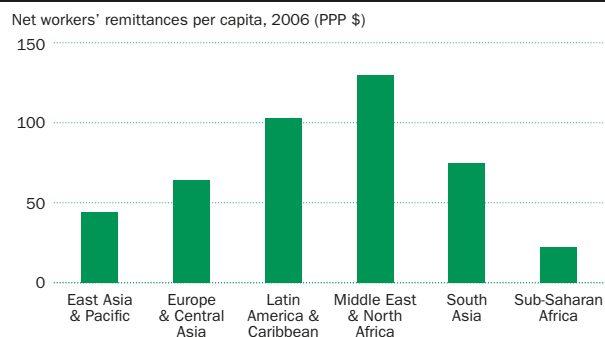
Developing economies receive large financial flows from official development assistance (ODA) and the remittances of workers abroad. Because prices in developing economies are lower, the purchasing power of aid or remittances spent in the local economy is greater than the purchasing power of the same amount spent in the sending country. Adjusting ODA and remittances by the PPP price level index provides better measures of their relative impact.

In 2006 developing countries received PPP \$15 per capita in net programmable assistance (net ODA excluding debt relief, humanitarian assistance, and technical cooperation). Low-income countries received PPP \$25 per capita, and middle-income countries received PPP \$7. Fragile states received PPP \$50.

Developing countries received 2006 PPP \$62 per capita in net workers' remittances. Middle-income countries received PPP \$67, low-income countries PPP \$55, and fragile states PPP \$16. The Middle East and North Africa is the main recipient of remittances. At the other end Sub-Saharan Africa received PPP \$22 in remittances in 2006 (figure 1u), half what it received in programmable aid (figure 1v).

Workers' remittances play a sizable role in the Middle East and North Africa and Latin America and the Caribbean

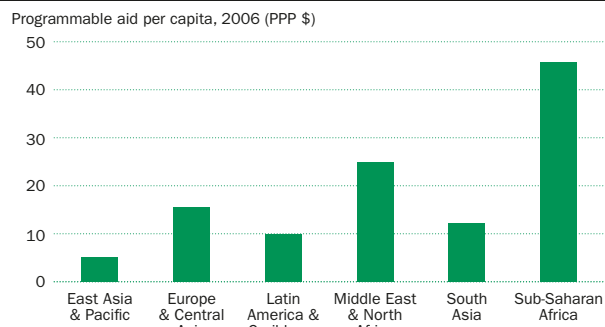
1u



Source: World Bank staff estimates.

Sub-Saharan Africa is the main recipient of programmable aid

1v



Source: World Bank staff estimates.



1.a

New purchasing power parity estimates from the 2005 International Comparison Program

	Purchasing power parity (PPP) conversion factor	Market exchange rate	Ratio of PPP conversion factor to market exchange rate	Gross domestic product		Fixed capital formation	Collective government consumption	Consumption expenditure				
				per capita PPP \$	per capita PPP \$			Individual by household Final	Actual individual	per capita PPP \$	Individual Education	Health
	2005	2005	2005	2005	2005	2005	2005	2005	2005	2005	2005	2005
Albania	48.56	99.87	0.49	17.2	5,465	1,374	639	3,241	4,280	650	681	855
Angola	44.49	87.16	0.51	60.0	3,729	850	712	541	692	132	122	75
Argentina	1.269	2.904	0.44	419.0	10,815	1,775	1,120	6,226	7,463	1,192	779	1,641
Armenia	178.6	457.7	0.39	12.6	4,162	750	423	2,855	3,925	1,380	1,237	510
Australia	1.388	1.309	1.06	695.8	34,106	8,133	3,297	17,487	21,915	1,613	3,421	3,449
Austria	0.8736	0.8041	1.09	280.6	34,075	6,254	2,424	18,163	23,443	1,813	2,568	3,499
Azerbaijan ^a	0.3263	0.9454	0.35	38.4	4,573	1,073	334	1,795	2,669	903	1,127	385
Bahrain	0.2488	0.376	0.66	24.2	33,451	6,926	2,441	10,170	12,822	2,268	2,632	2,376
Bangladesh	22.64	61.75	0.37	163.7	1,068	254	71	764	903	290	238	112
Belarus	779.3	2154	0.36	83.5	8,541	1,351	829	4,438	6,733	1,422	2,435	1,453
Belgium	0.8988	0.8041	1.12	332.2	31,699	6,512	2,427	16,077	21,647	1,958	2,759	3,957
Benin	219.6	527.5	0.42	10.3	1,213	184	232	758	948	197	168	73
Bhutan	15.74	44.1	0.36	2.3	3,649	1,715	868	1,277	1,924	417	446	906
Bolivia	2.232	8.066	0.28	34.1	3,715	298	557	2,151	2,972	481	1,129	519
Bosnia and Herzegovina	0.7268	1.573	0.46	23.3	5,949	1,157	923	4,859	6,320	1,163	1,075	963
Botswana	2.421	5.110	0.47	22.0	12,010	1,981	3,491	2,228	2,895	352	1,428	307
Brazil	1.357	2.434	0.56	1,583.2	8,474	1,218	1,640	4,416	5,639	712	851	1,306
Brunei Darussalam	0.9031	1.664	0.54	17.6	46,991	4,825	14,595	9,283	12,672	1,489	6,086	1,653
Bulgaria	0.5928	1.574	0.38	72.2	9,328	1,418	1,563	5,234	7,285	925	1,822	1,306
Burkina Faso	200.2	527.5	0.38	14.8	1,061	136	414	624	778	170	135	51
Burundi	343.0	1082	0.32	2.5	319	..	..	..	..	..	..	..
Cambodia	1,279	4097	0.31	20.1	1,440	146	202	926	1,197	324	594	430
Cameroon	251.0	527.5	0.48	35.5	1,993	210	268	1,211	1,499	335	233	72
Canada	1.214	1.212	1.00	1,130.0	34,972	7,265	2,695	18,233	23,526	1,465	2,743	3,269
Cape Verde	69.36	88.67	0.78	1.3	2,521	936	421	1,964	2,449	480	766	239
Central African Republic	263.7	527.5	0.50	2.7	654	36	85	496	607	168	96	22
Chad	208.0	527.5	0.39	14.9	1,471	166	576	548	781	169	469	62
Chile	333.7	560.1	0.60	199.6	12,248	2,372	995	6,143	7,430	917	1,084	1,323
China ^b	3.448	8.194	0.42	5,333.2	4,088	1,581	823	1,310	1,751	265	582	549
Hong Kong, China	5.688	7.777	0.73	243.2	35,690	8,326	3,078	16,320	19,622	1,266	2,923	3,632
Macao, China	5.270	7.987	0.66	17.4	36,869	8,520	2,735	8,266	10,525	963	2,181	2,164
Taiwan, China	19.34	32.18	0.60	592.3	26,057	5,303	4,257	13,645	16,836	1,407	4,727	4,803
Colombia	1,082	2135	0.51	263.7	5,867	962	1,002	3,266	4,098	610	678	914
Comoros	226.2	395.6	0.57	0.7	1,127	98	406	762	918	330	171	39
Congo, Dem. Rep.	214.3	473.9	0.45	15.7	267	52	77	125	151	45	20	16
Congo, Rep.	268.8	527.5	0.51	11.7	3,246	252	549	679	943	166	478	135
Côte d'Ivoire	287.5	527.5	0.55	30.0	1,614	63	279	991	1,216	271	118	90
Croatia	3.935	5.949	0.66	58.8	13,231	3,161	1,695	6,641	9,076	1,423	1,740	1,805
Cyprus	0.424	0.4636	0.91	18.6	24,534	4,647	2,601	14,709	17,859	2,213	2,420	1,725
Czech Republic	14.40	23.96	0.60	207.6	20,280	3,770	2,897	9,278	13,145	1,322	2,145	2,756
Denmark	8.517	5.997	1.42	182.2	33,645	6,955	2,960	15,082	21,490	1,583	2,895	3,283
Djibouti	84.69	177.7	0.48	1.5	1,850	240	762	864	1,135	187	366	104
Ecuador	0.4226	1	0.42	88.0	6,737	1,329	690	3,680	4,577	781	781	785
Egypt, Arab Rep.	1.616	6.004	0.27	333.2	4,574	570	887	2,835	3,662	856	1,230	665
Equatorial Guinea ^c	287.4	527.5	0.54	13.8	13,610	2,019	860	2,359	2,912	558	731	612
Estonia	7.813	12.59	0.62	22.2	16,456	3,694	2,008	7,811	11,291	1,306	2,605	1,731
Ethiopia	2.254	8.652	0.26	43.7	581	70	121	373	457	139	..	29
Fiji	1.430	1.691	0.85	3.5	4,282	1,116	731	2,996	3,768	750	1,016	691
Finland	0.9834	0.8041	1.22	159.8	30,462	5,969	2,475	13,761	19,501	1,672	2,473	3,234
France	0.9225	0.8041	1.15	1,862.2	30,591	5,654	2,260	16,724	23,027	2,263	2,567	4,059
Gabon	256.2	527.5	0.49	17.8	13,821	2,428	2,304	2,641	3,620	594	1,691	595
Gambia, The	7.560	28.58	0.26	1.7	1,078	62	409	405	550	75	..	121
Georgia	0.7380	1.812	0.41	15.7	3,520	650	366	2,200	3,063	564	820	836
Germany	0.8926	0.8041	1.11	2,510.7	30,445	4,963	2,325	17,278	21,742	1,780	1,436	4,123
Ghana	3,721	9073	0.41	26.1	1,160	254	118	745	912	189	241	140
Greece	0.7022	0.8041	0.87	324.9	29,261	5,523	3,313	15,481	18,545	2,168	2,170	2,557

New purchasing power parity estimates from the 2005 International Comparison Program

1.a

WORLD VIEW

	Purchasing power parity (PPP) conversion factor	Market exchange rate	Ratio of PPP conversion factor to market exchange rate	Gross domestic product		Fixed capital formation	Collective government consumption	Consumption expenditure													
				PPP \$ billions	per capita PPP \$			per capita PPP \$	Individual by household Final	Actual individual	per capita PPP \$	Food	Individual Education	Health							
2005	2005	2005	2005	2005	2005	2005	2005	2005	2005	2005	2005	2005									
Guinea	1,219	3640	0.33	9.9	1,105	167	95	548	682	123	241	143									
Guinea-Bissau	217.3	527.5	0.41	0.7	458	57	266	295	361	96	49	25									
Hungary	128.5	199.6	0.64	171.6	17,014	2,804	2,129	8,481	12,365	1,242	2,189	2,434									
Iceland	97.06	62.98	1.54	10.5	35,465	12,207	3,245	19,100	26,816	1,808	4,118	4,394									
India	14.67	44.27	0.33	2,431.9	2,222	504	233	1,183	1,464	317	391	485									
Indonesia	3,934	9705	0.41	707.9	3,209	615	248	1,934	2,326	607	658	144									
Iran, Islamic Rep.	2,675	8964	0.30	643.5	9,314	1,646	1,489	5,275	6,645	655	1,257	2,119									
Iraq	558.7	..	..	..	..	269	1,643	1,297	1,862	394	543	877					
Ireland	1.023	0.8041	1.27	157.6	37,886	8,864	2,183	15,560	20,997	867	3,177	2,998									
Israel	3.717	4.488	0.83	156.7	22,627	3,775	3,602	11,096	15,278	1,681	3,385	2,248									
Italy	0.8750	0.8041	1.09	1,626.3	27,750	6,016	2,165	15,678	19,667	2,032	1,865	2,914									
Japan	129.6	110.2	1.18	3,870.3	30,290	6,656	2,615	15,342	20,438	1,348	1,767	4,653									
Jordan	0.3805	0.709	0.54	23.5	4,342	1,552	875	2,947	3,843	898	1,202	724									
Kazakhstan	57.61	132.9	0.43	131.8	8,699	1,632	811	3,746	5,426	735	2,768	1,728									
Kenya	29.52	75.55	0.39	49.0	1,375	145	177	948	1,196	221	351	259									
Korea, Rep.	788.9	1024	0.77	1,027.4	21,273	6,376	2,046	9,829	12,157	874	2,124	2,240									
Kuwait	0.2136	0.292	0.73	110.4	43,551	9,288	5,292	10,978	13,683	2,316	2,437	1,365									
Kyrgyz Republic	11.35	41.02	0.28	8.9	1,728	138	251	1,249	1,901	403	841	282									
Lao PDR	2,988	10636	0.28	10.3	1,814	476	678	859	1,109	268	575	165									
Latvia	0.2980	0.5647	0.53	30.4	13,215	2,663	2,007	6,985	9,745	1,277	2,464	1,498									
Lebanon	847.5	1508	0.56	38.3	9,545	2,814	1,715	6,265	7,639	1,842	3,260	1,390									
Lesotho	3.490	6.359	0.55	2.6	1,311	274	219	1,319	1,686	309	738	446									
Liberia ^d	0.4926	1	0.49	1.1	312	59	60	200	248	31	216	37									
Lithuania	1.484	2.776	0.53	48.1	14,084	2,030	1,551	8,169	11,402	1,888	2,478	1,944									
Luxembourg	0.9225	0.8041	1.15	31.9	69,776	14,390	3,898	27,061	34,295	1,849	2,853	4,345									
Macedonia, FYR	19.06	49.29	0.39	15.0	7,394	905	1,276	4,623	6,123	1,181	991	1,007									
Madagascar	649.6	2003	0.32	15.5	834	119	249	557	702	189	383	66									
Malawi	39.46	118.4	0.33	8.6	648	121	124	400	482	53	161	139									
Malaysia	1.734	3.8	0.46	299.6	11,678	2,483	1,642	4,302	5,669	649	1,728	779									
Maldives	8.134	12.8	0.64	1.2	3,995	1,965	1,497	1,496	2,190	355	2,095	932									
Mali	240.1	527.5	0.46	11.7	1,004	98	290	616	772	180	176	76									
Malta	0.2474	0.346	0.71	8.3	20,483	3,462	2,471	11,778	15,662	1,887	2,164	2,457									
Mauritania	98.84	268.6	0.37	5.0	1,684	647	556	906	1,150	336	222	124									
Mauritius	14.68	28.94	0.51	12.4	9,975	1,524	1,768	5,837	7,621	1,158	1,778	889									
Mexico	7.127	10.90	0.65	1,173.9	11,387	1,631	798	7,189	8,924	1,658	2,007	910									
Moldova	4.434	12.60	0.35	8.5	2,190	305	237	1,854	2,688	374	1,345	364									
Mongolia	417.2	1205	0.35	6.7	2,609	714	402	1,159	1,618	353	1,137	421									
Montenegro	0.3659	0.8027	0.46	4.5	7,450	980	3,144	4,201	5,739	1,112	885	975									
Morocco	4.8782	8.865	0.55	107.1	3,554	851	540	1,801	2,254	494	372	191									
Mozambique	10,909	23061	0.47	13.9	677	104	108	455	574	180	117	53									
Namibia	4.265	6.359	0.67	9.3	4,599	979	1,233	2,068	2,769	483	1,046	589									
Nepal	22.65	72.06	0.31	26.0	960	179	98	706	850	277	183	303									
Netherlands	0.8983	0.8041	1.12	562.9	34,492	5,711	3,468	16,477	22,587	1,974	2,515	3,680									
New Zealand	1.535	1.420	1.08	101.6	24,566	4,842	2,114	13,620	17,750	1,670	2,180	2,698									
Niger	226.7	527.5	0.43	8.0	602	80	164	370	453	103	51	43									
Nigeria	60.23	131.3	0.46	214.8	1,520	150	207	937	1,172	269	280	97									
Norway	8.840	6.443	1.37	219.8	47,538	8,600	3,358	17,357	24,603	1,885	2,832	4,502									
Oman	0.2324	0.3845	0.60	51.0	20,350	4,800	4,385	5,814	7,402	1,515	1,446	723									
Pakistan	19.10	59.36	0.32	340.3	2,184	329	266	1,663	2,026	525	491	511									
Paraguay	2,007	6178	0.32	22.6	3,824	480	353	2,763	3,350	761	505	348									
Peru	1.487	3.296	0.45	176.0	6,452	1,070	536	3,834	4,564	854	799	559									
Philippines	21.75	55.09	0.39	250.0	2,956	382	308	1,845	2,218	612	811	175									
Poland	1.898	3.235	0.59	516.6	13,535	1,945	1,504	7,421	10,271	1,423	1,985	1,858									
Portugal	0.7074	0.8041	0.88	210.5	19,956	4,337	1,940	11,920	15,288	1,851	1,681	2,778									
Qatar	2.745	3.64	0.75	56.3	70,716	29,906	7,576	9,476	12,893	2,072	3,756	2,503									
Romania	1.421	2.914	0.49	202.7	9,368	1,499	1,483	5,280	7,311	1,165	1,350	1,438									



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New purchasing power parity estimates from the 2005 International Comparison Program

	Purchasing power parity (PPP) conversion factor	Market exchange rate	Ratio of PPP conversion factor to market exchange rate	Gross domestic product		Fixed capital formation	Collective government consumption	Consumption expenditure				
	local currency units to international \$	local currency units to \$		PPP \$ billions	per capita PPP \$	per capita PPP \$	per capita PPP \$	Individual by household Final	Actual individual	per capita PPP \$	Individual Education	Health
										Food		
2005	2005	2005	2005	2005	2005	2005	2005	2005	2005	2005	2005	
Russian Federation	12.736	28.28	0.45	1,697.5	11,858	1,377	1,333	5,545	7,916	1,298	1,723	1,394
Rwanda	186.2	557.8	0.33	6.4	696	109	243	464	592	148	202	59
São Tomé and Príncipe	5,558	10558	0.53	0.2	1,401	199	418	1,167	1,446	388	300	176
Saudi Arabia	2.410	3.747	0.64	490.6	21,220	4,657	3,376	5,037	6,976	1,108	1,924	1,229
Senegal	251.7	527.5	0.48	18.1	1,541	262	250	988	1,239	300	181	144
Serbia	27.21	66.71	0.41	64.3	8,644	1,139	1,050	4,726	6,712	1,015	1,109	1,209
Sierra Leone	1,074	2890	0.37	3.3	584	62	254	523	667	118	240	278
Singapore	1.079	1.665	0.65	180.1	41,479	10,352	5,534	12,636	15,564	929	3,159	3,043
Slovak Republic	17.20	31.02	0.55	85.6	15,881	2,856	2,561	8,181	11,077	1,227	1,916	1,990
Slovenia	147.0	192.7	0.76	45.0	22,506	5,638	2,094	11,305	14,970	1,457	2,075	2,628
South Africa	3.872	6.359	0.61	397.5	8,478	1,214	1,587	4,582	5,886	764	1,228	1,062
Spain	0.7676	0.8041	0.95	1,179.6	27,180	7,020	2,265	14,826	19,232	2,117	2,156	3,280
Sri Lanka	35.17	100.5	0.35	67.3	3,420	658	499	2,126	2,735	568	393	341
Sudan	107.7	243.6	0.44	63.1	1,711	257	234	1,493	1,799	489	77	69
Swaziland	3.293	6.359	0.52	5.0	4,461	678	752	2,537	3,157	746	625	1,057
Sweden	9.243	7.473	1.24	288.9	32,016	4,784	2,752	14,381	21,833	1,631	3,339	3,635
Switzerland	1.741	1.245	1.40	261.7	35,182	7,609	1,779	19,472	23,235	1,871	2,413	4,294
Syrian Arab Republic	19.72	52.86	0.37	75.6	4,002	909	542	2,210	2,881	861	878	664
Tajikistan	0.7444	3.117	0.24	9.7	1,478	67	209	948	1,560	363	1,161	236
Tanzania	395.6	1129	0.35	35.9	933	132	126	618	750	261	..	40
Thailand	15.93	40.22	0.40	444.9	7,061	1,908	747	3,638	4,616	448	1,451	1,072
Togo	240.4	527.5	0.46	4.6	742	75	170	618	767	174	168	41
Tunisia	0.5813	1.297	0.45	64.0	6,382	1,149	894	3,463	4,371	697	553	519
Turkey	0.8683	1.341	0.65	561.1	7,786	1,192	1,057	4,612	5,715	888	913	346
Uganda	619.6	1737	0.36	24.5	848	115	181	583	748	155	..	98
Ukraine	1.678	5.125	0.33	263.0	5,583	732	512	3,138	4,657	953	2,081	922
United Kingdom	0.6489	0.5493	1.18	1,889.4	31,371	4,937	2,841	19,187	25,155	1,586	1,955	3,665
United States	1	1	1.00	12,397.9	41,813	8,018	3,962	29,368	32,045	1,998	2,725	5,853
Uruguay	13.28	24.48	0.54	30.6	9,266	1,111	933	5,886	7,074	1,071	716	1,506
Venezuela, RB	1,153	2090	0.55	262.5	9,877	1,287	985	4,290	5,364	844	1,026	866
Vietnam	4,713	15804	0.30	178.1	2,143	634	367	990	1,310	238	1,009	466
Yemen, Rep.	69.49	191.5	0.36	46.2	2,188	472	386	1,073	1,405	376	454	190
Zambia	2,415	4464	0.54	13.4	1,171	211	275	672	894	59	..	233
Zimbabwe	33,068	22364	1.48	2.3	176	45	169	284	381	90	159	9

a. Original data collected in old manat are converted to new manat at 1 new manat = 5,000 old manat. b. Results for China were based on national average prices extrapolated by the World Bank and Asian Development Bank using price data for 11 cities submitted by the National Bureau of Statistics for China. The data for China do not include Hong Kong, China; Macao, China; and Taiwan, China. c. Per capita figures derived using population from the International Comparison Program. d. Data in U.S. dollars.

About the data

The International Comparison Program (ICP) is a worldwide statistical initiative to collect comparative price data and estimate purchasing power parities (PPPs) of the world's economies. Using PPPs instead of market exchange rates to convert currencies allows the output of economies and the welfare of their inhabitants to be compared in real terms—that is, controlling for differences in price levels. PPPs are the preferred means of converting gross domestic product (GDP) and its components to a common currency. They enable cross-country comparison of the size of economies, average consumption levels, poverty rates, productivity, and use of resources. The ratio of the PPP conversion factor to the market exchange rate (also referred to as the price level index) allows the cost of the goods and services that make up GDP to be compared across countries.

The new estimates of PPP, published for the first time in *World Development Indicators*, are the result of a global program of price surveys carried out using similar methods in 146 countries. New methods of data collection and analysis were used to overcome problems encountered in previous rounds of the ICP. Teams in each region identified characteristic goods and services to be priced. Surveys conducted by each country in 2005 and 2006 yielded prices for more than 1,000 goods and services. Many countries participated for the first time, including China. (Previous estimates of China's PPPs came from a research study using data for 1986.) India participated for the first time since 1985.

The ICP Global Office within the World Bank coordinated the collection of data and calculation of PPPs in more than 100 (mostly developing) economies. The program was organized in five geographic areas: Africa, Asia-Pacific, Commonwealth of Independent States, South America, and Western Asia. Regional agencies coordinated the work in the five regions. In parallel the Statistical Office of the European Communities (Eurostat) and the Organisation for Economic Co-operation and Development (OECD) conducted its 2005 PPP program, which included 46 countries.

Each region and the Eurostat-OECD group differ in the size and structure of their economies and their statistical capacity. To ensure the most consistent comparisons of countries within regions, different methods were used in each region. Three methods were used to compute housing PPPs. Asia and Africa used reference volumes, Eurostat and West Asia used a combination of rentals and quantities, and the CIS and Latin America used the quantity method. In Africa, Asia-Pacific, and Western Asia government expenditures were adjusted to account for productivity differences. There were other differences in

methodology, such as how basic heading PPPs were computed and aggregated. Annex F of the 2005 ICP report (available at www.worldbank.org/data/ICP) provides a review of the methods used.

For the 2005 ICP GDP data were compiled using the expenditure approach, with its components allocated to 155 basic headings for the year 2005. The detailed breakdown of GDP expenditure used by the ICP may differ from other national accounts data presented in *World Development Indicators 2008* because of the timing of data collection and differences in methodology. In table 1.a gross fixed capital formation and consumption data are from the ICP, and GDP data are collected by World Bank staff from national and international sources and in some cases differ from ICP data. All per capita figures are estimated using the World Bank's population data, except where otherwise noted.

Definitions

- **Purchasing power parity (PPP) conversion factor** is the number of units of a country's currency required to buy the same amount of goods and services in the domestic market as a U.S. dollar would buy in the United States.
- **Market exchange rate** is the exchange rate determined by national authorities or the rate determined in the legally sanctioned exchange market. When the official exchange rate diverges by an exceptionally large margin from the rate effectively applied to domestic transactions of foreign currencies and traded products, the market exchange rate is an estimated alternative conversion factor. It is calculated as an annual average based on monthly averages (local currency units relative to the U.S. dollar).
- **Ratio of PPP conversion factor to market exchange rate**, also known as the price level index, is obtained by dividing the PPP conversion factor by the market exchange rate.
- **PPP gross domestic product (GDP)** is GDP converted to U.S. dollars using PPP rates. GDP is the sum of value added by all resident producers plus any product taxes (less subsidies) not included in the valuation of output.
- **PPP GDP per capita** is PPP GDP divided by midyear population. Population is based on the de facto definition of population, which counts all residents regardless of legal status or citizenship, except refugees not permanently settled in the country of asylum, who are generally considered part of the population of their country of origin.
- **PPP gross fixed capital formation per capita** is outlays on additions to the fixed assets of an economy converted to U.S. dollars using PPP rates and divided by midyear population.
- **PPP collective government consumption per capita** is all government current expenditures for purchases of goods and services (including

compensation of employees). Data are converted to U.S. dollars using PPP rates and divided by midyear population.

- **PPP individual by household final consumption expenditure per capita** is the market value of all goods and services, including durable products, purchased by households. It excludes purchases of dwellings but includes imputed rent for owner-occupied dwellings. Data are converted to U.S. dollars using PPP rates and divided by midyear population.
- **PPP actual individual consumption expenditure per capita** is household final consumption expenditure plus the individual component of government consumption expenditure and the final consumption expenditure by nonprofit institutions serving households. The individual component of government consumption expenditure relates to services provided to specific individuals, such as health and education. Data are converted to U.S. dollars using PPP rates and divided by midyear population.
- **PPP individual consumption expenditure on food per capita** is expenditure on food products and nonalcoholic beverages purchased for consumption at home. It excludes food products and beverages sold for immediate consumption away from home, cooked dishes prepared by restaurants and catering contractors, and products sold as pet foods. Data are converted to U.S. dollars using PPP rates and divided by midyear population.
- **PPP individual consumption expenditure on education per capita** is expenditures by households on pre-primary, primary, secondary, post-secondary, and tertiary education. Data are converted to U.S. dollars using PPP rates and divided by midyear population.
- **PPP individual consumption expenditure on health per capita** is expenditures by households on medical products, appliances and equipment, outpatient services, and hospital services. Data are converted to U.S. dollars using PPP rates and divided by midyear population.

Data sources

PPP conversion factors are estimates by World Bank staff based on data collected by the International Comparison Program (www.worldbank.org/data/ICP). Data on GDP are estimated by World Bank staff based on national accounts data collected by World Bank staff during economic missions or reported to other international organizations such as the OECD. Population estimates are prepared by World Bank staff from a variety of sources (see *Data sources* for table 2.1). Data on gross fixed capital formation, government consumption, and household consumption expenditures are based on data collected by the International Comparison Program.

Millennium Development Goals

Goals and targets from the Millennium Declaration Indicators for monitoring progress

Goal 1 Eradicate extreme poverty and hunger

Target 1.A	Halve, between 1990 and 2015, the proportion of people whose income is less than \$1 a day	1.1	Proportion of population below \$1 purchasing power parity (PPP) a day ¹
		1.2	Poverty gap ratio [incidence × depth of poverty]
		1.3	Share of poorest quintile in national consumption
Target 1.B	Achieve full and productive employment and decent work for all, including women and young people	1.4	Growth rate of GDP per person employed
		1.5	Employment to population ratio
		1.6	Proportion of employed people living below \$1 (PPP) a day
		1.7	Proportion of own-account and contributing family workers in total employment
Target 1.C	Halve, between 1990 and 2015, the proportion of people who suffer from hunger	1.8	Prevalence of underweight children under-five years of age
		1.9	Proportion of population below minimum level of dietary energy consumption

Goal 2 Achieve universal primary education

Target 2.A	Ensure that by 2015 children everywhere, boys and girls alike, will be able to complete a full course of primary schooling	2.1	Net enrolment ratio in primary education
		2.2	Proportion of pupils starting grade 1 who reach last grade of primary education
		2.3	Literacy rate of 15- to 24-year-olds, women and men

Goal 3 Promote gender equality and empower women

Target 3.A	Eliminate gender disparity in primary and secondary education, preferably by 2005, and in all levels of education no later than 2015	3.1	Ratios of girls to boys in primary, secondary, and tertiary education
		3.2	Share of women in wage employment in the nonagricultural sector
		3.3	Proportion of seats held by women in national parliament

Goal 4 Reduce child mortality

Target 4.A	Reduce by two-thirds, between 1990 and 2015, the under-five mortality rate	4.1	Under-five mortality rate
		4.2	Infant mortality rate
		4.3	Proportion of one-year-old children immunized against measles

Goal 5 Improve maternal health

Target 5.A	Reduce by three-quarters, between 1990 and 2015, the maternal mortality ratio	5.1	Maternal mortality ratio
		5.2	Proportion of births attended by skilled health personnel
Target 5.B	Achieve by 2015 universal access to reproductive health	5.3	Contraceptive prevalence rate
		5.4	Adolescent birth rate
		5.5	Antenatal care coverage (at least one visit and at least four visits)
		5.6	Unmet need for family planning

Goal 6 Combat HIV/AIDS, malaria, and other diseases

Target 6.A	Have halted by 2015 and begun to reverse the spread of HIV/AIDS	6.1	HIV prevalence among population ages 15–24 years
		6.2	Condom use at last high-risk sex
		6.3	Proportion of population ages 15–24 years with comprehensive, correct knowledge of HIV/AIDS
		6.4	Ratio of school attendance of orphans to school attendance of nonorphans ages 10–14 years
Target 6.B	Achieve by 2010 universal access to treatment for HIV/AIDS for all those who need it	6.5	Proportion of population with advanced HIV infection with access to antiretroviral drugs
Target 6.C	Have halted by 2015 and begun to reverse the incidence of malaria and other major diseases	6.6	Incidence and death rates associated with malaria
		6.7	Proportion of children under age five sleeping under insecticide-treated bednets
		6.8	Proportion of children under age five with fever who are treated with appropriate antimalarial drugs
		6.9	Incidence, prevalence, and death rates associated with tuberculosis
		6.10	Proportion of tuberculosis cases detected and cured under directly observed treatment short course

The Millennium Development Goals and targets come from the Millennium Declaration, signed by 189 countries, including 147 heads of state and government, in September 2000 (www.un.org/millennium/declaration/ares552e.htm) as updated by the 60th UN General Assembly in September 2005. The revised Millennium Development Goal (MDG) monitoring framework shown here, including new targets and indicators, was presented to the 62nd General Assembly, with new numbering as recommended by the Inter-agency and Expert Group on MDG Indicators at its 12th meeting on 14 November 2007. The goals and targets are interrelated and should be seen as a whole. They represent a partnership between the developed countries and the developing countries “to create an environment—at the national and global levels alike—which is conducive to development and the elimination of poverty.” All indicators should be disaggregated by sex and urban-rural location as far as possible.

Goals and targets from the Millennium Declaration Indicators for monitoring progress

Goal 7 Ensure environmental sustainability

Target 7.A	Integrate the principles of sustainable development into country policies and programs and reverse the loss of environmental resources	7.1 Proportion of land area covered by forest 7.2 Carbon dioxide emissions, total, per capita and per \$1 GDP (PPP) 7.3 Consumption of ozone-depleting substances
Target 7.B	Reduce biodiversity loss, achieving, by 2010, a significant reduction in the rate of loss	7.4 Proportion of fish stocks within safe biological limits 7.5 Proportion of total water resources used 7.6 Proportion of terrestrial and marine areas protected 7.7 Proportion of species threatened with extinction
Target 7.C	Halve by 2015 the proportion of people without sustainable access to safe drinking water and basic sanitation	7.8 Proportion of population using an improved drinking water source 7.9 Proportion of population using an improved sanitation facility
Target 7.D	Achieve by 2020 a significant improvement in the lives of at least 100 million slum dwellers	7.10 Proportion of urban population living in slums ²

Goal 8 Develop a global partnership for development

Target 8.A	Develop further an open, rule-based, predictable, nondiscriminatory trading and financial system (Includes a commitment to good governance, development, and poverty reduction—both nationally and internationally.)	Some of the indicators listed below are monitored separately for the least developed countries (LDCs), Africa, landlocked developing countries, and small island developing states. Official development assistance (ODA) 8.1 Net ODA, total and to the least developed countries, as percentage of OECD/DAC donors' gross national income 8.2 Proportion of total bilateral, sector-allocable ODA of OECD/DAC donors to basic social services (basic education, primary health care, nutrition, safe water, and sanitation) 8.3 Proportion of bilateral official development assistance of OECD/DAC donors that is untied 8.4 ODA received in landlocked developing countries as a proportion of their gross national incomes 8.5 ODA received in small island developing states as a proportion of their gross national incomes
Target 8.B	Address the special needs of the least developed countries (Includes tariff and quota-free access for the least developed countries' exports; enhanced program of debt relief for heavily indebted poor countries (HIPC) and cancellation of official bilateral debt; and more generous ODA for countries committed to poverty reduction.)	
Target 8.C	Address the special needs of landlocked developing countries and small island developing states (through the Programme of Action for the Sustainable Development of Small Island Developing States and the outcome of the 22nd special session of the General Assembly)	Market access 8.6 Proportion of total developed country imports (by value and excluding arms) from developing countries and least developed countries, admitted free of duty 8.7 Average tariffs imposed by developed countries on agricultural products and textiles and clothing from developing countries 8.8 Agricultural support estimate for OECD countries as a percentage of their GDP 8.9 Proportion of ODA provided to help build trade capacity
Target 8.D	Deal comprehensively with the debt problems of developing countries through national and international measures in order to make debt sustainable in the long term	Debt sustainability 8.10 Total number of countries that have reached their HIPC decision points and number that have reached their HIPC completion points (cumulative) 8.11 Debt relief committed under HIPC Initiative and Multilateral Debt Relief Initiative (MDRI) 8.12 Debt service as a percentage of exports of goods and services
Target 8.E	In cooperation with pharmaceutical companies, provide access to affordable essential drugs in developing countries	8.13 Proportion of population with access to affordable essential drugs on a sustainable basis
Target 8.F	In cooperation with the private sector, make available the benefits of new technologies, especially information and communications	8.14 Telephone lines per 100 population 8.15 Cellular subscribers per 100 population 8.16 Internet users per 100 population

1. Where available, indicators based on national poverty lines should be used for monitoring country poverty trends.

2. The proportion of people living in slums is measured by a proxy, represented by the urban population living in households with at least one of these characteristics: lack of access to improved water supply, lack of access to improved sanitation, overcrowding (3 or more persons per room), and dwellings made of nondurable material.



	Population	Surface area	Population density	Gross national income		Gross national income per capita		PPP gross national income ^a			Gross domestic product	
	millions	thousand sq. km	people per sq. km	\$ billions	Rank	\$	Rank	\$ billions	Per capita \$	Rank	% growth	Per capita % growth
	2006	2006	2006	2006 ^b	2005	2006 ^b	2006	2006	2006	2006	2005-06	2005-06
Afghanistan	..	652	..	8.1	117	.. ^c	..	23.9 ^d	.. ^d	..	5.3	..
Albania	3	29	116	9.3	109	2,930	116	19.0	6,000	118	5.0	4.4
Algeria	33	2,382	14	101.2	49	3,030	111	198.0 ^d	5,940 ^d	119	3.0	1.5
Angola	17	1,247	13	32.7	69	1,970	131	64.5	3,890	139	18.6	15.3
Argentina	39	2,780	14	201.4	31	5,150	88	456.8	11,670	78	8.5	7.4
Armenia	3	30	107	5.8	132	1,920	133	14.9	4,950	127	13.3	13.6
Australia	21	7,741	3	742.3	15	35,860	25	702.5	33,940	26	2.5	1.0
Austria	8	84	100	329.2	22	39,750	18	298.4	36,040	18	3.1	2.5
Azerbaijan	8	87	103	15.6	95	1,840	134	46.1	5,430	123	34.5	33.0
Bangladesh	156	144	1,198	70.5	55	450	182	191.9	1,230	180	6.6	4.8
Belarus	10	208	47	33.8	66	3,470	105	94.4	9,700	88	9.9	10.4
Belgium	11	31	349	405.4	18	38,460	20	356.9	33,860	27	3.2	2.6
Benin	9	113	79	4.7	138	530	176	10.9	1,250	178	4.1	0.9
Bolivia	9	1,099	9	10.3	105	1,100	149	35.6	3,810	142	4.6	2.7
Bosnia and Herzegovina	4	51	77	12.7	102	3,230	106	26.6	6,780	109	6.0	5.7
Botswana	2	582	3	10.4	104	5,570	81	21.8	11,730	77	2.1	0.9
Brazil	189	8,515	22	892.6	11	4,710	93	1,647.5	8,700	96	3.7	2.4
Bulgaria	8	111	71	30.7	71	3,990	98	79.0	10,270	84	6.1	6.7
Burkina Faso	14	274	52	6.3	129	440	184	16.2	1,130	184	6.4	3.2
Burundi	8	28	318	0.8	189	100	209	2.6	320	206	5.1	1.1
Cambodia	14	181	80	7.0	123	490	180	22.1	1,550	174	10.8	9.0
Cameroon	18	475	39	18.1	87	990	154	37.4	2,060	163	3.8	1.6
Canada	33	9,985	4	1,196.6	9	36,650	22	1,184.4	36,280	16	2.8	1.7
Central African Republic	4	623	7	1.5	173	350	188	2.9	690	196	4.1	2.3
Chad	10	1,284	8	4.7	137	450	182	12.3	1,170	181	0.5	-2.6
Chile	16	757	22	111.9	46	6,810	76	185.6	11,300	80	4.0	3.1
China	1,312	9,635 ^e	141	2,621.0	4	2,000	130	6,119.1	4,660	133	10.7	10.1
Hong Kong, China	7	1	6,581	199.1	32	29,040	31	268.8	39,200	12	6.8	6.1
Colombia	46	1,142	41	142.0	39	3,120	108	279.2	6,130	114	6.8	5.3
Congo, Dem. Rep.	61	2,345	27	7.7	119	130	207	16.2	270	207	5.1	1.8
Congo, Rep.	4	342	11	3.8	..	1,050	..	8.7	2,420	..	6.4	4.1
Costa Rica	4	51	86	21.9	82	4,980	90	40.6 ^d	9,220 ^d	91	8.2	6.4
Côte d'Ivoire	19	322	59	16.6	91	880	158	29.8	1,580	171	0.9	-0.9
Croatia	4	57	79	41.4	62	9,310	65	61.5	13,850	72	4.8	4.8
Cuba	11	111	103	..	..	..^f	..	..	..	..	5.4	5.2
Czech Republic	10	79	133	131.4	40	12,790	56	214.9	20,920	55	6.1	5.7
Denmark	5	43	128	283.3	27	52,110	7	196.7	36,190	17	3.2	2.8
Dominican Republic	10	49	199	28.0	77	2,910	118	53.3 ^d	5,550 ^d	121	10.7	9.0
Ecuador	13	284	48	38.5	63	2,910	118	89.9	6,810	108	3.9	2.8
Egypt, Arab Rep.	74	1,001	75	100.9	50	1,360	143	366.5	4,940	128	6.8	4.9
El Salvador	7	21	326	18.1	86	2,680	121	37.9 ^d	5,610 ^d	120	4.2	2.7
Eritrea	5	118	46	0.9	183	190	202	3.2 ^d	680 ^d	198	-1.0	-4.5
Estonia	1	45	32	15.3	96	11,400	60	24.3	18,090	58	11.4	11.7
Ethiopia	77	1,104	77	12.9	101	170	204	49.0	630	200	9.0	6.2
Finland	5	338	17	217.8	29	41,360	16	174.7	33,170	30	5.5	5.1
France	61	552	111	2,306.7 ^g	6	36,560 ^g	24	1,974.9	32,240	34	2.0	1.4
Gabon	1	268	5	7.0	121	5,360	85	14.7	11,180	81	1.2	-0.4
Gambia, The	2	11	166	0.5	194	290	196	1.8	1,110	186	4.5	1.6
Georgia	4	70	64	7.0	122	1,580	137	17.2	3,880	140	9.4	10.4
Germany	82	357	236	3,032.6	3	36,810	21	2,692.3	32,680	32	2.8	2.9
Ghana	23	239	101	11.8	103	510	177	28.4	1,240	179	6.2	4.0
Greece	11	132	86	305.3	26	27,390	34	344.1	30,870	36	4.3	3.9
Guatemala	13	109	120	33.7	67	2,590	123	66.7 ^d	5,120 ^d	124	4.5	1.9
Guinea	9	246	37	3.7	147	400	186	10.4	1,130	184	2.8	0.8
Guinea-Bissau	2	36	59	0.3	203	190	202	0.8	460	205	4.2	1.1
Haiti	9	28	343	4.0	144	430	185	10.1 ^d	1,070 ^d	187	2.3	0.7

Size of the economy

1.1

WORLD VIEW

	Population	Surface area	Population density	Gross national income		Gross national income per capita		PPP gross national income ^a			Gross domestic product	
	millions 2006	thousand sq. km 2006	people per sq. km 2006	\$ billions 2006 ^b	Rank 2005	\$ 2006 ^b	Rank 2006	\$ billions 2006	Per capita \$ 2006	Rank 2006	% growth 2005-06	Per capita % growth 2005-06
Honduras	7	112	62	8.8	113	1,270	146	23.9 ^d	3,420 ^d	147	6.0	4.0
Hungary	10	93	112	109.5	47	10,870	62	170.8	16,970	61	3.9	4.1
India	1,110	3,287	373	909.1	10	820	161	2,726.3	2,460	155	9.2	7.7
Indonesia	223	1,905	123	315.9	24	1,420	140	737.2	3,310	149	5.5	4.3
Iran, Islamic Rep.	70	1,745	43	205.0	30	2,930	116	686.9	9,800	87	4.6	3.1
Iraq	..	438	..	..	..	..^f	..	..	..	..	46.5	..
Ireland	4	70	62	191.3	34	44,830	10	148.2	34,730	19	5.7	3.0
Israel	7	22	326	142.2	38	20,170	44	168.1	23,840	49	5.1	3.2
Italy	59	301	200	1,882.5	7	31,990	28	1,704.9	28,970	38	1.9	1.5
Jamaica	3	11	246	9.5	107	3,560	104	18.8 ^d	7,050 ^d	107	2.5	2.0
Japan	128	378	350	4,934.7	2	38,630	19	4,195.9	32,840	31	2.2	2.2
Jordan	6	89	63	14.7	99	2,650	122	26.7	4,820	129	5.7	3.3
Kazakhstan	15	2,725	6	59.2	57	3,870	99	133.2	8,700	96	10.7	9.5
Kenya	37	580	64	21.3	83	580	175	53.8	1,470	176	6.1	3.3
Korea, Dem. Rep.	24	121	197	..	..	..^c	..	..	..	..	..	..
Korea, Rep.	48	99	490	856.6	12	17,690	51	1,113.0	22,990	50	5.0	4.7
Kuwait	3	18	146	77.7	..	30,630	..	122.5	48,310	..	8.5	5.3
Kyrgyz Republic	5	200	27	2.6	157	500	178	9.3	1,790	167	2.7	1.7
Lao PDR	6	237	25	2.9	155	500	178	10.0	1,740	169	7.6	5.8
Latvia	2	65	37	18.5	85	8,100	71	33.9	14,840	67	11.9	12.6
Lebanon	4	10	396	22.6	81	5,580	80	38.9	9,600	89	0.0	-1.1
Lesotho	2	30	66	2.0	167	980	155	3.6	1,810	166	7.2	6.4
Liberia	4	111	37	0.5	195	130	207	0.9	260	208	7.8	3.7
Libya	6	1,760	3	44.0	61	7,290	75	70.2 ^d	11,630 ^d	79	5.6	3.5
Lithuania	3	65	54	26.9	78	7,930	73	49.4	14,550	68	7.7	8.3
Macedonia, FYR	2	26	80	6.3	128	3,070	109	16.0	7,850	102	3.0	2.9
Madagascar	19	587	33	5.3	134	280	197	16.6	870	193	4.9	2.1
Malawi	14	118	144	3.1	152	230	201	9.4	690	196	7.4	4.7
Malaysia	26	330	79	146.8	37	5,620	79	317.4	12,160	75	5.9	4.0
Mali	12	1,240	10	5.6	133	460	181	11.9	1,000	189	5.3	2.2
Mauritania	3	1,031	3	2.3	163	760	165	6.0	1,970	164	11.7	8.7
Mauritius	1	2	617	6.8	124	5,430	82	13.3	10,640	83	3.5	2.7
Mexico	104	1,964	54	815.7	14	7,830	74	1,249.2	11,990	76	4.8	3.6
Moldova	4	34	117	3.7 ^h	149	1,080 ^h	151	10.2	2,660	152	4.0	5.2
Mongolia	3	1,567	2	2.6	158	1,000 ⁱ	153	7.3	2,810	150	8.6	7.3
Morocco	30	447	68	65.8	56	2,160	128	117.7	3,860	141	8.0	6.7
Mozambique	21	799	27	6.5	126	310	193	13.9	660	199	8.0	5.7
Myanmar	48	677	74	..	..	..^c	..	..	..	..	5.0	4.1
Namibia	2	824	2	6.6	125	3,210	107	9.8	4,770	130	2.9	1.6
Nepal	28	147	193	8.8	114	320	192	27.8	1,010	188	2.8	0.8
Netherlands	16	42	482	703.5	16	43,050	13	620.0	37,940	15	2.9	2.7
New Zealand	4	268	16	112.0	45	26,750	37	107.7	25,750	44	1.9	0.7
Nicaragua	6	130	46	5.2	135	930	156	15.1 ^d	2,720 ^d	151	3.7	2.4
Niger	14	1,267	11	3.7	148	270	198	8.6	630	200	4.8	1.2
Nigeria	145	924	159	90.0	52	620	173	203.7	1,410	177	5.2	2.8
Norway	5	324	15	318.9	23	68,440	2	233.3	50,070	4	2.9	2.1
Oman	3	310	8	27.9	..	11,120 ^j	..	49.5	19,740	..	5.8	4.6
Pakistan	159	796	206	126.7	42	800	162	382.8	2,410	156	6.9	4.7
Panama	3	76	44	16.4	93	5,000	89	28.6 ^d	8,690 ^d	98	8.1	6.3
Papua New Guinea	6	463	14	4.6	141	740	168	10.1 ^d	1,630 ^d	170	2.6	0.4
Paraguay	6	407	15	8.5	115	1,410	141	24.3	4,040	137	4.3	2.2
Peru	28	1,285	22	82.2	54	2,980	113	179.2	6,490	110	7.7	6.5
Philippines	86	300	289	120.2	44	1,390	142	296.2	3,430	146	5.4	3.4
Poland	38	313	124	313.0	25	8,210	70	543.4	14,250	71	6.1	6.2
Portugal	11	92	116	189.0	35	17,850	50	211.3	19,960	57	1.3	0.9
Puerto Rico	4	9	443	..	..	..^k	..	..	..	..	..	..



1.1

Size of the economy

	Population	Surface area	Population density	Gross national income		Gross national income per capita		PPP gross national income ^a			Gross domestic product	
	millions	thousand sq. km	people per sq. km	\$ billions	Rank	\$	Rank	\$ billions	Per capita \$	Rank	% growth	Per capita % growth
	2006	2006	2006	2006 ^b	2005	2006 ^b	2006	2006	2006	2006	2005-06	2005-06
Romania	22	238	94	104.4	48	4,830	91	219.2	10,150	85	7.7	7.9
Russian Federation	143	17,098	9	822.3	13	5,770	78	1,814.9	12,740	74	6.7	7.2
Rwanda	9	26	384	2.3	162	250	199	6.9	730	195	5.3	2.7
Saudi Arabia	24	2,000 ^l	12	331.0	21	13,980	55	528.0	22,300	52	4.3	1.8
Senegal	12	197	63	9.1	110	760	165	18.8	1,560	172	2.3	-0.3
Serbia	7 ^m	88	96 ^m	30.0 ^m	75	4,030 ^m	97	69.3	9,320	90	5.7	5.8
Sierra Leone	6	72	80	1.4	175	240	200	3.5	610	202	7.4	4.4
Singapore	4	1	6,508	128.8	41	28,730	33	194.1	43,300	9	7.9	4.5
Slovak Republic	5	49	112	51.8	60	9,610	64	91.9	17,060	60	8.3	8.2
Slovenia	2	20	100	37.4	64	18,660	49	48.1	23,970	48	5.2	4.9
Somalia	8	638	13	..	..	..^c	..	..	..	..	..	..
South Africa	47	1,219	39	255.4	28	5,390	84	421.7	8,900	94	5.0	3.9
Spain	44	505	88	1,206.2	8	27,340	35	1,244.2	28,200	39	3.9	2.2
Sri Lanka	20	66	308	26.0	79	1,310	144	74.2	3,730	143	7.4	6.2
Sudan	38	2,506	16	30.1	74	800	162	67.2	1,780	168	11.8	9.4
Swaziland	1	17	66	2.7	156	2,400	124	5.3	4,700	132	2.1	1.5
Sweden	9	450	22	395.4	19	43,530	12	311.7	34,310	20	4.2	3.5
Switzerland	7	41	187	434.8	17	58,050	6	305.9	40,840	11	3.2	2.5
Syrian Arab Republic	19	185	106	30.3	72	1,560	138	79.7	4,110	136	5.1	2.3
Tajikistan	7	143	47	2.6	159	390	187	10.3	1,560	172	7.0	5.6
Tanzania	39	947	45	13.4 ⁿ	100	350 ⁿ	188	38.8	980	190	5.9	3.3
Thailand	63	513	124	193.7	33	3,050	110	472.2	7,440	104	5.0	4.3
Timor-Leste	1	15	69	0.9	185	840	160	5.2 ^d	5,100 ^d	125	-1.6	-6.7
Togo	6	57	118	2.3	165	350	188	4.9	770	194	4.1	1.3
Trinidad and Tobago	1	5	259	16.6	90	12,500	57	22.3 ^d	16,800 ^d	62	12.0	11.6
Tunisia	10	164	65	30.1	73	2,970	115	65.7	6,490	110	5.2	4.2
Turkey	73	784	95	393.9	20	5,400	83	613.7	8,410	99	6.1	4.8
Turkmenistan	5	488	10	..	..	..^f	..	19.3 ^d	3,990 ^d	..	..	..
Uganda	30	241	152	9.0	112	300	195	26.3	880	192	5.4	2.1
Ukraine	47	604	81	90.7	51	1,940	132	286.0	6,110	115	7.1	7.8
United Arab Emirates	4	84	51	103.5	..	26,210	..	123.1 ^d	31,190 ^d	..	8.5	4.3
United Kingdom	61	244	250	2,455.7	5	40,560	17	2,037.2	33,650	29	2.8	2.2
United States	299	9,632	33	13,386.9	1	44,710	11	13,195.7	44,070	8	2.9	1.9
Uruguay	3	176	19	17.6	89	5,310	86	32.9	9,940	86	7.0	6.7
Uzbekistan	27	447	62	16.2	94	610	174	58.1 ^d	2,190 ^d	159	7.3	5.8
Venezuela, RB	27	912	31	164.0	36	6,070	77	296.4	10,970	82	10.3	8.5
Vietnam	84	329	271	58.5	58	700	169	194.4	2,310	157	8.2	6.9
West Bank and Gaza	4	6	627	4.5	..	1,230	..	14.0 ^d	3,720 ^d	144	1.4	-2.6
Yemen, Rep.	22	528	41	16.4	92	760	165	45.5	2,090	162	3.3	0.3
Zambia	12	753	16	7.4	120	630	172	13.4	1,140	182	6.2	4.2
Zimbabwe	13	391	34	4.5	..	340	..	2.2	170	..	-5.3	-6.0
World	6,538 s	133,946 s	50 w	48,694.1 t		7,448 w		60,210 t	9,209 w		3.8 w	2.6 w
Low income	2,420	29,220	86	1,570.8		649		4,501	1,860		8.0	6.1
Middle income	3,088	70,112	45	9,426.9		3,053		19,920	6,451		7.2	6.3
Lower middle income	2,276	28,646	81	4,639.8		2,038		11,152	4,899		8.8	7.9
Upper middle income	811	41,466	20	4,797.3		5,913		8,826	10,879		5.7	4.9
Low & middle income	5,507	99,332	57	10,997.7		1,997		24,430	4,436		7.3	6.0
East Asia & Pacific	1,899	16,300	120	3,524.7		1,856		8,277	4,359		9.4	8.6
Europe & Central Asia	461	24,114	20	2,217.1		4,815		4,509	9,791		6.8	6.7
Latin America & Carib.	556	20,421	28	2,661.2		4,785		4,828	8,682		5.5	4.2
Middle East & N. Africa	311	9,087	35	778.8		2,507		2,084	6,710		5.1	3.3
South Asia	1,499	5,140	314	1,151.3		768		3,432	2,289		8.7	7.0
Sub-Saharan Africa	782	24,270	33	647.9		829		1,314	1,681		5.6	3.0
High income	1,031	34,614	31	37,731.7		36,608		36,005	34,933		2.9	2.2
Euro area	317	2,536	128	10,864.1		34,307		9,874	31,181		2.7	2.2

a. PPP is purchasing power parity; see *Definitions*. b. Calculated using the *World Bank Atlas* method. c. Estimated to be low income (\$905 or less). d. Based on regression; others are extrapolated from the 2005 International Comparison Program benchmark estimates. e. Includes Taiwan, China; Macao, China; and Hong Kong, China. f. Estimated to be lower middle income (\$906–\$3,595). g. Includes the French overseas departments of French Guiana, Guadeloupe, Martinique, and Réunion. h. Excludes Transnistria. i. Included in the aggregates for low-income economies based on earlier data. j. Included in the aggregates for upper middle-income economies based on earlier data. k. Estimated to be high income (\$11,116 or more). l. Provisional estimate. m. Excludes Kosovo and Metohija. n. Covers mainland Tanzania only.

About the data

Population, land area, income, output, and growth in output are basic measures of the size of an economy. They also provide a broad indication of actual and potential resources. Population, land area, income (as measured by gross national income, GNI) and output (as measured by gross domestic product, GDP) are therefore used throughout *World Development Indicators* to normalize other indicators.

Population estimates are generally based on extrapolations from the most recent national census. For further discussion of the measurement of population and population growth, see *About the data* for table 2.1 and *Statistical methods*.

The surface area of an economy includes inland bodies of water and some coastal waterways. Surface area thus differs from land area, which excludes bodies of water, and from gross area, which may include offshore territorial waters. Land area is particularly important for understanding an economy's agricultural capacity and the environmental effects of human activity. (For measures of land area and data on rural population density, land use, and agricultural productivity, see tables 3.1–3.3.) Innovations in satellite mapping and computer databases have resulted in more precise measurements of land and water areas.

GNI measures total domestic and foreign value added claimed by residents. GNI comprises GDP plus net receipts of primary income (compensation of employees and property income) from nonresident sources. The World Bank uses GNI per capita in U.S. dollars to classify countries for analytical purposes and to determine borrowing eligibility. For definitions of the income groups in *World Development Indicators*, see *Users guide*. For discussion of the usefulness of national income and output as measures of productivity or welfare, see *About the data* for tables 4.1 and 4.2.

When calculating GNI in U.S. dollars from GNI reported in national currencies, the World Bank follows the *World Bank Atlas* conversion method, using a three-year average of exchange rates to smooth the effects of transitory fluctuations in exchange rates. (For further discussion of the *World Bank Atlas* method, see *Statistical methods*.) GDP and GDP per capita growth rates are calculated from data in constant prices and national currency units.

Because exchange rates do not always reflect differences in price levels between countries, the table also converts GNI and GNI per capita estimates into international dollars using purchasing power parity (PPP) rates. PPP rates provide a standard measure

allowing comparison of real levels of expenditure between countries, just as conventional price indexes allow comparison of real values over time. The PPP conversion factors used are derived from the 2005 round of price surveys covering 146 economies conducted by the International Comparison Program. For Organisation for Economic Co-operation and Development (OECD) countries data come from the most recent round of surveys, completed in 2005. Estimates for economies not included in the surveys are derived from statistical models using available data.

For more information on the results of the 2005 International Comparison Program, see the introduction to *World View*. The final report of the program is available at www.worldbank.org/data/icp.

All 209 economies shown in *World Development Indicators* are ranked by size, including those that appear in table 1.6. The ranks are shown only in table 1.1. No rank is shown for economies for which numerical estimates of GNI per capita are not published. Economies with missing data are included in the ranking at their approximate level, so that the relative order of other economies remains consistent.

Definitions

- **Population** is based on the de facto definition of population, which counts all residents regardless of legal status or citizenship—except for refugees not permanently settled in the country of asylum, who are generally considered part of the population of their country of origin. The values shown are midyear estimates. See also table 2.1.
- **Surface area** is a country's total area, including areas under inland bodies of water and some coastal waterways.
- **Population density** is midyear population divided by land area in square kilometers.
- **Gross national income (GNI)** is the sum of value added by all resident producers plus any product taxes (less subsidies) not included in the valuation of output plus net receipts of primary income (compensation of employees and property income) from abroad. Data are in current U.S. dollars converted using the *World Bank Atlas* method (see *Statistical methods*).
- **GNI per capita** is GNI divided by midyear population. GNI per capita in U.S. dollars is converted using the *World Bank Atlas* method.
- **Purchasing power parity (PPP) GNI** is GNI converted to international dollars using PPP rates. An international dollar has the same purchasing power over GNI that a U.S. dollar has in the United States.
- **Gross domestic product (GDP)** is the sum of value added by all resident producers plus any product taxes (less subsidies) not included in the valuation of output. Growth is calculated from constant price GDP data in local currency.
- **GDP per capita** is GDP divided by midyear population.

Data sources

Population estimates are prepared by World Bank staff from a variety of sources (see *Data sources* for table 2.1). Data on surface and land area are from the Food and Agriculture Organization (see *Data sources* for table 3.1). GNI, GNI per capita, GDP growth, and GDP per capita growth are estimated by World Bank staff based on national accounts data collected by World Bank staff during economic missions or reported by national statistical offices to other international organizations such as the OECD. PPP conversion factors are estimates by World Bank staff based on data collected by the International Comparison Program.



1.2

Millennium Development Goals: eradicating poverty and saving lives

	Eradicate extreme poverty and hunger					Achieve universal primary education		Promote gender equality		Reduce child mortality	
	Share of poorest quintile in national consumption or income % 1992–2005 ^{b,c}	Vulnerable employment Unpaid family workers % of total employment		Prevalence of malnutrition Underweight % of children under age 5		Primary completion rate ^a %		Ratio of girls to boys enrollments in primary and secondary school ^a %		Under-five mortality rate per 1,000	
		1990	2005	1990	2000–06 ^b	1991	2006 ^d	1991	2006 ^d	1990	2006
Afghanistan	..	..	..	..	..	..	..	54	56	..	..
Albania	8.2	..	..	..	17.0	..	96	96	97	45	17
Algeria	7.0	..	29	..	10.2	80	85	83	99	69	38
Angola	..	..	..	..	27.5	35	..	..	..	260	260
Argentina	3.1 ^e	..	21	..	2.3	..	99	..	104	29	16
Armenia	8.5	..	..	..	4.2	90	91	..	104	56	24
Australia	5.9	10	10	..	..	..	..	101	97	10	6
Austria	8.6	..	9	..	..	..	103	95	97	10	5
Azerbaijan	7.4	..	..	..	14.0	..	92	100	96	105	88
Bangladesh	8.8	..	63	..	39.2	49	72	..	103	149	69
Belarus	8.8	..	..	..	..	94	95	..	101	24	13
Belgium	8.5	..	11	..	..	79	..	101	98	10	4
Benin	7.4	..	..	..	21.5	21	65	49	73	185	148
Bolivia	1.5	40	62	8.9	5.9	..	101	..	98	125	61
Bosnia and Herzegovina	7.0	..	..	..	4.2	..	..	..	..	22	15
Botswana	3.2	..	12	..	10.7	89	95	109	100	58	124
Brazil	2.9	29	29	..	3.7	93	105	..	102	57	20
Bulgaria	8.7	..	10	..	1.6	84	99	99	97	19	14
Burkina Faso	6.9	..	..	..	35.2	20	31	62	80	206	204
Burundi	5.1	..	..	..	38.9	46	36	82	89	190	181
Cambodia	6.8	..	87	..	28.4	..	87	73	89	116	82
Cameroon	5.6	..	..	..	15.1	53	58	83	84	139	149
Canada	7.2	..	..	..	..	..	..	99	98	8	6
Central African Republic	2.0	..	..	..	21.8	27	24	60	..	173	175
Chad	..	94	..	..	33.9	18	31	42	61	201	209
Chile	3.8	..	27	..	..	..	123	100	98	21	9
China	4.3	..	..	..	6.8	105	..	87	100	45	24
Hong Kong, China	5.3	5	8	..	..	102	..	103	..	..	..
Colombia	2.9	28	44	..	5.1	70	105	108	104	35	21
Congo, Dem. Rep.	..	..	..	..	33.6	46	38	..	73	205	205
Congo, Rep.	..	..	..	..	11.8	54	73	85	90	103	126
Costa Rica	4.1	25	21	..	..	79	89	101	102	18	12
Côte d'Ivoire	5.2	..	..	..	..	43	43	65	..	153	127
Croatia	8.8	..	19	..	..	85	92	102	101	12	6
Cuba	..	..	..	..	..	99	92	106	100	13	7
Czech Republic	10.3	7	12	..	2.1	..	102	98	101	13	4
Denmark	8.3	..	..	..	..	98	99	101	102	9	5
Dominican Republic	4.1	39	43	8.4	4.2	61	83	..	104	65	29
Ecuador	3.3	36	33	..	6.2	91	106	..	100	57	24
Egypt, Arab Rep.	8.9	28	26	..	5.4	..	98	81	93	91	35
El Salvador	2.7	35	36	7.2	6.1	41	88	102	99	60	25
Eritrea	..	..	..	..	34.5	19	48	..	72	147	74
Estonia	6.8	2	5	..	..	93	106	103	100	16	7
Ethiopia	9.1	..	91	..	34.6	26	49	68	81	204	123
Finland	9.6	..	..	..	..	97	100	109	102	7	4
France	7.2	..	7	..	..	104	..	102	100	9	4
Gabon	..	48	..	..	8.8	58	75	..	..	92	91
Gambia, The	4.8	..	..	..	15.4	44	63	66	102	153	113
Georgia	5.4	..	64	..	..	..	85	98	103	46	32
Germany	8.5	..	6	..	..	100	95	99	99	9	4
Ghana	5.6	..	..	..	18.8	61	71	79	95 ^f	120	120
Greece	6.7	40	28	..	..	99	100	99	99	11	4
Guatemala	3.9	..	55	27.8	17.7	..	77	..	92	82	41
Guinea	7.0	..	..	..	22.5	17	64	45	74	235	161
Guinea-Bissau	5.2	..	..	..	21.9	..	..	..	..	240	200
Haiti	2.4	..	..	..	18.9	27	..	94	..	152	80

Millennium Development Goals: eradicating poverty and saving lives

1.2

WORLD VIEW

	Eradicate extreme poverty and hunger					Achieve universal primary education		Promote gender equality		Reduce child mortality	
	Share of poorest quintile in national consumption or income % 1992–2005 ^{b,c}	Vulnerable employment Unpaid family workers % of total employment		Prevalence of malnutrition Underweight % of children under age 5		Primary completion rate ^a %		Ratio of girls to boys enrollments in primary and secondary school ^a %		Under-five mortality rate per 1,000	
		1990	2005	1990	2000–06 ^b	1991	2006 ^d	1991	2006 ^d	1990	2006
Honduras	3.4	49	49	..	8.6	64	89	106	109	58	27
Hungary	8.6	7	8	2.3	..	93	94	100	99	17	7
India	8.1	..	..	..	43.5	64	85	70	91	115	76
Indonesia	7.1	..	..	31.0	24.4	91	99	93	97	91	34
Iran, Islamic Rep.	6.5	..	..	..	..	91	101	85	105	72	34
Iraq	..	..	..	..	..	59	..	78	78	53	..
Ireland	7.4	20	12	..	..	..	97	104	103	9	5
Israel	5.7	..	8	..	..	..	101	105	100	12	5
Italy	6.5	16	13	..	..	104	100	100	99	9	4
Jamaica	5.3	42	34	..	3.1	90	82	102	101	33	31
Japan	10.6	19	12	..	..	101	..	101	100	6	4
Jordan	6.7	..	..	..	3.6	72	100	101	102	40	25
Kazakhstan	7.4	..	36	..	..	..	101 ^f	102	99 ^f	60	29
Kenya	6.0	..	..	20.1	16.5	..	93	94	96	97	121
Korea, Dem. Rep.	..	..	..	..	17.8	..	..	..	..	55	55
Korea, Rep.	7.9	..	26	..	..	98	101	99	96	9	5
Kuwait	..	..	..	..	..	..	91	97	102	16	11
Kyrgyz Republic	8.9	..	50	..	..	..	99	..	100	75	41
Lao PDR	8.1	..	..	..	36.4	43	75	76	85	163	75
Latvia	6.8	..	8	..	..	..	92	101	99	18	9
Lebanon	..	..	..	..	..	..	80	..	103	37	30
Lesotho	1.5	38	..	..	16.6	59	78	123	104	101	132
Liberia	..	..	..	..	22.8	..	63	..	..	235	235
Libya	..	..	..	..	..	..	..	..	105	41	18
Lithuania	6.8	..	..	..	..	89	91	..	100	13	8
Macedonia, FYR	6.1	..	22	..	1.2	98	97	99	99	38	17
Madagascar	4.9	..	82	35.5	36.8	33	57	98	96	168	115
Malawi	7.0	..	..	24.4	18.4	29	55	81	100	221	120
Malaysia	4.4	..	20	..	..	91	95	101	105	22	12
Mali	6.1	..	..	29.0	30.1	13	49	57	74	250	217
Mauritania	6.2	..	..	..	30.4	34	47	71	102	133	125
Mauritius	..	..	17	..	..	107	92	102	103	23	14
Mexico	4.3	37	31	13.9	3.4	88	103	97	99	53	35
Moldova	7.8	..	36	..	3.2	..	90	106	102	37	19
Mongolia	7.5	..	60	..	4.8	..	109	109	108	109	43
Morocco	6.5	..	58	8.1	9.9	48	84	70	87	89	37
Mozambique	5.4	..	..	..	21.2	26	42	71	85	235	138
Myanmar	..	..	..	..	29.6	..	95	97	101	130	104
Namibia	1.4	..	..	..	20.3	78	76	106	104	86	61
Nepal	6.0	..	..	..	38.8	51	76	59	93	142	59
Netherlands	7.6	..	..	..	..	..	100	97	98	9	5
New Zealand	6.4	13	12	..	..	100	..	100	104	11	6
Nicaragua	5.6	..	38	..	7.8	42	73	109	102	68	36
Niger	2.6	..	..	41.0	39.9	18	33	53	70	320	253
Nigeria	5.0	..	..	35.1	27.2	..	76	77	83	230	191
Norway	9.6	..	..	..	..	100	99	102	101	9	4
Oman	..	..	..	..	..	74	94	89	98	32	12
Pakistan	9.1	..	61	39.0	31.3	..	62	..	78	130	97
Panama	2.5	34	32	..	..	86	94	..	101	34	23
Papua New Guinea	4.5	..	..	..	..	46	..	80	..	94	73
Paraguay	2.4	23	50	2.8	..	68	94	98	99	41	22
Peru	3.7	36	36	8.8	5.2	..	100	96	101	78	25
Philippines	5.4	..	45	..	20.7	86	96	100	103	62	32
Poland	7.4	28	22	..	..	98	97	101	99	18	7
Portugal	5.8	19	19	..	..	95	104	103	102	14	5
Puerto Rico	..	..	..	..	..	..	..	..	..	..	..



1.2 Millennium Development Goals: eradicating poverty and saving lives

	Eradicate extreme poverty and hunger					Achieve universal primary education		Promote gender equality		Reduce child mortality	
	Share of poorest quintile in national consumption or income % 1992–2005 ^{b,c}	Vulnerable employment Unpaid family workers % of total employment		Prevalence of malnutrition Underweight % of children under age 5		Primary completion rate ^a %		Ratio of girls to boys enrollments in primary and secondary school ^a %		Under-five mortality rate per 1,000	
		1990	2005	1990	2000–06 ^b	1991	2006 ^d	1991	2006 ^d	1990	2006
Romania	8.2	27	33	..	3.5	96	99	99	100	31	18
Russian Federation	6.1	1	6	..	..	93	94	104	99	27	16
Rwanda	5.3	..	..	24.3	18.0	35	35	92	102	176	160
Saudi Arabia	..	..	..	..	..	55	85	84	95	44	25
Senegal	6.6	83	..	21.9	14.5	39	49	69	91	149	116
Serbia	8.3 ^g	..	..	..	..	..	..	..	..	..	8
Sierra Leone	6.5	..	..	..	24.7	..	81 ^f	67	86 ^f	290	270
Singapore	5.0	8	9	..	3.3	..	..	95	101	8	3
Slovak Republic	8.8	..	9	..	..	96	94	..	100	14	8
Slovenia	8.3	12	11	..	..	95	99	..	100	10	4
Somalia	..	..	..	..	..	..	..	..	..	203	145
South Africa	3.5	..	19	..	..	76	100	104	100	60	69
Spain	7.0	22	13	..	..	..	103	104	103	9	4
Sri Lanka	7.0	..	39	29.3	22.8	102	108	102	104	32	13
Sudan	..	..	..	..	38.4	42	47	77	89	120	89
Swaziland	4.3	..	..	..	9.1	60	67	98	95	110	164
Sweden	9.1	..	..	..	..	96	..	102	100	7	3
Switzerland	7.6	9	10	..	..	53	91	97	97	9	5
Syrian Arab Republic	..	..	..	..	..	89	115	85	95	38	14
Tajikistan	7.8	..	..	..	..	..	106	..	88	115	68
Tanzania	7.3	..	..	25.1	16.7	62	85 ^f	97	..	161	118
Thailand	6.3	70	53	17.4	..	..	..	97	104	31	8
Timor-Leste	..	..	..	..	40.6	..	..	..	95	177	55
Togo	..	..	..	21.2	..	35	67	59	73	149	108
Trinidad and Tobago	5.9	22	16	4.7	4.4	101	88	101	101	34	38
Tunisia	6.0	..	..	8.5	..	74	99	86	104	52	23
Turkey	5.3	..	41	8.7	..	90	86	81	89	82	26
Turkmenistan	6.1	..	..	..	..	..	..	..	..	99	51
Uganda	5.7	..	85	19.7	19.0	..	54	82	98	160	134
Ukraine	9.0	..	..	..	4.1	94	105	..	99	25	24
United Arab Emirates	..	..	..	..	..	103	100	104	101	15	8
United Kingdom	6.1	..	..	..	..	..	..	102	101	10	6
United States	5.4	..	..	..	1.1	..	..	100	100	11	8
Uruguay	5.0 ^e	..	25	..	6.0	94	93	..	106	23	12
Uzbekistan	7.2	..	..	..	..	..	98	94	98 ^f	74	43
Venezuela, RB	3.3	..	35	..	..	43	96	105	103	33	21
Vietnam	7.1	..	74	36.9	26.7	..	92	..	97	53	17
West Bank and Gaza	..	..	38	..	..	..	89	..	104	40	22
Yemen, Rep.	7.2	..	..	..	..	..	60	..	66	139	100
Zambia	3.6	65	79	21.2	23.3	..	84	..	96	180	182
Zimbabwe	4.6	..	62	8.0	14.0	97	81	92	96	76	105
World	.. w	.. w	.. w	.. w	23.5 w	79 w	86 w	86 w	95 w	92 w	73 w
Low income	..	..	..	..	35.3	57	73	73	89	143	112
Middle income	..	..	..	..	9.5	93	97	91	99	56	33
Lower middle income	..	..	..	..	10.7	95	97	89	98	60	36
Upper middle income	..	24	..	..	..	88	99	99	100	47	26
Low & middle income	..	..	..	..	24.5	78	85	84	94	101	79
East Asia & Pacific	..	..	..	..	12.9	101	98	89	99	56	29
Europe & Central Asia	..	18	..	..	..	93	95	98	96	49	26
Latin America & Carib.	36	32	..	..	5.1	82	99	99	101	55	26
Middle East & N. Africa	..	..	..	..	..	77	91	82	94	77	42
South Asia	..	..	..	..	41.0	62	80	70	90	123	83
Sub-Saharan Africa	..	..	..	..	27.0	51	60	79	86	184	157
High income	..	..	..	..	..	..	97	100	100	12	7
Euro area	..	12	..	..	..	100	..	101	..	9	4

a. Because of the change from International Standard Classification of Education 1976 (ISCED76) to ISCED97 in 1998, data before 1998 are not fully comparable with data from 1999 onward. b. Data are for the most recent year available. c. See table 2.8 for survey year and whether share is based on income or consumption expenditure. d. Provisional data. e. Urban data. f. Data are for 2007. g. Includes Montenegro.

Millennium Development Goals: eradicating poverty and saving lives

1.2

WORLD VIEW

About the data

This table and the two following present indicators for 17 of the 21 targets specified by the Millennium Development Goals. Each of the eight goals includes one or more targets, and each target has several associated indicators for monitoring progress toward the target. Most of the targets are set as a value of a specific indicator to be attained by a certain date. In some cases the target value is set relative to a level in 1990. In others it is set at an absolute level. Some of the targets for goals 7 and 8 have not yet been quantified.

The indicators in this table relate to goals 1–4. Goal 1 has three targets between 1990 and 2015: to reduce by half the proportion of people whose income is less than \$1 a day, to achieve full and productive employment and decent work for all, and to reduce by half the proportion of people who suffer from hunger. Estimates of poverty rates are in table 2.7. The indicator shown here, the share of the poorest quintile in national consumption, is a distributional measure. Countries with more unequal distributions of consumption (or income) have a higher rate of poverty for a given average income. Vulnerable employment measures the portion of the labor force that receives the lowest wages and least security in employment. No single indicator captures the concept of suffering from hunger. Child malnutrition is a symptom of inadequate food supply, lack of essential nutrients, illnesses that deplete these nutrients, and

undernourished mothers who give birth to underweight children.

Progress toward universal primary education is measured by the primary completion rate. Because many school systems do not record school completion on a consistent basis, it is estimated from the gross enrollment rate in the final grade of primary school, adjusted for repetition. Official enrollments sometimes differ significantly from attendance, and even school systems with high average enrollment ratios may have poor completion rates.

Eliminating gender disparities in education would help to increase the status and capabilities of women. The ratio of female to male enrollments in primary and secondary school provides an imperfect measure of the relative accessibility of schooling for girls.

The targets for reducing under-five mortality rates are among the most challenging. Under-five mortality rates are harmonized estimates produced by a weighted least squares regression model and are available at regular intervals for most countries.

Most of the 60 indicators relating to the Millennium Development Goals can be found in *World Development Indicators*. Table 1.2a shows where to find the indicators for the first four goals. For more information about data collection methods and limitations, see *About the data* for the tables listed there. For information about the indicators for goals 5, 6, 7, and 8, see *About the data* for tables 1.3 and 1.4.

Definitions

• **Share of poorest quintile in national consumption or income** is the share of the poorest 20 percent of the population in consumption or, in some cases, income. • **Vulnerable employment** is the sum of unpaid family workers and own-account workers as a percentage of total employment. • **Prevalence of malnutrition** is the percentage of children under age five whose weight for age is more than two standard deviations below the median for the international reference population ages 0–59 months. The data are based on the new international child growth standards for infants and young children, called the Child Growth Standards, released in 2006 by the World Health Organization. • **Primary completion rate** is the percentage of students completing the last year of primary school. It is calculated as the total number of students in the last grade of primary school, minus the number of repeaters in that grade, divided by the total number of children of official graduation age. • **Ratio of girls to boys enrollments in primary and secondary school** is the ratio of the female to male gross enrollment rate in primary and secondary school. • **Under-five mortality rate** is the probability that a newborn baby will die before reaching age five, if subject to current age-specific mortality rates. The probability is expressed as a rate per 1,000.

Location of indicators for Millennium Development Goals 1–4

1.2a

Goal 1. Eradicate extreme poverty and hunger

1.1 Proportion of population below \$1 a day	2.7*
1.2 Poverty gap ratio	2.7
1.3 Share of poorest quintile in national consumption	1.2, 2.8
1.4 Growth rate of GDP per person employed	2.4*
1.5 Employment to population ratio	2.4
1.6 Proportion of employed people living below \$1 per day	—
1.7 Proportion of own-account and unpaid family workers in total employment	1.2, 2.4
1.8 Prevalence of underweight in children under age five	1.2, 2.18, 2.20
1.9 Proportion of population below minimum level of dietary energy consumption	2.18

Goal 2. Achieve universal primary education

2.1 Net enrollment ratio in primary education	2.11
2.2 Proportion of pupils starting grade 1 who reach last grade of primary	2.12
2.3 Literacy rate of 15- to 24-year-olds	2.13

Goal 3. Promote gender equality and empower women

3.1 Ratio of girls to boys in primary, secondary, and tertiary education	1.2, 2.11*
3.2 Share of women in wage employment in the nonagricultural sector	1.5, 2.3*
3.3 Proportion of seats held by women in national parliament	1.5

Goal 4. Reduce child mortality

4.1 Under-five mortality rate	1.2, 2.20, 2.21
4.2 Infant mortality rate	2.20, 2.21
4.3 Proportion of one-year-old children immunized against measles	2.16, 2.20

— No data are available in the *World Development Indicators* database. * Table shows information on related indicators.

Data sources

The indicators here and throughout this book have been compiled by World Bank staff from primary and secondary sources. Data on primary school completion rates are provided by the United Nations Educational, Scientific, and Cultural Organization Institute of Statistics and national sources. Efforts have been made to harmonize the data series used to compile this table with those published on the United Nations Millennium Development Goals Web site (www.un.org/millenniumgoals), but some differences in timing, sources, and definitions remain.



1.3

Millennium Development Goals: protecting our common environment

	Improve maternal health			Combat HIV/AIDS and other diseases		Ensure environmental sustainability					Develop a global partnership for development
	Maternal mortality ratio Modeled estimate per 100,000 live births 2005	Contraceptive prevalence rate		HIV prevalence % of population ages 15–49 2005	Incidence of tuberculosis per 100,000 people 2006	Carbon dioxide emissions per capita metric tons		Proportion of species threatened with extinction % 2007	Access to improved sanitation facilities		Fixed-line and mobile phone subscribers per 100 people ^a 2006
		% of married women ages 15–49 1990	2000–06 ^b			1990	2004		1990	2004	
Afghanistan	..	..	..	..	..	..	..	0.8	..	..	10
Albania	92	..	60	0.2	19	2.2	1.2	1.3	..	91	60
Algeria	180	47	61	0.1	56	3.0	6.0	2.0	88	92	71
Angola	1,400	..	6	3.7	285	0.4	0.5	1.4	29	31	14
Argentina	77	..	..	0.6	39	3.4	3.7	1.8	81	91	105
Armenia	76	..	53	0.1	72	1.2	1.2	0.9	..	83	30
Australia	4	..	..	0.1	6	16.3	16.2	3.7	100	100	143
Austria	4	..	..	0.3	13	7.5	8.5	1.8	100	100	155
Azerbaijan	82	..	55	0.1	77	7.5	3.8	0.8	..	54	53
Bangladesh	570	40	58	<0.1	225	0.1	0.2	1.8	20	39	13
Belarus	18	..	73	0.3	61	10.6	6.6	..	..	84	96
Belgium	8	78	..	0.3	13	10.1	9.7	1.4	..	..	136
Benin	840	..	17	1.8	90	0.1	0.3	1.5	12	33	13
Bolivia	290	30	58	0.1	198	0.8	0.8	0.8	33	46	36
Bosnia and Herzegovina	3	..	36	<0.1	51	1.6	4.0	14.4	..	95	73
Botswana	380	33	44	24.1	551	1.6	2.4	0.6	38	42	60
Brazil	110	59	..	0.5	50	1.4	1.8	1.2	71	75	73
Bulgaria	11	..	..	<0.1	40	8.6	5.5	1.2	99	99	138
Burkina Faso	700	..	17	2.0	248	0.1	0.1	0.9	7	13	8
Burundi	1,100	..	9	3.3	367	0.0	0.0	1.6	44	36	2
Cambodia	540	..	40	1.6	500	0.0	0.0	17.4	..	17	8
Cameroon	1,000	16	29	5.5 ^c	192	0.1	0.2	5.4	48	51	13
Canada	7	..	..	0.3	5	15.0	20.0	2.0	100	100	117
Central African Republic	980	..	19	10.7	345	0.1	0.1	0.7	23	27	3
Chad	1,500	..	3	3.5	299	0.0	0.0	1.0	7	9	5
Chile	16	56	..	0.3	15	2.7	3.9	2.3	84	91	96
China	45	85	87	0.1 ^d	99	2.1	3.9	2.3	23	44	63
Hong Kong, China	..	86	..	..	62	4.6	5.5	11.8	..	..	193
Colombia	130	66	78	0.6	45	1.7	1.2	1.1	82	86	83
Congo, Dem. Rep.	1,100	8	21 ^e	3.2	392	0.1	0.0	2.5	16	30	7
Congo, Rep.	740	..	44	5.3	403	0.5	1.0	1.1	..	27	14
Costa Rica	30	..	96	0.3	14	0.9	1.5	1.8	..	92	64
Côte d'Ivoire	810	..	13	7.1	420	0.4	0.3	3.9	21	37	23
Croatia	7	..	69	<0.1	40	5.1	5.3	1.7	100	100	142
Cuba	45	..	73	0.1	9	3.0	2.3	4.0	98	98	10
Czech Republic	4	78	..	0.1	10	15.6	11.5	1.8	99	98	147
Denmark	3	78	..	0.2	8	9.7	9.8	1.6	..	..	164
Dominican Republic	150	56	61	1.1	89	1.3	2.1	1.9	52	78	57
Ecuador	210	53	73	0.3	128	1.6	2.3	10.3	63	89	78
Egypt, Arab Rep.	130	47	59	<0.1	24	1.4	2.2	2.3	54	70	39
El Salvador	170	47	67	0.9	50	0.5	0.9	1.6	51	62	72
Eritrea	450	..	8	2.4	94	..	0.2	6.8	7	9	2
Estonia	25	..	..	1.3	39	18.1	14.0	0.7	97	97	164
Ethiopia	720	4	15	1.4 ^f	378	0.1	0.1	1.4	3	13	2
Finland	7	77	..	0.1	5	10.3	12.6	1.2	100	100	144
France	8	81	..	0.4	14	6.4	6.2	2.3	..	..	140
Gabon	520	..	33	7.9	354	6.5	1.1	2.0	..	36	61
Gambia, The	690	12	18	2.4	257	0.2	0.2	2.1	..	53	27
Georgia	66	..	47	0.2	84	3.2	0.9	1.0	97	94	51
Germany	4	75	..	0.1	6	12.3	9.8	2.2	100	100	168
Ghana	560	13	17	2.3	203	0.2	0.3	3.7	15	18	24
Greece	3	..	..	0.2	18	7.1	8.7	1.9	..	..	155
Guatemala	290	..	43	0.9	79	0.6	1.0	2.3	58	86	65
Guinea	910	..	9	1.5	265	0.2	0.2	2.2	14	18	2
Guinea-Bissau	1,100	..	10	3.8	219	0.2	0.2	2.1	..	35	7
Haiti	670	10	32	2.2 ^g	299	0.1	0.2	2.2	24	30	7

Millennium Development Goals: protecting our common environment

1.3

WORLD VIEW

	Improve maternal health			Combat HIV/AIDS and other diseases		Ensure environmental sustainability					Develop a global partnership for development
	Maternal mortality ratio Modeled estimate per 100,000 live births	Contraceptive prevalence rate		HIV prevalence % of population ages 15–49	Incidence of tuberculosis per 100,000 people	Carbon dioxide emissions per capita metric tons		Proportion of species threatened with extinction %	Access to improved sanitation facilities % of population		Fixed-line and mobile phone subscribers per 100 people ^a
		% of married women ages 15–49									
		2005	1990			2000–06 ^b	2005		2006	1990		2004	2007	1990	2004	2006
Honduras	280	47	65	1.5	76	0.5	1.1	3.2	50	69	42
Hungary	6	..	..	0.1	19	5.8	5.7	2.1	..	95	132
India	450	43	56	0.9	168	0.8	1.2	2.8	14	33	19
Indonesia	420	50	57	0.1	234	1.2	1.7	2.7	46	55	35
Iran, Islamic Rep.	140	49	74	0.2	22	4.0	6.4	0.9	83	..	51
Iraq	..	14	..	..	..	2.6	..	8.0	81	..	6
Ireland	1	60	..	0.2	13	8.7	10.4	1.1	..	..	159
Israel	4	68	..	0.2	8	7.1	10.5	2.7	..	..	162
Italy	3	..	..	0.5	7	6.9	7.7	2.2	..	..	165
Jamaica	170	55	69	1.5	7	3.3	4.0	7.4	75	80	118
Japan	6	58	56	<0.1	22	8.7	9.8	3.2	100	100	123
Jordan	62	40	56	0.2	5	3.2	3.1	1.7	93	93	90
Kazakhstan	140	..	51	0.1	130	17.6	13.3	1.1	72	72	70
Kenya	560	27	39	6.1	384	0.2	0.3	3.4	40	43	19
Korea, Dem. Rep.	370	62	..	0.2	178	12.1	3.4	1.4	..	59	..
Korea, Rep.	14	79	..	<0.1	88	5.6	9.7	1.6	..	..	139
Kuwait	4	..	..	0.2	24	20.4	40.4	..	..	..	114
Kyrgyz Republic	150	..	48	0.1	123	2.8	1.1	0.8	60	59	19
Lao PDR	660	..	32	0.1	152	0.1	0.2	1.1	..	30	13
Latvia	10	..	..	0.8	57	5.4	3.1	1.5	..	78	124
Lebanon	150	..	58	0.1	11	3.1	4.1	1.1	..	98	44
Lesotho	960	23	37	23.4 ^c	635	..	..	0.6	37	37	15
Liberia	1,200	..	10	..	331	0.2	0.1	3.6	39	27	..
Libya	97	..	..	0.2	18	8.7	10.3	1.4	97	97	73
Lithuania	11	..	..	0.2	62	6.6	3.9	..	..	..	162
Macedonia, FYR	10	..	14	<0.1	29	8.1	5.1	0.9	..	..	94
Madagascar	510	17	27	0.5	248	0.1	0.2	5.5	14	32	6
Malawi	1,100	13	42	14.1	377	0.1	0.1	3.3	47	61	4
Malaysia	62	50	..	0.5	103	3.1	7.0	5.5	..	94	91
Mali	970	..	8	1.7	280	0.1	0.1	1.1	36	46	13
Mauritania	820	3	8	0.7	316	1.4	0.9	..	31	34	36
Mauritius	15	75	76	0.6	23	1.4	2.6	17.0	..	94	90
Mexico	60	..	71	0.3	21	5.0	4.3	3.0	58	79	74
Moldova	22	..	68	1.1	141	5.4	2.0	1.4	..	68	62
Mongolia	46	..	66	<0.1	188	4.7	3.4	1.1	..	59	28
Morocco	240	42	63	0.1	93	1.0	1.4	1.8	56	73	57
Mozambique	520	..	17	16.1	443	0.1	0.1	2.1	20	32	11
Myanmar	380	17	34	1.3	171	0.1	0.2	1.9	24	77	1
Namibia	210	29	44	19.6	767	0.0	1.2	2.0	24	25	31
Nepal	830	23	48	0.5	176	0.0	0.1	1.1	11	35	6
Netherlands	6	76	..	0.2	8	9.4	8.7	1.5	100	100	144
New Zealand	9	..	..	0.1	9	6.6	7.7	5.2	..	..	127
Nicaragua	170	..	69	0.2	58	0.6	0.7	1.2	45	47	38
Niger	1,800	4	11	1.1	174	0.1	0.1	1.1	7	13	3
Nigeria	1,100	6	13	3.9	311	0.5	0.8	4.2	39	44	24
Norway	7	74	..	0.1	6	7.8	19.1	1.5	..	..	152
Oman	64	9	32	0.2	13	5.6	12.5	3.2	83	..	82
Pakistan	320	15	28	0.1	181	0.6	0.8	1.4	37	59	25
Panama	130	..	..	0.9	45	1.3	1.8	2.8	71	73	67
Papua New Guinea	470	..	..	1.8	250	0.6	0.4	2.4	44	44	2
Paraguay	150	48	73	0.4	71	0.5	0.7	0.6	58	80	59
Peru	240	59	46	0.6	162	1.0	1.2	2.6	52	63	39
Philippines	230	36	49	<0.1	287	0.7	1.0	4.8	57	72	54
Poland	8	49	..	0.1	25	9.1	8.0	1.4	..	..	126
Portugal	11	..	..	0.4	32	4.3	5.6	2.9	..	..	155
Puerto Rico	18	..	..	..	5	3.3	0.5	3.5	..	..	112



1.3

Millennium Development Goals: protecting our common environment

	Improve maternal health			Combat HIV/AIDS and other diseases		Ensure environmental sustainability					Develop a global partnership for development
	Maternal mortality ratio Modeled estimate per 100,000 live births 2005	Contraceptive prevalence rate % of married women ages 15–49 1990 2000–06 ^b		HIV prevalence % of population ages 15–49 2005	Incidence of tuberculosis per 100,000 people 2006	Carbon dioxide emissions per capita metric tons 1990 2004		Proportion of species threatened with extinction % 2007	Access to improved sanitation facilities % of population 1990 2004		Fixed-line and mobile phone subscribers per 100 people ^a 2006
Romania	24	..	70	<0.1	128	6.7	4.2	1.7	..	..	100
Russian Federation	28	34	..	1.1	107	15.3	10.6	1.3	87	87	112
Rwanda	1,300	21	17	3.0 ^f	397	0.1	0.1	1.6	37	42	3
Saudi Arabia	18	..	..	0.2	44	15.6	13.7	1.9	91	99	100
Senegal	980	..	12	0.7 ^f	270	0.4	0.4	2.1	33	57	27
Serbia	14 ^h	..	41	0.2 ^h	32 ^h	12.4	6.6	2.0 ^h	87 ^h	87 ^h	99
Sierra Leone	2,100	..	5	1.6	517	0.1	0.2	3.3	..	39	..
Singapore	14	65	..	0.3	26	14.8	12.3	3.6	100	100	148
Slovak Republic	6	74	..	<0.1	15	9.7	6.7	1.3	99	99	112
Slovenia	6	..	..	<0.1	13	9.0	8.1	..	..	..	132
Somalia	1,400	1	15	0.9	218	0.0	..	1.9	..	26	7
South Africa	400	57	60	18.8	940	9.4	9.4	1.6	69	65	83
Spain	4	..	..	0.6	30	5.5	7.7	3.8	100	100	146
Sri Lanka	58	..	70	<0.1	60	0.2	0.6	12.0	69	91	37
Sudan	450	9	8	1.6	242	0.2	0.3	1.5	33	34	14
Swaziland	390	20	48	33.4	1,155	0.6	0.9	0.8	..	48	26
Sweden	3	..	..	0.2	6	5.8	5.9	1.4	100	100	165
Switzerland	5	..	..	0.4	7	6.4	5.5	1.3	100	100	166
Syrian Arab Republic	130	..	58	0.2	32	2.8	3.7	1.7	73	90	41
Tajikistan	170	..	38	0.1	204	4.4	0.8	0.8	..	51	8
Tanzania	950	10	26	6.5	312	0.1	0.1	4.7	47	47	15
Thailand	110	..	77	1.4	142	1.8	4.3	1.9	80	99	75
Timor-Leste	380	..	10	0.2	556	..	0.2	..	..	36	..
Togo	510	34	17	3.2	389	0.2	0.4	1.1	37	35	12
Trinidad and Tobago	45	..	43	2.6	8	13.8	24.7	1.4	100	100	149
Tunisia	100	50	63	0.1	25	1.6	2.3	2.0	75	85	85
Turkey	44	63	71	0.2	29	2.6	3.2	1.3	85	88	98
Turkmenistan	130	..	48	<0.1	65	8.7	8.7	11.2	..	62	10
Uganda	550	5	24	6.4 ⁱ	355	0.0	0.1	2.7	42	43	7
Ukraine	18	..	66	1.4	106	13.2	6.9	1.1	..	96	131
United Arab Emirates	37	..	..	0.2	16	30.8	37.8	..	97	98	161
United Kingdom	8	..	84	0.2	15	10.1	9.8	2.2	..	..	171
United States	11	71	..	0.6	4	19.3	20.6	5.7	100	100	135
Uruguay	20	..	..	0.5	27	1.3	1.7	2.4	100	100	100
Uzbekistan	24	..	65	0.2	121	6.3	5.3	0.9	51	67	10
Venezuela, RB	57	..	..	0.7	41	5.9	6.6	1.0	..	68	85
Vietnam	150	53	76	0.5 ^f	173	0.3	1.2	2.6	36	61	31
West Bank and Gaza	..	..	50	..	20	..	..	..	..	73	31
Yemen, Rep.	430	10	23	0.2	78	0.8	1.0	9.8	32	43	14
Zambia	830	15	34	17.0	553	0.3	0.2	0.8	44	55	15
Zimbabwe	880	43	60	18.1 ^g	557	1.6	0.8	1.0	50	53	9
World	400 w	57 w	60 w	1.0 w	139 w	4.3 w	4.5 w		45 w	57 w	59 w
Low income	650	33	44	1.7	221	0.8	0.9		21	38	17
Middle income	160	68	75	0.7	114	3.6	4.0		47	62	66
Lower middle income	180	73	76	0.3	116	2.3	3.4		37	55	60
Upper middle income	97	51	..	1.7	109	6.9	5.6		77	81	88
Low & middle income	440	54	60	1.1	161	2.4	2.6		36	51	44
East Asia & Pacific	150	75	79	0.2	135	1.9	3.3		30	51	58
Europe & Central Asia	43	46	63	0.6	82	10.3	7.1		84	85	88
Latin America & Carib.	130	57	69	0.6	57	2.4	2.5		67	77	73
Middle East & N. Africa	200	41	60	0.1	42	2.5	3.9		70	76	53
South Asia	500	40	53	0.7	174	0.7	1.0		17	37	19
Sub-Saharan Africa	900	15	22	5.8	368	0.9	0.9		31	37	15
High income	9	71	..	0.4	16	11.9	13.2		100	100	143
Euro area	5	..	..	0.3	13	8.4	8.2		100	100	153

a. Data are from the International Telecommunication Union's World Telecommunication Development Report database. b. Data are for the most recent year available. c. Survey data, 2004. d. Includes Hong Kong, China. e. Data are for 2007. f. Survey data, 2005. g. Survey data, 2005–06. h. Includes Montenegro. i. Survey data, 2004–05.

Millennium Development Goals: protecting our common environment

1.3

WORLD VIEW

About the data

The Millennium Development Goals address concerns common to all economies. Diseases and environmental degradation do not respect national boundaries. Epidemic diseases, wherever they occur, pose a threat to people everywhere. And environmental damage in one location may affect the well-being of plants, animals, and humans far away. The indicators in the table relate to goals 5, 6, and 7 and the targets of goal 8 that address access to new technologies. For the other targets of goal 8, see table 1.4.

The target of achieving universal access to reproductive health has been added to goal 5 to address the importance of family planning and health service in improving maternal health and preventing maternal death. Women with multiple pregnancies are more likely to die in childbirth. Access to contraception is an important way to limit and space births.

Measuring the prevalence or incidence of a disease can be difficult. Most developing economies lack reporting systems for monitoring diseases. Estimates are often derived from surveys and reports from sentinel sites that must be extrapolated to the general population. Tracking diseases such as

HIV/AIDS, which has a long latency between contraction of the virus and the appearance of symptoms, or malaria, which has periods of dormancy, can be particularly difficult. The table shows the estimated prevalence of HIV among adults ages 15–49. Prevalence among older populations can be affected by life-prolonging treatment. The incidence of tuberculosis is based on case notifications and estimates of cases detected in the population.

Carbon dioxide emissions are the primary source of greenhouse gases, which contribute to global warming, threatening human and natural habitats. In recognition of the vulnerability of animal and plant species, a new target of reducing biodiversity loss has been added to goal 7.

Access to reliable supplies of safe drinking water and sanitary disposal of excreta are two of the most important means of improving human health and protecting the environment. Improved sanitation facilities prevent human, animal, and insect contact with excreta.

Fixed telephone lines and mobile phones are among the telecommunications technologies that are changing the way the global economy works.

Definitions

- **Maternal mortality ratio** is the number of women who die from pregnancy-related causes during pregnancy and childbirth, per 100,000 live births. Data are from various years and adjusted to a common 2000 base year. The values are modeled estimates (see *About the data* for table 2.17).
- **Contraceptive prevalence rate** is the percentage of women ages 15–49 married or in-union who are practicing, or whose sexual partners are practicing, any form of contraception.
- **HIV prevalence** is the percentage of people ages 15–49 who are infected with HIV.
- **Incidence of tuberculosis** is the estimated number of new tuberculosis cases (pulmonary, smear positive, and extrapulmonary).
- **Carbon dioxide emissions** are those stemming from the burning of fossil fuels and the manufacture of cement. They include emissions produced during consumption of solid, liquid, and gas fuels and gas flaring (see table 3.8).
- **Proportion of species threatened with extinction** is the total number of threatened mammal (excluding whales and porpoises), bird, and higher native, vascular plant species as a percentage of the total number of known species of the same categories.
- **Access to improved sanitation facilities** is the percentage of the population with at least adequate access to excreta disposal facilities (private or shared, but not public) that can effectively prevent human, animal, and insect contact with excreta (facilities do not have to include treatment to render sewage outflows innocuous). Improved facilities range from simple but protected pit latrines to flush toilets with a sewerage connection. To be effective, facilities must be correctly constructed and properly maintained.
- **Fixed-line and mobile phone subscribers** are telephone mainlines connecting a customer's equipment to the public switched telephone network and users of portable telephones subscribing to an automatic public mobile telephone service using cellular technology that provides access to the public switched telephone network.

Location of indicators for Millennium Development Goals 5–7

1.3a

Goal 5. Improve maternal health

5.1	Maternal mortality ratio	1.3, 2.17
5.2	Proportion of births attended by skilled health personnel	2.17, 2.20
5.3	Contraceptive prevalence rate	1.3, 2.17, 2.20
5.4	Adolescent fertility rate	2.17
5.5	Antenatal care coverage	1.5, 2.17, 2.20
5.6	Unmet need for family planning	2.17

Goal 6. Combat HIV/AIDS, malaria, and other diseases

6.1	HIV prevalence among pregnant women ages 15–24	1.3*, 2.19*
6.2	Condom use at last high-risk sex	2.19*
6.3	Proportion of population ages 15–24 with comprehensive correct knowledge of HIV/AIDS	—
6.4	Ratio of school attendance of orphans to school attendance of nonorphans ages 10–14	—
6.5	Proportion of population with advanced HIV infection with access to antiretroviral drugs	—
6.6	Incidence and death rates associated with malaria	—
6.7	Proportion of children under age 5 sleeping under insecticide-treated bednets and proportion of children under age 5 with fever who are treated with appropriate antimalarial drugs	2.16
6.8	Incidence, prevalence, and death rates associated with tuberculosis	1.3, 2.19
6.9	Proportion of tuberculosis cases detected and cured under directly observed treatment short course	2.16

Goal 7. Ensure environmental sustainability

7.1	Proportion of land area covered by forest	3.1
7.2	Carbon dioxide emissions, total, per capita, and per \$1 GDP, and consumption of ozone-depleting substances	3.8
7.3	Proportion of fish stocks within safe biological limits	—
7.4	Proportion of total water resources used	3.5
7.5	Proportion of terrestrial and marine areas protected	3.4
7.6	Proportion of species threatened with extinction	1.3
7.7	Proportion of population using and improved drinking water source	1.3, 2.16, 3.5
7.8	Proportion of population using an improved sanitation facility	1.3, 2.16, 3.11
7.9	Proportion of urban population living in slums	—

— No data are available in the *World Development Indicators* database. * Table shows information on related indicators.

Data sources

The indicators here and throughout this book have been compiled by World Bank staff from primary and secondary sources. Efforts have been made to harmonize the data series used to compile this table with those published on the United Nations Millennium Development Goals Web site (www.un.org/millenniumgoals), but some differences in timing, sources, and definitions remain.



1.4

Millennium Development Goals: overcoming obstacles

Development Assistance Committee members

	Official development assistance (ODA) by donor		Least developed countries' access to high-income markets								Support to agriculture
	Net % of donor GNI	For basic social services ^a % of total sector-allocable ODA	Goods (excluding arms) admitted free of tariffs		Average tariff on exports of least developed countries						% of GDP 2006 ^b
			1999	2005	Agricultural products		Textiles		Clothing		
					1999	2005	1999	2005	1999	2005	
2006	2006	1999	2005	1999	2005	1999	2005	1999	2005		
Australia	0.30	15.4	96.3	100.0	13.7	0.0	6.3	0.0	25.5	0.0	0.22
Canada	0.29	24.3	45.7	99.7	9.3	0.7	7.5	0.2	19.8	1.7	0.80
European Union			96.9	97.8	1.0	1.2	0.0	0.1	0.0	1.2	1.10
Austria	0.47	14.9									
Belgium	0.50	18.5									
Denmark	0.80	26.8									
Finland	0.40	15.7									
France	0.47	11.1									
Germany	0.36	13.3									
Greece	0.17	16.4									
Ireland	0.54	22.8									
Italy	0.20	11.6									
Luxembourg	0.89	26.3									
Netherlands	0.81	42.6									
Portugal	0.21	4.8									
Spain	0.32	13.4									
Sweden	1.02	13.6									
United Kingdom	0.21	12.9									
Japan	0.25	18.6	58.0	23.2	3.7	2.5	5.1	2.8	0.4	0.1	1.11
New Zealand ^c	0.27	21.0	93.8	99.2	0.0	6.7	9.6	0.0	13.0	0.0	0.25
Norway	0.89	11.9	97.5	99.1	3.3	0.4	4.8	0.0	1.5	1.0	0.99
Switzerland	0.39	8.8	99.9	96.7	1.5	0.9	0.0	0.0	0.0	0.0	1.46
United States	0.18	13.5	53.4	76.7	9.4	7.9	7.1	5.7	14.3	11.7	0.73

Heavily indebted poor countries (HIPC)

	HIPC decision point ^d	HIPC completion point ^d	HIPC Initiative assistance ^e	MDRI assistance ^f		HIPC decision point ^d	HIPC completion point ^d	HIPC Initiative assistance ^e	MDRI assistance ^f
			\$ millions	\$ millions				\$ millions	\$ millions
Afghanistan	Jul. 2007	Floating	546	..	Haiti	Nov. 2006	Floating	140	..
Benin	Jul. 2000	Mar. 2003	344	570	Honduras	Jul. 2000	Apr. 2005	729	1,474
Bolivia ^g	Feb. 2000	Jun. 2001	1,752	1,526	Madagascar	Dec. 2000	Oct. 2004	1,096	1,205
Burkina Faso ^{g,h}	Jul. 2000	Apr. 2002	725	564	Malawi ^h	Dec. 2000	Aug. 2006	1,278	662
Burundi	Aug. 2005	Floating	864	..	Mali ^g	Sep. 2000	Mar. 2003	707	982
Cameroon	Oct. 2000	Apr. 2006	1,662	687	Mauritania	Feb. 2000	Jun. 2002	816	422
Central African Republic	Sep. 2007	Floating	583	..	Mozambique ^g	Apr. 2000	Sep. 2001	2,758	1,004
Chad	May 2001	Floating	214	..	Nicaragua	Dec. 2000	Jan. 2004	4,340	900
Congo, Dem. Rep.	Jul. 2003	Floating	7,229	..	Niger ^h	Dec. 2000	Apr. 2004	853	477
Congo, Rep.	Apr. 2006	Floating	1,757	..	Rwanda ^h	Dec. 2000	Apr. 2005	872	200
Ethiopia ^h	Nov. 2001	Apr. 2004	2,446	1,366	São Tomé & Príncipe ^h	Dec. 2000	Mar. 2007	156	22
Gambia, The	Dec. 2000	Dec. 2007	81	201	Senegal	Jun. 2000	Apr. 2004	641	1,298
Ghana	Feb. 2002	Jul. 2004	2,742	1,938	Sierra Leone	Mar. 2002	Dec. 2006	809	316
Guinea	Dec. 2000	Floating	716	..	Tanzania	Apr. 2000	Nov. 2001	2,658	1,907
Guinea-Bissau	Dec. 2000	Floating	546	..	Uganda ^g	Feb. 2000	May 2000	1,349	1,713
Guyana ^g	Nov. 2002	Dec. 2003	824	382	Zambia	Dec. 2000	Apr. 2005	3,279	1,437

a. Includes basic health, education, nutrition, and water and sanitation services. b. Preliminary. c. Estimates of market access for least developed countries are calculated by World Bank staff using the World Integrated Trade Solution based on the United Nations Conference on Trade and Development's Trade Analysis and Information Systems database. d. Refers to the Enhanced HIPC Initiative. e. Total HIPC assistance (committed debt relief) assuming full participation of creditors, in end-2006 net present value terms. Topping-up assistance and assistance provided under the original HIPC Initiative were committed in net present value terms as of the decision point and are converted to end-2006 terms. f. Multilateral Debt Relief Initiative (MDRI) assistance has been delivered in full to all post-completion point countries, shown in end-2006 net present value terms. g. Also reached completion point under the original HIPC Initiative. The assistance includes original debt relief. h. Assistance includes topping up at completion point.

Millennium Development Goals: overcoming obstacles

1.4

WORLD VIEW

About the data

Achieving the Millennium Development Goals requires an open, rule-based global economy in which all countries, rich and poor, participate. Many poor countries, lacking the resources to finance development, burdened by unsustainable debt, and unable to compete globally, need assistance from rich countries. For goal 8—develop a global partnership for development—many indicators therefore monitor the actions of members of the Organisation for Economic Co-operation and Development's (OECD) Development Assistance Committee (DAC).

Official development assistance (ODA) has risen in recent years as a share of donor countries' gross national income (GNI), but the poorest countries need additional assistance to achieve the Millennium Development Goals. After rising to a record \$106 billion in 2005, ODA fell 4.5 percent in 2006 to \$104 billion in nominal terms.

One important action that high-income economies can take is to reduce barriers to low- and middle-income economy exports. The European Union has begun to eliminate tariffs on developing country exports of "everything but arms," and the United States offers special concessions to Sub-Saharan African exports. However, these programs still have many restrictions.

Average tariffs in the table reflect high-income OECD member tariff schedules for exports of countries designated least developed countries by the United Nations. Agricultural commodities, textiles, and clothing are three of the most important exports of developing economies. Although average tariffs have been

falling, averages may disguise high tariffs on specific goods (see table 6.7 for each country's share of tariff lines with "international peaks"). The averages in the table include ad valorem duties and equivalents.

Subsidies to agricultural producers and exporters in OECD countries are another barrier to developing economies' exports. The table shows the total support to agriculture as a share of the economy's gross domestic product (GDP). Agricultural subsidies in OECD economies are estimated at \$372 billion in 2006.

The Debt Initiative for Heavily Indebted Poor Countries (HIPC), an important step in placing debt relief within the framework of poverty reduction, is the first comprehensive approach to reducing the external debt of the world's poorest, most heavily indebted countries. A 1999 review led to an enhancement of the framework. In 2005, to further reduce the debt of HIPCs and provide resources for meeting the Millennium Development Goals, the Multilateral Debt Relief Initiative (MDRI), proposed by the Group of Eight countries, was launched. Under the MDRI the International Development Association (IDA), International Monetary Fund (IMF), and African Development Fund (AfDF) provide 100 percent debt relief on eligible debts due to them from countries that completed the HIPC Initiative process. Debt relief under the two initiatives is expected to reduce the debt stocks of the 32 HIPCs that have reached the decision point by almost 90 percent. Twenty-two countries have reached the completion point and have received nearly \$45 billion in HIPC Initiative assistance and \$42 billion in MDRI assistance in nominal terms.

Definitions

- **Net official development assistance (ODA)** is grants and loans (net of repayments of principal) that meet the DAC definition of ODA and are made to countries and territories on the DAC list of recipient countries.
- **ODA for basic social services** is aid reported by DAC donors for basic health, education, nutrition, and water and sanitation services.
- **Goods admitted free of tariffs** are exports of goods (excluding arms) from least developed countries admitted without tariff as a share of total exports from least developed countries.
- **Average tariff** is the unweighted average of the effectively applied rates for all products subject to tariffs.
- **Agricultural products** are plant and animal products, including tree crops but excluding timber and fish products.
- **Textiles and clothing** are natural and synthetic fibers and fabrics and articles of clothing made from them.
- **Support to agriculture** is the value of gross transfers from taxpayers and consumers arising from policy measures that support agriculture, net of associated budgetary receipts, regardless of their objectives and impacts on farm production and income or consumption of farm products.
- **HIPC decision point** is the date when a heavily indebted poor country with an established track record of good performance under adjustment programs supported by the IMF and the World Bank commits to additional reforms and a poverty reduction strategy.
- **HIPC completion point** is the date when a country successfully completes the key structural reforms agreed on at the decision point, including developing and implementing a poverty reduction strategy. The country then receives the bulk of debt relief under the HIPC Initiative without further policy conditions.
- **HIPC Initiative assistance** is the net present value of debt relief committed as of the decision point and converted to end-2006 values.
- **MDRI assistance** is the net present value of debt relief from IDA, IMF, and AfDF, delivered to countries having reached the HIPC completion point converted to end-2006 values.

Location of indicators for Millennium Development Goal 8

1.4a

Goal 8. Develop a global partnership for development

Table

8.1	Net ODA as a percentage of DAC donors' gross national income	1.4, 6.12
8.2	Proportion of ODA for basic social services	1.4, 6.13b*
8.3	Proportion of ODA that is untied	6.13b
8.4	Proportion of ODA received in landlocked countries as a percentage of GNI	—
8.5	Proportion of ODA received in small island developing states as a percentage of GNI	—
8.6	Proportion of total developed country imports (by value, excluding arms) from least developed countries admitted free of duty	1.4
8.7	Average tariffs imposed by developed countries on agricultural products and textiles and clothing from least developed countries	1.4, 6.7*
8.8	Agricultural support estimate for OECD countries as a percentage of GDP	1.4
8.9	Proportion of ODA provided to help build trade capacity	—
8.10	Number of countries reaching HIPC decision and completion points	1.4
8.11	Debt relief committed under new HIPC initiative	1.4
8.12	Debt services as a percentage of exports of goods and services	6.9*
8.13	Proportion of population with access to affordable, essential drugs on a sustainable basis	—
8.14	Telephone lines per 100 people	1.3*, 5.10
8.15	Cellular subscribers per 100 people	1.3*, 5.10
8.16	Internet users per 100 people	5.11

— No data are available in the *World Development Indicators* database. * Table shows information on related indicators.

Data sources

Data on ODA are from the OECD. Data on goods admitted free of tariffs and average tariffs are from the World Trade Organization, in collaboration with the United Nations Conference on Trade and Development and the International Trade Centre. These data are available electronically at www.mdg-trade.org. Data on subsidies to agriculture are from the OECD's *Producer and Consumer Support Estimates, OECD Database 1986–2006*. Data on the HIPC Initiative and MDRI are from the World Bank's Economic Policy and Debt Department.



1.5

Women in development

	Female population	Life expectancy at birth		Pregnant women receiving prenatal care	Teenage mothers	Women in nonagricultural sector	Unpaid family workers		Women in parliaments	
	% of total 2006	years		% 2000-06 ^a	% of women ages 15-19 2000-06 ^a	% of nonagricultural wage employment 2005	Male % of male employment 2000-05 ^a	Female % of female employment 2000-05 ^a	% of total seats 1990	2007
		Male 2006	Female 2006							
Afghanistan	..	..	..	16	..	..	..	..	4	27
Albania	50.0	73	80	97	..	33	..	..	29	7
Algeria	49.4	71	73	89	..	14	7.2	7.2	2	8
Angola	50.7	41	44	66	..	..	..	..	15	15
Argentina	50.8	71	79	99	..	45	0.7 ^b	1.9 ^b	6	35
Armenia	53.2	68	75	93	5	..	1.1	0.8	36	9
Australia	49.7	79	83	..	..	49	0.2	0.4	6	25
Austria	50.5	77	83	..	..	47	1.0	1.9	12	32
Azerbaijan	51.3	70	75	70	..	49	..	..	..	11
Bangladesh	48.8	63	65	48	33	..	9.9	48.0	10	15
Belarus	53.2	63	74	99	..	53	..	..	..	29
Belgium	50.5	77	82	..	..	45	0.4	3.4	9	35
Benin	49.6	55	57	84	21	..	..	..	3	8
Bolivia	50.1	63	67	79	16	32	12.6	34.8	9	17
Bosnia and Herzegovina	51.2	72	77	99	..	..	..	..	..	14
Botswana	50.3	50	50	97	..	40	2.3	2.2	5	11
Brazil	50.5	69	76	97	..	..	5.4 ^b	9.1 ^b	5	9
Bulgaria	51.0	69	76	..	..	53	0.9	2.2	21	22
Burkina Faso	49.9	50	53	85	23	..	..	..	..	15
Burundi	51.1	48	50	92	..	..	..	..	..	31
Cambodia	51.2	57	61	69	8	52	31.6	53.3	..	10
Cameroon	50.0	50	51	82	28	..	9.5	27.2	14	14
Canada	50.0	78	83	..	..	49	0.1	0.2	13	21
Central African Republic	51.2	43	46	69	..	..	..	..	4	11
Chad	50.3	49	52	39	37	..	..	..	..	7
Chile	50.3	75	81	..	..	38	1.4	3.2	..	15
China	48.2	70	74	90	..	..	..	..	21	20
Hong Kong, China	51.6	79	85	..	..	48	0.2	1.4	..	..
Colombia	50.6	69	76	94	21	48	3.5	7.7	5	8
Congo, Dem. Rep.	50.5	45	47	85 ^c	..	..	..	..	5	8
Congo, Rep.	50.4	54	56	86	27	..	..	..	14	7
Costa Rica	49.0	76	81	92	..	40	1.7	3.5	11	39
Côte d'Ivoire	49.2	47	49	85	..	..	..	..	6	9
Croatia	51.5	73	79	100	4	44	1.1 ^d	3.6 ^d	..	19
Cuba	49.5	76	80	100	..	43	..	..	34	36
Czech Republic	50.8	73	80	..	..	47	0.3	1.3	..	16
Denmark	50.0	76	80	..	..	49	0.2	1.3	31	37
Dominican Republic	49.6	69	75	99	23	38	2.8	4.9	8	20
Ecuador	49.7	72	78	84	..	42	3.0 ^b	9.4 ^b	5	25
Egypt, Arab Rep.	49.8	69	73	70	9	20	9.4	32.2	4	2
El Salvador	50.8	69	75	86	..	35	7.7	7.7	12	17
Eritrea	50.9	55	60	70	14	..	..	..	..	22
Estonia	53.6	67	78	..	..	53	0.3	0.2	..	22
Ethiopia	50.2	51	54	28	17	41	34.6	68.5	..	22
Finland	50.6	76	83	..	..	51	0.6	0.4	32	42
France	50.7	77	84	..	..	48	0.5	1.6	7	19
Gabon	49.9	56	57	94	33	..	..	..	13	13
Gambia, The	49.8	58	60	98	..	..	..	..	8	9
Georgia	52.5	67	75	94	..	49	19.0	39.0	..	9
Germany	50.7	76	82	..	..	47	0.5	1.9	..	32
Ghana	49.3	59	60	92	14	..	..	..	..	11
Greece	49.9	77	82	..	..	41	3.3	11.2	7	16
Guatemala	51.1	66	74	84	..	..	21.3	24.5	7	12
Guinea	49.5	54	57	82	32	..	..	..	..	19
Guinea-Bissau	50.5	45	48	78	..	..	..	..	20	14
Haiti	50.4	59	62	85	14	..	..	..	..	4

Women in development

1.5

WORLD VIEW

	Female population	Life expectancy at birth		Pregnant women receiving prenatal care	Teenage mothers	Women in nonagricultural sector	Unpaid family workers		Women in parliaments	
	% of total 2006	Male 2006	Female 2006	% 2000-06 ^a	% of women ages 15-19 2000-06 ^a	% of nonagricultural wage employment 2005	Male % of male employment 2000-05 ^a	Female % of female employment 2000-05 ^a	% of total seats 1990	% of total seats 2007
Honduras	50.2	66	73	92	22	45	12.1 ^b	8.3 ^b	10	23
Hungary	52.0	69	77	..	..	49	0.3	0.7	21	10
India	48.1	63	66	74	..	18	..	..	5	8
Indonesia	49.9	66	70	92	10	..	..	..	12	11
Iran, Islamic Rep.	49.2	69	72	..	..	..	..	..	2	4
Iraq	..	..	..	84	..	..	..	..	11	26
Ireland	49.8	77	82	..	..	48	0.6	0.9	8	13
Israel	50.1	78	82	..	..	49	0.2	0.5	7	14
Italy	50.7	78	84	..	..	43	1.2	2.8	13	17
Jamaica	50.3	70	73	91	..	47	0.4	2.5	5	13
Japan	50.5	79	86	..	..	41	1.5	8.6	1	9
Jordan	48.5	71	74	99	4	..	..	..	0	6
Kazakhstan	52.1	61	72	100	7	49	1.0	1.3	..	16
Kenya	50.1	52	55	88	23	..	..	..	1	7
Korea, Dem. Rep.	50.6	65	69	..	..	..	..	..	21	20
Korea, Rep.	49.8	75	82	..	..	42	1.3	14.0	2	13
Kuwait	39.8	76	80	..	..	..	..	..	..	2
Kyrgyz Republic	50.6	64	72	97	..	52	9.6	21.8	..	0
Lao PDR	50.1	63	65	27	..	..	..	..	6	25
Latvia	53.6	65	77	..	..	53	2.5	2.1	..	19
Lebanon	50.8	70	74	96	..	..	..	..	0	5
Lesotho	52.9	43	43	90	20	..	..	..	..	24
Liberia	50.0	44	46	85	..	..	..	..	..	13
Libya	48.1	71	77	..	..	..	..	..	..	8
Lithuania	53.1	65	77	..	..	51	2.1	3.9	..	25
Macedonia, FYR	49.9	72	76	98	..	44	6.4	16.7	..	28
Madagascar	50.2	57	61	80	34	46	29.7	51.9	7	8
Malawi	50.3	47	48	92	31	..	..	..	10	14
Malaysia	49.1	72	76	79	..	38	2.2	9.6	5	9
Mali	51.2	52	56	57	40	50	18.4	10.2	..	10
Mauritania	49.3	62	66	64	16	..	..	..	..	18
Mauritius	50.2	70	77	..	..	37	0.9	4.7	7	17
Mexico	51.0	72	77	..	..	39	5.5	11.0	12	23
Moldova	52.0	65	72	98	6	55	0.8	1.4	..	22
Mongolia	50.0	66	69	99	..	53	18.4	31.7	25	7
Morocco	50.7	69	73	68	7	22	22.8	55.7	0	11
Mozambique	51.5	42	43	85	41	..	..	..	16	35
Myanmar	50.3	59	65	76	..	..	..	..	..	..
Namibia	50.6	52	53	91	18	..	12.8	22.0	7	27
Nepal	50.4	63	64	44	19	..	..	..	6	17
Netherlands	50.1	78	82	..	..	47	0.2	1.0	21	37
New Zealand	50.3	78	82	..	..	47	0.4	0.9	14	32
Nicaragua	50.0	70	76	86	25	..	3.1	4.2	15	19
Niger	49.2	57	56	46	39	..	..	..	5	12
Nigeria	50.0	46	47	58	25	21	..	..	..	7
Norway	49.7	78	83	..	..	49	0.2	0.3	36	38
Oman	44.0	74	77	100	..	..	..	..	..	0
Pakistan	48.5	65	66	36	..	10	18.3	52.8	10	21
Panama	49.4	73	78	..	..	43	2.8	5.5	8	17
Papua New Guinea	49.2	55	60	..	..	..	..	..	0	1
Paraguay	49.3	69	74	94	..	..	10.9 ^b	8.7 ^b	6	10
Peru	49.8	69	74	92	26	38	1.6 ^b	7.0 ^b	6	29
Philippines	49.6	69	74	88	8	42	8.9	18.7	9	22
Poland	51.4	71	80	..	..	47	3.8	7.0	14	20
Portugal	51.1	75	82	..	..	47	0.9	2.1	8	21
Puerto Rico	51.6	74	83	..	..	40	0.1	0.9	..	..



1.5

Women in development

	Female population	Life expectancy at birth		Pregnant women receiving prenatal care	Teenage mothers	Women in nonagricultural sector	Unpaid family workers		Women in parliaments	
	% of total 2006	years		% 2000-06 ^a	% of women ages 15-19 2000-06 ^a	% of nonagricultural wage employment 2005	Male % of male employment 2000-05 ^a	Female % of female employment 2000-05 ^a	% of total seats 1990	% of total seats 2007
		Male 2006	Female 2006							
Romania	51.0	69	76	94	..	46	7.8	21.2	34	11
Russian Federation	53.5	59	73	..	..	51	0.1	0.1	..	10
Rwanda	51.8	44	47	94	4	..	..	..	17	49
Saudi Arabia	44.8	71	75	..	..	..	..	..	..	0
Senegal	50.0	61	65	87	19	..	..	..	13	22
Serbia	50.2	70	76	98	..	..	..	..	..	20
Sierra Leone	50.7	41	44	81	..	23	..	..	..	13
Singapore	49.4	78	82	..	..	48	0.3	1.2	5	25
Slovak Republic	51.2	70	78	..	..	51	0.0 ^b	0.1 ^b	..	19
Slovenia	50.9	74	81	..	..	47	3.1	6.4	..	12
Somalia	50.3	47	49	26	..	..	..	..	4	8
South Africa	50.8	49	53	92	..	43	0.4	1.1	3	33
Spain	50.1	78	84	..	..	42	1.1	2.4	15	36
Sri Lanka	50.4	72	78	100	..	40	4.2 ^b	20.9 ^b	5	5
Sudan	49.6	57	60	70	..	..	..	..	..	18
Swaziland	51.6	42	40	90	..	..	..	..	4	11
Sweden	49.6	79	83	..	..	51	0.2	0.2	38	47
Switzerland	50.7	79	84	..	..	47	1.3	2.9	14	30
Syrian Arab Republic	49.4	72	76	84	..	..	10.8	44.2	9	12
Tajikistan	50.3	64	69	77	..	..	..	..	..	18
Tanzania	50.2	51	53	78	26	..	..	..	..	30
Thailand	51.1	66	75	98	..	48	14.7	31.4	3	9
Timor-Leste	49.2	56	58	61	..	..	..	..	..	28
Togo	50.5	56	60	89	..	..	..	..	5	7
Trinidad and Tobago	50.6	68	72	96	..	44	0.3	1.7	17	19
Tunisia	49.5	72	76	92	..	25	..	..	4	23
Turkey	49.5	69	74	81	..	20	7.0	41.7	1	9
Turkmenistan	50.7	59	67	99	4	..	..	..	26	16
Uganda	49.9	50	51	94	25	39	10.3 ^b	40.5 ^b	12	30
Ukraine	53.6	62	74	99	..	55	0.5	0.5	..	9
United Arab Emirates	32.2	77	82	..	..	..	..	..	0	23
United Kingdom	50.4	77	81	..	..	49	0.3	0.5	6	20
United States	50.3	75	81	..	..	48	0.1	0.1	7	16
Uruguay	51.3	72	80	..	..	48	0.7 ^b	2.2 ^b	6	11
Uzbekistan	50.2	64	71	99	..	..	..	..	..	18
Venezuela, RB	49.6	72	77	94	..	..	2.0	3.9	10	19
Vietnam	49.8	68	73	91	3	46	18.9	47.2	18	26
West Bank and Gaza	49.1	71	74	99	..	18	6.4	32.2	..	..
Yemen, Rep.	49.4	61	64	41	..	..	..	..	4	0 ^e
Zambia	50.1	41	42	93	32	..	..	..	7	15
Zimbabwe	50.2	43	42	94	21	..	10.4	13.6	11	17
World	49.4 w	66 w	70 w	80 w		.. w	.. w	.. w	13 w	18 w
Low income	49.0	59	62	69		24	..	..	11	16
Middle income	49.6	68	73	90		..	..	..	14	16
Lower middle income	49.0	69	73	89		..	..	..	14	16
Upper middle income	51.0	67	74	..		44	3.8	7.9	12	15
Low & middle income	49.3	64	68	80		..	..	..	13	16
East Asia & Pacific	48.7	69	73	89		..	..	..	17	18
Europe & Central Asia	51.9	65	74	91		48	2.8	6.9	..	15
Latin America & Carib.	50.4	70	76	95		..	4.6	8.4	12	20
Middle East & N. Africa	49.5	68	72	76		..	..	..	4	9
South Asia	48.3	63	66	66		17	..	..	6	14
Sub-Saharan Africa	50.2	49	52	72		..	..	..	..	17
High income	50.1	76	82	..		46	0.6	2.6	12	23
Euro area	50.5	77	83	..		46	0.8	2.3	12	25

a. Data are for the most recent year available. b. Limited coverage. c. Data are for 2007. d. Data are for 2006. e. Less than 0.5.

About the data

Despite much progress in recent decades, gender inequalities remain pervasive in many dimensions of life—worldwide. But while disparities exist throughout the world, they are most prevalent in developing countries. Gender inequalities in the allocation of such resources as education, health care, nutrition, and political voice matter because of the strong association with well-being, productivity, and economic growth. These patterns of inequality begin at an early age, with boys routinely receiving a larger share of education and health spending than do girls, for example.

Because of biological differences girls are expected to experience lower infant and child mortality rates and to have a longer life expectancy than boys. This biological advantage, however, may be overshadowed by gender inequalities in nutrition and medical interventions and by inadequate care during pregnancy and delivery, so that female rates of illness and death sometimes exceed male rates, particularly during early childhood and the reproductive years. In high-income countries women tend to outlive men by four to eight years on average, while in low-income countries the difference is narrower—about two to three years. The difference in child mortality rates (table 2.21) is another good indicator of female social disadvantage because nutrition and medical interventions are particularly important for the 1–4 age group. Female child mortality rates that are as high as or higher than male child mortality rates may indicate discrimination against girls.

Having a child during the teenage years limits girls' opportunities for better education, jobs, and income. Pregnancy is more likely to be unintended during the teenage years, and births are more likely to be premature and are associated with greater risks of complications during delivery and of death. In many countries maternal mortality (tables 1.3 and 2.17) is a leading cause of death among women of reproductive age. Most maternal deaths result from preventable causes—hemorrhage, infection, and complications from unsafe abortions. Prenatal care is essential for recognizing, diagnosing, and promptly treating complications that arise during pregnancy. In high-income countries most women have access to health care during pregnancy, but in developing countries an estimated 200 million women suffer pregnancy-related complications, and over half a million die every year (Glasier and others 2006). This is reflected in the differences in maternal mortality ratios between high- and low-income countries.

Women's wage work is important for economic growth and the well-being of families. But restricted access to education and vocational training, heavy workloads at home and in nonpaid domestic and market activities, and labor market discrimination often limit women's participation in paid economic activities, lower their productivity, and reduce their wages. When women are in salaried employment, they tend to be concentrated in the nonagricultural sector. However, in many developing countries women are a large part of agricultural employment, often as unpaid family workers. Among people who are unsalaried, women are more likely than men to be unpaid family workers, while men are more likely than women to be self-employed or employers. There are several reasons for this.

Few women have access to credit markets, capital, land, training, and education, which may be required to start a business. Cultural norms may prevent women from working on their own or from supervising other workers. Also, women may face time constraints due to their traditional family responsibilities. Because of biases and misclassification substantial numbers of employed women may be underestimated or reported as unpaid family workers even when they work in association or equally with their husbands in the family enterprise.

Women are vastly underrepresented in decision-making positions in government, although there is some evidence of recent improvement. Gender parity in parliamentary representation is still far from being realized. In 2007 women accounted for 18 percent of parliamentarians worldwide, compared with 9 percent in 1987. Without representation at this level, it is difficult for women to influence policy.

For information on other aspects of gender, see tables 1.2 (Millennium Development Goals: eradicating poverty and saving lives), 2.3 (Employment by economic activity), 2.4 (Decent work and productive employment), 2.5 (Unemployment), 2.6 (Children at work), 2.9 (Assessing vulnerability and security), 2.12 (Education efficiency), 2.13 (Education completion and outcomes), 2.14 (Education gaps by income and gender), 2.17 (Reproductive health), 2.19 (Health risk factors and public health challenges), 2.20 (Health gaps by income and gender), and 2.21 (Mortality).

Definitions

- **Female population** is the percentage of the population that is female.
- **Life expectancy at birth** is the number of years a newborn infant would live if prevailing patterns of mortality at the time of its birth were to stay the same throughout its life.
- **Pregnant women receiving prenatal care** are the percentage of women attended at least once during pregnancy by skilled health personnel for reasons related to pregnancy.
- **Teenage mothers** are the percentage of women ages 15–19 who already have children or are currently pregnant.
- **Women in nonagricultural sector** are female wage employees in the nonagricultural sector as a percentage of total nonagricultural wage employment.
- **Unpaid family workers** are those who work without pay in a market-oriented establishment or activity operated by a related person living in the same household.
- **Women in parliaments** are the percentage of parliamentary seats in a single or lower chamber held by women.

Data sources

Data on female population and life expectancy are from the World Bank's population database. Data on pregnant women receiving prenatal care are from household surveys, including Demographic and Health Surveys by Macro International and Multiple Indicator Cluster Surveys by the United Nations Children's Fund (UNICEF), and UNICEF's *State of the World's Children 2008*. Data on teenage mothers are from Demographic and Health Surveys by Macro International. Data on labor force and employment are from the International Labour Organization's *Key Indicators of the Labour Market*, fifth edition. Data on women in parliaments are from the Inter-Parliamentary Union.



	Population	Surface area	Population density	Gross national income				Gross domestic product		Life expectancy at birth	Adult literacy rate	Carbon dioxide emissions
	thousands 2006	thousand sq. km 2006	people per sq. km 2006	\$ millions 2006 ^b	Per capita \$ 2006 ^b	\$ millions 2006	PPP ^a Per capita \$ 2006	% growth 2005–06	Per capita % growth 2005–06	years 2006	% ages 15 and older 2005	thousand metric tons 2004
American Samoa	60	0.2	298	..	..^c	..	..	..	..	..	..	41
Andorra	67	0.5	142	..	..^d	..	..	..	..	..	..	..
Antigua and Barbuda	84	0.4	191	929	11,050 ^e	1,273 ^f	15,130 ^f	11.5	10.1	..	..	414
Aruba	101	0.2	562	..	..^d	..	..	..	..	..	..	2,154
Bahamas, The	327	13.9	33	..	..^d	.. ^f	.. ^f	..	..	73	..	2,007
Bahrain	739	0.7	1,041	14,022	19,350	24,869	34,310	7.8	5.6	76	..	16,934
Barbados	293	0.4	681	..	..^d	4,422 ^f	15,150 ^f	..	..	77	..	1,267
Belize	298	23.0	13	1,114	3,740	2,108 ^f	7,080 ^f	5.6	3.5	72	..	791
Bermuda	64	0.1	1,276	..	..^d	..	..	..	..	79	..	549
Bhutan	649	47.0	14	928	1,430	2,596	4,000	8.5	6.5	65	60	414
Brunei Darussalam	382	5.8	72	10,287	26,930	19,059	49,900	5.1	2.9	77	..	8,802
Cape Verde	519	4.0	129	1,105	2,130	1,344	2,590	6.1	3.7	71	81	275
Cayman Islands	46	0.3	177	..	..^d	..	..	..	..	..	..	311
Channel Islands	149	0.2	784	..	..^d	..	..	..	..	79	..	..
Comoros	614	1.9	330	406	660	698	1,140	0.5	-1.6	63	..	88
Cyprus	771	9.3	83	17,948	23,270	19,328	25,060	4.0	2.2	79	..	6,744
Djibouti	819	23.2	35	864	1,060	1,787	2,180	4.9	3.0	54	..	366
Dominica	72	0.8	97	300	4,160	566 ^f	7,870 ^f	4.0	3.4	..	..	106
Equatorial Guinea	496	28.1	18	4,216	8,510	8,238	16,620	-5.6	-7.8	51	..	5,421
Faeroe Islands	48	1.4	35	..	..^d	..	..	..	..	79	..	659
Fiji	833	18.3	46	3,098	3,720 ^g	3,707	4,450	3.6	2.9	69	..	1,070
French Polynesia	259	4.0	71	..	..^d	..	..	..	..	74	..	670
Greenland	57	410.5	0 ^h	..	..^d	..	..	..	..	..	..	571
Grenada	108	0.3	318	495	4,650	934 ^f	8,770 ^f	0.7	-0.8	..	..	216
Guam	171	0.5	317	..	..^d	..	..	..	..	75	..	4,081
Guyana	739	215.0	4	849	1,150	2,522 ^f	3,410 ^f	4.8	4.9	66	..	1,443
Iceland	302	103.0	3	15,078	49,960	10,181	33,740	2.6	0.9	81	..	2,227
Isle of Man	77	0.6	135	3,088	40,600	..	..	5.9	4.9	..	..	..

About the data

The table shows data for 56 economies with populations between 30,000 and 1 million and smaller economies if they are members of the World Bank. Where data on gross national income (GNI) per capita are not available, the estimated range is given. For more information on the calculation of GNI (gross national product, or GNP, in the System of National Accounts 1968) and purchasing power parity (PPP) conversion factors, see *About the data* for table 1.1. Since 2000 the table has excluded France's overseas departments—French Guiana, Guadeloupe, Martinique, and Réunion—for which GNI and other economic measures are now included in the French national accounts.

Definitions

- **Population** is based on the de facto definition of population, which counts all residents regardless of legal status or citizenship—except for refugees not permanently settled in the country of asylum, who are generally considered part of the population of their country of origin. The values shown are midyear estimates. See also table 2.1.
- **Surface area** is a country's total area, including areas under inland bodies of water and some coastal waterways.
- **Population density** is midyear population divided by land area in square kilometers.
- **Gross national income (GNI)** is the sum of value added by all resident producers plus any product taxes (less subsidies) not included in the valuation of output plus

net receipts of primary income (compensation of employees and property income) from abroad. Data are in current U.S. dollars converted using the *World Bank Atlas* method (see *Statistical methods*).

- **GNI per capita** is GNI divided by midyear population. GNI per capita in U.S. dollars is converted using the *World Bank Atlas* method.
- **Purchasing power parity (PPP) GNI** is GNI converted to international dollars using PPP rates. An international dollar has the same purchasing power over GNI that a U.S. dollar has in the United States.
- **Gross domestic product (GDP)** is the sum of value added by all resident producers plus any product taxes (less subsidies) not included in the valuation of output.

Key indicators for other economies

1.6

WORLD VIEW

	Population	Surface area	Population density	Gross national income				Gross domestic product		Life expectancy at birth	Adult literacy rate	Carbon dioxide emissions
	thousands 2006	thousand sq. km 2006	people per sq. km 2006	\$ millions 2006 ^b	Per capita \$ 2006 ^b	\$ millions 2006	Per capita \$ 2006 ^b	% growth 2005–06	Per capita \$ 2005–06	years 2006	% ages 15 and older 2005	thousand metric tons 2004
Kiribati	100	0.8	124	124	1,240	624 ^f	6,230 ^f	5.8	4.5	..	..	29
Liechtenstein	35	0.2	218	..	..^d	..	..	..	..	..	..	..
Luxembourg	462	2.6	178	32,904	71,240	28,117	60,870	6.2	5.0	79	..	11,267
Macao, China	478	0.0	16,934	..	..^d	..	..	16.6	15.5	80	..	2,205
Maldives	300	0.3	1,001	903	3,010	1,424	4,740	23.5	21.5	68	..	725
Malta	406	0.3	1,269	6,216	15,310	8,523	20,990	3.4	2.8	79	..	2,451
Marshall Islands	65	0.2	363	195	2,980	525 ^f	8,040 ^f	3.0	–0.3	..	..	..
Mayotte	187	0.4	499	..	..^c	..	..	..	..	..	..	..
Micronesia, Fed. Sts.	111	0.7	158	264	2,390	672 ^f	6,070 ^f	–0.7	–1.2	68	..	..
Monaco	33	0.0	16,718	..	..^d	..	..	..	..	..	..	..
Montenegro	601	14.0	44	2,481	4,130	5,366	8,930	16.2	17.5	74	..	..
Netherlands Antilles	189	0.8	236	..	..^d	..	..	..	..	75	96	4,084
New Caledonia	238	18.6	13	..	..^d	..	..	..	..	75	..	2,575
Northern Mariana Islands	82	0.5	178	..	..^c	..	..	..	..	..	..	..
Palau	20	0.5	44	161	7,990	290 ^f	14,340 ^f	5.7	5.2	..	..	238
Qatar	821	11.0	75	..	..^d	..	..	6.1	1.8	75	89	52,857
Samoa	185	2.8	66	421	2,270	943 ^f	5,090 ^f	2.3	1.5	71	99	150
San Marino	29	0.1	477	1,291	45,130	..	..	5.0	3.5	82	..	..
São Tomé and Príncipe	155	1.0	162	124	800	231	1,490	7.0	5.3	65	..	92
Seychelles	85	0.5	184	751	8,870	1,215 ^f	14,360 ^f	5.3	3.2	72	..	546
Solomon Islands	484	28.9	17	333	690	896 ^f	1,850 ^f	6.1	3.6	63	..	176
St. Kitts and Nevis	48	0.3	186	406	8,460	597 ^f	12,440 ^f	5.8	4.9	..	..	125
St. Lucia	166	0.6	272	833	5,060	1,400 ^f	8,500 ^f	4.5	3.7	74	..	366
St. Vincent & Grenadines	120	0.4	307	395	3,320	741 ^f	6,220 ^f	1.5	1.0	71	..	198
Suriname	455	163.3	3	1,918	4,210 ^g	3,514 ^f	7,720 ^f	5.8	5.1	70	90	2,282
Tonga	100	0.8	139	225	2,250	546 ^f	5,470 ^f	1.4	0.9	73	..	117
Vanuatu	221	12.2	18	373	1,690	768 ^f	3,480 ^f	7.2	4.6	70	..	88
Virgin Islands (U.S.)	109	0.4	310	..	..^d	..	..	..	..	79	..	13,524

a. PPP is purchasing power parity, see *Definitions*. b. Calculated using the *World Bank Atlas* method. c. Estimated to be upper middle income (\$3,596–\$11,115). d. Estimated to be high income (\$11,116 or more). e. Included in the aggregates for high-income economies based on earlier data. f. Based on regression; others are extrapolated from the 2005 International Comparison Program benchmark estimates. g. Included in the aggregates for lower middle-income economies based on earlier data. h. Less than 0.5.

Growth is calculated from constant price GDP data in local currency. • **GDP per capita** is GDP divided by midyear population. • **Life expectancy at birth** is the number of years a newborn infant would live if prevailing patterns of mortality at the time of its birth were to stay the same throughout its life. • **Adult literacy rate** is the percentage of adults ages 15 and older who can, with understanding, read and write a short, simple statement about their everyday life. • **Carbon dioxide emissions** are those stemming from the burning of fossil fuels and the manufacture of cement. They include carbon dioxide produced during consumption of solid, liquid, and gas fuels and gas flaring.

Data sources

The indicators here and throughout the book are compiled by World Bank staff from primary and secondary sources. More information about the indicators and their sources can be found in the *About the data*, *Definitions*, and *Data sources* entries that accompany each table in subsequent sections.



2



PEOPLE

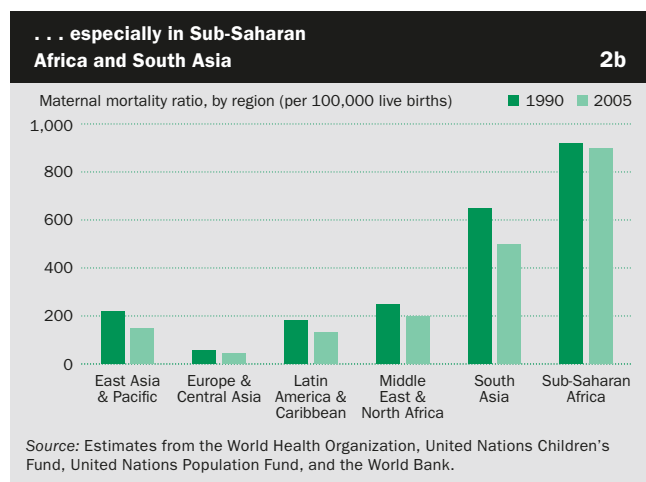
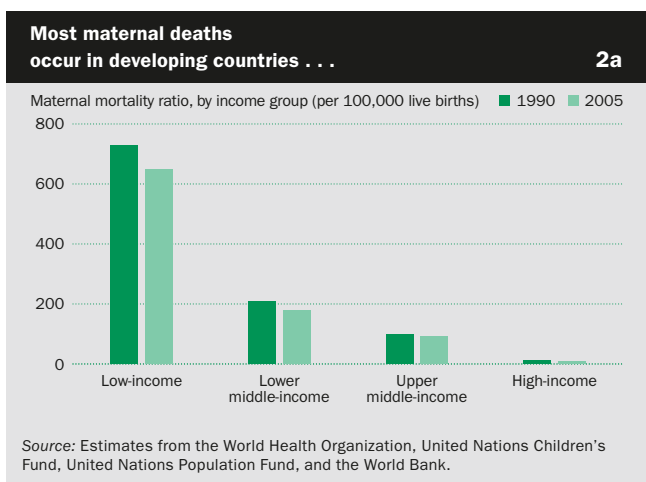
R

eproductive health

Keeping mothers alive and healthy is good for women, their families, and society. Prioritizing women's health will help countries meet many of the Millennium Development Goals—first improved maternal and child health, then reduced poverty, universal education, and gender equality. Poor people tend to have large families, suffer disproportionately from illness, and use fewer health services during pregnancy and childbirth. Reproductive health care can enhance poor people's overall health care and help families escape the poverty impact of having many children. When financial resources are divided among fewer family members, more is left for education, health care, and savings, decreasing vulnerability and insecurity (UN Millennium Project 2005a).

This important link between reproductive health and development outcomes was first articulated in 1994 at the International Conference on Population and Development in Cairo. But as fertility declined in many countries and new priorities arose, reproductive health and family planning fell steadily in international priority. Complicating this was the lack of sectoral ownership of reproductive health and the requirement for multisectoral action.

The targets for the Millennium Development Goals, drafted in 2000, ignored the overarching Cairo goal of universal access to sexual and reproductive health services, instead focusing on the target of reducing maternal mortality, a problem of immense magnitude in poor countries (figures 2a and 2b). Millennium Development Goal 5 in 2000 identified two indicators to measure progress: maternal mortality ratios and the proportion of births attended by skilled staff. At an analytical level, however, it is impossible to disentangle maternal health from reproductive health, of which maternal health is just one facet.

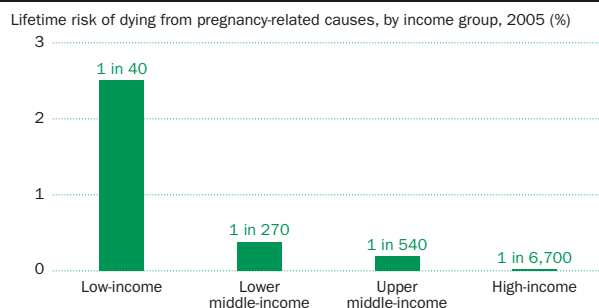


Why reproductive health now?

Pregnancy and childbirth are leading causes of death and disability for women of reproductive age in developing countries. In 2005 more than half a million women died from pregnancy-related causes, and about 200 million women suffered life-threatening complications and disabilities (Glasier and others 2006). As a result of reproductive health problems an estimated 250 million years of productive life are lost every year (UNFPA 2005). Over 99 percent of all maternal deaths occur in developing countries, the majority in Sub-Saharan Africa and South Asia (Glasier and others 2006).

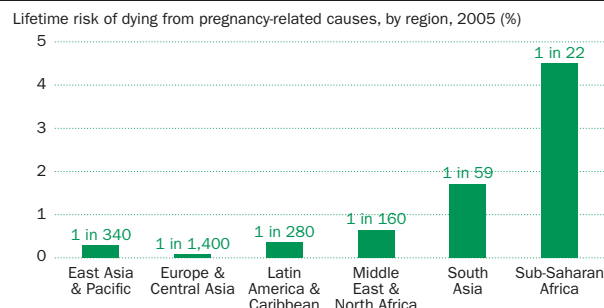
In 2005 Millennium Development Goal 5—improved maternal health—was expanded to include family planning and reproductive health services. Reproductive health care was recognized as important for improving maternal health and preventing maternal deaths, but also as essential for achieving all the Millennium Development Goals. A new target was introduced for universal access to reproductive health by 2015, along with indicators measuring adolescent fertility, prenatal care, unmet need for contraception, and contraceptive prevalence.

Women in developing countries are more likely to die of pregnancy-related causes than women in high-income countries 2c



Source: Estimates from the World Health Organization, United Nations Children's Fund, United Nations Population Fund, and the World Bank.

The lifetime risk of dying from pregnancy-related causes is unacceptably high in Sub-Saharan Africa and South Asia 2d

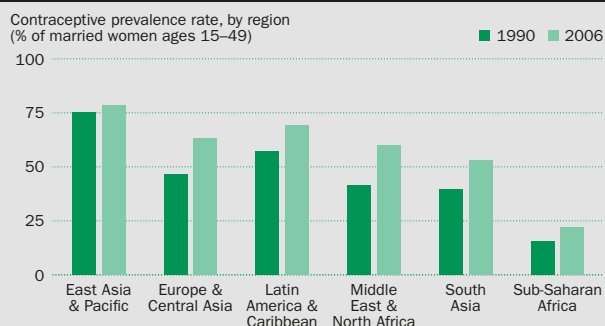


Source: Estimates from the World Health Organization, United Nations Children's Fund, United Nations Population Fund, and the World Bank.

Poor women disproportionately bear the burden of disability and loss of productive life. Women in low-income countries face a 1 in 40 risk of a pregnancy-related death; those in high-income countries, a 1 in 6,700 risk (figure 2c). The contrast is also larger within countries. In Peru the poorest women are about 7 times more likely than the richest to die of pregnancy-related causes (Ronsman and Graham 2006). Even though cheap and easy methods to prevent unintended or unwanted pregnancies are available, 120 million couples hoping to avoid pregnancy did not use contraception. As a result, 80 million women became pregnant against their will, and 45 million sought abortions, about 20 million of them unsafe, performed by untrained providers (Glasier and others 2006).

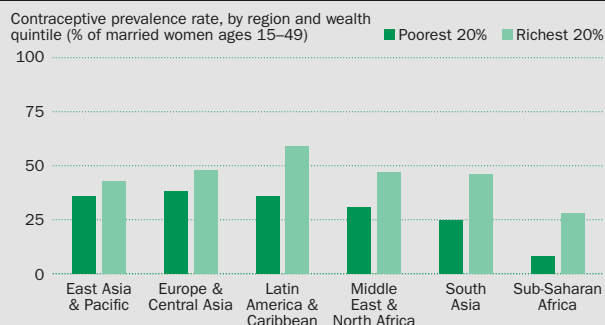
Progress in maternal and reproductive health in recent years has been mixed in developing countries. Several middle-income countries have made rapid progress in reducing maternal deaths, but maternal mortality ratios and the lifetime risk of dying in childbirth remain unacceptably high in Sub-Saharan Africa and South Asia (figure 2d). Within countries, poorer women are more vulnerable than wealthier women.

East Asia and Pacific leads in contraceptive use among married women ages 15–49 2e



Source: Household surveys.

Women from the richest households are more likely to use contraception—but contraceptive prevalence rates remain low 2f



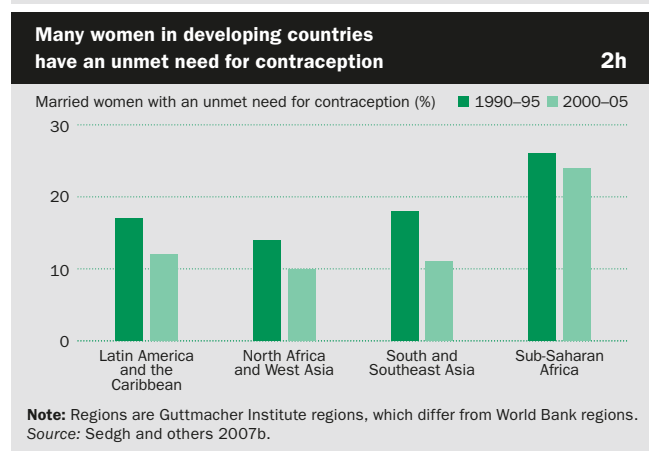
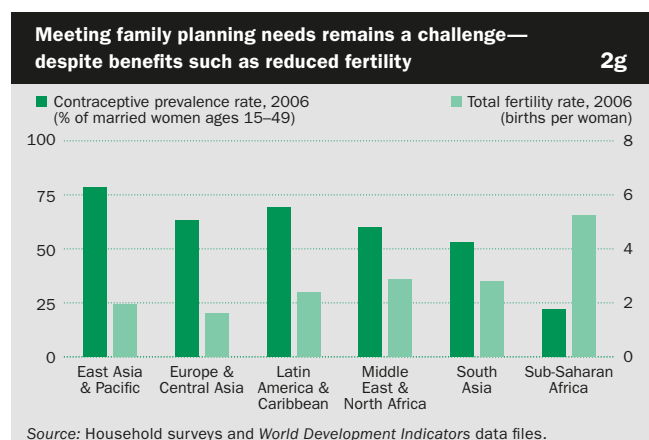
Source: Gwatkin and others 2007.

Maternal and reproductive health: current status

The vast majority of maternal deaths and disabilities can be prevented through appropriate reproductive health services before, during, and after pregnancy. Key among them is expanding family planning to allow women to space or limit their births.

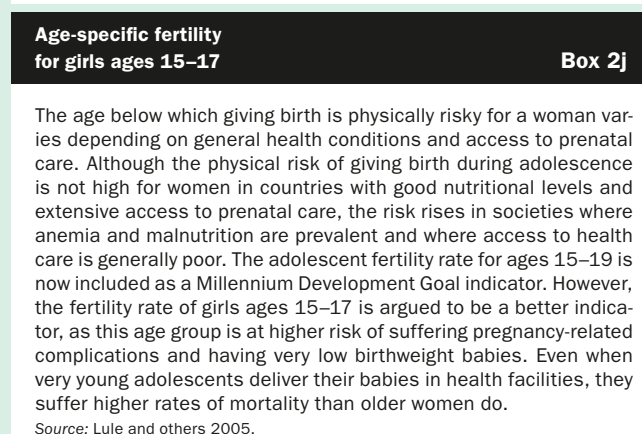
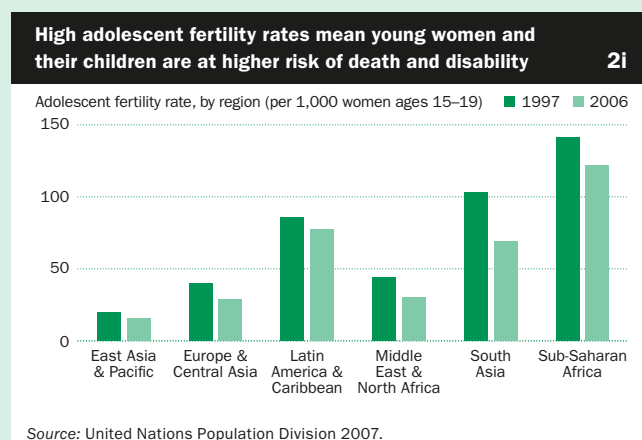
Contraceptive use among women in developing countries has increased steadily, from about 14 percent of married women ages 15–49 in 1965 to 60 percent in 2006. But use is uneven across and within countries. In Sub-Saharan Africa only 22 percent of married women use contraception, compared with 63 percent in Europe and Central Asia, about 70 percent in Latin America and the Caribbean, and about 80 percent in East Asia and the Pacific (figure 2e).

Contraceptive use follows the distribution of wealth, and the poorest women come up short. Differences are especially stark in South Asia and Sub-Saharan Africa (figure 2f). In Sub-Saharan Africa women from richer households are three times more likely to use contraception, but prevalence is still less than 30 percent of eligible women. In South Asia richer women are twice as likely as poorer women to use contraception.



Despite the benefits, many countries continue to face major challenges in meeting their family planning needs (figure 2g), and rates of unmet need for family planning in developing countries remain high (figure 2h). According to surveys, one married woman in seven in these countries has an unmet need for contraception, and in Sub-Saharan Africa nearly one in four does. Regional aggregates mask wide differences: in Asia only 5 percent of women in Vietnam have an unmet need, compared with 28 percent in Nepal (Sedgh and others 2007b). Preventing unplanned pregnancies alone could avert around one-quarter of maternal deaths, including those from unsafe abortions (Sedgh and others 2007b).

Young girls are particularly vulnerable to maternal death. They have limited information, means, and access to contraception and even less access to good quality maternal health care, especially if they are not married. In regions where the adolescent fertility rate is high (figure 2i), many young women and their children, particularly very young women, face higher risks of death and disability (box 2j). Young girls either continue unintended pregnancies, giving up opportunities

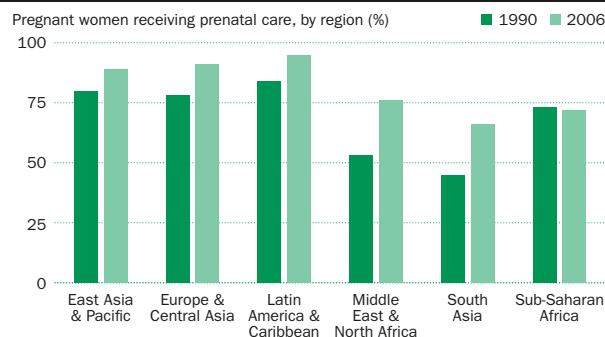


for education and employment, or seek unsafe abortions. Forty percent of all the abortions are performed on women under age 25 (Glasier and others 2006).

Prenatal care, long at the core of maternal health services, identifies risks, helps plan for safe delivery, and provides entry into the health care system. All regions but Sub-Saharan Africa have made progress in providing prenatal care to women at least once during pregnancy (figure 2k). In South Asia, with the slowest progress, 66 percent of pregnant women have at least one prenatal care visit. But rich women are three times more likely to get prenatal care than are poor women (figure 2l).

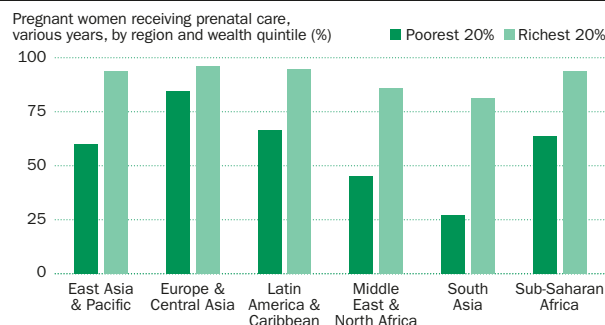
A key factor in lowering maternal mortality is the presence of a skilled attendant during childbirth. Nearly half of maternal deaths in developing countries occur during labor and delivery or just after delivery (Lule and others 2005). The proportion of attended births remains low in South Asia and Sub-Saharan Africa (figure 2m) and is even lower in the poorer segments of these countries (figure 2n). Other regions have made impressive gains, with countries in Europe and Central Asia providing skilled care to nearly all women giving birth.

All regions have made progress in providing prenatal care to women at least once during their pregnancy 2k



Source: Household surveys.

In South Asia rich women are three times more likely to receive prenatal care than are poor women 2l



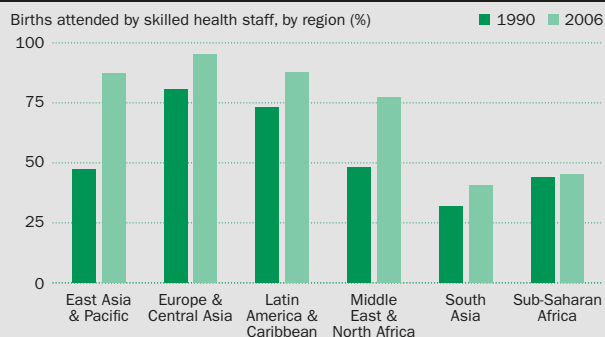
Source: Gwatkin and others 2007.

An improvement, but is it enough?

Both preventive and strategic interventions are needed to treat the many factors that contribute to maternal mortality. The expanded Millennium Development Goal 5 indicators are mainly process indicators to assess reproductive health and address preventive interventions: preparing for birth, including timing and spacing of births for both adults and adolescents; recognizing danger signs in the prenatal period and responding appropriately; and having skilled health staff at delivery.

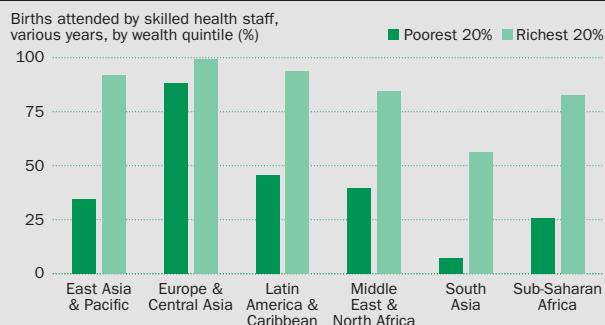
Equally important are the strategic interventions, especially during labor and delivery. Among these are obstetric care, including timely and safe transfers of mothers to a hospital or health care center with the necessary staff, equipment, drugs, and other supplies. The World Health Organization (WHO) has proposed that national public health administrators monitor the availability of essential obstetric care and access to emergency obstetric care at the country level (box 2o). An estimated 15 percent of pregnancies result in complications (Nanda, Switlick, and Lule 2005). But data on complications are collected only by ad hoc studies, usually in limited areas of countries, and no standard definition or methodology is followed.

The proportion of births attended by skilled health staff remains low in South Asia and Sub-Saharan Africa 2m



Source: Household surveys.

Nearly all women in Europe and Central Asia have births attended by skilled health staff—but even there poor women lag behind 2n



Source: Gwatkin and others 2007.

Complications from abortion are also now recognized as a major public and reproductive health problem, especially in developing countries. Abortions, especially unsafe ones, account for 13 percent of maternal deaths, and good quality post-abortion services and family planning services to avoid unwanted pregnancies are essential. Of an estimated 20 million unsafe abortions worldwide each year, the majority are in developing countries (Nanda, Switlick, and Lule 2005) (figure 2p). Abortion information is particularly difficult to gather because abortion is restricted and stigmatized in many countries, leading to false reporting by women and service providers. Regional estimates of abortion rates are available from the WHO, UN agencies, national authorities, and nongovernmental organizations. But reliable country data are not routinely collected.

In addition to definitional gaps, data collection for these two indicators faces additional hurdles because the infrastructure for collecting data is weak or because there is political, cultural, or moral hesitation. Obtaining accurate values also requires significant clinical resources and technical skills.

The importance of emergency obstetric care

Box 2o

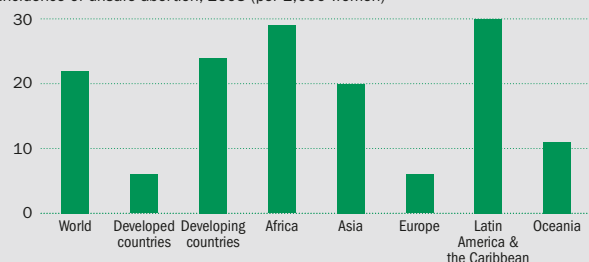
Emergency obstetric care encompasses a set of functions performed at health facilities that can prevent the death of women experiencing obstetric complications. Basic emergency obstetric care, usually provided at health centers and small maternity homes, includes administering certain drugs and performing lifesaving procedures, such as for preeclampsia and eclampsia. Comprehensive emergency obstetric care, usually provided at subdistrict or district hospitals, also includes providing Caesarean sections and blood transfusions.

More maternal health programs now recognize that emergency obstetric care is critical to reducing maternal death and disability. Much can be accomplished by upgrading existing facilities. In programming for emergency obstetric care, bottlenecks in accessing services are often assessed using the “three delays” model: delays in the decision to seek care, delays in arrival at a health facility, and delays in the provision of adequate care at the facility.

Source: Nanda, Switlick, and Lule 2005.

Most unsafe abortions take place in developing countries, especially in Latin America and the Caribbean and Africa 2p

Incidence of unsafe abortion, 2003 (per 1,000 women)



Note: Regions are World Health Organization regions, which differ from World Bank regions.

Source: WHO 2007.

Challenges ahead

The interventions to prevent the vast majority of conditions that kill women of reproductive age—and to enable health systems to protect and promote women’s health—have already been identified. Some are simple, low-tech, and cost-effective, such as the provision and use of contraception. Yet many people in developing countries, especially in South Asia and Sub-Saharan Africa, do not benefit. Behind the failure of these health systems are weak commitments to improving maternal health, poor management systems, inadequate human and medical resources and equipment, and, for most of the poor, the inability to pay for services.

Underlying the failures of the health system is the lack of reliable data for monitoring progress in maternal and reproductive health and in other safe motherhood indicators. And most developing countries have inadequate health information systems or lack them altogether. So, providing timely and reliable information often depends on local, one-off data collection, such as household surveys, which are both costly and unsustainable because they do not establish permanent health information structures. Ideally, there would be vital registration systems, hospital and health service data, and household surveys.

Least available are data on maternal deaths, needed to monitor the Millennium Development Goal target of cutting maternal mortality ratios by 75 percent. While vital registration systems are a rich and valuable source of health data in developed countries, they are incomplete in developing countries. For example, the share of developing countries with at least 90 percent complete vital registration increased from 45 percent in 1988 to 62 percent in 2006. Still, some of the most populous countries—China, India, Indonesia, Brazil, Pakistan, Bangladesh, Nigeria—do not have complete vital registration systems. Hospital or other health service records are sometimes a source of information. But these record only women who have access to health services, and a large number of women, especially in rural areas, do not. Household surveys for estimating maternal mortality ratios are costly and yield unreliable estimates.

The evidence base should be strong enough to provide crucial information on who dies and why—and to generate insights about interventions that are available, accessible, appropriate, and affordable.



2.1

Population dynamics

	Population			Average annual population growth		Population age composition			Dependency ratio		Crude death rate	Crude birth rate
	millions			%		% Ages			dependents as proportion of working-age population		per 1,000 people	per 1,000 people
	1990	2006	2015	1990–2006	2006–15	0–14	15–64	65+	Young	Old	2006	2006
Afghanistan	..	..	..	..	..	..	..	..	..	..	..	..
Albania	3.3	3.2	3.3	–0.2	0.4	25.5	65.8	8.7	0.4	0.1	6	16
Algeria	25.3	33.4	38.0	1.7	1.5	28.9	66.5	4.6	0.4	0.1	5	21
Angola	10.5	16.6	21.2	2.8	2.8	46.3	51.3	2.4	0.9	0.0 ^a	21	48
Argentina	32.6	39.1	42.5	1.1	0.9	26.1	63.6	10.3	0.4	0.2	8	18
Armenia	3.5	3.0	3.0	–1.0	–0.2	20.0	67.9	12.1	0.3	0.2	9	12
Australia	17.1	20.7	22.4	1.2	0.9	19.3	67.4	13.3	0.3	0.2	7	13
Austria	7.7	8.3	8.4	0.4	0.2	15.6	68.0	16.4	0.2	0.2	9	9
Azerbaijan	7.2	8.5	9.2	1.1	0.9	24.2	68.5	7.2	0.4	0.1	6	18
Bangladesh	113.0	156.0	180.0	2.0	1.6	34.7	61.7	3.6	0.6	0.1	8	25
Belarus	10.2	9.7	9.2	–0.3	–0.6	15.3	70.4	14.3	0.2	0.2	15	9
Belgium	10.0	10.5	10.7	0.3	0.1	16.9	65.8	17.3	0.3	0.3	10	12
Benin	5.2	8.8	11.3	3.3	2.9	44.0	53.3	2.7	0.8	0.1	11	41
Bolivia	6.7	9.4	10.9	2.1	1.6	37.7	57.7	4.6	0.7	0.1	8	28
Bosnia and Herzegovina	4.3	3.9	3.9	–0.6	–0.2	17.3	68.6	14.1	0.3	0.2	9	9
Botswana	1.4	1.9	2.1	1.9	1.2	35.1	61.5	3.4	0.6	0.1	15	25
Brazil	149.5	189.3	209.4	1.5	1.1	27.6	66.2	6.3	0.4	0.1	6	19
Bulgaria	8.7	7.7	7.1	–0.8	–0.8	13.6	69.2	17.3	0.2	0.2	15	9
Burkina Faso	8.9	14.4	18.6	3.0	2.9	46.0	51.0	3.1	0.9	0.1	15	44
Burundi	5.7	8.2	11.2	2.3	3.5	44.7	52.7	2.6	0.8	0.0 ^a	16	47
Cambodia	9.7	14.2	16.6	2.4	1.8	36.7	60.1	3.2	0.6	0.1	9	27
Cameroon	12.2	18.2	21.5	2.5	1.9	41.5	55.0	3.5	0.8	0.1	15	35
Canada	27.8	32.6	35.1	1.0	0.8	17.3	69.4	13.3	0.2	0.2	7	11
Central African Republic	3.0	4.3	5.0	2.2	1.8	42.5	53.7	3.9	0.8	0.1	18	37
Chad	6.1	10.5	13.4	3.4	2.7	46.2	50.9	2.9	0.9	0.1	16	46
Chile	13.2	16.4	17.8	1.4	0.9	24.3	67.4	8.3	0.4	0.1	5	15
China	1,135.2	1,311.8	1,382.5	0.9	0.6	21.1	71.1	7.8	0.3	0.1	7	12
Hong Kong, China	5.7	6.9	7.4	1.2	0.9	14.8	73.2	12.1	0.2	0.2	5	10
Colombia	34.9	45.6	50.6	1.7	1.2	29.8	65.0	5.2	0.5	0.1	6	19
Congo, Dem. Rep.	37.9	60.6	78.5	2.9	2.9	47.3	50.1	2.6	0.9	0.1	18	44
Congo, Rep.	2.4	3.7	4.5	2.6	2.1	41.9	54.9	3.2	0.8	0.1	12	36
Costa Rica	3.1	4.4	5.0	2.2	1.4	27.8	66.3	5.9	0.4	0.1	4	18
Côte d'Ivoire	12.8	18.9	22.3	2.5	1.9	41.4	55.4	3.2	0.7	0.1	16	36
Croatia	4.8	4.4	4.3	–0.5	–0.3	15.3	67.4	17.3	0.2	0.3	11	9
Cuba	10.6	11.3	11.2	0.4	–0.1	18.9	69.7	11.4	0.3	0.2	8	11
Czech Republic	10.4	10.3	10.2	–0.1	–0.1	14.5	71.2	14.3	0.2	0.2	10	10
Denmark	5.1	5.4	5.5	0.4	0.1	18.7	66.0	15.4	0.3	0.2	10	12
Dominican Republic	7.3	9.6	10.9	1.7	1.4	33.2	61.1	5.7	0.5	0.1	6	24
Ecuador	10.3	13.2	14.6	1.6	1.1	32.2	61.7	6.0	0.5	0.1	5	21
Egypt, Arab Rep.	55.1	74.2	86.2	1.9	1.7	33.0	62.1	4.9	0.5	0.1	6	24
El Salvador	5.1	6.8	7.6	1.8	1.3	33.7	60.7	5.6	0.6	0.1	6	23
Eritrea	3.2	4.7	6.2	2.5	3.0	42.9	54.8	2.3	0.8	0.0 ^a	9	40
Estonia	1.6	1.3	1.3	–1.0	–0.4	14.9	68.4	16.7	0.2	0.2	13	11
Ethiopia	51.2	77.2	96.0	2.6	2.4	44.2	52.9	2.9	0.8	0.1	13	39
Finland	5.0	5.3	5.4	0.3	0.2	17.2	66.7	16.1	0.3	0.2	9	11
France	56.7	61.3	63.1	0.5	0.3	18.3	65.4	16.3	0.3	0.2	9	13
Gabon	0.9	1.3	1.5	2.2	1.5	35.4	60.0	4.6	0.6	0.1	12	26
Gambia, The	1.0	1.7	2.1	3.4	2.5	41.0	55.2	3.8	0.7	0.1	11	36
Georgia	5.5	4.4	4.2	–1.3	–0.7	18.4	67.3	14.4	0.3	0.2	12	11
Germany	79.4	82.4	81.1	0.2	–0.2	14.1	66.6	19.2	0.2	0.3	10	8
Ghana	15.6	23.0	27.3	2.4	1.9	38.6	57.7	3.7	0.7	0.1	9	30
Greece	10.2	11.1	11.2	0.6	0.0 ^a	14.2	67.4	18.4	0.2	0.3	9	10
Guatemala	8.9	13.0	16.2	2.4	2.4	42.9	52.8	4.3	0.8	0.1	6	34
Guinea	6.0	9.2	11.4	2.6	2.4	43.3	53.7	3.1	0.8	0.1	12	40
Guinea-Bissau	1.0	1.6	2.2	3.0	3.0	47.6	49.4	3.0	1.0	0.1	19	50
Haiti	7.1	9.4	11.0	1.8	1.7	37.5	58.3	4.2	0.6	0.1	9	28

Population dynamics

2.1

PEOPLE

	Population			Average annual population growth		Population age composition			Dependency ratio		Crude death rate	Crude birth rate
	1990	millions 2006	2015	%		Ages 0–14 2006	Ages 15–64 2006	Ages 65+ 2006	dependents as proportion of working-age population		per 1,000 people 2006	per 1,000 people 2006
				1990–2006	2006–15				Young 2006	Old 2006		
Honduras	4.9	7.0	8.2	2.2	1.8	39.4	56.4	4.2	0.7	0.1	6	28
Hungary	10.4	10.1	9.7	–0.2	–0.4	15.5	69.1	15.4	0.2	0.2	13	10
India	849.5	1,109.8	1,233.2	1.7	1.2	32.5	62.4	5.0	0.5	0.1	8	24
Indonesia	178.2	223.0	245.1	1.4	1.0	28.0	66.3	5.6	0.4	0.1	7	20
Iran, Islamic Rep.	54.4	70.1	78.9	1.6	1.3	27.8	67.8	4.5	0.4	0.1	5	18
Iraq	18.5	..	..	..	..	..	..	..	..	..	..	..
Ireland	3.5	4.3	4.8	1.2	1.3	20.7	68.2	11.1	0.3	0.2	6	15
Israel	4.7	7.0	8.0	2.6	1.5	27.9	62.0	10.1	0.4	0.2	6	21
Italy	56.7	58.8	58.4	0.2	–0.1	13.9	66.1	19.9	0.2	0.3	9	10
Jamaica	2.4	2.7	2.8	0.7	0.4	31.3	61.2	7.5	0.5	0.1	6	17
Japan	123.5	127.8	124.5	0.2	–0.3	13.8	66.0	20.3	0.2	0.3	9	9
Jordan	3.2	5.5	6.8	3.5	2.2	36.5	60.2	3.3	0.6	0.1	4	29
Kazakhstan	16.3	15.3	16.4	–0.4	0.8	23.9	68.2	8.0	0.4	0.1	10	20
Kenya	23.4	36.6	46.1	2.8	2.6	42.6	54.7	2.7	0.8	0.0 ^a	12	39
Korea, Dem. Rep.	20.1	23.7	24.4	1.0	0.3	23.6	67.5	8.8	0.4	0.1	10	14
Korea, Rep.	42.9	48.4	49.2	0.8	0.2	18.1	72.0	9.8	0.3	0.1	5	9
Kuwait	2.1	2.6	3.2	1.3	2.2	23.6	74.6	1.9	0.3	0.0 ^a	2	21
Kyrgyz Republic	4.4	5.2	5.7	1.0	1.0	30.4	63.8	5.8	0.5	0.1	7	23
Lao PDR	4.1	5.8	6.7	2.2	1.7	38.9	57.5	3.5	0.7	0.1	7	27
Latvia	2.7	2.3	2.2	–1.0	–0.6	14.0	69.2	16.8	0.2	0.2	15	10
Lebanon	3.0	4.1	4.4	1.9	1.0	28.2	64.5	7.3	0.4	0.1	7	18
Lesotho	1.6	2.0	2.1	1.4	0.6	40.1	55.1	4.7	0.7	0.1	19	29
Liberia	2.1	3.6	5.1	3.2	3.9	47.0	50.8	2.2	0.9	0.0 ^a	19	50
Libya	4.4	6.0	7.1	2.0	1.8	30.2	65.9	3.9	0.5	0.1	4	24
Lithuania	3.7	3.4	3.2	–0.5	–0.5	16.2	68.3	15.5	0.2	0.2	13	9
Macedonia, FYR	1.9	2.0	2.0	0.4	–0.0 ^b	19.2	69.5	11.3	0.3	0.2	9	11
Madagascar	12.0	19.2	24.1	2.9	2.5	43.6	53.3	3.2	0.8	0.1	10	37
Malawi	9.4	13.6	17.0	2.3	2.5	47.0	49.9	3.0	0.9	0.1	15	41
Malaysia	18.1	26.1	30.0	2.3	1.5	31.0	64.6	4.4	0.5	0.1	4	21
Mali	7.7	12.0	15.7	2.8	3.0	47.6	48.8	3.6	1.0	0.1	15	48
Mauritania	1.9	3.0	3.8	2.8	2.4	40.1	56.3	3.6	0.7	0.1	8	33
Mauritius	1.1	1.3	1.3	1.1	0.7	24.0	69.3	6.7	0.3	0.1	8	15
Mexico	83.2	104.2	113.7	1.4	1.0	30.2	63.8	6.0	0.5	0.1	5	19
Moldova	4.4	3.8	3.6	–0.8	–0.8	19.4	69.5	11.1	0.3	0.2	12	11
Mongolia	2.1	2.6	2.9	1.3	1.1	28.0	68.1	4.0	0.4	0.1	6	18
Morocco	24.2	30.5	33.9	1.5	1.2	29.7	65.0	5.3	0.5	0.1	6	22
Mozambique	13.5	21.0	24.7	2.7	1.8	44.3	52.5	3.2	0.8	0.1	20	40
Myanmar	40.1	48.4	51.9	1.2	0.8	26.7	67.7	5.6	0.4	0.1	10	18
Namibia	1.4	2.0	2.3	2.3	1.2	38.3	58.2	3.5	0.7	0.1	13	26
Nepal	19.1	27.6	32.2	2.3	1.7	38.5	57.8	3.7	0.7	0.1	8	29
Netherlands	15.0	16.3	16.5	0.6	0.1	18.3	67.4	14.3	0.3	0.2	8	11
New Zealand	3.4	4.2	4.5	1.2	0.8	21.2	66.5	12.3	0.3	0.2	7	14
Nicaragua	4.1	5.5	6.3	1.8	1.4	37.2	58.7	4.0	0.6	0.1	5	25
Niger	7.8	13.7	18.5	3.5	3.3	48.0	48.8	3.2	1.0	0.1	14	49
Nigeria	94.5	144.7	175.6	2.7	2.1	44.1	53.0	2.9	0.8	0.1	17	40
Norway	4.2	4.7	4.9	0.6	0.6	19.4	65.9	14.7	0.3	0.2	9	12
Oman	1.8	2.5	3.0	2.0	2.0	33.1	64.1	2.7	0.5	0.0 ^a	3	22
Pakistan	108.0	159.0	191.9	2.4	2.1	36.4	59.7	3.9	0.6	0.1	7	26
Panama	2.4	3.3	3.8	1.9	1.5	30.1	63.8	6.1	0.5	0.1	5	21
Papua New Guinea	4.1	6.2	7.3	2.5	1.8	40.3	57.3	2.4	0.7	0.0 ^a	10	30
Paraguay	4.2	6.0	7.0	2.2	1.7	35.4	59.8	4.8	0.6	0.1	6	25
Peru	21.8	27.6	30.7	1.5	1.2	31.2	63.1	5.7	0.5	0.1	6	21
Philippines	61.2	86.3	101.0	2.1	1.8	35.8	60.3	3.9	0.6	0.1	5	26
Poland	38.1	38.1	37.4	0.0 ^a	–0.2	15.9	70.8	13.3	0.2	0.2	10	10
Portugal	9.9	10.6	10.8	0.4	0.2	15.6	67.4	17.0	0.2	0.3	10	10
Puerto Rico	3.5	3.9	4.1	0.7	0.5	21.6	65.7	12.7	0.3	0.2	8	13



2.1 | Population dynamics

	Population			Average annual population growth		Population age composition			Dependency ratio		Crude death rate	Crude birth rate
	1990	millions 2006	2015	%		Ages 0–14 2006	Ages 15–64 2006	Ages 65+ 2006	dependents as proportion of working-age population		per 1,000 people 2006	per 1,000 people 2006
				1990–2006	2006–15				Young 2006	Old 2006		
Romania	23.2	21.6	20.5	–0.5	–0.6	15.4	69.8	14.9	0.2	0.2	12	10
Russian Federation	148.3	142.5	135.2	–0.2	–0.6	14.9	71.4	13.7	0.2	0.2	15	10
Rwanda	7.3	9.5	12.1	1.6	2.8	43.1	54.5	2.5	0.8	0.0 ^a	17	44
Saudi Arabia	16.4	23.7	28.5	2.3	2.1	34.0	63.2	2.8	0.5	0.0 ^a	4	25
Senegal	7.9	12.1	15.4	2.7	2.7	41.9	53.8	4.3	0.8	0.1	9	36
Serbia	7.5 ^c	7.4 ^c	7.3 ^c	–0.1 ^c	–0.2 ^c	18.4 ^d	66.9 ^d	14.7 ^d	0.3 ^d	0.2 ^d	14 ^c	10 ^c
Sierra Leone	4.1	5.7	6.9	2.1	2.1	42.8	53.9	3.3	0.8	0.1	22	46
Singapore	3.0	4.5	4.8	2.4	0.8	18.8	72.4	8.8	0.3	0.1	4	10
Slovak Republic	5.3	5.4	5.4	0.1	–0.0 ^b	16.3	71.8	11.8	0.2	0.2	10	10
Slovenia	2.0	2.0	2.0	0.0 ^a	–0.1	13.9	70.3	15.8	0.2	0.2	9	9
Somalia	6.7	8.4	10.9	1.4	2.8	44.2	53.2	2.6	0.8	0.0 ^a	17	43
South Africa	35.2	47.4	49.1	1.9	0.4	31.9	63.7	4.4	0.5	0.1	21	23
Spain	38.8	44.1	45.7	0.8	0.4	14.5	68.7	16.9	0.2	0.2	9	11
Sri Lanka	17.0	19.9	20.5	1.0	0.3	23.7	69.7	6.6	0.3	0.1	6	19
Sudan	25.9	37.7	45.6	2.3	2.1	40.3	56.1	3.6	0.7	0.1	10	32
Swaziland	0.8	1.1	1.2	2.4	0.5	39.2	57.5	3.3	0.7	0.1	22	33
Sweden	8.6	9.1	9.4	0.4	0.4	17.1	65.5	17.4	0.3	0.3	10	12
Switzerland	6.7	7.5	7.6	0.7	0.2	16.5	67.9	15.7	0.2	0.2	8	10
Syrian Arab Republic	12.7	19.4	23.5	2.6	2.1	36.0	60.8	3.2	0.6	0.1	3	27
Tajikistan	5.3	6.6	7.7	1.4	1.6	38.7	57.4	3.9	0.7	0.1	6	28
Tanzania	25.5	39.5	48.9	2.7	2.4	44.4	52.6	3.0	0.8	0.1	13	40
Thailand	54.3	63.4	66.6	1.0	0.5	21.4	70.6	8.0	0.3	0.1	8	15
Timor-Leste	0.7	1.0	1.4	2.0	3.7	44.7	52.6	2.7	0.8	0.1	15	51
Togo	4.0	6.4	8.0	3.0	2.5	43.0	53.9	3.1	0.8	0.1	10	37
Trinidad and Tobago	1.2	1.3	1.4	0.5	0.4	21.7	71.7	6.6	0.3	0.1	8	15
Tunisia	8.2	10.1	11.2	1.4	1.1	25.4	68.3	6.3	0.4	0.1	6	17
Turkey	56.2	73.0	81.0	1.6	1.2	27.9	66.5	5.7	0.4	0.1	6	19
Turkmenistan	3.7	4.9	5.5	1.8	1.3	30.9	64.5	4.6	0.5	0.1	8	22
Uganda	17.8	29.9	40.7	3.2	3.4	49.3	48.3	2.5	1.0	0.1	14	47
Ukraine	51.9	46.8	43.4	–0.6	–0.8	14.3	69.5	16.2	0.2	0.2	16	10
United Arab Emirates	1.8	4.2	5.3	5.5	2.4	19.6	79.3	1.1	0.2	0.0 ^a	1	15
United Kingdom	57.6	60.6	62.4	0.3	0.3	17.8	66.1	16.1	0.3	0.2	10	12
United States	249.6	299.4	323.9	1.1	0.9	20.7	67.0	12.3	0.3	0.2	8	14
Uruguay	3.1	3.3	3.4	0.4	0.2	23.6	62.8	13.6	0.4	0.2	9	15
Uzbekistan	20.5	26.5	29.6	1.6	1.2	32.4	62.9	4.7	0.5	0.1	6	19
Venezuela, RB	19.8	27.0	31.1	2.0	1.5	30.9	64.0	5.1	0.5	0.1	5	22
Vietnam	66.2	84.1	93.7	1.5	1.2	28.9	65.6	5.6	0.4	0.1	5	17
West Bank and Gaza	2.0	3.8	4.7	4.1	2.5	45.6	51.4	3.0	0.9	0.1	3	32
Yemen, Rep.	12.3	21.7	28.2	3.6	2.9	45.4	52.2	2.3	0.9	0.0 ^a	8	38
Zambia	8.1	11.7	13.8	2.3	1.9	45.6	51.4	2.9	0.9	0.1	19	40
Zimbabwe	10.5	13.2	14.8	1.5	1.3	39.0	57.5	3.5	0.7	0.1	18	28
World	5,263.9 s	6,538.1 s	7,200.7 s	1.4 w	1.1 w	28.0 w	64.6 w	7.4 w	0.4 w	0.1 w	8 w	20 w
Low income	1,747.9	2,419.7	2,815.3	2.0	1.7	36.3	59.4	4.3	0.6	0.1	10	29
Middle income	2,599.1	3,087.7	3,313.9	1.1	0.8	24.7	67.9	7.4	0.4	0.1	8	16
Lower middle income	1,899.6	2,276.5	2,456.3	1.1	0.8	24.7	68.3	7.0	0.4	0.1	7	16
Upper middle income	699.5	811.3	857.7	0.9	0.6	24.6	66.9	8.6	0.4	0.1	9	17
Low & middle income	4,347.0	5,507.4	6,129.2	1.5	1.2	29.8	64.2	6.0	0.5	0.1	8	22
East Asia & Pacific	1,595.9	1,898.9	2,032.7	1.1	0.8	23.5	69.4	7.1	0.3	0.1	7	14
Europe & Central Asia	451.8	460.5	460.7	0.1	0.0 ^a	19.4	68.9	11.6	0.3	0.2	12	13
Latin America & Carib.	436.9	556.1	616.5	1.5	1.1	29.6	64.1	6.3	0.5	0.1	6	20
Middle East & N. Africa	225.6	310.7	361.9	2.0	1.7	32.7	63.0	4.3	0.5	0.1	6	24
South Asia	1,120.1	1,499.4	1,694.9	1.8	1.4	33.4	61.9	4.7	0.5	0.1	8	24
Sub-Saharan Africa	516.7	781.8	962.6	2.6	2.3	43.3	53.6	3.1	0.8	0.1	15	39
High income	916.9	1,030.7	1,071.5	0.7	0.4	17.9	67.1	14.9	0.3	0.2	8	12
Euro area	296.2	316.7	319.7	0.4	0.1	15.5	66.7	17.8	0.2	0.3	9	10

a. Less than 0.05. b. More than –0.05. c. Excludes Kosovo and Metohija. d. Includes Kosovo and Metohija.

About the data

Population estimates are usually based on national population censuses, but their frequency and quality vary by country. Most countries conduct a complete enumeration no more than once a decade. Estimates for the years before and after the census are interpolations or extrapolations based on demographic models. Errors and undercounting occur even in high-income countries; in developing countries errors may be substantial because of limits in the transport, communications, and other resources required to conduct and analyze a full census.

The quality and reliability of official demographic data are also affected by public trust in the government, government commitment to accurate enumeration, confidentiality and protection against misuse of census data, and census agencies' independence from political influence. Moreover, comparability of population indicators is limited by differences in the concepts, definitions, collection procedures, and estimation methods used by national statistical agencies and other organizations that collect the data.

Of the 153 economies in the table, 131 (about 86 percent) conducted a census between 1995 and 2006. The currentness of censuses and the availability of complementary data from surveys or registration systems are objective ways to judge demographic data quality. Some European countries' registration systems offer complete information on population in the absence of a census. See *Primary data documentation* for the most recent census or survey year and for the completeness of registration.

Current population estimates for developing countries that lack recent census-based data and pre- and post-census estimates for countries with census data are provided by the United Nations Population Division and other agencies. The standard estimation method requires fertility, mortality, and net migration data, often collected from sample surveys, which can be small or limited in coverage. Population estimates are from demographic modeling and so are susceptible to biases and errors from shortcomings in the model as well as in the data. Population projections use the cohort component method. Because of a drastic reduction in estimated mortality due partly to revised lower estimates of HIV prevalence, populations of several countries, notably in Sub-Saharan Africa, have been revised upward from previous estimates.

The growth rate of the total population conceals the fact that different age groups may grow at different rates. In many developing countries the under-15 population was growing rapidly but has begun to shrink. Previously high fertility rates and declining

mortality rates are now reflected in the larger share of the working-age population.

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

The vital rates in the table are based on data from birth and death registration systems, censuses, and sample surveys by national statistical offices and other organizations, or on demographic analysis. The 2006 estimates for many countries are projections based on extrapolations of levels and trends from earlier years or interpolations of population estimates and projections from the United Nations Population Division.

Vital registers are the preferred source for these data, but in many developing countries systems for registering births and deaths are absent or incomplete because of deficiencies in the coverage of events or geographic areas. Many developing countries carry out special household surveys that ask respondents about births and deaths in the recent past. Estimates derived in this way are subject to sampling errors and errors due to inaccurate recall.

The United Nations Statistics Division monitors the completeness of vital registration systems. The share of countries with at least 90 percent complete vital registration rose from 45 percent in 1988 to 62 percent in 2006. Still, some of the most populous developing countries—China, India, Indonesia, Brazil, Pakistan, Bangladesh, Nigeria—lack complete vital registration systems. From 2003 to 2006, 51 percent of births and deaths and 48 percent of infant deaths worldwide were registered and reported.

International migration is the only other factor besides birth and death rates that directly determines a country's population growth. From 1990 to 2005 the number of immigrants in high-income countries rose by 40 million. About 190 million people (3 percent of the world's population) currently live outside their home country. Estimating international migration is difficult. At any time many people are located outside their home country as tourists, workers, or refugees or for other reasons. Standards for the duration and purpose of international moves that qualify as migration vary, and estimates require information on flows into and out of countries that is difficult to collect.

Definitions

• **Population** is based on the de facto definition of population, which counts all residents regardless of legal status or citizenship—except for refugees not permanently settled in the country of asylum, who are generally considered part of the population of their country of origin. The values shown are mid-year estimates for 1990 and 2006 and projections for 2015. • **Average annual population growth** is the exponential change for the period indicated. See *Statistical methods* for more information. • **Population age composition** is the percentage of the total population that is in specific age groups. • **Dependency ratio** is the ratio of dependents—people younger than 15 or older than 64—to the working-age population—those ages 15–64. • **Crude death rate** and **crude birth rate** are the number of deaths and the number of live births occurring during the year, per 1,000 population, estimated at midyear. Subtracting the crude death rate from the crude birth rate provides the rate of natural increase, which is equal to the population growth rate in the absence of migration.

Data sources

The World Bank's population estimates are compiled and produced by its Human Development Network and Development Data Group in consultation with its operational staff and country offices. Important inputs to the World Bank's demographic work come from the United Nations Population Division's *World Population Prospects: The 2006 Revision*; census reports and other statistical publications from national statistical offices; household surveys conducted by national agencies, Macro International, and the U.S. Centers for Disease Control and Prevention; Eurostat, *Demographic Statistics* (various years); *Centro Latinoamericano de Demografía, Boletín Demográfico* (various years); and U.S. Bureau of the Census, International Database.



2.2

Labor force structure

	Labor force participation rate				Labor force				
	% ages 15 and older				Total millions	Ages 15 and older average annual % growth	Female		
	Male		Female				% of labor force		
	1990	2006	1990	2006	1990	2006	1990–2006	1990	2006
Afghanistan	..	..	..	..	..	..	..	..	..
Albania	83	70	58	49	1.6	1.4	–0.7	40.2	41.8
Algeria	78	80	23	37	7.2	13.9	4.1	22.6	31.0
Angola	90	92	74	74	4.5	7.3	3.0	46.4	45.8
Argentina	78	76	38	54	13.0	18.8	2.3	34.4	43.1
Armenia	87	60	72	48	1.9	1.3	–2.6	47.7	48.9
Australia	75	70	52	56	8.4	10.5	1.4	41.3	44.8
Austria	70	66	43	50	3.5	4.0	0.8	40.8	44.4
Azerbaijan	78	73	64	61	3.3	4.3	1.6	47.4	47.7
Bangladesh	89	86	63	52	51.2	71.0	2.0	40.2	36.7
Belarus	76	64	61	53	5.3	4.8	–0.7	48.8	49.1
Belgium	61	60	37	44	3.9	4.5	0.9	39.1	43.6
Benin	90	86	58	54	2.0	3.4	3.3	40.8	38.3
Bolivia	80	84	49	63	2.5	4.3	3.3	39.2	43.5
Bosnia and Herzegovina	78	68	60	59	2.2	2.0	–0.6	44.4	48.4
Botswana	77	70	57	46	0.5	0.7	2.1	44.5	40.3
Brazil	85	79	45	57	62.5	93.1	2.5	35.0	42.9
Bulgaria	68	52	60	40	4.4	3.1	–2.3	48.0	45.0
Burkina Faso	91	89	77	78	3.9	6.5	3.2	47.5	47.1
Burundi	90	93	91	92	2.8	4.2	2.5	52.5	51.4
Cambodia	85	80	78	75	4.4	6.9	2.9	52.4	50.7
Cameroon	82	80	56	52	4.6	7.0	2.6	41.3	39.6
Canada	76	72	58	61	14.7	17.9	1.2	44.0	46.1
Central African Republic	89	89	71	71	1.4	2.0	2.3	47.0	46.0
Chad	80	78	64	66	2.4	4.0	3.3	45.7	46.8
Chile	77	70	32	37	5.0	6.6	1.7	30.5	35.4
China	85	82	73	69	650.6	780.5	1.1	44.8	44.1
Hong Kong, China	80	70	47	54	2.9	3.6	1.5	36.3	45.5
Colombia	81	81	46	62	14.0	22.8	3.0	37.0	44.8
Congo, Dem. Rep.	91	91	61	61	15.2	24.2	2.9	41.6	41.3
Congo, Rep.	86	88	58	57	1.0	1.5	2.9	41.3	40.1
Costa Rica	84	81	33	46	1.2	2.0	3.5	27.6	35.6
Côte d'Ivoire	90	89	44	39	4.7	7.1	2.6	30.0	29.3
Croatia	71	60	47	45	2.2	1.9	–0.8	42.1	44.8
Cuba	73	73	39	44	4.6	5.3	0.9	34.6	37.3
Czech Republic	73	67	61	52	5.4	5.2	–0.3	47.5	44.9
Denmark	75	69	62	59	2.9	2.8	–0.2	46.1	46.4
Dominican Republic	84	82	36	47	2.7	4.1	2.5	29.6	36.4
Ecuador	85	82	33	61	3.7	6.4	3.5	27.8	42.7
Egypt, Arab Rep.	75	73	27	20	16.5	23.1	2.1	26.3	21.7
El Salvador	80	75	51	48	2.0	2.7	2.1	41.2	40.7
Eritrea	92	90	61	58	1.3	2.0	2.7	41.8	41.0
Estonia	77	65	64	52	0.9	0.7	–1.6	49.8	48.9
Ethiopia	91	89	72	71	22.6	34.4	2.6	44.9	44.9
Finland	70	66	58	57	2.6	2.7	0.2	47.2	47.4
France	65	61	46	48	24.8	27.3	0.6	43.3	45.5
Gabon	84	83	63	62	0.4	0.6	2.7	43.8	42.7
Gambia, The	86	86	63	59	0.4	0.7	3.5	42.6	40.8
Georgia	72	76	69	49	2.9	2.2	–1.6	52.3	42.7
Germany	72	65	44	51	38.3	41.0	0.4	40.4	45.1
Ghana	80	75	76	70	6.7	10.3	2.6	48.8	47.8
Greece	67	65	36	44	4.2	5.2	1.4	36.2	40.7
Guatemala	89	83	29	34	2.9	4.2	2.4	24.7	31.3
Guinea	90	87	80	80	2.8	4.4	2.7	47.3	47.5
Guinea-Bissau	91	93	58	61	0.4	0.7	2.9	40.3	40.8
Haiti	83	84	58	56	2.8	4.1	2.4	42.7	41.3

Labor force structure

2.2

PEOPLE

	Labor force participation rate				Labor force				
	% ages 15 and older		Female	2006	Total millions	2006	Ages 15 and older average annual % growth 1990–2006	Female % of labor force	
	Male	2006						1990	2006
	1990	2006	1990	2006	1990	2006	1990–2006	1990	2006
Honduras	87	89	33	55	1.6	3.0	4.0	27.9	39.4
Hungary	64	58	46	42	4.5	4.2	–0.5	44.5	45.0
India	85	82	37	34	325.6	438.0	1.9	28.4	28.1
Indonesia	81	85	50	51	75.3	109.2	2.3	38.4	37.9
Iran, Islamic Rep.	81	74	22	40	15.6	29.1	3.9	20.2	34.3
Iraq	76	..	16	..	4.7	..	..	16.8	..
Ireland	70	72	36	54	1.3	2.1	2.9	34.3	43.0
Israel	62	59	41	51	1.6	2.8	3.3	40.5	47.0
Italy	66	61	36	38	23.9	24.8	0.2	37.1	39.9
Jamaica	80	74	66	54	1.1	1.2	0.2	46.8	43.3
Japan	77	73	50	48	63.9	66.2	0.2	40.6	40.8
Jordan	69	77	18	28	0.8	1.9	5.7	18.8	25.4
Kazakhstan	78	75	61	65	7.7	8.1	0.3	46.3	49.4
Kenya	90	90	75	70	9.8	16.7	3.3	45.9	44.2
Korea, Dem. Rep.	82	78	52	48	9.9	11.4	0.9	40.6	39.3
Korea, Rep.	73	74	47	50	19.1	24.5	1.6	39.3	40.8
Kuwait	82	85	35	50	0.9	1.4	3.2	21.8	25.7
Kyrgyz Republic	74	74	59	55	1.8	2.3	1.5	46.2	44.0
Lao PDR	80	80	53	54	1.5	2.4	2.8	40.6	41.0
Latvia	77	64	63	49	1.5	1.1	–1.8	49.7	48.0
Lebanon	78	80	32	34	1.0	1.6	2.9	31.2	31.0
Lesotho	86	74	57	46	0.6	0.7	0.8	46.5	43.5
Liberia	85	83	55	55	0.8	1.3	3.2	39.4	39.7
Libya	79	82	19	35	1.3	2.5	4.2	16.9	27.8
Lithuania	75	64	59	52	1.9	1.6	–1.0	48.1	49.0
Macedonia, FYR	73	65	48	41	0.9	0.9	0.1	40.0	39.0
Madagascar	83	86	79	79	5.4	8.9	3.2	49.2	48.3
Malawi	91	90	85	86	4.4	6.3	2.2	50.2	50.0
Malaysia	81	81	44	47	7.1	11.6	3.0	34.8	36.0
Mali	89	82	72	72	3.2	4.8	2.5	46.9	49.2
Mauritania	86	84	56	54	0.8	1.3	3.1	40.2	39.2
Mauritius	82	79	42	43	0.5	0.6	1.4	33.9	35.7
Mexico	84	80	34	40	29.9	43.1	2.3	30.0	35.2
Moldova	75	68	61	54	2.1	1.9	–0.8	48.5	46.8
Mongolia	82	82	56	54	0.8	1.3	2.5	41.0	40.1
Morocco	81	80	24	27	7.6	11.3	2.5	23.7	26.1
Mozambique	88	83	88	85	6.4	9.8	2.7	54.0	53.4
Myanmar	88	86	69	68	20.2	27.3	1.9	44.7	44.9
Namibia	65	63	49	47	0.4	0.7	2.7	45.0	43.8
Nepal	80	78	48	50	7.1	10.8	2.6	37.9	40.5
Netherlands	71	73	44	57	6.9	8.6	1.3	39.1	44.4
New Zealand	74	74	53	61	1.7	2.2	1.8	43.1	46.1
Nicaragua	86	86	35	36	1.3	2.1	2.8	29.7	30.0
Niger	95	95	71	71	3.3	5.9	3.6	43.7	42.4
Nigeria	86	85	48	46	33.9	52.7	2.8	36.5	35.3
Norway	73	73	57	64	2.2	2.6	0.9	44.7	46.8
Oman	83	81	15	24	0.6	1.0	3.3	11.1	17.3
Pakistan	86	83	28	33	35.0	59.6	3.3	23.3	27.3
Panama	79	79	39	52	0.9	1.5	3.0	32.5	39.2
Papua New Guinea	75	75	72	72	1.8	2.7	2.7	46.7	48.7
Paraguay	83	84	52	65	1.7	2.9	3.5	38.1	43.3
Peru	80	82	47	60	8.5	13.4	2.8	37.0	42.5
Philippines	83	83	47	56	23.5	38.4	3.1	36.5	40.2
Poland	74	61	57	47	18.6	17.2	–0.5	45.8	45.7
Portugal	73	70	50	56	4.8	5.6	1.0	42.7	46.2
Puerto Rico	61	59	31	38	1.2	1.5	1.5	35.8	41.4



2.2

Labor force structure

	Labor force participation rate				Labor force				
	% ages 15 and older				Total millions	Ages 15 and older average annual % growth	Female		
	Male		Female				% of labor force		
	1990	2006	1990	2006	1990	2006	1990–2006	1990	2006
Romania	71	62	54	50	11.0	10.1	–0.5	44.3	45.9
Russian Federation	77	68	60	55	77.3	73.5	–0.3	48.4	48.8
Rwanda	87	84	86	80	3.1	4.4	2.1	51.8	51.4
Saudi Arabia	80	80	15	18	5.1	8.4	3.2	11.4	14.2
Senegal	87	81	61	56	3.2	4.8	2.5	40.8	41.2
Serbia	72 ^a	70 ^a	50 ^a	51 ^a	3.5 ^b	3.6 ^b	0.2 ^b	41.8 ^b	42.9 ^b
Sierra Leone	90	94	53	56	1.7	2.5	2.3	38.5	38.5
Singapore	80	76	50	50	1.6	2.3	2.4	38.8	39.9
Slovak Republic	75	68	60	52	2.6	2.7	0.1	46.3	44.9
Slovenia	70	67	54	54	1.0	1.0	0.4	45.5	46.0
Somalia	96	95	61	59	2.9	3.6	1.5	39.9	39.2
South Africa	79	79	54	46	14.4	20.0	2.1	41.6	37.9
Spain	69	67	34	45	15.9	21.1	1.8	34.4	40.6
Sri Lanka	79	76	45	35	7.2	8.4	1.0	36.0	32.3
Sudan	79	71	27	24	7.7	10.7	2.0	26.0	24.9
Swaziland	78	75	38	32	0.2	0.4	2.9	38.0	32.3
Sweden	72	67	63	59	4.7	4.7	0.0	47.7	46.6
Switzerland	80	75	52	61	3.7	4.2	0.9	40.4	46.1
Syrian Arab Republic	82	88	29	39	3.6	7.9	4.9	26.0	30.5
Tajikistan	74	62	52	46	1.9	2.2	0.9	42.2	43.7
Tanzania	91	90	88	86	12.4	19.3	2.8	50.2	49.7
Thailand	88	81	75	66	31.4	36.5	0.9	46.9	46.7
Timor-Leste	79	83	50	56	0.3	0.4	1.9	37.5	39.5
Togo	90	90	54	50	1.5	2.5	3.2	38.5	36.7
Trinidad and Tobago	75	77	42	47	0.5	0.6	2.0	37.0	38.9
Tunisia	76	75	21	29	2.4	3.9	3.0	21.6	27.9
Turkey	82	76	34	28	21.0	27.4	1.7	29.4	26.5
Turkmenistan	77	73	64	61	1.5	2.3	2.4	46.9	46.5
Uganda	92	86	80	80	8.0	12.6	2.9	47.2	48.4
Ukraine	73	64	58	50	26.3	22.5	–1.0	49.3	48.1
United Arab Emirates	92	93	25	41	0.9	2.7	6.7	9.8	14.6
United Kingdom	75	69	53	55	29.7	30.8	0.2	43.3	45.4
United States	76	73	57	60	129.3	157.0	1.2	44.3	45.9
Uruguay	76	78	46	57	1.4	1.7	1.3	39.9	44.4
Uzbekistan	76	73	60	57	8.2	11.6	2.2	45.4	44.6
Venezuela, RB	81	84	38	59	7.3	13.3	3.8	31.8	41.3
Vietnam	81	78	74	72	31.3	44.8	2.2	48.4	48.2
West Bank and Gaza	64	66	9	10	0.4	0.8	4.4	11.9	13.2
Yemen, Rep.	74	75	28	30	3.0	6.3	4.6	27.5	28.2
Zambia	90	91	66	66	3.4	5.0	2.3	43.1	42.6
Zimbabwe	80	85	70	64	4.2	6.0	2.2	47.0	43.6
World	81 w	79 w	54 w	53 w	2,386.6 t	3,081.8 t	1.6 w	39.7 w	39.9 w
Low income	85	83	48	46	694.0	995.4	2.3	35.1	35.0
Middle income	82	79	59	57	1,258.0	1,582.6	1.4	41.7	41.9
Lower middle income	83	81	63	60	954.4	1,208.6	1.5	42.4	42.0
Upper middle income	79	74	48	49	303.7	374.0	1.3	39.5	41.5
Low & middle income	83	81	55	53	1,952.1	2,578.0	1.7	39.4	39.2
East Asia & Pacific	85	82	69	66	858.7	1,074.1	1.4	44.1	43.5
Europe & Central Asia	75	68	56	49	216.4	214.6	–0.1	45.7	44.7
Latin America & Carib.	83	80	41	53	171.1	257.4	2.6	33.9	40.8
Middle East & N. Africa	78	77	23	30	64.9	111.8	3.4	22.9	28.0
South Asia	85	82	39	36	430.6	597.1	2.0	29.7	29.3
Sub-Saharan Africa	87	85	63	61	210.3	323.0	2.7	43.0	42.2
High income	73	70	49	52	434.5	503.8	0.9	41.4	43.4
Euro area	68	64	41	47	131.8	148.8	0.8	39.6	43.4

a. Includes Montenegro. b. Excludes Kosovo and Metohija.

Labor force structure

2.2

About the data

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

Data on the labor force are collected from labor force surveys, censuses, establishment censuses and surveys, and administrative records such as employment exchange registers and unemployment insurance schemes. For some countries a combination of these sources is used. Labor force surveys are the most comprehensive source for internationally comparable labor force data. They can cover all noninstitutionalized civilians, all branches and sectors of the economy, and all categories of workers, including people holding multiple jobs. By contrast, labor force data from population censuses are often based on a limited number of questions on the economic characteristics of individuals, with little scope to probe. The resulting data often differ from labor force survey data and vary considerably by country, depending on the census scope and coverage. Establishment censuses and surveys provide data only on the employed population, not unemployed workers, workers in small establishments, or workers in the informal sector (International Labour Organization, *Key Indicators of the Labour Market 2001–2002*).

The reference period of a census or survey is another important source of differences: in some countries data refer to people's status on the day of the census or survey or during a specific period before the inquiry date, while in others data are recorded without reference to any period. In developing countries, where the household is often the basic unit of production and all members contribute to output, but some at low intensity or irregularly, the estimated labor force may be much smaller than the numbers actually working.

Differing definitions of employment age also affect comparability. For most countries the working age is 15 and older, but in some developing countries children younger than 15 work full- or part-time and are included in the estimates. Similarly, some countries have an upper age limit. As a result, calculations may systematically over- or underestimate actual rates. For further information on source, reference period, or definition, consult the original source.

The labor force participation rates in the table are from *Key Indicators of the Labour Market*, 5th edition. These harmonized estimates use strict data selection criteria and enhanced methods to ensure comparability across countries and over time, including collection and tabulation methodologies and methods applied to such country-specific factors as military service requirements. Estimates are based mainly on labor force surveys, with other sources (population censuses and nationally reported estimates) used only when no survey data are available.

Participation rates indicate the relative size of the labor supply. The indicator in this edition is for the population ages 15 and older, to include people who continue working past age 65. In previous editions the indicator was for the population ages 15–64, so participation rates are not comparable across editions.

The labor force estimates in the table were calculated by applying labor force participation rates from the International Labour Organization (ILO) database to World Bank population estimates to create a series consistent with these population estimates. This procedure sometimes results in labor force estimates that differ slightly from those in the ILO's *Yearbook of Labour Statistics* and its database *Key Indicators of the Labour Market*.

Estimates of women in the labor force and employment are generally lower than those of men and are not comparable internationally, reflecting that demographic, social, legal, and cultural trends and norms determine whether women's activities are regarded as economic. In many countries many women work on farms or in other family enterprises without pay, and others work in or near their homes, mixing work and family activities during the day.

Definitions

- **Labor force participation rate** is the proportion of the population ages 15 and older that is economically active: all people who supply labor for the production of goods and services during a specified period.
- **Total labor force** comprises people ages 15 and older who meet the ILO definition of the economically active population. It includes both the employed and the unemployed.
- **Average annual percentage growth of the labor force** is calculated using the exponential endpoint method (see *Statistical methods* for more information).
- **Females as a percentage of the labor force** show the extent to which women are active in the labor force.

Data sources

Data on labor force participation rates are from the ILO database *Key Indicators of the Labour Market*, 5th edition. Labor force numbers were calculated by World Bank staff, applying labor force participation rates from the ILO database to population estimates.



2.3

Employment by economic activity

	Agriculture				Industry				Services			
	Male % of male employment		Female % of female employment		Male % of male employment		Female % of female employment		Male % of male employment		Female % of female employment	
	1990-92 ^a	2003-06 ^a	1990-92 ^a	2003-06 ^a	1990-92 ^a	2003-06 ^a	1990-92 ^a	2003-06 ^a	1990-92 ^a	2003-06 ^a	1990-92 ^a	2003-06 ^a
Afghanistan	..	..	..	..	..	..	..	..	..	..	..	..
Albania	..	..	..	..	..	..	..	..	..	..	..	..
Algeria	..	23	..	11	..	24	..	25	..	53	..	64
Angola	..	..	..	..	..	..	..	..	..	..	..	..
Argentina	0 ^{b,c}	2 ^c	0 ^{b,c}	1 ^c	40 ^c	33 ^c	18 ^c	11 ^c	59 ^c	66 ^c	81 ^c	88 ^c
Armenia	..	..	..	..	..	..	..	..	..	..	..	..
Australia	6	5	4	3	32	31	12	9	61	65	84	88
Austria	6	6 ^c	8	6 ^c	47	40 ^c	20	13 ^c	46	55 ^c	72	81 ^c
Azerbaijan	..	41	..	37	..	15	..	9	..	44	..	54
Bangladesh	54	50	85	59	16	12	9	18	25	38	2	23
Belarus	..	..	..	..	..	..	..	..	..	..	..	..
Belgium	3 ^c	2 ^c	2 ^c	2 ^c	41 ^c	35 ^c	16 ^c	11 ^c	56 ^c	62 ^c	81 ^c	86 ^c
Benin	..	..	..	..	..	..	..	..	..	..	..	..
Bolivia	3 ^c	..	1 ^c	..	42 ^c	..	17 ^c	..	55 ^c	..	82 ^c	..
Bosnia and Herzegovina	..	..	..	..	..	..	..	..	..	..	..	..
Botswana	..	29	..	13	..	28	..	17	..	43	..	71
Brazil	31 ^c	25 ^c	25 ^c	16 ^c	27 ^c	27 ^c	10 ^c	13 ^c	43 ^c	48 ^c	65 ^c	71 ^c
Bulgaria	..	11	..	7	..	39	..	29	..	50	..	64
Burkina Faso	..	..	..	..	..	..	..	..	..	..	..	..
Burundi	..	..	..	..	..	..	..	..	..	..	..	..
Cambodia	..	..	..	..	..	..	..	..	..	..	..	..
Cameroon	53	..	68	..	14	..	4	..	26	..	23	..
Canada	6 ^c	4 ^c	2 ^c	2 ^c	31 ^c	32 ^c	11 ^c	11 ^c	64 ^c	64 ^c	87 ^c	88 ^c
Central African Republic	..	..	..	..	..	..	..	..	..	..	..	..
Chad	..	..	..	..	..	..	..	..	..	..	..	..
Chile	24	17	6	6	32	29	15	12	45	54	79	83
China	..	..	..	..	..	..	..	..	..	..	..	..
Hong Kong, China	1	0 ^b	0 ^b	0 ^b	37	22	27	7	63	77	73	93
Colombia	2	32 ^b	1 ^{b,c}	8 ^{b,c}	35	21	25	16	63	48	74	76
Congo, Dem. Rep.	..	..	..	..	..	..	..	..	..	..	..	..
Congo, Rep.	..	..	..	..	..	..	..	..	..	..	..	..
Costa Rica	32	21	5	5	27	26	25	13	41	52	69	82
Côte d'Ivoire	..	..	..	..	..	..	..	..	..	..	..	..
Croatia	..	16 ^c	..	19 ^c	..	37 ^c	..	18 ^c	..	47 ^c	..	63 ^c
Cuba	..	28	..	10	..	23	..	14	..	50	..	76
Czech Republic	9	5	7	3	55	49	33	27	36	46	61	71
Denmark	7	4	3	2	37	34	16	12	56	62	81	86
Dominican Republic	26	21	3	3	23	26	21	15	52	53	76	82
Ecuador	10 ^c	11 ^c	2 ^c	4 ^c	29 ^c	27 ^c	17 ^c	12 ^c	62 ^c	62 ^c	81 ^c	84 ^c
Egypt, Arab Rep.	35	28	52	39	25	23	10	6	41	49	37	55
El Salvador	48 ^c	28	15 ^c	5	23 ^c	25	23 ^c	22	29 ^c	45	63 ^c	75
Eritrea	..	..	..	..	..	..	..	..	..	..	..	..
Estonia	23	7	13	4	42	44	30	24	36	49	57	72
Ethiopia	..	84 ^c	..	76 ^c	..	5 ^c	..	8 ^c	..	10 ^c	..	16 ^c
Finland	11	7	6	3	38	38	15	12	51	56	78	84
France	..	5	..	2	..	35	..	12	..	60	..	85
Gabon	..	..	..	..	..	..	..	..	..	..	..	..
Gambia, The	..	..	..	..	..	..	..	..	..	..	..	..
Georgia	..	52	..	57	..	14	..	4	..	34	..	38
Germany	4	3	4	2	50	41	24	16	47	56	72	82
Ghana	66	..	59	..	10	..	10	..	23	..	32	..
Greece	20 ^c	12 ^c	26 ^c	14 ^c	32 ^c	30 ^c	17 ^c	10 ^c	48 ^c	58 ^c	56 ^c	76 ^c
Guatemala	..	..	..	..	..	..	..	..	..	..	..	..
Guinea	..	..	..	..	..	..	..	..	..	..	..	..
Guinea-Bissau	..	..	..	..	..	..	..	..	..	..	..	..
Haiti	..	..	..	..	..	..	..	..	..	..	..	..

Employment by economic activity

2.3

PEOPLE

	Agriculture				Industry				Services			
	Male % of male employment		Female % of female employment		Male % of male employment		Female % of female employment		Male % of male employment		Female % of female employment	
	1990-92 ^a	2003-06 ^a	1990-92 ^a	2003-06 ^a	1990-92 ^a	2003-06 ^a	1990-92 ^a	2003-06 ^a	1990-92 ^a	2003-06 ^a	1990-92 ^a	2003-06 ^a
Honduras	53	51	6	13	18	20	25	23	29	29	69	63
Hungary	..	7 ^c	..	3 ^c	..	42 ^c	..	21 ^c	..	51 ^c	..	76 ^c
India	..	..	..	..	..	..	..	..	..	..	..	..
Indonesia	54	43	57	41	15	20	13	15	31	37	31	44
Iran, Islamic Rep.	..	23	..	34	..	31	..	28	..	46	..	37
Iraq	..	..	..	..	..	..	..	..	..	..	..	..
Ireland	19	9	3	1	33	39	18	12	48	51	78	86
Israel	5	3	2	1	38	31	15	11	57	65	83	88
Italy	8	5	9	3	37	39	22	18	55	56	70	79
Jamaica	36	25	16	9	25	27	12	5	39	48	72	86
Japan	6	4	7	5	40	35	27	18	54	59	65	77
Jordan	..	4	..	2	..	23	..	12	..	73	..	84
Kazakhstan	..	33	..	30	..	25	..	12	..	42	..	58
Kenya	19 ^c	..	20 ^c	..	23 ^c	..	9 ^c	..	58 ^c	..	71 ^c	..
Korea, Dem. Rep.	..	..	..	..	..	..	..	..	..	..	..	..
Korea, Rep.	14	7	18	9	40	34	28	17	46	59	54	74
Kuwait	..	..	..	..	..	..	..	..	..	..	..	..
Kyrgyz Republic	..	39	..	39	..	23	..	11	..	38	..	50
Lao PDR	..	..	..	..	..	..	..	..	..	..	..	..
Latvia	..	15 ^c	..	8 ^c	..	35 ^c	..	16 ^c	..	49 ^c	..	75 ^c
Lebanon	..	..	..	..	..	..	..	..	..	..	..	..
Lesotho	..	..	..	..	..	..	..	..	..	..	..	..
Liberia	..	..	..	..	..	..	..	..	..	..	..	..
Libya	..	..	..	..	..	..	..	..	..	..	..	..
Lithuania	25	17 ^c	15	11 ^c	46	37 ^c	31	21 ^c	29	46 ^c	54	68 ^c
Macedonia, FYR	..	20	..	19	..	34	..	30	..	46	..	51
Madagascar	..	77	..	79	..	7	..	6	..	16	..	15
Malawi	..	..	..	..	..	..	..	..	..	..	..	..
Malaysia	23	16	20	11	31	35	32	27	46	49	48	62
Mali	..	50	..	30	..	18	..	15	..	32	..	55
Mauritania	..	..	..	..	..	..	..	..	..	..	..	..
Mauritius	15	11	13	9	36	34	48	29	48	55	39	62
Mexico	34	21	11	5	25	30	19	19	41	49	70	76
Moldova	..	41	..	40	..	21	..	12	..	38	..	48
Mongolia	..	43	..	37	..	19	..	15	..	38	..	48
Morocco	..	38	..	63	..	22	..	14	..	40	..	23
Mozambique	..	..	..	..	..	..	..	..	..	..	..	..
Myanmar	..	..	..	..	..	..	..	..	..	..	..	..
Namibia	45	..	52	..	21	..	8	..	34	..	40	..
Nepal	75	..	91	..	4	..	1	..	20	..	8	..
Netherlands	5	4	3	2	33	30	10	8	60	62	82	86
New Zealand	13	9	8	5	31	32	13	11	56	59	80	84
Nicaragua	..	41	..	10	..	19	..	17	..	33	..	52
Niger	..	..	..	..	..	..	..	..	..	..	..	..
Nigeria	..	..	..	..	..	..	..	..	..	..	..	..
Norway	7	5	3	2	34	32	10	8	58	63	86	90
Oman	..	..	..	..	..	..	..	..	..	..	..	..
Pakistan	45	38	69	67	20	21	15	15	35	41	16	18
Panama	35	22	3	4	20	22	11	9	45	56	85	86
Papua New Guinea	..	..	..	..	..	..	..	..	..	..	..	..
Paraguay	3 ^c	39 ^c	0 ^{b,c}	20 ^c	33 ^c	19 ^c	19 ^c	10 ^c	64 ^c	42 ^c	80 ^c	70 ^c
Peru	1 ^c	1 ^c	0 ^{b,c}	0 ^{b,c}	30 ^c	31 ^c	13 ^c	13 ^c	69 ^c	68 ^c	87 ^c	86 ^c
Philippines	53 ^c	45	32 ^c	25	17 ^c	17	14 ^c	12	29 ^c	39	55 ^c	64
Poland	..	18 ^c	..	17 ^c	..	39 ^c	..	17 ^c	..	43 ^c	..	66 ^c
Portugal	10 ^c	11 ^c	13 ^c	13 ^c	39 ^c	41 ^c	24 ^c	19 ^c	51 ^c	48 ^c	63 ^c	68 ^c
Puerto Rico	5	3	0 ^b	0 ^b	27	25	19	11	67	72	80	89



2.3

Employment by economic activity

	Agriculture				Industry				Services			
	Male % of male employment		Female % of female employment		Male % of male employment		Female % of female employment		Male % of male employment		Female % of female employment	
	1990-92 ^a	2003-06 ^a	1990-92 ^a	2003-06 ^a	1990-92 ^a	2003-06 ^a	1990-92 ^a	2003-06 ^a	1990-92 ^a	2003-06 ^a	1990-92 ^a	2003-06 ^a
Romania	29 ^c	31	38 ^c	33	44 ^c	35	30 ^c	25	28 ^c	34	33 ^c	42
Russian Federation	..	12	..	8	..	38	..	21	..	50	..	71
Rwanda	..	..	..	..	..	..	..	..	..	..	..	..
Saudi Arabia	..	5	..	0 ^b	..	11	..	1	..	85	..	99
Senegal	..	..	..	..	..	..	..	..	..	..	..	..
Serbia	..	..	..	..	..	..	..	..	..	..	..	..
Sierra Leone	..	..	..	..	..	..	..	..	..	..	..	..
Singapore	1	0	0 ^b	0	36	36	32	21	63	63	68	79
Slovak Republic	..	6 ^c	..	3 ^c	..	50 ^c	..	25 ^c	..	44 ^c	..	72 ^c
Slovenia	..	9	..	9	..	47	..	25	..	43	..	65
Somalia	..	..	..	..	..	..	..	..	..	..	..	..
South Africa	..	13	..	7	..	33	..	14	..	54	..	79
Spain	11 ^c	6 ^c	8 ^c	4 ^c	41 ^c	41 ^c	16 ^c	12 ^c	49 ^c	52 ^c	76 ^c	84 ^c
Sri Lanka	..	..	..	..	..	..	..	..	..	..	..	..
Sudan	..	..	..	..	..	..	..	..	..	..	..	..
Swaziland	..	..	..	..	..	..	..	..	..	..	..	..
Sweden	5 ^c	3 ^c	2 ^c	1 ^c	40 ^c	34 ^c	12 ^c	9 ^c	55 ^c	63 ^c	86 ^c	90 ^c
Switzerland	4 ^c	5 ^c	4 ^c	3 ^c	37 ^c	32 ^c	15 ^c	11 ^c	59 ^c	63 ^c	81 ^c	86 ^c
Syrian Arab Republic	23	23	54	49	28	29	8	8	49	48	38	43
Tajikistan	..	..	..	..	..	..	..	..	..	..	..	..
Tanzania	78 ^c	..	90 ^c	..	7 ^c	..	1 ^c	..	15 ^c	..	8 ^c	..
Thailand	60	44	62	41	18	22	13	19	22	34	25	41
Timor-Leste	..	..	..	..	..	..	..	..	..	..	..	..
Togo	..	..	..	..	..	..	..	..	..	..	..	..
Trinidad and Tobago	15	6	6	2	34	41	14	16	51	52	80	82
Tunisia	..	..	..	..	..	..	..	..	..	..	..	..
Turkey	33	22	72	52	26	28	11	15	41	50	17	33
Turkmenistan	..	..	..	..	..	..	..	..	..	..	..	..
Uganda	91	60 ^c	91	77 ^c	4	11 ^c	6	5 ^c	5	29 ^c	3	18 ^c
Ukraine	..	..	..	..	..	..	..	..	..	..	..	..
United Arab Emirates	..	..	..	..	..	..	..	..	..	..	..	..
United Kingdom	3	2	1	1	41	33	16	9	55	65	82	90
United States	4	2	1	1	34	30	14	10	62	68	85	90
Uruguay	7 ^c	7 ^c	1 ^c	2 ^c	36 ^c	29 ^c	21 ^c	13 ^c	57 ^c	64 ^c	78 ^c	86 ^c
Uzbekistan	..	..	..	..	..	..	..	..	..	..	..	..
Venezuela, RB	17	16 ^c	2	2 ^c	32	25 ^c	16	11 ^c	52	59 ^c	82	86 ^c
Vietnam	..	56	..	60	..	21	..	14	..	23	..	26
West Bank and Gaza	..	12	..	34	..	28	..	8	..	59	..	56
Yemen, Rep.	44	..	83	..	14	..	2	..	38	..	13	..
Zambia	..	..	..	..	..	..	..	..	..	..	..	..
Zimbabwe	..	..	..	..	..	..	..	..	..	..	..	..
World	.. W	.. W	.. W	.. W	.. W	.. W	.. W	.. W	.. W	.. W	.. W	.. W
Low income	..	..	..	..	..	..	..	..	..	..	..	..
Middle income	..	..	..	..	..	..	..	..	..	..	..	..
Lower middle income	..	..	..	..	..	..	..	..	..	..	..	..
Upper middle income	..	20	..	14	..	31	..	17	..	49	..	68
Low & middle income	..	..	..	..	..	..	..	..	..	..	..	..
East Asia & Pacific	..	..	..	..	..	..	..	..	..	..	..	..
Europe & Central Asia	..	19	..	18	..	34	..	19	..	47	..	62
Latin America & Carib.	20	21	14	10	30	27	14	15	50	52	72	76
Middle East & N. Africa	..	..	..	..	..	..	..	..	..	..	..	..
South Asia	..	..	..	..	..	..	..	..	..	..	..	..
Sub-Saharan Africa	..	..	..	..	..	..	..	..	..	..	..	..
High income	6	4	5	3	38	34	19	13	56	62	76	85
Euro area	7	5	7	3	42	38	20	14	50	56	72	82

Note: Data across sectors may not sum to 100 percent because of workers not classified by sectors.

a. Data are for the most recent year available. b. Less than 0.5. c. Limited coverage.

Employment by economic activity

About the data

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

Data on employment are drawn from labor force surveys, household surveys, official estimates, censuses and administrative records of social insurance schemes, and establishment surveys when no other information is available. The concept of employment generally refers to people above a certain age who worked, or who held a job, during a reference period. Employment data include both full-time and part-time workers.

There are many differences in how countries define and measure employment status, particularly, members of the armed forces, self-employed workers, and unpaid family workers. Where members of the armed forces are included, they are allocated to the service sector, causing that sector to be somewhat overstated relative to the service sector in economies where they are excluded. Where data are obtained from establishment surveys, data cover only employees; thus self-employed and unpaid family workers are excluded. In such cases the employment share of the agricultural sector is severely underreported. Caution should be also used where the data refer only to urban areas, which record little or no agricultural work. Moreover, the age group and area covered could differ by country or change over time within a country. For detailed information on breaks in series, consult the original source.

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

The ILO's *Yearbook of Labour Statistics* and its database Key Indicators of the Labour Market report data by major divisions of the ISIC revision 2 or revision 3. In the table the reported divisions or categories are

aggregated into three broad groups: agriculture, industry, and services. Such broad classification may obscure fundamental shifts within countries' industrial patterns. A slight majority of countries report economic activity according to the ISIC revision 2 instead of revision 3. The use of one classification or the other should not have a significant impact on the information for the three broad sectors presented in the table.

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

The distribution of economic activity by gender reveals some clear patterns. Men still make up the majority of people employed in all three sectors, but the gender gap is biggest in industry. Employment in agriculture is also male-dominated, although not as much as industry. Segregating one sex in a narrow range of occupations significantly reduces economic efficiency by reducing labor market flexibility and thus the economy's ability to adapt to change. This segregation is particularly harmful for women, who have a much narrower range of labor market choices and lower levels of pay than men. But it is also detrimental to men when job losses are concentrated in industries dominated by men and job growth is centered in service occupations, where women have better chances, as has been the recent experience in many countries.

There are several explanations for the rising importance of service jobs for women. Many service jobs—such as nursing and social and clerical work—are considered “feminine” because of a perceived similarity to women's traditional roles. Women often do not receive the training needed to take advantage of changing employment opportunities. And the greater availability of part-time work in service industries may lure more women, although it is unclear whether this is a cause or an effect.

Definitions

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

Data sources

Data on employment are from the ILO database Key Indicators of the Labour Market, 5th edition.



	Employment to population ratio				Vulnerable employment				Labor productivity			
	% ages 15 and older		% ages 15–24		Unpaid family workers and own-account workers				GDP per person employed			
					Male		Female				Index	
	1991	2006	1991	2006	% of male employment	2005	% of female employment	2005	1990 PPP \$ ^a	2006	1990 = 100	2006
Afghanistan	..	..	..	..	..	..	..	..	..	..	..	..
Albania	62	51	45	37	..	..	..	..	2,499	3,502	107	149
Algeria	37	50	22	33	..	29	..	32	2,946	3,401	94	108
Angola	74	75	64	66	..	..	..	..	869	1,143	90	119
Argentina	54	60	45	46	..	23 ^b	..	19 ^b	6,436	8,915	78	109
Armenia	68	49	51	19	..	..	..	..	6,066	8,428	..	..
Australia	57	60	56	63	12	12	8	7	17,106	24,603	119	171
Austria	54	55	61	50	..	9	..	8	16,895	22,708	123	165
Azerbaijan	59	61	39	41	..	..	..	..	4,639	5,954	..	..
Bangladesh	73	67	64	57	..	60	..	73	640	1,014	117	185
Belarus	59	52	40	36	..	..	..	..	7,184	9,491	..	..
Belgium	46	48	32	28	..	11	..	10	17,197	22,582	119	156
Benin	67	64	55	49	..	..	..	..	..	..	..	..
Bolivia	61	70	44	51	32 ^b	..	50 ^b	..	2,197	2,764	85	107
Bosnia and Herzegovina	58	55	37	37	..	..	..	..	3,737	6,469	..	..
Botswana	57	44	38	21	..	7	..	17	..	..	..	..
Brazil	60	61	54	49	29 ^b	34 ^b	30 ^b	32 ^b	4,923	5,812	95	112
Bulgaria	50	41	31	20	..	11	..	9	5,597	7,780	93	129
Burkina Faso	81	82	74	73	..	..	..	..	810	1,135	111	155
Burundi	83	84	67	71	..	..	..	..	..	..	..	..
Cambodia	79	76	69	63	..	..	..	..	880	1,827	106	220
Cameroon	63	61	48	44	..	..	..	..	1,222	1,155	102	97
Canada	59	62	57	59	..	..	..	..	18,872	24,633	117	152
Central African Republic	73	72	56	57	..	..	..	..	..	..	..	..
Chad	66	65	44	45	..	..	..	..	..	..	..	..
Chile	51	49	34	22	..	29	..	24	6,402	12,207	113	215
China	76	73	73	65	..	..	..	..	1,871	6,352	176	599
Hong Kong, China	63	58	54	39	..	10	..	5	17,541	27,769	167	264
Colombia	54	63	41	46	30 ^b	44	26 ^b	44	4,840	5,767	114	135
Congo, Dem. Rep.	67	68	56	58	..	..	..	..	510	224	85	38
Congo, Rep.	66	66	49	48	..	..	..	..	..	..	..	..
Costa Rica	55	60	48	44	26	20	20	23	4,747	7,321	97	149
Côte d'Ivoire	62	58	47	45	..	..	..	..	1,363	1,310	65	63
Croatia	52	45	34	27	..	19	..	21	7,351	8,326	..	..
Cuba	54	58	39	37	..	..	..	..	2,948	3,008	112	114
Czech Republic	62	55	51	30	..	15	..	8	8,895	11,688	..	..
Denmark	62	61	65	61	..	..	..	..	18,452	24,816	121	163
Dominican Republic	49	53	32	32	42	49	30	31	2,473	4,344	104	183
Ecuador	55	66	43	48	33 ^b	30 ^b	41 ^b	39 ^b	3,903	4,831	95	117
Egypt, Arab Rep.	43	42	22	20	..	21	..	46	2,522	3,386	122	164
El Salvador	58	57	41	37	..	29	..	45	..	..	..	..
Eritrea	68	66	60	56	..	..	..	..	..	..	..	..
Estonia	68	54	51	29	2	7	3	4	10,820	20,795	..	..
Ethiopia	77	76	74	71	..	89	..	93	578	702	89	108
Finland	59	56	45	43	..	..	..	..	16,866	23,358	130	180
France	50	49	28	23	..	8	..	5	18,093	22,402	120	148
Gabon	60	59	42	39	..	..	..	..	..	..	..	..
Gambia, The	68	66	52	51	..	..	..	..	..	..	..	..
Georgia	60	53	37	24	..	64	..	65	7,616	4,721	..	..
Germany	56	52	58	41	..	7	..	6	16,306	20,018	..	..
Ghana	72	66	51	42	..	..	..	..	1,063	1,485	92	128
Greece	46	50	31	28	..	29	..	28	10,015	15,440	112	172
Guatemala	58	55	52	49	..	..	..	..	3,631	4,554	83	104
Guinea	82	81	72	70	..	..	..	..	..	..	..	..
Guinea-Bissau	67	69	56	60	..	..	..	..	..	..	..	..
Haiti	60	65	39	50	..	..	..	..	..	..	..	..

Decent work and productive employment

2.4

PEOPLE

	Employment to population ratio				Vulnerable employment				Labor productivity			
	% ages 15 and older		% ages 15–24		Unpaid family workers and own-account workers				GDP per person employed			
					Male		Female				Index	
	1991	2006	1991	2006	% of male employment	2005	% of female employment	2005	1990 PPP \$ ^a	2006	1990 = 100	2006
Honduras	57	69	48	60	48 ^b	48 ^b	50 ^b	51 ^b	..	..	..	..
Hungary	49	46	39	24	8	9	7	6	6,459	9,291	102	147
India	59	56	46	40	..	..	..	..	1,309	2,611	140	278
Indonesia	63	61	45	37	..	..	..	..	2,526	4,126	135	220
Iran, Islamic Rep.	46	51	33	34	..	..	..	..	3,503	5,786	89	146
Iraq	33	..	20	..	..	..	..	..	2,458	..	39	..
Ireland	45	60	38	48	25	17	9	5	11,818	27,768	138	325
Israel	46	50	24	25	..	9	..	5	12,968	17,548	118	160
Italy	44	46	30	26	..	15	..	11	16,313	19,653	124	150
Jamaica	61	57	39	30	46	37	37	31	3,786	3,751	121	120
Japan	63	58	43	41	15	11	26	14	18,789	22,461	140	167
Jordan	39	47	26	31	..	..	..	..	3,792	4,591	85	103
Kazakhstan	63	65	45	44	..	33	..	39	7,458	8,954	..	..
Kenya	64	63	44	43	..	..	..	..	1,117	1,060	106	101
Korea, Dem. Rep.	64	60	49	33	..	..	..	..	..	..	..	..
Korea, Rep.	59	60	36	34	..	24	..	29	8,704	18,086	212	440
Kuwait	65	71	34	38	..	..	..	..	6,121	11,806	46	89
Kyrgyz Republic	59	59	41	41	..	50	..	50	3,602	2,464	..	..
Lao PDR	65	66	53	54	..	..	..	..	..	..	..	..
Latvia	61	51	46	31	..	9	..	7	9,916	13,514	..	..
Lebanon	47	51	32	32	..	..	..	..	..	..	..	..
Lesotho	54	37	40	25	..	..	..	..	..	..	..	..
Liberia	63	63	48	47	..	..	..	..	..	..	..	..
Libya	47	54	30	33	..	..	..	..	..	..	..	..
Lithuania	55	53	35	24	..	..	..	..	8,663	10,309	..	..
Macedonia, FYR	40	33	20	13	..	23	..	21	3,972	3,538	..	..
Madagascar	77	78	61	63	..	79	..	86	799	675	76	64
Malawi	80	80	66	66	..	..	..	..	554	620	86	96
Malaysia	61	62	47	44	..	20	..	21	5,132	9,782	140	268
Mali	75	70	67	58	..	..	..	..	747	1,026	102	140
Mauritania	64	64	49	48	..	..	..	..	..	..	..	..
Mauritius	53	55	39	35	..	18	..	15	..	..	..	..
Mexico	57	57	50	40	37	30	36	34	6,085	7,816	96	124
Moldova	58	56	36	36	..	37	..	36	6,165	3,057	..	..
Mongolia	50	59	39	44	..	62	..	57	..	..	..	..
Morocco	46	47	39	36	..	54	..	67	2,596	2,998	114	132
Mozambique	80	77	62	55	..	..	..	..	1,115	1,783	91	146
Myanmar	75	75	63	58	..	..	..	..	778	2,387	95	291
Namibia	46	38	23	18	..	..	..	..	..	..	..	..
Nepal	59	58	48	44	..	..	..	..	..	..	..	..
Netherlands	53	61	55	69	..	..	..	..	17,262	23,385	117	159
New Zealand	57	65	54	58	15	15	10	9	13,909	18,306	113	148
Nicaragua	56	56	45	44	..	..	..	..	..	..	..	..
Niger	78	79	68	71	..	..	..	..	540	514	67	64
Nigeria	60	59	44	43	..	..	..	..	1,214	1,329	85	93
Norway	60	66	49	60	..	..	..	..	18,466	28,044	123	186
Oman	52	52	28	28	..	..	..	..	6,479	7,528	159	185
Pakistan	54	55	44	44	..	60	..	69	1,589	2,278	137	196
Panama	50	59	34	36	44	35	19	26	..	..	..	..
Papua New Guinea	71	71	58	58	..	..	..	..	..	..	..	..
Paraguay	62	69	51	58	17 ^b	50 ^b	31 ^b	52 ^b	..	..	..	..
Peru	56	64	40	43	30 ^b	34 ^b	45 ^b	39 ^b	3,021	4,272	71	100
Philippines	59	64	42	44	..	43	..	48	2,224	2,734	94	115
Poland	55	46	35	22	..	23	..	20	5,113	8,999	89	157
Portugal	59	58	53	38	18 ^b	18	21 ^b	20	10,826	14,174	135	176
Puerto Rico	38	43	21	30	..	..	..	..	10,539	15,026	129	184



2.4

Decent work and productive employment

	Employment to population ratio				Vulnerable employment				Labor productivity			
	% ages 15 and older		% ages 15–24		Unpaid family workers and own-account workers				GDP per person employed			
					Male		Female				Index	
	1991	2006	1991	2006	% of male employment	2005	% of female employment	2005	1990 PPP \$ ^a	2006	1990 = 100	2006
Romania	58	52	47	22	7 ^b	33	10 ^b	34	3,511	4,305	85	104
Russian Federation	58	56	36	33	1	6	1	6	7,779	7,297	..	..
Rwanda	79	73	63	58	..	..	..	..	..	..	..	..
Saudi Arabia	51	51	26	25	..	..	..	..	8,993	8,691	68	66
Senegal	67	62	55	47	77	..	91	..	1,279	1,433	101	113
Serbia	49 ^c	51 ^c	28 ^c	33 ^c	..	..	..	..	5,160 ^c	2,935 ^c	..	..
Sierra Leone	64	68	51	60	..	..	..	..	..	..	..	..
Singapore	64	60	56	41	10	12	6	6	14,220	24,688	157	273
Slovak Republic	56	52	41	30	..	13 ^b	..	5 ^b	7,763	11,057	..	..
Slovenia	55	57	37	33	..	12	..	10	10,860	16,136	..	..
Somalia	70	69	64	63	..	..	..	..	..	..	..	..
South Africa	48	45	31	27	..	18	..	20	3,842	4,821	88	110
Spain	43	51	37	36	20	14	24	11	12,055	17,110	131	186
Sri Lanka	52	52	32	37	..	39 ^b	..	39 ^b	2,448	4,193	132	227
Sudan	47	43	33	26	..	..	..	..	743	947	80	102
Swaziland	42	39	26	22	..	..	..	..	..	..	..	..
Sweden	65	59	59	44	..	..	..	..	17,609	23,831	118	160
Switzerland	65	65	68	63	8	9	11	10	21,487	23,475	114	125
Syrian Arab Republic	51	56	40	43	..	..	..	..	5,701	7,015	88	108
Tajikistan	54	48	37	28	..	..	..	..	2,979	1,318	..	..
Tanzania	87	84	77	72	..	..	..	..	551	690	92	115
Thailand	77	72	70	46	67	51	74	55	4,633	7,888	181	309
Timor-Leste	62	67	46	57	..	..	..	..	..	..	..	..
Togo	65	63	53	51	..	..	..	..	..	..	..	..
Trinidad and Tobago	48	58	33	46	22	17	21	13	9,272	23,233	75	188
Tunisia	41	45	29	29	..	..	..	..	3,337	5,362	113	182
Turkey	53	47	48	39	..	36	..	55	5,445	8,080	136	201
Turkmenistan	58	60	36	37	..	..	..	..	3,626	2,609	..	..
Uganda	83	81	74	71	..	77 ^b	..	92 ^b	598	889	104	154
Ukraine	60	52	43	34	..	..	..	..	6,027	4,154	..	..
United Arab Emirates	72	76	43	47	..	..	..	..	13,070	22,700	47	82
United Kingdom	58	59	66	59	..	..	..	..	16,430	22,967	127	178
United States	61	63	56	55	..	..	..	..	23,201	31,245	125	168
Uruguay	55	62	49	50	..	27 ^b	..	22 ^b	6,474	8,313	98	126
Uzbekistan	56	58	36	37	..	..	..	..	4,241	4,202	..	..
Venezuela, RB	55	60	38	41	..	33	..	40	8,313	8,815	82	87
Vietnam	75	73	75	66	..	70	..	79	1,025	2,458	135	325
West Bank and Gaza	29	28	18	15	..	37	..	43	..	..	..	..
Yemen, Rep.	44	47	32	32	..	..	..	..	2,272	2,861	99	125
Zambia	63	70	48	61	56	..	81	..	810	719	89	79
Zimbabwe	71	70	50	52	..	..	..	..	1,356	910	105	70
World	63 w	62 w	53 w	47 w	.. w	.. w	.. w	.. w	5,408 w	7,629 w	106 m	146 m
Low income	63	61	51	47	..	..	..	..	1,175	1,937	95	115
Middle income	66	64	57	48	..	..	..	..	3,208	5,775	97	120
Lower middle income	69	67	61	52	..	..	..	..	2,353	5,348	103	120
Upper middle income	57	55	44	38	..	26	..	24	6,099	7,245	96	123
Low & middle income	65	63	54	48	..	..	..	..	2,507	4,356	96	120
East Asia & Pacific	74	71	68	58	..	..	..	..	2,006	6,352	135	279
Europe & Central Asia	57	53	40	33	..	19	..	17	6,359	6,704	..	..
Latin America & Carib.	57	60	47	45	..	33	..	34	5,186	6,452	96	117
Middle East & N. Africa	43	46	29	30	..	..	..	..	3,110	4,253	96	125
South Asia	60	57	47	43	..	..	..	..	1,266	2,611	135	212
Sub-Saharan Africa	67	66	54	52	..	..	..	..	1,061	1,192	90	102
High income	57	57	47	45	..	..	..	..	18,145	24,534	123	167
Euro area	50	51	41	35	..	13	..	10	15,772	20,101	123	169

a. Based on extrapolated PPPs from the 1993 International Comparison Program. b. Limited coverage. c. Includes Montenegro.

Decent work and productive employment

About the data

At the 2005 World Summit four targets were added to the UN Millennium Declaration. One was full and productive employment and decent work for all, which is seen as the main route for people to escape poverty. The four indicators for this target have an economic focus, and three of them are presented in the table.

The employment to population ratio indicates how efficiently an economy provides jobs for people who want to work. A high ratio means that a large proportion of the population is employed. But this indicator has a gender bias because women who do not consider their work employment or who are not perceived as working tend to be undercounted. This bias has different effects across countries.

Comparability of employment ratios across countries is also affected by variations in definitions of employment and population (see *About the data* for table 2.3). The biggest difference results from the age range used to define labor force activity. The population base for employment ratios can also vary (see table 2.1). Most countries use the resident, noninstitutionalized population of working age living in private households, excluding members of the armed forces and individuals residing in mental, penal, or other types of institutions. But some countries include members of the armed forces in the population base of their employment ratio while still excluding them from employment data (International Labour Organization, *Key Indicators of the Labour Market*, 5th edition).

The proportion of unpaid family workers and own-account workers in total employment is derived from information on status in employment. Each status group faces different economic risks, and unpaid family workers and own-account workers are the most vulnerable—and therefore the most likely to fall into poverty. They are the least likely to have formal work arrangements, are the least likely to have social protection and safety nets to guard against economic shocks, and often are incapable of generating sufficient savings to offset these shocks. A high proportion of unpaid family workers in a country indicates weak development, little job growth, and often a large rural economy.

Data on employment by status are drawn from labor force surveys and household surveys, supplemented by official estimates and censuses for a small group of countries. The labor force survey is the most comprehensive source for international comparable employment, but there are still some limitations for comparing data across countries and over time even

within a country. Information from labor force surveys is not always consistent in terms of what is included in employment. For example, information provided by the Organisation for Economic Co-operation and Development relates only to civilian employment, which can result in an underestimation of “employees” and “workers not classified by status,” especially in countries with large armed forces. While the categories of unpaid family workers and self-employed workers, which include own-account workers, would not be affected, their relative shares would be. Geographic coverage is another factor that can limit cross-country comparisons. The employment by status data for most Latin American countries covers urban areas only. Similarly, in some countries in Sub-Saharan Africa, where limited information is available anyway, the members of producer cooperatives are usually excluded from the self-employed category. For detailed information on definitions and coverage, consult the original source.

Labor productivity, measured as output per person employed, can be used to assess a country’s economic ability to create and sustain decent employment opportunities with fair and equitable remuneration. For comparability of individual sectors labor productivity is estimated according to national accounts conventions. However, there are still significant limitations on the availability of reliable data, as the information on consistent series of output in both national currencies and purchasing power parity U.S. dollars is not easily available, especially in developing countries, because the definition, coverage, and methodology are not always consistent across countries. For example, countries employ different methodologies for estimating the missing values for the nonmarket service sectors and use different definitions of the informal sector (see *About the data* for tables 4.1 and 4.14).

Definitions

• **Employment to population ratio** is the proportion of a country’s population that is employed. Ages 15 and older are generally considered the working-age population. Ages 15–24 are generally considered the youth population. • **Vulnerable employment** is unpaid family workers and own-account workers as a percentage of total employment • **Labor productivity** is gross domestic product (GDP) divided by total employment in the economy. Purchasing power parity (PPP) GDP is GDP converted to 1990 international dollars using PPP rates. An international dollar has the same purchasing power over GDP that a U.S. dollar has in the United States.

Data sources

Data on decent work and productive employment are from the International Labour Organization database *Key Indicators of the Labour Market*, 5th edition.



2.5

Unemployment

	Unemployment						Long-term unemployment			Unemployment by educational attainment		
	Total % of total labor force		Male % of male labor force		Female % of female labor force		% of total unemployment			% of total unemployment		
	1990-92 ^a	2003-05 ^a	1990-92 ^a	2003-05 ^a	1990-92 ^a	2003-05 ^a	Total 2000-05 ^a	Male 2000-05 ^a	Female 2000-05 ^a	Primary 2003-05 ^a	Secondary 2003-05 ^a	Tertiary 2003-05 ^a
Afghanistan	..	..	..	..	..	..	..	..	..	..	..	..
Albania	..	14.4	..	12.4	..	17.5	..	..	..	98.3	..	1.7
Algeria	..	15.3	..	14.9	..	17.5	..	..	..	59.3	23.0	11.4
Angola	..	..	..	..	..	..	..	..	..	..	..	..
Argentina	6.6 ^b	10.2 ^b	6.8 ^b	9.2 ^b	6.3 ^b	12.5 ^b	..	..	..	40.3 ^b	39.8 ^b	18.4 ^b
Armenia	..	..	..	..	..	..	71.6 ^b	72.2 ^b	70.8 ^b	6.2	79.8	14.0
Australia	10.8	5.1	11.4	4.9	10.0	5.3	17.7 ^b	20.2 ^b	14.9 ^b	51.4	29.1	19.3
Austria	3.6	5.2	3.5	4.9	3.8	5.5	25.3	25.6	24.9	35.2 ^b	55.0 ^b	9.6 ^b
Azerbaijan	..	8.6	..	7.6	..	9.5	..	..	..	4.4	30.2	65.4
Bangladesh	1.9	4.3	2.0	4.2	1.9	4.9	..	..	..	..	..	..
Belarus	..	..	..	..	..	..	..	..	..	10.2	40.6	49.1
Belgium	6.7	8.1	4.8	7.4	9.5	9.0	51.6	50.4	52.7	42.1	38.4	19.6
Benin	..	..	..	..	..	..	..	..	..	..	..	..
Bolivia	5.5 ^b	..	5.5 ^b	..	5.6 ^b	..	..	..	..	..	..	..
Bosnia and Herzegovina	..	..	..	..	..	..	..	..	..	..	..	..
Botswana	14.2	23.8	12.1	21.4	17.5	26.3	..	..	..	65.5	27.3	..
Brazil	6.4 ^b	8.9 ^b	5.4 ^b	6.8 ^b	7.9 ^b	11.7 ^b	..	..	..	53.4 ^b	30.4 ^b	3.0 ^b
Bulgaria	..	10.1	..	10.3	..	9.9	..	..	..	38.6	51.0	10.3
Burkina Faso	..	..	..	..	..	..	..	..	..	..	..	..
Burundi	..	..	..	..	..	..	..	..	..	..	..	..
Cambodia	..	..	..	..	..	..	..	..	..	..	..	..
Cameroon	..	..	..	..	..	..	..	..	..	..	..	..
Canada	11.2 ^b	6.8 ^b	12.0 ^b	7.0 ^b	10.2 ^b	6.5 ^b	9.6 ^b	10.1 ^b	9.1 ^b	27.1 ^b	31.2 ^b	41.7 ^b
Central African Republic	..	..	..	..	..	..	..	..	..	..	..	..
Chad	..	..	..	..	..	..	..	..	..	..	..	..
Chile	4.4	6.9	3.9	6.1	5.3	8.5	..	..	..	16.1	58.9	24.5
China	2.3 ^b	4.2 ^b	..	..	..	..	..	..	..	..	..	..
Hong Kong, China	2.0	5.6	2.0	6.5	1.9	4.4	..	..	..	46.3 ^b	39.7 ^b	12.6 ^b
Colombia	9.4 ^b	9.5	6.7 ^b	7.4	13.0 ^b	12.3	..	..	..	58.4	..	15.6
Congo, Dem. Rep.	..	..	..	..	..	..	..	..	..	..	..	..
Congo, Rep.	..	..	..	..	..	..	..	..	..	..	..	..
Costa Rica	4.0	6.6	3.4	5.0	5.4	9.6	10.9	8.9	13.3	64.0	20.5	12.0
Côte d'Ivoire	6.7	..	..	..	..	..	..	..	..	..	..	..
Croatia	..	11.2 ^c	..	10.1 ^c	..	13.2 ^c	53.7 ^c	52.7 ^c	54.5 ^c	22.0 ^c	69.1 ^c	9.8 ^c
Cuba	..	1.9	..	1.7	..	2.2	..	..	..	50.6	44.7	4.7
Czech Republic	..	7.9	..	6.5	..	9.8	53.6	52.9	54.2	24.1	72.0	4.1
Denmark	9.0	4.8	8.3	4.1	9.9	5.6	25.9	29.7	22.7	27.7	44.8	27.5
Dominican Republic	20.7	17.9	12.0	11.3	35.2	28.8	1.6	2.2	1.3	..	..	..
Ecuador	8.9 ^b	7.7 ^b	6.0 ^b	5.6 ^b	13.2 ^b	10.8 ^b	..	..	..	76.0 ^b	..	22.5 ^b
Egypt, Arab Rep.	9.1	10.7	6.5	6.8	17.3	24.4	..	..	..	..	..	..
El Salvador	7.9 ^b	6.6	8.4 ^b	8.5	7.2 ^b	3.9	..	..	..	..	..	..
Eritrea	..	..	..	..	..	..	..	..	..	..	..	..
Estonia	3.7	7.9	3.9	8.8	3.5	7.1	..	..	..	15.7	64.4	19.9
Ethiopia	..	5.4	..	2.7	..	8.2	24.4	24.3	24.4	35.9	13.3	3.2
Finland	11.7	8.4	13.6	8.2	9.7	8.7	24.9	27.9	21.9	35.5	46.8	17.7
France	10.0 ^b	9.8 ^b	7.9 ^b	9.0 ^b	12.7 ^b	10.8 ^b	42.5	41.8	43.2	40.6	39.4	18.7
Gabon	..	..	..	..	..	..	..	..	..	..	..	..
Gambia, The	..	..	..	..	..	..	..	..	..	..	..	..
Georgia	..	13.8	..	14.8	..	12.7	..	..	..	4.8	56.0	38.8
Germany	6.6	11.1	5.3	11.3	8.4	10.9	54.0	53.8	54.4	27.1	60.5	12.4
Ghana	..	..	..	..	..	..	..	..	..	..	..	..
Greece	7.8	9.6	4.9	5.8	12.9	15.2	53.7	43.1	59.6	30.8	49.7	19.1
Guatemala	3.2 ^b	3.4	2.6 ^b	2.5	4.6 ^b	4.9	..	..	..	..	..	..
Guinea	..	..	..	..	..	..	..	..	..	..	..	..
Guinea-Bissau	..	..	..	..	..	..	..	..	..	..	..	..
Haiti	12.2	..	11.2	..	13.6	..	..	..	..	..	..	..

Unemployment

2.5

PEOPLE

	Unemployment						Long-term unemployment			Unemployment by educational attainment		
	Total % of total labor force		Male % of male labor force		Female % of female labor force		% of total unemployment			% of total unemployment		
	1990-92 ^a	2003-05 ^a	1990-92 ^a	2003-05 ^a	1990-92 ^a	2003-05 ^a	Total 2000-05 ^a	Male 2000-05 ^a	Female 2000-05 ^a	Primary 2003-05 ^a	Secondary 2003-05 ^a	Tertiary 2003-05 ^a
Honduras	3.2 ^b	4.2 ^b	3.3 ^b	3.2 ^b	3.0 ^b	6.2 ^b	..	..	..	..	..	..
Hungary	9.9	7.2	11.0	7.0	8.7	7.5	46.1	47.9	44.2	30.2	62.2	7.6
India	..	5.0 ^b	..	4.9 ^b	..	5.3 ^b	..	..	..	27.0	41.1	31.9
Indonesia	2.8	10.3 ^c	2.7	8.5 ^c	3.0	13.4 ^c	..	..	..	48.7 ^c	38.0 ^c	6.2 ^c
Iran, Islamic Rep.	11.1	11.5	9.5	10.1	24.4	17.1	..	..	..	41.8	34.7	19.6
Iraq	..	..	..	..	..	..	..	..	..	..	..	..
Ireland	15.2	4.3	15.2	4.6	15.2	3.8	34.3	42.4	21.1	45.0	25.6	26.1
Israel	11.2 ^b	9.0 ^b	9.2 ^b	8.5 ^b	13.9 ^b	9.5 ^b	..	..	..	20.6	48.7	25.9
Italy	11.5	7.7	8.1	6.2	17.3	10.1	52.2	50.5	53.8	48.1	39.4	10.7
Jamaica	15.7	10.9	9.5	7.4	22.8	15.3	31.7	24.4	36.2	12.9	4.2	9.2
Japan	2.2	4.4	2.1	4.6	2.2	4.2	33.3	40.3	22.6	67.7	..	29.9
Jordan	..	12.4	..	11.8	..	16.5	..	..	..	..	..	..
Kazakhstan	..	7.8 ^c	..	6.4 ^c	..	9.2 ^c	..	..	..	7.1 ^c	49.0 ^c	43.9 ^c
Kenya	..	..	..	..	..	..	..	..	..	..	..	..
Korea, Dem. Rep.	..	..	..	..	..	..	..	..	..	..	..	..
Korea, Rep.	2.5	3.7	2.8	4.0	2.1	3.4	0.8	1.0	0.4	17.4	53.2	29.4
Kuwait	..	1.7	..	..	..	..	..	..	..	..	..	..
Kyrgyz Republic	..	8.5	..	8.0	..	9.3	..	..	..	9.9	79.5	10.7
Lao PDR	..	1.4	..	1.3	..	1.4	..	..	..	..	..	..
Latvia	..	8.7	..	9.0	..	8.4	..	..	..	23.6	65.6	10.7
Lebanon	..	..	..	..	..	..	..	..	..	..	..	..
Lesotho	..	..	..	..	..	..	..	..	..	..	..	..
Liberia	..	..	..	..	..	..	..	..	..	..	..	..
Libya	..	..	..	..	..	..	..	..	..	..	..	..
Lithuania	..	8.3	..	8.2	..	8.3	57.8	..	..	16.4	69.5	14.1
Macedonia, FYR	..	37.3	..	36.5	..	38.4	..	..	..	..	..	..
Madagascar	..	5.0	..	3.8	..	6.2	..	..	..	61.5	..	6.1
Malawi	..	..	..	..	..	..	..	..	..	..	..	..
Malaysia	3.7	3.5	..	3.6	..	3.6	..	..	..	32.0	48.8	15.6
Mali	..	8.8	..	7.2	..	10.9	..	..	..	..	..	..
Mauritania	..	..	..	..	..	..	..	..	..	..	..	..
Mauritius	3.1	9.6	3.2	5.8	3.1	16.5	..	..	..	48.6	44.9	5.4
Mexico	3.1	3.5	2.7	3.4	4.0	3.6	2.4 ^b	2.3 ^b	2.6 ^b	51.7	24.4	21.5
Moldova	..	7.3	..	8.7	..	6.0	..	..	..	..	..	..
Mongolia	..	14.2	..	14.3	..	14.1	..	..	..	35.1	45.8	18.5
Morocco	16.0 ^b	9.7 ^c	13.0 ^b	9.7 ^c	25.3 ^b	9.7 ^c	..	..	..	51.1 ^b	22.4 ^b	21.6 ^b
Mozambique	..	..	..	..	..	..	..	..	..	..	..	..
Myanmar	6.0	..	4.7	..	8.8	..	..	..	..	..	..	..
Namibia	19.1	..	19.6	..	18.6	..	..	..	..	..	..	..
Nepal	..	..	..	..	..	..	..	..	..	..	..	..
Netherlands	5.5	5.2	4.3	4.9	7.3	5.6	40.1	44.7	35.0	40.7	39.1	17.9
New Zealand	10.4 ^b	3.7 ^b	11.0 ^b	3.4 ^b	9.6 ^b	4.0 ^b	9.4 ^b	12.6 ^b	6.2 ^b	0.0	52.7	14.4
Nicaragua	14.4	8.0	11.3	7.9	19.4	8.1	..	..	..	..	..	..
Niger	..	..	..	..	..	..	..	..	..	..	..	..
Nigeria	..	..	..	..	..	..	..	..	..	..	..	..
Norway	5.9	4.6	6.6	4.8	5.1	4.4	9.5	10.4	8.5	24.3	54.1	18.9
Oman	..	..	..	..	..	..	..	..	..	..	..	..
Pakistan	5.2	7.7	3.8	6.6	14.0	12.8	..	..	..	13.1	12.3	29.1
Panama	14.7	10.3	10.8	8.1	22.3	14.0	29.3	24.0	35.7	31.7	38.4	29.1
Papua New Guinea	7.7	..	9.0	..	5.9	..	..	..	..	..	..	..
Paraguay	5.0 ^b	7.9 ^b	6.0 ^b	6.6 ^b	3.7 ^b	10.0 ^b	..	..	..	..	..	..
Peru	9.4 ^b	11.4 ^b	7.5 ^b	9.7 ^b	12.5 ^b	13.7 ^b	..	..	..	69.6 ^b	..	30.0 ^b
Philippines	8.6	7.4	7.9	7.4	9.9	7.3	..	..	..	15.2	45.2	38.9
Poland	13.3	17.7	12.2	16.6	14.7	19.1	52.2	51.3	53.1	17.7	74.8	7.6
Portugal	4.1 ^b	7.6	3.5 ^b	6.7	5.0 ^b	8.7	48.6	47.1	49.9	70.2	15.3	10.9
Puerto Rico	17.0	11.3	19.3	12.2	13.3	10.2	..	..	..	..	..	..



2.5

Unemployment

	Unemployment						Long-term unemployment			Unemployment by educational attainment		
	Total % of total labor force		Male % of male labor force		Female % of female labor force		% of total unemployment			% of total unemployment		
	1990-92 ^a	2003-05 ^a	1990-92 ^a	2003-05 ^a	1990-92 ^a	2003-05 ^a	Total 2000-05 ^a	Male 2000-05 ^a	Female 2000-05 ^a	Primary 2003-05 ^a	Secondary 2003-05 ^a	Tertiary 2003-05 ^a
Romania	..	7.2	..	7.7	..	6.4	..	..	..	23.1	69.1	6.6
Russian Federation	5.3	7.9	5.4	7.8	5.2	8.0	..	..	..	..	..	..
Rwanda	..	..	..	..	..	..	..	..	..	..	..	..
Saudi Arabia	..	6.2	..	4.7	..	14.7	..	..	..	12.3	43.9	40.0
Senegal	..	..	..	..	..	..	..	..	..	..	..	..
Serbia	..	15.2 ^d	..	14.4 ^d	..	16.4 ^d	..	..	..	..	..	..
Sierra Leone	..	..	..	..	..	..	..	..	..	..	..	..
Singapore	2.7	4.2	2.7	3.7	2.6	5.0	..	..	..	20.2	25.7	59.2
Slovak Republic	..	16.2	..	15.4	..	17.2	68.1	68.7	67.4	27.1 ^b	68.3 ^b	4.5 ^b
Slovenia	..	5.8	..	5.5	..	6.0	..	..	..	22.4	69.0	8.6
Somalia	..	..	..	..	..	..	..	..	..	..	..	..
South Africa	..	26.7	..	26.8	..	26.6	..	..	..	50.2	41.0	5.1
Spain	18.1	9.2	13.9	7.0	25.8	12.2	32.6	28.2	36.0	53.9	22.1	23.1
Sri Lanka	13.3 ^b	7.6 ^b	10.1 ^b	5.5 ^b	19.9 ^b	11.9 ^b	..	..	..	41.7 ^b	..	58.3 ^b
Sudan	..	..	..	..	..	..	..	..	..	..	..	..
Swaziland	..	..	..	..	..	..	..	..	..	..	..	..
Sweden	5.7	7.7	6.7	7.8	4.6	7.6	18.9	20.9	16.4	25.9	54.4	17.8
Switzerland	2.8	4.4	2.3	3.9	3.5	5.1	38.8	37.1	40.4	28.6	53.5	17.3
Syrian Arab Republic	..	12.3	..	9.0	..	28.3	..	..	..	..	..	..
Tajikistan	..	..	..	..	..	..	..	..	..	..	..	..
Tanzania	3.6 ^b	..	2.8 ^b	..	4.3 ^b	..	..	..	..	..	..	..
Thailand	1.4	1.3	1.3	1.5	1.5	1.2	..	..	..	39.7	46.3	0.2
Timor-Leste	..	..	..	..	..	..	..	..	..	..	..	..
Togo	..	..	..	..	..	..	..	..	..	..	..	..
Trinidad and Tobago	19.6	8.0	17.0	5.8	23.9	11.0	27.6	20.3	34.7	..	..	..
Tunisia	..	14.2	..	13.1	..	17.3	..	..	..	79.1	..	13.6
Turkey	8.5	10.3	8.8	10.3	7.8	10.3	39.6	36.9	47.4	54.3	28.1	11.4
Turkmenistan	..	..	..	..	..	..	..	..	..	..	..	..
Uganda	..	3.2	..	2.5	..	3.9	..	..	..	..	..	..
Ukraine	..	7.2	..	7.5	..	6.8	..	..	..	10.9	53.2	35.8
United Arab Emirates	..	..	..	..	..	..	..	..	..	..	..	..
United Kingdom	9.7	4.6	11.5	5.0	7.3	4.1	22.4	26.2	16.9	36.7	46.1	16.2
United States	7.5 ^b	5.1 ^b	7.9 ^b	5.1 ^b	7.0 ^b	5.1 ^b	11.8 ^b	12.6 ^b	10.8 ^b	19.1 ^b	35.5 ^b	45.4 ^b
Uruguay	9.0 ^b	12.2 ^b	6.8 ^b	9.5 ^b	11.8 ^b	15.3 ^b	..	..	..	..	..	..
Uzbekistan	..	..	..	..	..	..	..	..	..	..	..	..
Venezuela, RB	7.7	15.0	8.2	13.4	6.8	17.6	..	..	..	..	..	..
Vietnam	..	2.1	..	1.9	..	2.4	..	..	..	..	..	..
West Bank and Gaza	..	26.8	..	28.1	..	20.1	..	..	..	58.5	13.1	18.9
Yemen, Rep.	..	..	..	..	..	..	..	..	..	..	..	..
Zambia	18.9	..	16.3	..	22.4	..	..	..	..	..	..	..
Zimbabwe	..	..	..	..	..	..	..	..	..	..	..	..
World	.. w	6.7 w	.. w	.. w	.. w	.. w	.. w	.. w	.. w	.. w	.. w	.. w
Low income	..	..	..	..	..	..	..	..	..	..	..	..
Middle income	3.9	6.4	..	..	..	..	..	..	..	..	..	..
Lower middle income	3.2	5.7	..	..	..	..	..	..	..	..	..	..
Upper middle income	6.3	9.8	6.0	9.0	7.0	11.4	..	..	..	44.0	41.2	8.7
Low & middle income	..	6.8	..	..	..	..	..	..	..	..	..	..
East Asia & Pacific	2.5	4.9	..	..	..	..	..	..	..	..	..	..
Europe & Central Asia	..	10.0	..	10.0	..	9.9	..	..	..	..	..	..
Latin America & Carib.	6.7	8.9	5.5	7.1	8.4	11.5	..	..	..	56.6	31.9	12.7
Middle East & N. Africa	..	13.8	..	12.8	..	18.7	..	..	..	..	..	..
South Asia	..	5.3	..	5.1	..	6.3	..	..	..	..	..	..
Sub-Saharan Africa	..	..	..	..	..	..	..	..	..	..	..	..
High income	7.4	6.2	7.0	6.0	7.9	6.6	26.4	28.0	24.0	36.3	38.1	29.1
Euro area	9.5	9.0	7.5	8.1	12.5	10.3	45.8	44.6	46.5	45.8	35.5	17.2

a. Data are for the most recent year available. b. Limited coverage. c. Data are for 2006. d. Includes Montenegro and excludes Kosovo and Metohija.

About the data

Unemployment and total employment are the broadest indicators of economic activity as reflected by the labor market. The International Labour Organization (ILO) defines the unemployed as members of the economically active population who are without work but available for and seeking work, including people who have lost their jobs or who have voluntarily left work. Some unemployment is unavoidable. At any time some workers are temporarily unemployed—between jobs as employers look for the right workers and workers search for better jobs. Such unemployment, often called frictional unemployment, results from the normal operation of labor markets.

Changes in unemployment over time may reflect changes in the demand for and supply of labor; they may also reflect changes in reporting practices. Paradoxically, low unemployment rates can disguise substantial poverty in a country, while high unemployment rates can occur in countries with a high level of economic development and low rates of poverty. In countries without unemployment or welfare benefits people eke out a living in the informal sector. In countries with well developed safety nets workers can afford to wait for suitable or desirable jobs. But high and sustained unemployment indicates serious inefficiencies in resource allocation.

The ILO definition of unemployment notwithstanding, reference periods, the criteria for people considered to be seeking work, and the treatment of people temporarily laid off or seeking work for the first time vary across countries. In many developing countries it is especially difficult to measure employment and unemployment in agriculture. The timing of a survey, for example, can maximize the effects of seasonal unemployment in agriculture. And informal sector employment is difficult to quantify where informal activities are not tracked.

Data on unemployment are drawn from labor force sample surveys and general household sample surveys, censuses, and official estimates, which are generally based on information from different sources and can be combined in many ways. Administrative records, such as social insurance statistics and employment office statistics, are not included in the table because of their limitations in coverage. Labor force surveys generally yield the most comprehensive data because they include groups not covered in other unemployment statistics, particularly people seeking work for the first time. These surveys generally use a definition of unemployment that follows the international recommendations more closely than that used by other sources and therefore

generate statistics that are more comparable internationally. But the age group, geographic coverage, and collection methods could differ by country or change over time within a country. For detailed information, consult the original source.

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

Long-term unemployment is measured by the length of time that an unemployed person has been without work and looking for a job. The data in the table are from labor force surveys. The underlying assumption is that shorter periods of joblessness are of less concern, especially when the unemployed are covered by unemployment benefits or similar forms of support. The length of time that a person has been unemployed is difficult to measure, because the ability to recall that time diminishes as the period of joblessness extends. Women's long-term unemployment is likely to be lower in countries where women constitute a large share of the unpaid family workforce.

Unemployment by level of educational attainment provides insights into the relation between the educational attainment of workers and unemployment and may be used to draw inferences about changes in employment demand. Information on educational attainment is the best available indicator of skill levels of the labor force. Besides the limitations to comparability raised for measuring unemployment, the different ways of classifying the education level may also cause inconsistency. Education level is supposed to be classified according to International Standard Classification of Education 1997 (ISCED97). For more information on ISCED97, see *About the data* for table 2.10.

Definitions

- **Unemployment** is the share of the labor force without work but available for and seeking employment. Definitions of labor force and unemployment may differ by country (see *About the data*).
- **Long-term unemployment** is the number of people with continuous periods of unemployment extending for a year or longer, expressed as a percentage of the total unemployed.
- **Unemployment by educational attainment** is the unemployed by level of educational attainment as a percentage of the total unemployed. The levels of educational attainment accord with the ISCED97 of the United Nations Educational, Scientific, and Cultural Organization.

Data sources

Data on unemployment are from the ILO database Key Indicators of the Labour Market, 5th edition.



2.6

Children at work

	Survey year	Economically active children					Employment by economic activity ^a					
		Total	% of children ages 7–14		% of economically active children ages 7–14		Agriculture		% of economically active children ages 7–14		Services	
			Male	Female	Work only	Study and work	Male	Female	Male	Female	Male	Female
Afghanistan		..	..	..	..	..	..	..	..	..	..	..
Albania	2000	36.6	41.1	31.8	43.1	56.9	..	..	..	..	..	..
Algeria		..	..	..	..	..	..	..	..	..	..	..
Angola ^b	2001	30.1	30.0	30.1	26.6	73.4	..	..	..	..	..	..
Argentina	2004	15.1	18.0	12.0	4.1	95.9	..	..	..	..	..	..
Armenia		..	..	..	..	..	..	..	..	..	..	..
Australia		..	..	..	..	..	..	..	..	..	..	..
Austria		..	..	..	..	..	..	..	..	..	..	..
Azerbaijan	2000	9.7	12.0	7.3	4.2	95.8	..	..	..	..	..	..
Bangladesh	2003	17.5	20.9	13.9	63.3	36.7	61.4	64.0	11.6	15.5	25.2	18.3
Belarus		..	..	..	..	..	..	..	..	..	..	..
Belgium		..	..	..	..	..	..	..	..	..	..	..
Benin		..	..	..	..	..	..	..	..	..	..	..
Bolivia	2002	23.2	24.0	22.5	15.2	84.8	78.8	73.4	4.5	3.8	15.5	22.6
Bosnia and Herzegovina	2000	20.2	22.8	17.6	4.0	96.0	..	..	..	..	..	..
Botswana		..	..	..	..	..	..	..	..	..	..	..
Brazil	2004	7.0	9.4	4.6	7.2	92.8	66.2	48.9	5.2	9.7	26.4	40.8
Bulgaria		..	..	..	..	..	..	..	..	..	..	..
Burkina Faso	2004	50.0	49.0	51.0	98.1	1.9	98.4	96.1	0.2	0.5	1.3	3.1
Burundi	2000	37.0	38.4	35.7	48.3	51.7	..	..	..	..	..	..
Cambodia	2001	52.3	52.4	52.1	16.5	83.5	78.5	73.6	4.7	5.4	15.7	20.4
Cameroon ^c	2001	15.9	14.5	17.4	52.5	47.5	90.4	86.3	1.9	2.3	5.1	8.8
Canada		..	..	..	..	..	..	..	..	..	..	..
Central African Republic	2000	67.0	66.5	67.6	54.9	45.1	..	..	..	..	..	..
Chad	2004	60.4	64.4	56.2	59.0	41.0	..	..	..	..	..	..
Chile	2003	4.1	5.1	3.1	3.2	96.8	31.0	12.2	8.2	4.5	57.8	81.5
China		..	..	..	..	..	..	..	..	..	..	..
Hong Kong, China		..	..	..	..	..	..	..	..	..	..	..
Colombia	2005	4.0	6.2	1.8	32.8	67.2	..	..	..	..	..	..
Congo, Dem. Rep.	2000	39.8	39.9	39.8	35.7	64.3	..	..	..	..	..	..
Congo, Rep.		..	..	..	..	..	..	..	..	..	..	..
Costa Rica ^c	2004	5.7	8.1	3.5	44.6	55.4	48.0	19.4	9.5	9.6	40.8	71.1
Côte d'Ivoire	2000	40.7	40.9	40.5	46.4	53.6	..	..	..	..	..	..
Croatia		..	..	..	..	..	..	..	..	..	..	..
Cuba		..	..	..	..	..	..	..	..	..	..	..
Czech Republic		..	..	..	..	..	..	..	..	..	..	..
Denmark		..	..	..	..	..	..	..	..	..	..	..
Dominican Republic ^c	2002	3.5	5.9	0.9	11.4	88.6	..	..	..	..	..	..
Ecuador	2004	12.0	14.6	9.3	27.0	73.0	71.2	68.0	5.0	4.1	21.1	27.8
Egypt, Arab Rep.	2005	7.9	11.5	4.3	21.0	79.0	..	..	..	..	..	..
El Salvador	2003	12.7	17.1	8.1	19.5	80.5	66.4	17.6	10.8	16.1	21.2	66.3
Eritrea		..	..	..	..	..	..	..	..	..	..	..
Estonia		..	..	..	..	..	..	..	..	..	..	..
Ethiopia	2005	56.0	64.3	47.1	69.4	30.6	96.8	91.4	0.6	2.8	2.4	5.6
Finland		..	..	..	..	..	..	..	..	..	..	..
France		..	..	..	..	..	..	..	..	..	..	..
Gabon		..	..	..	..	..	..	..	..	..	..	..
Gambia, The	2000	25.3	25.4	25.3	41.6	58.4	..	..	..	..	..	..
Georgia		..	..	..	..	..	..	..	..	..	..	..
Germany		..	..	..	..	..	..	..	..	..	..	..
Ghana	2003	6.0	6.0	5.9	71.2	28.8	89.0	67.9	1.5	4.1	7.5	23.5
Greece		..	..	..	..	..	..	..	..	..	..	..
Guatemala	2003	21.1	26.2	16.0	33.8	66.2	74.2	43.0	6.0	20.1	16.5	36.9
Guinea	1994	48.3	47.2	49.5	98.6	1.4	..	..	..	..	..	..
Guinea-Bissau	2000	67.5	67.4	67.5	63.7	36.3	..	..	..	..	..	..
Haiti	2005	33.4	37.3	29.6	17.7	82.3	..	..	..	..	..	..

Children at work

2.6

PEOPLE

	Survey year	Economically active children					Employment by economic activity ^a					
		Total	% of children ages 7–14		% of economically active children ages 7–14		Agriculture		% of economically active children ages 7–14		Services	
			Male	Female	Work only	Study and work	Male	Female	Male	Female	Male	Female
Honduras	2004	6.8	10.4	3.2	48.6	51.4	76.9	20.2	5.3	17.9	13.9	59.4
Hungary		..	..	..	..	..	..	..	..	..	..	..
India	2000	5.2	5.3	5.1	89.8	10.2	70.5	76.6	10.0	15.4	15.9	6.5
Indonesia	2000	8.9	8.8	9.1	24.9	75.1	..	..	..	..	..	..
Iran, Islamic Rep.		..	..	..	..	..	..	..	..	..	..	..
Iraq		..	..	..	..	..	..	..	..	..	..	..
Ireland		..	..	..	..	..	..	..	..	..	..	..
Israel		..	..	..	..	..	..	..	..	..	..	..
Italy		..	..	..	..	..	..	..	..	..	..	..
Jamaica	2002	1.1	1.5	0.6	17.1	82.9	36.8	17.1	6.2	11.6	43.6	71.3
Japan		..	..	..	..	..	..	..	..	..	..	..
Jordan		..	..	..	..	..	..	..	..	..	..	..
Kazakhstan	1996	29.7	30.3	29.1	4.4	95.6	..	..	..	..	..	..
Kenya	1999	6.7	6.9	6.4	44.8	55.2	87.3	74.4	2.5	0.3	8.8	25.3
Korea, Dem. Rep.		..	..	..	..	..	..	..	..	..	..	..
Korea, Rep.		..	..	..	..	..	..	..	..	..	..	..
Kuwait		..	..	..	..	..	..	..	..	..	..	..
Kyrgyz Republic	1998	8.6	9.7	7.6	7.0	93.0	93.0	96.3	0.0	0.0	7.0	2.7
Lao PDR		..	..	..	..	..	..	..	..	..	..	..
Latvia		..	..	..	..	..	..	..	..	..	..	..
Lebanon		..	..	..	..	..	..	..	..	..	..	..
Lesotho	2000	30.8	34.2	27.5	17.6	82.4	..	..	..	..	..	..
Liberia		..	..	..	..	..	..	..	..	..	..	..
Libya		..	..	..	..	..	..	..	..	..	..	..
Lithuania		..	..	..	..	..	..	..	..	..	..	..
Macedonia, FYR		..	..	..	..	..	..	..	..	..	..	..
Madagascar	2001	25.6	26.1	25.1	85.1	14.9	94.1	93.9	0.6	1.4	2.0	2.9
Malawi	2004	42.6	45.0	40.3	13.9	86.1	..	..	..	..	..	..
Malaysia		..	..	..	..	..	..	..	..	..	..	..
Mali	2005	70.9	71.2	70.7	53.3	46.7	78.4	41.8	1.4	3.2	19.6	54.6
Mauritania		..	..	..	..	..	..	..	..	..	..	..
Mauritius		..	..	..	..	..	..	..	..	..	..	..
Mexico ^d	2004	8.9	12.2	5.6	34.1	65.9	46.4	20.6	12.6	11.5	38.6	68.0
Moldova	2000	33.5	34.1	32.8	3.8	96.2	..	..	..	..	..	..
Mongolia	2000	22.0	23.5	20.6	28.2	71.8	..	..	..	..	..	..
Morocco	1998–99	13.2	13.5	12.8	93.2	6.8	60.8	60.3	8.1	8.5	13.5	6.4
Mozambique		..	..	..	..	..	..	..	..	..	..	..
Myanmar		..	..	..	..	..	..	..	..	..	..	..
Namibia	1999	15.4	16.2	14.7	9.5	90.5	91.5	91.7	0.4	0.4	8.1	8.0
Nepal	1999	47.2	42.2	52.4	35.6	64.4	89.0	86.1	1.2	1.5	9.7	12.3
Netherlands		..	..	..	..	..	..	..	..	..	..	..
New Zealand		..	..	..	..	..	..	..	..	..	..	..
Nicaragua	2001	12.1	17.5	6.5	33.3	66.7	73.2	32.0	3.0	10.2	23.3	57.8
Niger		..	..	..	..	..	..	..	..	..	..	..
Nigeria		..	..	..	..	..	..	..	..	..	..	..
Norway		..	..	..	..	..	..	..	..	..	..	..
Oman		..	..	..	..	..	..	..	..	..	..	..
Pakistan		..	..	..	..	..	..	..	..	..	..	..
Panama ^c	2003	5.1	7.7	2.2	38.4	61.6	62.0	41.3	2.5	5.2	34.0	53.5
Papua New Guinea		..	..	..	..	..	..	..	..	..	..	..
Paraguay ^c	2005	15.3	22.6	7.7	24.2	75.7	69.8	33.9	6.0	6.9	34.0	59.3
Peru	2000	24.1	25.7	22.3	4.8	95.2	75.4	69.1	3.1	2.5	21.2	28.4
Philippines	2001	13.3	16.3	10.0	14.8	85.2	72.6	53.6	3.6	5.3	22.1	41.0
Poland		..	..	..	..	..	..	..	..	..	..	..
Portugal	2001	3.6	4.6	2.6	3.6	96.4	52.7	40.7	11.4	10.7	25.6	47.7
Puerto Rico		..	..	..	..	..	..	..	..	..	..	..



2.6

Children at work

	Survey year	Economically active children					Employment by economic activity ^a					
		% of children ages 7–14		% of economically active children ages 7–14			Agriculture		% of economically active children ages 7–14		Services	
		Total	Male	Female	Work only	Study and work	Male	Female	Male	Female	Male	Female
Romania	2000	1.4	1.7	1.1	20.7	79.3	96.4	98.1	0.0	0.0	2.6	1.9
Russian Federation		..	..	..	..	..	..	..	..	..	..	..
Rwanda	2000	33.1	36.1	30.3	27.5	72.5	..	..	..	..	..	..
Saudi Arabia		..	..	..	..	..	..	..	..	..	..	..
Senegal	2005	18.5	24.4	12.6	61.9	38.1	85.2	67.0	6.5	2.3	6.7	28.5
Serbia		..	..	..	..	..	..	..	..	..	..	..
Sierra Leone	2000	65.0	64.7	65.4	53.8	46.2	..	..	..	..	..	..
Singapore		..	..	..	..	..	..	..	..	..	..	..
Slovak Republic		..	..	..	..	..	..	..	..	..	..	..
Slovenia		..	..	..	..	..	..	..	..	..	..	..
Somalia		..	..	..	..	..	..	..	..	..	..	..
South Africa	1999	27.7	29.0	26.4	5.1	94.9	..	..	..	..	..	..
Spain		..	..	..	..	..	..	..	..	..	..	..
Sri Lanka	1998	17.0	20.4	13.4	5.4	94.6	71.1	71.4	12.0	15.0	15.8	13.5
Sudan ^e	2000	19.1	21.5	16.8	55.9	44.1	..	..	..	..	..	..
Swaziland	2000	11.2	11.4	10.9	14.0	86.0	..	..	..	..	..	..
Sweden		..	..	..	..	..	..	..	..	..	..	..
Switzerland		..	..	..	..	..	..	..	..	..	..	..
Syrian Arab Republic		..	..	..	..	..	..	..	..	..	..	..
Tajikistan ^f	1999	7.3	7.9	6.8	11.2	88.8	23.8	35.3	..	..	76.2	64.7
Tanzania	2001	40.4	41.5	39.2	40.0	60.0	83.5	73.1	0.1	0.2	16.3	26.7
Thailand		..	..	..	..	..	..	..	..	..	..	..
Timor-Leste		..	..	..	..	..	..	..	..	..	..	..
Togo	2006	39.6	40.5	38.5	30.2	69.8	89.7	77.2	0.9	1.5	8.3	20.8
Trinidad and Tobago	2000	3.9	5.2	2.8	12.8	87.2	..	..	..	..	..	..
Tunisia		..	..	..	..	..	..	..	..	..	..	..
Turkey	1999	4.5	5.2	3.8	66.8	33.2	52.7	83.4	19.9	10.2	10.2	1.8
Turkmenistan		..	..	..	..	..	..	..	..	..	..	..
Uganda	2005–06	38.2	39.8	36.5	7.7	92.3	96.0	94.9	1.0	1.7	2.7	3.3
Ukraine		..	..	..	..	..	..	..	..	..	..	..
United Arab Emirates		..	..	..	..	..	..	..	..	..	..	..
United Kingdom		..	..	..	..	..	..	..	..	..	..	..
United States		..	..	..	..	..	..	..	..	..	..	..
Uruguay		..	..	..	..	..	..	..	..	..	..	..
Uzbekistan	2000	18.1	22.0	14.0	4.1	95.9	..	..	..	..	..	..
Venezuela, RB ^c	2003	9.1	11.4	6.6	17.6	82.4	35.2	9.2	7.3	9.5	53.9	81.0
Vietnam		..	..	..	..	..	..	..	..	..	..	..
West Bank and Gaza		..	..	..	..	..	..	..	..	..	..	..
Yemen, Rep.	1999	13.1	12.4	14.0	64.3	35.7	87.2	96.6	1.2	0.8	10.8	1.8
Zambia	2005	47.9	48.9	46.8	25.9	74.1	96.5	95.3	0.7	0.5	2.8	4.2
Zimbabwe	1999	14.3	15.3	13.3	12.0	88.0	..	..	..	..	..	..

a. Shares by major industrial category may not sum to 100 percent because of a residual category not included in the table. b. Covers only Angola-secured territory. c. Covers children ages 10–14. d. Covers children ages 12–14. e. Covers northern Sudan only. f. Covers children ages 11–14.

About the data

The indicators in the table refer to children's economic activity, a broader concept than child labor. According to a gradually emerging consensus, child labor is a subset of children's economic activity. Based on International Labour Organization (ILO) Conventions 138 and 182, child labor is work that is damaging to the child and therefore targeted for elimination.

In line with the definition of economic activity adopted by the Thirteenth International Conference of Labour Statisticians and set by the 1993 United Nations System of National Accounts, the threshold for classifying a person as employed is spending at least one hour during the reference period in the production of goods and services. Economic activity covers all market production and certain types of nonmarket production, including the production of goods for own use. It excludes household chores performed in one's own household.

The data used to develop the indicators are from household surveys conducted by the ILO, the United Nations Children's Fund (UNICEF), the World Bank, and national statistical offices. These surveys yield data on education, employment, health, expenditure, and consumption that relate to child work.

Household survey data generally include information on work type—for example, whether a child is working for pay in cash or in kind or is involved in unpaid work, whether a child is working for someone who is not a member of the household, whether a child is involved in any type of family work (on the farm or in a business), and the like. The age used in country surveys to define child labor ranges from 5 to 17 years old. The data in the table have been

recalculated to present statistics for children ages 7–14.

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

Because of differences in the underlying survey instruments and survey dates, estimates of working children are not fully comparable across countries. Great caution should be exercised in drawing conclusions concerning relative levels of child economic activity across countries or regions based on the published data.

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

Definitions

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

In developing countries the majority of child workers ages 5–14 are involved in unpaid family work

2.6a



The incidence of child work varies substantially by country, as does status in employment for working children. A majority of children are unpaid family workers, with self-employed workers the next largest group.

Source: Understanding Children's Work.

Data sources

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



	Population below national poverty line								Poverty gap at national poverty line			
	Survey year	Rural	% Urban	National	Survey year	Rural	% Urban	National	Survey year	Rural	% Urban	National
Afghanistan		..	..	..		..	..	..		..	..	..
Albania	2002	29.6	19.8	25.4		..	..	..	2002	6.6	..	5.7
Algeria	1988	16.6	7.3	12.2	1995	30.3	14.7	22.6	1995	4.5	1.8	3.2
Angola		..	..	..		..	..	..		..	..	..
Argentina	1995	..	28.4	..	1998	..	29.9	..	1998	..	11.6	..
Armenia	1998–99	50.8	58.3	55.1	2001	48.7	51.9	50.9	2001	..	..	15.1
Australia		..	..	..		..	..	..		..	..	..
Austria		..	..	..		..	..	..		..	..	..
Azerbaijan	1995	..	..	68.1	2001	42.0	55.0	49.6	2001	..	..	15.5
Bangladesh	1995–96	55.2	29.4	51.0	2000	53.0	36.6	49.8	2000	13.8	9.5	12.9
Belarus	2000	..	..	41.9	2002	..	..	18.5	2002	..	..	20.0
Belgium		..	..	..		..	..	..		..	..	..
Benin	1995	25.2	28.5	26.5	1999	33.0	23.3	29.0	1999	9.4	6.9	..
Bolivia	1999	84.0	51.4	63.5	2002	83.5	53.9	65.2	2002	43.4	23.8	31.2
Bosnia and Herzegovina	2001–02	19.9	13.8	19.5		..	..	..	2001–02	4.9	2.8	4.6
Botswana		..	..	..		..	..	..		..	..	..
Brazil	1998	51.4	14.7	22.0	2002–03	41.0	17.5	21.5	2002–03	28.4	17.8	19.6
Bulgaria	1997	..	..	36.0	2001	..	..	12.8	2001	..	..	4.2
Burkina Faso	1998	61.1	22.4	54.6	2003	52.4	19.2	46.4	2003	17.6	5.1	15.3
Burundi	1998	64.6	66.5	68.0		..	..	..		..	..	..
Cambodia	1994	..	..	47.0	2004	38.0	18.0	35.0	2004	7.8	1.2	6.7
Cameroon	1996	59.6	41.4	53.3	2001	49.9	22.1	40.2		..	..	..
Canada		..	..	..		..	..	..		..	..	..
Central African Republic		..	..	..		..	..	..		..	..	..
Chad	1995–96	48.6	..	43.4		..	..	..	1995–96	26.3	..	27.5
Chile	1996	..	..	19.9	1998	..	..	17.0	1998	..	..	5.7
China	1998	4.6	..	4.6	2004	..	..	2.8		..	..	..
Hong Kong, China		..	..	..		..	..	..		..	..	..
Colombia	1995	79.0	48.0	60.0	1999	79.0	55.0	64.0	1999	44.0	26.0	34.0
Congo, Dem. Rep.		..	..	..		..	..	..		..	..	..
Congo, Rep.		..	..	..		..	..	..		..	..	..
Costa Rica	1992	25.5	19.2	22.0	2004	28.3	20.8	23.9	2004	10.8	7.0	8.6
Côte d'Ivoire		..	..	..		..	..	..		..	..	..
Croatia		..	..	..		..	..	..		..	..	..
Cuba		..	..	..		..	..	..		..	..	..
Czech Republic		..	..	..		..	..	..		..	..	..
Denmark		..	..	..		..	..	..		..	..	..
Dominican Republic	2000	45.3	18.2	27.7	2004	55.7	34.7	42.2	2004	24.0	12.9	16.8
Ecuador	1995	56.0	19.0	34.0	1998	69.0	30.0	46.0	1998	29.0	9.0	18.0
Egypt, Arab Rep.	1995–96	23.3	22.5	22.9	1999–2000	..	..	16.7	1999–2000	..	..	3.0
El Salvador	1995	64.8	38.9	50.6	2002	49.8	28.5	37.2	2002	24.2	11.1	16.5
Eritrea	1993–94	..	..	53.0		..	..	..		..	..	..
Estonia	1995	14.7	6.8	8.9		..	..	..	1995	6.6	1.8	3.1
Ethiopia	1995–96	47.0	33.3	45.5	1999–2000	45.0	37.0	44.2	1999–2000	12.0	10.0	12.0
Finland		..	..	..		..	..	..		..	..	..
France		..	..	..		..	..	..		..	..	..
Gabon		..	..	..		..	..	..		..	..	..
Gambia, The	1998	61.0	48.0	57.6	2003	63.0	57.0	61.3	2003	..	..	25.9
Georgia	2002	55.4	48.5	52.1	2003	52.7	56.2	54.5		..	..	..
Germany		..	..	..		..	..	..		..	..	..
Ghana	1998–99	49.6	19.4	39.5	2005–06	39.2	10.8	28.5	2005–06	13.5	3.1	9.6
Greece		..	..	..		..	..	..		..	..	..
Guatemala	1989	71.9	33.7	57.9	2000	74.5	27.1	56.2	2000	..	..	22.6
Guinea	1994	..	..	40.0		..	..	..		..	..	..
Guinea-Bissau	2002	..	52.6	65.7		..	..	..	2000	..	17.5	25.7
Haiti	1987	..	..	65.0	1995	66.0	..	..		..	..	..

	Population below national poverty line								Poverty gap at national poverty line			
	Survey year	Rural	% Urban	National	Survey year	Rural	% Urban	National	Survey year	Rural	% Urban	National
Honduras	1998–99	71.2	28.6	52.5	2004	70.4	29.5	50.7	2004	34.5	9.1	22.3
Hungary	1993	..	..	14.5	1997	..	..	17.3	1997	4.1	..	..
India	1993–94	37.3	32.4	36.0	1999–2000	30.2	24.7	28.6	1999–2000	5.6	6.9	..
Indonesia	1996	..	..	17.5	2004	..	..	16.7	2004	..	..	2.9
Iran, Islamic Rep.		..	..	..		..	..	..		..	..	..
Iraq		..	..	..		..	..	..		..	..	..
Ireland		..	..	..		..	..	..		..	..	..
Israel		..	..	..		..	..	..		..	..	..
Italy		..	..	..		..	..	..		..	..	..
Jamaica	1995	37.0	18.7	27.5	2000	25.1	12.8	18.7		..	..	..
Japan		..	..	..		..	..	..		..	..	..
Jordan	1997	27.0	19.7	21.3	2002	18.7	12.9	14.2	2002	4.7	2.9	3.3
Kazakhstan	2001	..	..	17.6	2002	..	..	15.4	2002	4.5	2.0	3.1
Kenya	1994	47.0	29.0	40.0	1997	53.0	49.0	52.0		..	..	..
Korea, Dem. Rep.		..	..	..		..	..	..		..	..	..
Korea, Rep.		..	..	..		..	..	..		..	..	..
Kuwait		..	..	..		..	..	..		..	..	..
Kyrgyz Republic	2003	57.5	35.7	49.9	2005	50.8	29.8	43.1	2005	12.0	7.0	10.0
Lao PDR	1997–98	41.0	26.9	38.6	2002–03	..	..	33.0	2002–03	..	..	8.0
Latvia	2002	11.6	..	7.5	2004	12.7	..	5.9	2004	..	..	1.2
Lebanon		..	..	..		..	..	..		..	..	..
Lesotho	1993	53.9	27.8	49.2	1999	..	..	68.0		..	..	..
Liberia		..	..	..		..	..	..		..	..	..
Libya		..	..	..		..	..	..		..	..	..
Lithuania		..	..	..		..	..	..		..	..	..
Macedonia, FYR	2002	25.3	..	21.4	2003	22.3	..	21.7	2003	6.5	..	6.7
Madagascar	1997	76.0	63.2	73.3	1999	76.7	52.1	71.3	1999	36.1	21.4	32.8
Malawi	1990–91	..	..	54.0	1997–98	66.5	54.9	65.3		..	..	..
Malaysia	1989	..	..	15.5		..	..	..		..	..	..
Mali	1998	75.9	30.1	63.8		..	..	..		..	..	..
Mauritania	1996	65.5	30.1	50.0	2000	61.2	25.4	46.3		..	..	..
Mauritius		..	..	..		..	..	..		..	..	..
Mexico	2002	34.8	11.4	20.3	2004	27.9	11.3	17.6	2002	12.2	2.8	6.3
Moldova	2001	64.1	58.0	62.4	2002	67.2	42.6	48.5	2002	..	..	16.5
Mongolia	1998	32.6	39.4	35.6	2002	43.4	30.3	36.1	2002	13.2	9.2	11.0
Morocco	1990–91	18.0	7.6	13.1	1998–99	27.2	12.0	19.0	1998–99	6.7	2.5	4.4
Mozambique	1996–97	71.3	62.0	69.4	2002–03	55.3	51.5	54.1	2002–03	20.9	19.7	20.5
Myanmar		..	..	..		..	..	..		..	..	..
Namibia		..	..	..		..	..	..		..	..	..
Nepal	1995–96	43.3	21.6	41.8	2003–04	34.6	9.6	30.9	2003–04	8.5	2.2	7.5
Netherlands		..	..	..		..	..	..		..	..	..
New Zealand		..	..	..		..	..	..		..	..	..
Nicaragua	1998	68.5	30.5	47.9	2001	64.3	28.7	45.8	2001	25.9	8.7	17.0
Niger	1989–93	66.0	52.0	63.0		..	..	..		..	..	..
Nigeria	1985	49.5	31.7	43.0	1992–93	36.4	30.4	34.1		..	..	..
Norway		..	..	..		..	..	..		..	..	..
Oman		..	..	..		..	..	..		..	..	..
Pakistan	1993	33.4	17.2	28.6	1998–99	35.9	24.2	32.6	1998–99	7.9	5.0	7.0
Panama	1997	64.9	15.3	37.3		..	..	..	1997	32.1	3.9	16.4
Papua New Guinea	1996	41.3	16.1	37.5		..	..	..	1996	13.8	4.3	12.4
Paraguay ^a	1990	28.5	19.7	20.5		..	..	..	1990	10.5	5.6	6.0
Peru	2001	77.1	42.0	54.3	2004	72.1	42.9	53.1	2004	28.3	12.4	18.0
Philippines	1994	45.4	18.6	32.1	1997	36.9	11.9	25.1	1997	10.0	2.6	6.4
Poland	1996	..	..	14.6	2001	..	..	14.8		..	..	..
Portugal		..	..	..		..	..	..		..	..	..
Puerto Rico		..	..	..		..	..	..		..	..	..



2.7 | Poverty

	Population below national poverty line								Poverty gap at national poverty line			
	Survey year	Rural	% Urban	National	Survey year	Rural	% Urban	National	Survey year	Rural	% Urban	National
Romania	1995	..	..	25.4	2002	..	..	28.9	2002	..	..	7.6
Russian Federation	1998	..	..	31.4	2002	..	..	19.6	2002	..	..	5.1
Rwanda	1993	..	..	51.2	1999–2000	65.7	14.3	60.3	..	..	..	..
Saudi Arabia	..	..	..	..	..	..	..	..	..	..	..	..
Senegal	1992	40.4	23.7	33.4	..	..	..	..	1992	16.4	3.1	13.9
Serbia	..	..	..	..	..	..	..	..	..	..	..	..
Sierra Leone	1989	..	..	82.8	2003–04	79.0	56.4	70.2	2003–04	34.0	..	29.0
Singapore	..	..	..	..	..	..	..	..	..	..	..	..
Slovak Republic	..	..	..	..	..	..	..	..	..	..	..	..
Slovenia	..	..	..	..	..	..	..	..	..	..	..	..
Somalia	..	..	..	..	..	..	..	..	..	..	..	..
South Africa	..	..	..	..	..	..	..	..	..	..	..	..
Spain	..	..	..	..	..	..	..	..	..	..	..	..
Sri Lanka	1995–96	27.0	15.0	25.0	2002	7.9	24.7	22.7	2002	..	..	5.1
Sudan	..	..	..	..	..	..	..	..	..	..	..	..
Swaziland	2000–01	75.0	49.0	69.2	..	..	..	..	2000–01	..	..	32.9
Sweden	..	..	..	..	..	..	..	..	..	..	..	..
Switzerland	..	..	..	..	..	..	..	..	..	..	..	..
Syrian Arab Republic	..	..	..	..	..	..	..	..	..	..	..	..
Tajikistan	1999	..	..	74.9	2003	..	..	44.4	2003	..	..	12.7
Tanzania	1991	40.8	31.2	38.6	2000–01	38.7	29.5	35.7	..	..	..	..
Thailand	1994	..	..	9.8	1998	..	..	13.6	1998	..	..	3.0
Timor-Leste	2001	..	..	39.7	..	..	..	..	2001	..	..	11.9
Togo	1987–89	..	..	32.3	..	..	..	..	1987–89	..	..	10.0
Trinidad and Tobago	1992	20.0	24.0	21.0	..	..	..	..	1992	6.2	7.4	7.3
Tunisia	1990	13.1	3.5	7.4	1995	13.9	3.6	7.6	1990	3.3	0.9	1.7
Turkey	1994	..	..	28.3	2002	34.5	22.0	27.0	2002	..	..	0.3
Turkmenistan	..	..	..	..	..	..	..	..	..	..	..	..
Uganda	1999–2000	37.4	9.6	33.8	2002–03	41.7	12.2	37.7	2002–03	12.6	3.0	11.3
Ukraine	2000	34.9	..	31.5	2003	28.4	..	19.5	..	..	..	..
United Arab Emirates	..	..	..	..	..	..	..	..	..	..	..	..
United Kingdom	..	..	..	..	..	..	..	..	..	..	..	..
United States	..	..	..	..	..	..	..	..	..	..	..	..
Uruguay	1994	..	20.2	..	1998	..	24.7	..	1998	..	8.6	..
Uzbekistan	2000	30.5	22.5	27.5	..	..	..	..	..	..	..	..
Venezuela, RB	1989	..	..	31.3	..	..	..	..	1989	..	24.0	..
Vietnam	1998	45.5	9.2	37.4	2002	35.6	6.6	28.9	2002	8.7	1.3	6.9
West Bank and Gaza	..	..	..	..	..	..	..	..	..	..	..	..
Yemen, Rep.	1998	45.0	30.8	41.8	..	..	..	..	1998	14.7	8.2	13.2
Zambia	1998	83.1	56.0	72.9	2004	78.0	53.0	68.0	2004	44.0	22.0	36.0
Zimbabwe	1990–91	35.8	3.4	25.8	1995–96	48.0	7.9	34.9	..	..	..	..

a. Covers Asunción metropolitan area only.

About the data

The World Bank periodically prepares poverty assessments for member countries in which it has an active program in close collaboration with national institutions, other development agencies, and civil society groups, including poor people's organizations. Poverty assessments assess the extent and causes of poverty and propose strategies to reduce it. Since 1992 the World Bank has conducted about 180 poverty assessments, which are the source of all poverty estimates based on national poverty lines presented in the table.

The World Bank published its first systematic review of poverty for developing countries in *World Development Report 1990* using household survey data for 22 countries (Ravallion, Datt, and van de Walle 1991). Since then the number of countries that field such surveys has increased considerably, as have the frequency of the surveys and the quality of the data. Household survey data sets rose dramatically from 10 between 1979 and 1981 to 111 between 2000 and 2002. Fewer surveys are available after 2002, reflecting the lag between data collection and availability for analysis, not a reduction in collection effort. Coverage is improving in all regions, but Sub-Saharan Africa continues to lag, with only 21 of 48 countries having at least one data set available since 2000. Overall more than 550 surveys representing about 100 developing countries are now included in the World Bank's data sets. Some 1.1 million randomly sampled households were interviewed in these surveys, representing 93 percent of the population of developing countries. A complete overview of data availability by year and country is available at <http://iresearch.worldbank.org/povcalnet/>.

These household surveys ask detailed questions on sources of income and how income was spent and on household characteristics such as the number of people sharing that income. Most interviews are conducted by staff of government statistics offices. As data coverage and quality have improved, so has the underlying methodology, resulting in more comprehensive estimates.

Estimating poverty and comparing poverty rates is difficult. In addition to survey data availability are data quality issues that arise in measuring household living standards. One concerns the choice of income or consumption as a welfare indicator. Income is generally more difficult to measure accurately, and consumption comes closer to the notion of living standards. And income can vary over time even if living standards do not. But consumption data are not always available. Another issue is that household

surveys can differ widely. Even similar surveys may not be strictly comparable because of differences in timing or in the quality and training of enumerators.

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

The statistics reported here are based on consumption data or, when unavailable, on income surveys. Analysis of some 20 countries for which income and consumption expenditure data were both available from the same surveys found income to yield a higher mean than consumption but also found higher inequality. When poverty measures based on consumption and income were compared, the two effects roughly cancelled each other out: there was no significant statistical difference.

International poverty lines and the 2005 International Comparison Project

This year's table does not include poverty estimates using the international poverty lines of \$1 a day and \$2 a day, which were based on 1993 purchasing power parities (PPPs). The International Comparison Program recently released new PPP estimates benchmarked to 2005 (see introduction to *World View*). Poverty estimates using new international poverty lines based on PPPs will be published later as a supplement to *World Development Indicators*.

Do it yourself: PovcalNet

The World Bank's Development Research Group developed *PovcalNet*, an interactive Web-based tool that allows users to replicate the calculations by the World Bank's researchers in estimating absolute poverty in the world. *PovcalNet* is self-contained and powered by built-in software that performs the calculations from a primary database. The underlying software can also be downloaded from the *PovcalNet* site and used with distributional data of various formats. The *PovcalNet* primary database consists of distributional data calculated directly

from household survey data. Detailed information is available from the site.

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

PovcalNet also allows users to calculate poverty measures under different assumptions. For example, users can specify different poverty lines and aggregate the estimates using alternative country groupings (for example, UN groupings or groupings based on average incomes) or a selected set of individual countries. *PovcalNet* is available online at <http://iresearch.worldbank.org/povcalnet/>. It will be updated using the 2005 PPP results along with the *World Development Indicators* supplemental publication later this year.

Definitions

- **Survey year** is the year in which the underlying data were collected.
- **Rural population below national poverty line** is the percentage of the rural population living below the national rural poverty line.
- **Urban population below national poverty line** is the percentage of the urban population living below the national urban poverty line.
- **National population below national poverty line** is the percentage of the country's population living below the national poverty line. National estimates are based on population-weighted subgroup estimates from household surveys.
- **Poverty gap at national poverty line** is the mean shortfall from the poverty line (counting the nonpoor as having zero shortfall) as a percentage of the poverty line. This measure reflects the depth of poverty as well as its incidence.

Data sources

The poverty measures are prepared by the World Bank's Development Research Group. The national poverty lines are based on the World Bank's country poverty assessments. For details on data sources and methods used in deriving the World Bank's latest estimates, see Chen and Ravallion's "How Have the World's Poorest Fared Since the Early 1980s?"



	Survey year	Gini index	Percentage share of income or consumption ^a						
			Lowest 10%	Lowest 20%	Second 20%	Third 20%	Fourth 20%	Highest 20%	Highest 10%
Afghanistan		..	..	..	..	..	..	..	..
Albania	2004 ^b	31.1	3.4	8.2	12.6	17.0	22.6	39.5	24.4
Algeria	1995 ^b	35.3	2.8	7.0	11.6	16.1	22.7	42.6	26.8
Angola		..	..	..	..	..	..	..	..
Argentina ^c	2004 ^d	51.3	0.9	3.1	7.6	12.8	21.1	55.4	38.2
Armenia	2003 ^b	33.8	3.6	8.5	12.3	15.7	20.6	42.8	29.0
Australia	1994 ^d	35.2	2.0	5.9	12.0	17.2	23.6	41.3	25.4
Austria	2000 ^d	29.1	3.3	8.6	13.3	17.4	22.9	37.8	23.0
Azerbaijan	2001 ^b	36.5	3.1	7.4	11.5	15.3	21.2	44.5	29.5
Bangladesh	2005 ^b	33.2	3.8	8.8	12.2	15.6	20.9	42.5	28.0
Belarus	2005 ^b	28.0	3.6	8.8	13.7	17.7	23.0	36.8	22.1
Belgium	2000 ^d	33.0	3.4	8.5	13.0	16.3	20.8	41.4	28.1
Benin	2003 ^b	36.5	3.1	7.4	11.3	15.4	21.5	44.5	29.0
Bolivia	2002 ^d	60.1	0.3	1.5	5.9	10.9	18.7	63.0	47.2
Bosnia and Herzegovina	2005 ^b	35.8	2.7	7.0	11.6	15.9	22.3	43.2	27.5
Botswana	1993 ^b	60.5	1.2	3.2	6.0	9.7	16.0	65.1	51.0
Brazil	2005 ^d	56.6	0.9	2.9	6.5	11.1	18.7	60.8	44.9
Bulgaria	2003 ^b	29.2	3.4	8.7	13.7	17.2	22.1	38.3	23.9
Burkina Faso	2003 ^b	39.5	2.8	6.9	10.9	14.5	20.5	47.2	32.2
Burundi	1998 ^b	42.4	1.7	5.1	10.3	15.1	21.5	48.0	32.8
Cambodia	2004 ^b	41.7	2.9	6.8	10.2	13.7	19.6	49.6	34.8
Cameroon	2001 ^b	44.6	2.3	5.6	9.3	13.7	20.4	50.9	35.4
Canada	2000 ^d	32.6	2.6	7.2	12.7	17.2	23.0	39.9	24.8
Central African Republic	1993 ^b	61.3	0.7	2.0	4.9	9.6	18.5	65.0	47.7
Chad		..	..	..	..	..	..	..	..
Chile	2003 ^d	54.9	1.4	3.8	7.3	11.1	17.8	60.0	45.0
China	2004 ^d	46.9	1.6	4.3	8.5	13.7	21.7	51.9	34.9
Hong Kong, China	1996 ^d	43.4	2.0	5.3	9.4	13.9	20.7	50.7	34.9
Colombia	2004 ^d	56.2	0.8	2.9	6.9	11.0	18.3	60.9	45.0
Congo, Dem. Rep.		..	..	..	..	..	..	..	..
Congo, Rep.		..	..	..	..	..	..	..	..
Costa Rica	2004 ^d	48.2	1.4	4.1	8.5	13.2	20.9	53.3	36.7
Côte d'Ivoire	2002 ^b	44.6	2.0	5.2	9.1	13.7	21.3	50.7	34.0
Croatia	2005 ^b	29.0	3.6	8.8	13.3	17.3	22.7	37.9	23.1
Cuba		..	..	..	..	..	..	..	..
Czech Republic	1996 ^d	25.4	4.3	10.3	14.5	17.7	21.7	35.9	22.4
Denmark	1997 ^d	24.7	2.6	8.3	14.7	18.2	22.9	35.8	21.3
Dominican Republic	2005 ^d	49.9	1.5	4.1	8.1	12.6	19.9	55.3	39.0
Ecuador	1998 ^b	53.6	0.9	3.3	7.5	11.7	19.4	58.0	41.6
Egypt, Arab Rep.	2004–05 ^b	34.4	3.8	8.9	12.7	16.0	20.8	41.5	27.6
El Salvador	2002 ^d	52.4	0.7	2.7	7.5	12.8	21.2	55.9	38.8
Eritrea		..	..	..	..	..	..	..	..
Estonia	2004 ^b	36.0	2.6	6.8	11.7	16.2	22.0	43.3	27.8
Ethiopia	1999–2000 ^b	30.0	3.9	9.1	13.2	16.8	21.5	39.4	25.5
Finland	2000 ^d	26.9	4.0	9.6	14.1	17.5	22.1	36.7	22.6
France	1995 ^d	32.7	2.8	7.2	12.6	17.2	22.8	40.2	25.1
Gabon		..	..	..	..	..	..	..	..
Gambia, The	2003–04 ^b	47.4	1.8	4.8	8.7	13.0	20.7	52.9	36.9
Georgia	2005 ^b	40.8	1.9	5.4	10.5	15.3	22.2	46.7	30.6
Germany	2000 ^d	28.3	3.2	8.5	13.7	17.8	23.1	36.9	22.1
Ghana	1998–99 ^b	40.8	2.1	5.6	10.1	14.9	22.9	46.6	30.0
Greece	2000 ^d	34.3	2.5	6.7	11.9	16.8	23.0	41.5	26.0
Guatemala	2004 ^d	49.4	1.3	3.9	8.2	13.1	20.6	54.1	38.0
Guinea	2003 ^b	38.6	2.9	7.0	10.8	14.7	21.4	46.1	30.7
Guinea-Bissau	1993 ^b	47.0	2.1	5.2	8.8	13.1	19.4	53.4	39.3
Haiti	2001 ^d	59.2	0.7	2.4	6.2	10.4	17.7	63.4	47.7

Distribution of income or consumption

2.8

PEOPLE

	Survey year	Gini index	Percentage share of income or consumption ^a						
			Lowest 10%	Lowest 20%	Second 20%	Third 20%	Fourth 20%	Highest 20%	Highest 10%
Honduras	2003 ^d	53.8	1.2	3.4	7.1	11.6	19.6	58.3	42.2
Hungary	2004 ^b	30.1	3.5	8.6	13.1	17.1	22.3	38.9	24.2
India	2004–05 ^b	36.8	3.6	8.1	11.3	14.9	20.4	45.3	31.1
Indonesia	2005 ^b	39.4	3.0	7.1	10.7	14.4	20.5	47.3	32.3
Iran, Islamic Rep.	2005 ^b	38.4	2.5	6.5	10.9	15.4	22.1	45.1	29.6
Iraq		..	..	..	..	..	..	..	..
Ireland	2000 ^d	34.3	2.9	7.4	12.3	16.3	21.9	42.0	27.2
Israel	2001 ^d	39.2	2.1	5.7	10.5	15.9	23.0	44.9	28.8
Italy	2000 ^d	36.0	2.3	6.5	12.0	16.8	22.8	42.0	26.8
Jamaica	2004 ^b	45.5	2.1	5.3	9.2	13.2	20.6	51.6	35.8
Japan	1993 ^d	24.9	4.8	10.6	14.2	17.6	22.0	35.7	21.7
Jordan	2002–03 ^b	38.8	2.7	6.7	10.8	14.9	21.3	46.3	30.6
Kazakhstan	2003 ^b	33.9	3.0	7.4	11.9	16.4	22.8	41.5	25.9
Kenya	1997 ^b	42.5	2.5	6.0	9.8	14.3	20.8	49.1	33.9
Korea, Dem. Rep.		..	..	..	..	..	..	..	..
Korea, Rep.	1998 ^d	31.6	2.9	7.9	13.6	18.0	23.1	37.5	22.5
Kuwait		..	..	..	..	..	..	..	..
Kyrgyz Republic	2003 ^b	30.3	3.8	8.9	12.8	16.4	22.5	39.4	24.3
Lao PDR	2002 ^b	34.6	3.4	8.1	11.9	15.6	21.1	43.3	28.5
Latvia	2004 ^b	35.8	2.6	6.8	11.7	16.2	22.3	42.9	27.5
Lebanon		..	..	..	..	..	..	..	..
Lesotho	1995 ^b	63.2	0.5	1.5	4.3	8.9	18.8	66.5	48.3
Liberia		..	..	..	..	..	..	..	..
Libya		..	..	..	..	..	..	..	..
Lithuania	2004 ^b	35.8	2.6	6.8	11.7	16.1	22.4	43.0	27.5
Macedonia, FYR	2003 ^b	39.0	2.4	6.1	10.8	15.5	22.2	45.5	29.6
Madagascar	2001 ^b	47.5	1.9	4.9	8.5	12.7	20.4	53.5	36.6
Malawi	2004–05 ^b	39.0	2.9	7.0	10.8	14.8	20.7	46.6	31.8
Malaysia	1997 ^d	49.2	1.7	4.4	8.1	12.9	20.3	54.3	38.4
Mali	2001 ^b	40.1	2.4	6.1	10.2	14.7	22.2	46.6	30.2
Mauritania	2000 ^b	39.0	2.5	6.2	10.6	15.2	22.3	45.7	29.5
Mauritius		..	..	..	..	..	..	..	..
Mexico	2004 ^b	46.1	1.6	4.3	8.3	12.6	19.7	55.1	39.4
Moldova	2003 ^b	33.2	3.2	7.8	12.2	16.5	22.1	41.4	26.4
Mongolia	2002 ^b	32.8	3.0	7.5	12.2	16.8	23.1	40.5	24.6
Morocco	1998–99 ^b	39.5	2.6	6.5	10.6	14.8	21.3	46.6	30.9
Mozambique	2002–03 ^b	47.3	2.1	5.4	9.3	13.0	18.7	53.6	39.4
Myanmar		..	..	..	..	..	..	..	..
Namibia	1993 ^d	74.3	0.5	1.4	3.0	5.4	11.5	78.7	64.5
Nepal	2003–04 ^b	47.2	2.6	6.0	9.0	12.4	18.0	54.6	40.6
Netherlands	1999 ^d	30.9	2.5	7.6	13.2	17.2	23.3	38.7	22.9
New Zealand	1997 ^d	36.2	2.2	6.4	11.4	15.8	22.6	43.8	27.8
Nicaragua	2001 ^b	43.1	2.2	5.6	9.8	14.2	21.1	49.3	33.8
Niger	1995 ^b	50.5	0.8	2.6	7.1	13.9	23.1	53.3	35.4
Nigeria	2003 ^b	43.7	1.9	5.0	9.6	14.5	21.7	49.2	33.2
Norway	2000 ^d	25.8	3.9	9.6	14.0	17.2	22.0	37.2	23.4
Oman		..	..	..	..	..	..	..	..
Pakistan	2005 ^b	31.2	3.9	9.1	12.9	16.1	21.1	40.8	26.5
Panama	2003 ^d	56.1	0.7	2.5	6.6	11.4	19.6	59.9	43.0
Papua New Guinea	1996 ^b	50.9	1.7	4.5	7.9	11.9	19.2	56.5	40.5
Paraguay	2003 ^d	58.4	0.7	2.4	6.3	10.8	18.6	61.9	46.1
Peru	2003 ^d	52.0	1.3	3.7	7.7	12.2	19.7	56.7	40.9
Philippines	2003 ^b	44.5	2.2	5.4	9.1	13.6	21.3	50.6	34.2
Poland	2005 ^b	34.9	3.0	7.4	11.7	16.1	22.3	42.5	27.2
Portugal	1997 ^d	38.5	2.0	5.8	11.0	15.5	21.9	45.9	29.8
Puerto Rico		..	..	..	..	..	..	..	..



	Survey year	Gini index	Percentage share of income or consumption ^a						
			Lowest 10%	Lowest 20%	Second 20%	Third 20%	Fourth 20%	Highest 20%	Highest 10%
Romania	2005 ^b	31.5	3.3	8.2	12.8	16.9	22.1	40.0	25.4
Russian Federation	2002 ^b	39.9	2.4	6.1	10.5	14.9	21.8	46.6	30.6
Rwanda	2000 ^b	46.8	2.1	5.3	9.1	13.2	19.4	53.0	38.2
Saudi Arabia		..	..	..	..	..	..	..	..
Senegal	2001 ^b	41.3	2.7	6.6	10.3	14.2	20.6	48.4	33.4
Serbia ^e	2003 ^b	30.0	3.4	8.3	13.0	17.3	23.0	38.4	23.4
Sierra Leone	2003 ^b	40.0	2.6	6.5	10.5	14.5	21.2	47.3	31.2
Singapore	1998 ^d	42.5	1.9	5.0	9.4	14.6	22.0	49.0	32.8
Slovak Republic	1996 ^d	25.8	3.1	8.8	14.9	18.7	22.8	34.8	20.9
Slovenia	2004 ^b	30.9	3.4	8.3	12.8	16.7	22.6	39.6	24.6
Somalia		..	..	..	..	..	..	..	..
South Africa	2000 ^b	57.8	1.4	3.5	6.3	10.0	18.0	62.2	44.7
Spain	2000 ^d	34.7	2.6	7.0	12.1	16.4	22.5	42.0	26.6
Sri Lanka	2002 ^b	40.2	3.0	7.0	10.5	14.2	20.4	48.0	32.7
Sudan		..	..	..	..	..	..	..	..
Swaziland	2000–01 ^d	50.4	1.6	4.3	8.2	12.3	18.9	56.3	40.7
Sweden	2000 ^d	25.0	3.6	9.1	14.0	17.6	22.7	36.6	22.2
Switzerland	2000 ^d	33.7	2.9	7.6	12.2	16.3	22.6	41.3	25.9
Syrian Arab Republic		..	..	..	..	..	..	..	..
Tajikistan	2004 ^b	33.6	3.2	7.8	12.0	16.4	21.9	41.9	26.6
Tanzania	2000–01 ^b	34.6	2.9	7.3	12.0	16.1	22.3	42.4	26.9
Thailand	2002 ^b	42.0	2.7	6.3	9.9	14.0	20.8	49.0	33.4
Timor-Leste		..	..	..	..	..	..	..	..
Togo		..	..	..	..	..	..	..	..
Trinidad and Tobago	1992 ^d	38.9	2.2	5.9	10.8	15.3	23.1	44.9	28.8
Tunisia	2000 ^b	39.8	2.3	6.0	10.3	14.8	21.7	47.3	31.5
Turkey	2003 ^b	43.6	2.0	5.3	9.7	14.2	21.0	49.7	34.1
Turkmenistan	1998 ^b	40.8	2.6	6.1	10.2	14.7	21.5	47.5	31.7
Uganda	2002 ^b	45.7	2.3	5.7	9.4	13.2	19.1	52.5	37.7
Ukraine	2005 ^b	28.2	3.8	9.0	13.5	17.4	22.7	37.4	22.6
United Arab Emirates		..	..	..	..	..	..	..	..
United Kingdom	1999 ^d	36.0	2.1	6.1	11.4	16.0	22.5	44.0	28.5
United States	2000 ^d	40.8	1.9	5.4	10.7	15.7	22.4	45.8	29.9
Uruguay ^c	2003 ^d	44.9	1.9	5.0	9.1	14.0	21.5	50.5	34.0
Uzbekistan	2003 ^b	36.8	2.8	7.2	11.7	15.4	21.0	44.7	29.6
Venezuela, RB	2003 ^d	48.2	0.7	3.3	8.7	13.9	22.0	52.1	35.2
Vietnam	2004 ^b	37.0	2.9	7.1	11.1	15.1	21.8	44.8	28.9
West Bank and Gaza		..	..	..	..	..	..	..	..
Yemen, Rep.	2005 ^b	37.7	2.9	7.2	11.4	15.3	20.8	45.3	30.9
Zambia	2004 ^b	50.8	1.2	3.6	7.9	12.6	20.8	55.1	38.8
Zimbabwe	1995 ^b	50.1	1.8	4.6	8.1	12.2	19.3	55.7	40.3

a. Percentage shares by quintile may not sum to 100 percent because of rounding. b. Refers to expenditure shares by percentiles of population, ranked by per capita expenditure. c. Urban data. d. Refers to income shares by percentiles of population, ranked by per capita income. e. Includes Montenegro.

Distribution of income or consumption

About the data

Inequality in the distribution of income is reflected in the percentage shares of income or consumption accruing to portions of the population ranked by income or consumption levels. The portions ranked lowest by personal income receive the smallest shares of total income. The Gini index provides a convenient summary measure of the degree of inequality. Data on the distribution of income or consumption come from nationally representative household surveys. Where the original data from the household survey were available, they have been used to directly calculate the income or consumption shares by quintile. Otherwise, shares have been estimated from the best available grouped data.

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

Because the underlying household surveys differ in method and type of data collected, the distribution data are not strictly comparable across countries. These problems are diminishing as survey methods improve and become more standardized,

but achieving strict comparability is still impossible (see *About the data* for table 2.7).

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

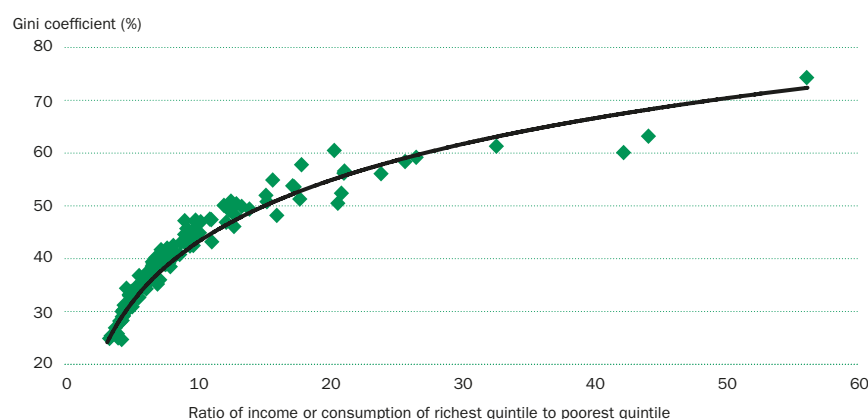
World Bank staff have made an effort to ensure that the data are as comparable as possible. Wherever possible, consumption has been used rather than income. Income distribution and Gini indexes for high-income economies are calculated directly from the Luxembourg Income Study database, using an estimation method consistent with that applied for developing countries.

Definitions

• **Survey year** is the year in which the underlying data were collected. • **Gini index** measures the extent to which the distribution of income (or consumption expenditure) among individuals or households within an economy deviates from a perfectly equal distribution. A Lorenz curve plots the cumulative percentages of total income received against the cumulative number of recipients, starting with the poorest individual. The Gini index measures the area between the Lorenz curve and a hypothetical line of absolute equality, expressed as a percentage of the maximum area under the line. Thus a Gini index of 0 represents perfect equality, while an index of 100 implies perfect inequality. • **Percentage share of income or consumption** is the share of total income or consumption that accrues to subgroups of population indicated by deciles or quintiles.

The Gini coefficient and ratio of income or consumption of the richest quintile to the poorest quintiles are closely correlated

2.8a



There are many ways to measure income or consumption inequality. The Gini coefficient shows inequality over the entire population; the ratio of income or consumption of the richest quintile to the poorest quintiles shows differences only at the tails of the population distribution. Both measures are closely correlated and provide similar information. At low levels of inequality the Gini coefficient is a more sensitive measure, but above a Gini value of 45–55 percent the inequality ratio rises faster.

Source: World Development Indicators data files.

Data sources

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



	Urban informal sector employment		Youth unemployment		Female-headed households	Pension contributors			Public expenditure on pensions			Average pension % of per capita income
	% of urban employment		Male % of male labor force ages 15–24	Female % of female labor force ages 15–24	% of total 2003–05 ^a	Year	% of labor force	% of working- age population	Year	% of GDP	Year	
	Male 1998– 2005 ^a	Female 1998– 2005 ^a	2003–05 ^a	2003–05 ^a								
Afghanistan	2005	0.5		..
Albania	2004	48.9	33.0	2004	4.6		..
Algeria	43	46	..	2002	36.7	22.1	2002	3.2	2002	89.1
Angola
Argentina	22 ^b	28 ^b	..	2004	35.0	25.9	1994	6.2	2002	73.7
Armenia	36	2002	64.4	48.3	2004	3.4		..
Australia	11 ^b	11 ^b	..	2005	92.6	69.6	2003	5.4	2002	52.4
Austria	11	10	..	2005	96.4	68.7	2003	14.6	2002	93.2
Azerbaijan	1996	52.0	46.0	1996	2.5		..
Bangladesh	7	6	10	2004	2.8	2.1	1992	0.0		..
Belarus	54	1992	97.0	94.0	1997	7.7		..
Belgium	21	19	..	2005	94.2	61.6	2003	11.3	2002	62.8
Benin	50 ^b	41 ^b	..	..	23	1996	4.8	..	1993	0.4		..
Bolivia	20	2002	10.1	7.8	2000	4.5		..
Bosnia and Herzegovina	2004	36.0	27.0	2004	8.8		..
Botswana
Brazil	14 ^b	23 ^b	..	2004	52.6	39.1	2004	12.6		..
Bulgaria	23	21	..	1994	64.0	63.0	2005	8.9	2002	75.2
Burkina Faso	9	1993	3.1	3.0	1992	0.3		..
Burundi	1993	3.3	3.0	1991	0.2		..
Cambodia	24		..	..		..		..
Cameroon	24	1993	13.7	11.5	2001	0.8		..
Canada	14 ^b	11 ^b	..	2005	90.5	71.4	2003	5.4	2002	57.1
Central African Republic	1990	0.3		..
Chad	20	1990	1.1	1.0	1997	0.1		..
Chile	15	21	..	2003	58.0	35.2	2001	2.9	2002	53.5
China	2005	20.5	17.2	1996	2.7		..
Hong Kong, China	14	8	..		..	..		..		..
Colombia	12	19	30	2000	19.0	14.0	1994	1.1	2002	54.4
Congo, Dem. Rep.
Congo, Rep.	23	1992	5.8	5.6	1992	0.9		..
Costa Rica	11	22	..	2004	55.3	37.6	1997	4.2	2002	103.1
Côte d'Ivoire	1997	9.3	9.1	1997	0.3		..
Croatia	27 ^c	31 ^c	..	2005	77.0	50.0	2005	12.3	2002	61.6
Cuba	46		..	..	1992	12.6		..
Czech Republic	19	19	..	2003	86.3	61.5	2003	8.7	2002	58.2
Denmark	6	10	..	2005	94.6	75.0	2003	11.0	2002	54.1
Dominican Republic	28	2005	27.2	18.6	2000	0.8	2002	55.9
Ecuador	32 ^b	42 ^b	12 ^b	21 ^b	..	2004	27.0	20.8	2002	2.5		..
Egypt, Arab Rep.	12	2004	55.5	27.7	2004	4.1	2002	119.8
El Salvador	43 ^c	55 ^c	13 ^c	10 ^c	..	2005	29.8	19.7	1997	1.3	2002	39.3
Eritrea	47		..	..	2001	0.3		..
Estonia	16	15	..	2004	95.2	68.6	2003	6.0	2002	60.9
Ethiopia	33 ^b	46 ^b	4	11	23		..	..	1993	0.9		..
Finland	21	19	..	2005	88.7	67.2	2003	11.2	2002	78.8
France	21	25 ^b	..	2005	89.9	61.4	2003	13.1	2002	65.0
Gabon	26	1995	15.0	14.0		..		..
Gambia, The	2003	3.8	2.9		..		..
Georgia	21 ^b	7 ^b	27	31	..	2004	29.9	22.7	2004	3.0		..
Germany	16	14	..	2005	88.2	65.5	2003	13.3	2002	71.8
Ghana	34	2003	9.1	7.1	2002	1.3		..
Greece	18	35	..	2005	85.2	58.5	2003	12.8	2002	99.9
Guatemala	2000	19.0	11.7	1995	0.7		..
Guinea	17	1993	1.5	1.8		..		..
Guinea-Bissau	2004	1.9	1.5	2005	2.1		..
Haiti	44		..	..		..		..

Assessing vulnerability and security

2.9

PEOPLE

	Urban informal sector employment		Youth unemployment		Female-headed households	Pension contributors			Public expenditure on pensions			
	% of urban employment		Male % of male labor force ages 15–24	Female % of female labor force ages 15–24	% of total	Year	% of labor force	% of working-age population	Year	% of GDP	Year	Average pension % of per capita income
	1998–2005 ^a	1998–2005 ^a	2003–05 ^a	2003–05 ^a								
Honduras	5 ^b	11 ^b	26	1999	20.6	17.7	1994	0.6	..	..
Hungary	20	19	..	2002	56.3	34.0	2003	9.1	2002	90.5
India	54 ^b	41 ^b	10 ^b	11 ^b	..	2004	9.0	5.7	..	..	..	..
Indonesia	25	34	12	2002	15.5	11.3	..	..	..	..
Iran, Islamic Rep.	20	32	..	2001	35.0	20.0	2000	1.1	2002	124.2
Iraq	11	..	..	..	..	..	..	..
Ireland	9	7	..	2005	88.0	63.9	2003	4.1	2002	36.6
Israel	17	19	..	1992	82.0	63.0	1996	5.9	..	..
Italy	22	27	..	2005	92.4	58.4	2003	14.7	2002	88.8
Jamaica	22	36	..	2004	17.4	12.6	..	..	..	..
Japan	10 ^b	7 ^b	..	2005	95.3	75.0	2003	8.9	2002	59.1
Jordan	12	2003	30.3	17.4	2001	2.2	2002	76.1
Kazakhstan	10 ^c	15 ^c	..	2004	33.8	26.4	2004	4.9	..	..
Kenya	32	2005	8.0	6.7	1993	0.5	..	..
Korea, Dem. Rep.
Korea, Rep.	12	9	..	2005	74.3	52.0	2003	1.3	2002	43.3
Kuwait	1990	3.5	..	..
Kyrgyz Republic	33 ^b	25 ^b	14	18	..	2006	42.2	28.9	2006	4.8	..	..
Lao PDR
Latvia	12	14	..	2003	92.4	66.5	2002	7.5	2002	81.8
Lebanon	2003	33.1	19.9	2003	2.1	..	..
Lesotho	37	2005	5.7	3.6	..	..	..	..
Liberia
Libya	2003	65.5	38.1	2001	2.1	2002	91.2
Lithuania	50 ^b	27 ^b	16	15	..	2004	79.7	56.0	2003	6.2	2002	71.3
Macedonia, FYR	63	62	8	2000	63.8	38.9	1998	8.7	..	..
Madagascar	7	7	22	1993	5.4	4.8	1990	0.2	..	..
Malawi	25	..	..	..	..	..	..	..
Malaysia	1993	48.7	37.8	1999	6.5	..	..
Mali	11	1990	2.5	2.0	1991	0.4	..	..
Mauritania	29	1995	5.0	4.0	1992	0.2	..	..
Mauritius	21	34	..	2000	51.4	33.6	1999	4.4	..	..
Mexico	18 ^b	22 ^b	6	7	..	2002	34.5	22.7	2003	1.3	2002	45.1
Moldova	19	18	..	2000	60.6	43.1	2003	8.0	..	..
Mongolia	20	21	..	2002	61.4	49.1	2002	5.8	..	..
Morocco	18 ^c	14 ^c	17	2003	22.4	12.8	2003	1.9	2002	74.1
Mozambique	26	1995	2.0	2.1	1996	0.0	..	..
Myanmar
Namibia	42	..	..	..	..	..	..	..
Nepal	60 ^b	76 ^b	..	..	23	2003	2.1	1.4	2003	0.3	..	..
Netherlands	10	10	..	2005	90.3	70.4	2003	12.8	2002	84.1
New Zealand	9 ^b	10 ^b	..	..	..	..	2003	7.4	2002	39.5
Nicaragua	11	16	31	2005	17.9	11.5	1996	2.5	..	..
Niger	19	1992	1.3	1.5	2005	0.2	..	..
Nigeria	17	2005	1.7	1.2	1991	0.1	..	..
Norway	13	12	..	2005	90.8	75.7	2003	10.7	2002	65.1
Oman
Pakistan	44 ^b	22 ^b	11	15	..	2004	6.4	4.0	1993	0.9	..	..
Panama	19	30	..	1998	51.6	40.7	1996	4.3	..	..
Papua New Guinea
Paraguay	12 ^b	21 ^b	..	2004	11.6	9.1	2001	1.2	..	..
Peru	56 ^b	55 ^b	21 ^b	21 ^b	22	2003	16.3	12.3	2000	2.6	2002	43.9
Philippines	15	19	15	2000	27.1	18.7	1993	1.0	..	..
Poland	37	39	..	2005	84.9	54.5	2003	13.9	2002	69.7
Portugal	14	19	..	2005	91.4	71.9	2003	11.9	2002	79.8
Puerto Rico	25 ^b	21 ^b	..	..	..	..	..	..	..	..



	Urban informal sector employment		Youth unemployment		Female-headed households	Pension contributors			Public expenditure on pensions			Average pension % of per capita income
	% of urban employment		Male % of male labor force ages 15–24	Female % of female labor force ages 15–24	% of total 2003–05 ^a	Year	% of labor force	% of working- age population	Year	% of GDP	Year	
	Male 1998– 2005 ^a	Female 1998– 2005 ^a	2003–05 ^a	2003–05 ^a								
Romania	..	..	21	18	..	2005	57.6	39.1	2003	6.9		..
Russian Federation	..	..	..	..	..		..	2004	5.8	..		..
Rwanda	..	..	..	..	34	2004	4.8	4.1		..		..
Saudi Arabia	..	..	..	..	..		..	..		..		..
Senegal	..	..	..	..	23	2003	5.3	3.9	2003	1.3		..
Serbia	..	..	..	..	26	2003	46.0 ^d	32.2 ^d	2003	12.4 ^d		..
Sierra Leone	..	..	..	..	..	2004	4.6	3.6		..		..
Singapore	..	..	4	6	..	1995	73.0	56.0	1996	1.4		..
Slovak Republic	..	..	31	29	..	2003	78.5	55.3	2003	8.5	2002	60.2
Slovenia	..	..	11	12	..	1995	86.0	68.7	2003	10.1		..
Somalia	..	..	..	..	..		..	..		..		..
South Africa	16	28	56	65	..		..	..		..		..
Spain	..	..	17	24	..	2005	91.0	63.2	2003	9.2	2002	88.3
Sri Lanka	..	..	20 ^b	37 ^b	..	2004	35.6	22.2	1996	2.4		..
Sudan	..	..	..	..	19	1995	12.1	12.0		..		..
Swaziland	..	..	..	..	..		..	..		..		..
Sweden	..	..	23	22	..	2005	91.0	72.3	2003	12.7	2002	68.2
Switzerland	..	..	9	9	..	2005	100.0	79.1	2003	12.1	2002	67.3
Syrian Arab Republic	..	..	..	..	..	2004	17.4	11.4	2004	1.3		..
Tajikistan	..	..	..	..	..		..	..	1996	3.0		..
Tanzania	..	..	..	..	25	1996	2.0	2.0		..		..
Thailand	..	..	5	5	30	2003	22.5	18.0		..		..
Timor-Leste	..	..	..	..	..		..	..		..		..
Togo	..	..	..	..	..	1997	15.9	15.0	1997	0.6		..
Trinidad and Tobago	..	..	..	..	..	2004	55.6	..	1996	0.6		..
Tunisia	..	..	31	29	..	2004	45.3	25.4	2003	4.3	2002	72.7
Turkey	10 ^b	6 ^b	19	19	..	2002	45.0	24.3	2002	7.1	2002	103.3
Turkmenistan	..	..	..	..	27		..	..	1996	2.3		..
Uganda	..	..	..	..	30	2004	10.7	9.3	2003	0.3		..
Ukraine	3 ^b	3 ^b	15	14	..	2005	76.0	52.3	2005	15.4		..
United Arab Emirates	..	..	..	..	..		..	..		..		..
United Kingdom	..	..	13	10	..	2005	92.7	71.4	2003	10.9	2002	47.6
United States	..	..	12 ^b	10 ^b	..	2005	92.5	72.5	2003	7.5	2002	51.0
Uruguay	..	..	25	35	..	2004	55.0	44.3	1996	15.0	2002	125.4
Uzbekistan	..	..	..	..	..		..	..	1995	5.3		..
Venezuela, RB	..	..	24	35	..	2004	31.8	23.8	2001	2.7		..
Vietnam	..	..	4	5	27	2005	13.2	10.8	1998	1.6		..
West Bank and Gaza	..	..	39	45	..	2000	18.8	7.8	2001	0.8		..
Yemen, Rep.	..	..	..	..	..	2005	10.0	5.5	1994	0.1	2002	106.3
Zambia	..	..	..	..	23	2000	5.9	4.9	1993	0.1		..
Zimbabwe	..	..	..	..	38	1995	12.0	10.0	2002	2.3		..
World			.. w	.. w								
Low income			..	..						
Middle income			..	..						
Lower middle income			..	..						
Upper middle income			21	26								
Low & middle income			..	..						
East Asia & Pacific			..	..						
Europe & Central Asia			..	..						
Latin America & Carib.			14	20								
Middle East & N. Africa			..	..						
South Asia			11	12								
Sub-Saharan Africa			..	..						
High income			14	13								
Euro area			18	20								

a. Data are for the most recent year available. b. Limited coverage. c. Data are for 2006. d. Includes Montenegro.

About the data

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

Enhancing security for poor people means reducing their vulnerability to such risks as ill health, providing them the means to manage risk themselves, and strengthening market or public institutions for managing risk. Tools include microfinance programs, public provision of education and basic health care, and old age assistance (see tables 2.10 and 2.15).

Poor households face many risks, and vulnerability is thus multidimensional. The indicators in the table focus on individual risks—informal sector employment, youth unemployment, female-headed households, income insecurity in old age—and the extent to which publicly provided services may be capable of mitigating some of these risks. Poor people face labor market risks, often having to take up precarious, low-quality jobs in the informal sector and to increase their household's labor market participation by sending their children to work (see table 2.6). Income security is a prime concern for the elderly.

Data on informal sector employment are from a variety of sources, including labor force and special informal sector surveys, household surveys, surveys of household industries or economic activities, surveys of small enterprises and microenterprises, and official estimates. In most countries data on the informal economy are collected on an ad hoc basis or less frequently than annually. The international comparability of the data is affected by differences among countries in definitions and coverage and in treatment of domestic workers. The data in the table are based on national definitions of informal sector and urban areas established by countries, and therefore data may not be comparable across countries. For details on these definitions, consult the original source.

Youth unemployment is an important policy issue for many economies. Experiencing unemployment may permanently impair a young person's productive potential and future employment opportunities. The table presents unemployment among youth ages 15–24, but the lower age limit for young people in a country could be determined by the minimum age for leaving school, so age groups could differ across countries. Also, since this age group is

likely to include school leavers, the level of youth unemployment varies considerably over the year as a result of different school opening and closing dates. The youth unemployment rate shares similar limitations on comparability as the general unemployment rate. For further information, see *About the data* for table 2.5 and the original source.

The definition of female-headed household differs greatly across countries, making cross-country comparison difficult. In some cases it is assumed that a woman cannot be the head of any household with an adult male, because of sex-biased stereotype. Caution should be exercised in interpreting the data.

Pension scheme coverage may be broad or even universal where eligibility is determined by citizenship, residency, or income status. In contribution-related schemes, however, eligibility is usually restricted to individuals who have contributed for a minimum number of years. Definitional issues—relating to the labor force, for example—may arise in comparing coverage by contribution-related schemes over time and across countries (for country-specific information, see Palacios and Pallares-Miralles 2000). The share of the labor force covered by a pension scheme may be overstated in countries that do not try to count informal sector workers as part of the labor force.

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

The data on public pension spending cover non-contributory pensions or social assistance targeted to the elderly and disabled and spending by social insurance schemes for which contributions had previously been made. A country's pattern of spending is correlated with its demographic structure—spending increases as the population ages.

Definitions

• **Urban informal sector employment** is all people who, during a given reference period, were employed in at least one informal enterprise, irrespective of their status in employment and whether it was their main or secondary job. • **Youth unemployment** is the share of the labor force ages 15–24 without work but available for and seeking employment. • **Female-headed households** are the percentage of households with a female head. • **Pension contributors** are the share of the labor force or working-age population (here defined as ages 15–64) covered by a pension scheme. • **Public expenditure on pensions** is all government expenditures on cash transfers to the elderly, the disabled, and survivors and the administrative costs of these programs. • **Average pension** is estimated by dividing total pension expenditure by the number of pensioners.

Data sources

Data on urban informal sector employment and youth unemployment are from the ILO database Key Indicators of the Labour Market, 5th edition. Data on female-headed household are from Demographic and Health Surveys by Macro International. Data on pension contributors and pension spending are from the World Bank Pensions Database (available June 2008).



	Public expenditure per student ^a						Public expenditure on education		Trained teachers in primary education	Primary school pupil-teacher ratio
	Primary		% of GDP per capita		Tertiary		% of GDP	% of total government expenditure	% of total	pupils per teacher
	1991	2006 ^b	1999	2006 ^b	1999	2006 ^b				
Afghanistan	..	..	..	..	..	..	..	..	36.5	83
Albania	..	..	..	..	..	..	..	..	..	21
Algeria	26.5	..	..	..	..	..	..	..	99.3	24
Angola	..	..	..	..	..	65.5	2.4	..	..	..
Argentina	..	11.3	16.4	15.7	17.7	11.8	3.8	13.1	..	17
Armenia	..	..	12.4	..	29.1	..	..	..	77.5	21
Australia	..	15.9	14.5	14.5	25.7	22.5	4.6	..	..	..
Austria	18.2	22.5	29.9	27.2	51.6	48.5	5.4	10.8	..	12
Azerbaijan	..	5.5	17.0	8.5	19.1	9.4	2.1	17.4	100.0	13
Bangladesh	..	7.6	12.4	14.6	46.3	49.4	2.5	14.2	48.3	51
Belarus	..	14.3	..	27.0	..	29.0	6.1	12.9	99.6	16
Belgium	15.8	20.0	23.7	33.5	38.3	35.1	6.0	12.2	..	11
Benin	..	11.5	26.1	..	202.9	..	4.4	17.1	72.2	47
Bolivia	..	..	11.7	..	44.1	..	..	..	..	24
Bosnia and Herzegovina	..	..	..	..	..	..	..	..	..	..
Botswana	..	15.7	..	40.2	..	438.4	8.7 ^c	21.0 ^c	96.7	25
Brazil	..	12.8	9.5	11.5	57.0	32.6	4.0	..	..	21
Bulgaria	..	11.9	18.8	10.8	17.9	17.8	2.5	..	..	16
Burkina Faso	..	27.4	..	20.5	..	208.1	4.2	15.4	86.9	46
Burundi	13.4	19.1	..	74.5	1,051.9	348.8	5.1	17.7	87.5	54
Cambodia	..	5.6	11.4	..	43.8	..	1.7	..	98.3	50
Cameroon	..	6.3	16.5	22.8	63.0	94.1	3.3	16.8	61.8	44
Canada	..	..	..	..	47.9	..	..	..	..	..
Central African Republic	11.9	10.5	..	..	..	291.3	1.4	..	49.7	..
Chad	8.0	6.8	27.5	28.0	..	333.9	1.9	10.1	26.8	63
Chile	..	11.9	14.8	13.1	19.4	11.6	3.4	18.5	..	26
China	..	..	11.5	..	90.1	..	..	..	..	18
Hong Kong, China	..	14.1	17.7	18.2	..	58.3	3.9	23.9	94.8	18
Colombia	..	19.2	16.9	18.0	39.6	23.6	4.7	11.1	..	28
Congo, Dem. Rep.	..	..	..	..	..	..	..	..	..	..
Congo, Rep.	..	3.4	..	..	404.9	..	1.9	8.1	89.0	55
Costa Rica	7.8	17.0	23.2	17.1	55.0	35.9	4.7	29.8	88.0	20
Côte d'Ivoire	..	..	54.5	..	212.8	..	..	..	..	46
Croatia	..	23.7	..	22.5	41.5	27.9	4.4	9.1	100.0	15
Cuba	21.6	33.8	41.3	43.0	86.4	34.5	9.1	14.2	100.0	10
Czech Republic	..	12.8	21.7	23.3	33.7	30.4	4.4	10.0	..	16
Denmark	..	24.8	38.1	35.3	65.9	62.5	8.4	15.3	..	..
Dominican Republic	..	8.2	..	5.9	..	..	3.6	16.8	88.3	23
Ecuador	..	..	9.7	..	..	..	..	..	71.1	23
Egypt, Arab Rep.	..	..	..	..	..	..	..	..	..	26
El Salvador	..	10.0	7.9	9.3	9.4	16.6	3.1	20.0	94.0	40
Eritrea	..	9.3	37.3	9.3	429.4	1,082.5	5.3	..	87.5	47
Estonia	..	19.2	27.9	25.5	32.6	18.2	5.1	14.9	..	..
Ethiopia	22.1	14.1	..	13.7	..	747.7	6.0	17.5	..	59
Finland	21.7	18.8	26.2	32.9	40.9	36.7	6.5	12.8	..	16
France	11.8	17.8	28.6	29.0	29.7	34.0	5.8	10.9	..	19
Gabon	..	..	..	..	..	..	..	..	..	36
Gambia, The	13.2	7.4	..	9.1	..	238.0	2.0	..	76.3	35
Georgia	..	..	..	..	..	..	3.1	9.3	..	15
Germany	..	16.3	20.5	21.7	..	..	4.6	9.8	..	14
Ghana	..	17.8	..	28.0	..	209.4	5.4	..	53.0 ^c	32 ^c
Greece	7.5	16.5	17.0	22.6	28.7	27.1	4.2	8.5	..	11
Guatemala	..	9.2	4.2	4.1	..	34.9	2.6	..	..	31
Guinea	..	..	..	..	..	188.8	1.6	..	67.7	44
Guinea-Bissau	..	..	..	..	..	..	..	..	..	..
Haiti	9.1	..	..	..	..	..	..	..	..	..

Education inputs

2.10 PEOPLE

	Public expenditure per student ^a						Public expenditure on education		Trained teachers in primary education	Primary school pupil-teacher ratio
	Primary		% of GDP per capita		Tertiary		% of GDP	% of total government expenditure	% of total	pupils per teacher
	1991	2006 ^b	1999	2006 ^b	1999	2006 ^b				
Honduras	..	..	..	..	..	..	..	..	87.2	28
Hungary	21.2	23.3	19.1	23.5	34.2	24.3	5.4	11.1	..	10
India	..	9.2	24.9	27.0	90.8	61.0	3.8	..	..	40
Indonesia	..	..	7.3	..	21.3	..	..	..	..	20
Iran, Islamic Rep.	..	13.6	9.8	11.1	34.6	30.0	5.1	18.6	70.4	19
Iraq	..	..	..	..	..	..	..	..	100.0	17
Ireland	11.5	14.3	16.8	21.1	28.5	23.9	4.7	14.0	..	18
Israel	12.6	22.3	23.3	22.7	32.9	25.6	6.9	..	..	13
Italy	14.9	24.9	27.7	27.2	27.6	22.7	4.6	9.6	..	10
Jamaica	9.9	14.6	23.6	21.5	79.0	..	5.3	8.8	..	28
Japan	..	22.7	21.0	22.7	15.2	20.8	3.7	9.8	..	19
Jordan	..	14.6	15.8	17.6	..	..	..	..	..	20
Kazakhstan	..	9.8	..	7.7	..	5.6	3.2	15.8	..	17 ^c
Kenya	12.9	21.0	14.8	20.7	204.8	284.5	6.9	17.9	98.8	40
Korea, Dem. Rep.	..	..	..	..	..	..	..	..	..	..
Korea, Rep.	11.8	19.2	15.7	25.0	8.4	8.9	4.6	16.5	..	28
Kuwait	35.4	9.6	..	13.9	..	80.5	3.8	12.9	100.0	10
Kyrgyz Republic	..	..	11.9	..	27.7	21.8	4.9	..	61.3	24
Lao PDR	..	9.1	4.3	4.7	66.5	25.2	3.0	14.0	85.8	31
Latvia	..	20.7	23.7	24.0	27.9	12.4	5.1	14.2	..	12
Lebanon	..	8.3	..	8.8	14.2	17.2	2.7	11.0	12.6	14
Lesotho	..	22.2	69.0	44.2	1,247.8	1,012.0	13.0	29.8	66.1	40
Liberia	..	..	..	..	..	..	..	..	..	19
Libya	..	..	..	..	23.8	..	..	..	..	..
Lithuania	..	15.0	..	21.2	34.2	20.0	5.2	15.6	..	14
Macedonia, FYR	..	..	..	..	..	..	..	..	..	19
Madagascar	..	8.1	39.9	15.3	180.9	187.8	3.1	25.3	36.5	48
Malawi	7.2	..	..	..	..	..	..	..	..	..
Malaysia	10.1	14.5	22.3	21.1	83.3	71.0	6.2	25.2	..	17
Mali	..	24.5	61.6	36.4	265.0	..	4.5	16.8	..	56
Mauritania	..	10.0	36.4	25.1	80.1	40.6	2.9	10.1	100.0	41
Mauritius	10.1	10.3	15.3	17.4	40.4	29.8	3.9	12.7	100.0	22
Mexico	4.8	14.9	14.2	15.7	47.8	41.3	5.4	25.6	..	28
Moldova	..	..	..	..	..	43.8	7.6	20.2	..	17
Mongolia	..	14.0	..	13.0	..	22.4	5.2	..	..	33
Morocco	15.4	22.9	50.1	39.7	107.0	84.3	6.8	27.2	100.0	27
Mozambique	..	15.0	..	94.8	..	361.2	5.0	19.5	64.6	67
Myanmar	..	..	7.0	..	28.6	..	..	..	98.3	30
Namibia	..	20.0	36.4	19.9	157.6	..	..	..	92.4	31
Nepal	..	..	13.1	..	141.7	..	..	..	30.5	40
Netherlands	12.1	17.9	20.9	24.0	42.3	40.6	5.2	11.2	..	..
New Zealand	17.2	19.3	24.3	22.5	41.6	25.2	6.5	..	..	16
Nicaragua	..	9.2	..	4.2	..	..	..	..	73.6	33
Niger	..	32.4	64.4	49.1	..	384.9	3.6	15.0	91.9	40
Nigeria	..	..	..	..	..	..	..	..	49.8	37
Norway	32.7	20.3	27.0	30.5	46.1	52.2	7.6	16.6	..	11
Oman	10.5	15.4	22.2	12.9	..	14.2	4.7	31.1	100.0	14
Pakistan	..	..	..	..	..	..	2.6	12.2	84.6	39
Panama	11.3	9.7	19.1	12.3	33.6	26.5	3.8	8.9	91.1	25
Papua New Guinea	..	..	..	..	..	..	..	..	..	36
Paraguay	..	..	18.4	..	58.9	..	..	..	..	28
Peru	..	6.6	10.8	8.9	21.2	9.0	2.7	17.0	..	23
Philippines	..	9.2	10.7	9.0	15.0	12.4	2.7	16.4	..	35
Poland	12.9	22.8	16.5	21.6	21.1	21.5	5.4	12.7	..	12
Portugal	16.3	23.2	27.5	34.9	28.1	23.5	5.4	11.5	..	11
Puerto Rico	..	..	..	..	..	..	..	..	..	..



	Public expenditure per student ^a						Public expenditure on education		Trained teachers in primary education	Primary school pupil-teacher ratio
	Primary		% of GDP per capita Secondary		Tertiary		% of GDP 2006 ^b	% of total government expenditure 2006 ^b	% of total 2006 ^b	pupils per teacher 2006 ^b
	1991	2006 ^b	1999	2006 ^b	1999	2006 ^b				
Romania	..	9.9	16.0	14.7	32.6	22.1	3.3	8.6	..	17
Russian Federation	..	..	..	..	..	10.8	3.5	12.9	..	17
Rwanda	..	10.4	28.4	18.4	657.6	404.5	3.8	19.0 ^c	98.3	66
Saudi Arabia	..	..	..	..	..	..	6.8	27.6	..	15
Senegal	18.9	18.3	..	35.0	..	235.3	5.0	26.3	100.0	39
Serbia	..	..	..	..	..	..	..	..	..	..
Sierra Leone	..	..	..	..	..	..	3.8	..	50.1 ^c	44 ^c
Singapore	..	..	17.9	..	..	..	..	..	..	24
Slovak Republic	..	11.9	18.3	16.7	32.6	32.2	4.2	10.8	..	18
Slovenia	17.4	25.9	26.5	30.6	28.8	25.8	6.0	..	..	15
Somalia	..	..	..	..	..	..	..	..	..	..
South Africa	20.2	14.3	20.0	17.6	60.7	50.1	5.4	17.6	..	36
Spain	11.3	19.0	24.4	23.8	19.6	22.7	4.3	11.0	..	14
Sri Lanka	..	..	..	..	..	..	..	..	..	22
Sudan	..	..	..	..	..	..	..	..	58.7	34
Swaziland	6.7	14.2	26.1	38.8	388.4	320.6	7.0	..	90.8	33
Sweden	45.8	25.7	26.1	34.5	52.7	43.7	7.3	12.9	..	10
Switzerland	36.1	25.0	27.7	28.0	54.5	63.1	6.0	..	..	13
Syrian Arab Republic	..	..	22.1	..	..	..	..	..	..	..
Tajikistan	..	8.8	..	11.4	..	11.2	3.4	19.0	93.0	22
Tanzania	..	..	..	..	..	..	..	..	100.0 ^c	53 ^c
Thailand	11.6	14.1	15.7	15.5	35.5	25.0	4.2	25.0	..	18
Timor-Leste	..	..	..	..	..	..	..	..	..	34
Togo	..	..	30.9	..	317.9	..	..	..	36.8	38
Trinidad and Tobago	..	..	12.2	..	147.6	..	..	..	81.0	17
Tunisia	..	21.1	27.1	24.4	89.4	56.4	7.3	20.8	..	20
Turkey	10.7	14.1	14.3	17.8	45.5	40.7	4.0	..	..	..
Turkmenistan	..	..	..	..	..	..	..	..	..	..
Uganda	..	11.3	..	34.0	..	188.9	5.2	18.3	84.8	49
Ukraine	..	16.0	11.2	24.5	36.5	31.5	6.3	19.3	99.6	17
United Arab Emirates	..	7.1	11.5	9.2	41.5	..	1.3	27.4	60.0	15
United Kingdom	15.0	18.0	24.4	27.0	26.2	27.6	5.4	11.7	..	17
United States	..	22.0	22.5	24.7	27.0	23.5	5.6	14.4	..	14
Uruguay	7.8	7.6	11.3	8.7	19.1	20.1	2.6	14.1	..	21
Uzbekistan	..	..	..	..	..	..	..	..	100.0 ^c	18 ^c
Venezuela, RB	..	8.0	..	8.3	..	34.3	3.7	..	83.1	17
Vietnam	..	..	..	..	..	..	..	..	95.6	21
West Bank and Gaza	..	..	..	..	..	..	..	..	100.0	32
Yemen, Rep.	..	..	..	..	..	..	..	..	..	..
Zambia	..	5.4	19.9	8.2	168.2	..	2.0	14.8	..	51
Zimbabwe	20.7	..	19.5	..	195.2	..	..	..	..	..
World	.. m	14.5 m	.. m	21.1 m	.. m	.. m	4.6 m	.. m	..	30 w
Low income	..	..	..	..	..	..	..	..	..	41
Middle income	..	13.0	16.6	17.1	37.2	25.9	4.3	..	..	..
Lower middle income	..	..	..	..	..	..	..	..	..	19
Upper middle income	..	13.2	17.1	16.7	31.8	23.3	4.1	14.1	..	21
Low & middle income	..	..	..	..	..	..	4.1	..	..	33
East Asia & Pacific	..	..	7.0	..	32.2	..	3.5	..	..	19
Europe & Central Asia	..	13.6	..	18.2	..	21.8	4.2	13.1	..	16
Latin America & Carib.	..	11.4	14.8	14.1	37.1	..	4.0	..	..	24
Middle East & N. Africa	..	..	..	..	..	..	..	..	..	23
South Asia	..	..	13.1	..	90.8	..	2.2	..	..	41
Sub-Saharan Africa	..	11.8	..	..	..	..	4.2	..	..	47
High income	15.8	19.2	24.3	24.8	32.8	29.0	5.4	12.5	..	16
Euro area	14.9	18.9	25.3	27.2	28.7	27.1	5.3	11.0	..	14

a. Because of the change from International Standard Classification of Education 1976 (ISCED76) to ISCED97 in 1998, data for 1991 are not fully comparable with data from 1999 onward. b. Provisional data. c. Data are for 2007.

About the data

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

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

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

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

The general quality of the data on education finance is poor. This is partly because ministries of education, from which the UNESCO Institute for Statistics collects data, are not necessarily the best source for education finance data. Other agencies, particularly ministries of finance, need to be consulted, but coordination is not easy. It is also difficult to track actual spending from the central government to local institutions. And private spending adds to the complexity of collecting accurate data on public spending.

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

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

In 1998 UNESCO introduced the new International Standard Classification of Education 1997. Thus the time-series data for the years through 1997 are not comparable with those for 1999 onward. Any time-series analysis should therefore be undertaken with extreme caution.

In 2006 the UNESCO Institute for Statistics also changed its convention for citing the reference year of education data and indicators to the calendar year in which the academic or financial year ends. Data that used to be listed for 2005/06, for example, are now listed for 2006. This change was implemented to present the most recent data available and to align the data reporting with that of other international organizations (in particular the Organisation for Economic Co-operation and Development and Eurostat).

Definitions

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

Data sources

Data on education inputs are from the UNESCO Institute for Statistics, which compiles international data on education in cooperation with national commissions and national statistical services.



2.11

Participation in education

	Gross enrollment ratio				Net enrollment ratio ^a				Total net enrollment ratio, primary		Children out of school	
	% of relevant age group				% of relevant age group				% of primary-school-age children		thousand primary-school-age children	
	Preprimary	Primary	Secondary	Tertiary	Primary	Secondary	Male	Female	Male	Female		
	2006 ^b	2006 ^b	2006 ^b	2006 ^b	1991	2006 ^b	1991	2006 ^b	2006 ^b	2006 ^b	2006 ^b	2006 ^b
Afghanistan	..	..	..	.	..	..	..	..	..	..	..	..
Albania	49	105	77	19	95	94	..	73	94	93	8	8
Algeria	14	110	83	22	89	95	53	66	100	98	26	62
Angola	..	..	..	3	50	..	..	..	..	..	..	..
Argentina	64	113	86	65	..	99	..	79	..	..	..	..
Armenia	36	98	90	32	..	82	..	86	84	88	7	4
Australia	104	104	149	73	99	96	80	86	96	97	35	27
Austria	88	102	102	49	88	97	..	..	96	98	8	4
Azerbaijan	32	96	83	15	89	85	..	78	87	84	38	43
Bangladesh	10	103	44	6	..	89	..	41	91	94	842	529
Belarus	103	96	96	66	85	89	..	88	91	88	18	21
Belgium	120	102	109	62	96	98	86	97	98	98	9	7
Benin	5	96	32	..	41	78	..	..	89	71	79	198
Bolivia	50	109	82	41	..	95	..	71	96	97	30	22
Bosnia and Herzegovina	..	..	..	..	..	..	..	..	..	..	..	..
Botswana	..	108	75	5	88	86	39	61	88	89	19	17
Brazil	63	140	106	24	85	95	17	78	95	97	336	224
Bulgaria	80	102	105	44	85	93	63	89	95	94	8	8
Burkina Faso	2	60	15	2	27	47	..	12	49	39	562	653
Burundi	2	103	14	2	53	75	..	..	61	56	154	170
Cambodia	11	122	38	5	72	90	..	24	97	96	98	114
Cameroon	22	106	41	7	69	..	..	..	..	..	..	..
Canada	68	100	117	62	98	..	89	..	..	..	0	..
Central African Republic	2	61	..	1	52	45	..	..	..	..	160	212
Chad	1	76	15	1	34	..	..	..	..	..	..	..
Chile	55	104	91	48	89	..	55	..	95	94	44	53
China	39	111	76	22	98	..	..	..	..	..	..	..
Hong Kong, China	..	..	85	33	..	..	..	78	97	93	..	..
Colombia	40	116	82	31	68	88	34	65	92	92	193	174
Congo, Dem. Rep.	..	..	..	..	54	..	..	..	..	..	..	..
Congo, Rep.	9	108	43	..	82	55	..	..	49	60	116	133
Costa Rica	70	111	86	25	87	..	38	..	..	..	..	..
Côte d'Ivoire	3	71	..	..	45	..	..	..	..	..	..	..
Croatia	53	93	89	46	79	..	63	..	..	..	..	..
Cuba	113	101	94	88	94	97	73	87	97	97	15	12
Czech Republic	114	102	96	48	87	93	..	..	91	94	22	15
Denmark	94	99	124	81	98	96	87	91	96	97	9	6
Dominican Republic	32	98	69	35	56	77	..	52	78	81	139	116
Ecuador	80	117	65	..	98	97	..	55	99	100	12	0
Egypt, Arab Rep.	17	102	86	35	86	94	..	83	100	94	10	256
El Salvador	51	114	64	21	..	94	..	54	96	97	21	18
Eritrea	14	62	31	1	15	47	..	25	53	45	145	163
Estonia	116	100	100	66	100	95	..	91	97	97	1	1
Ethiopia	2	83	27	2	22	65	..	24	70	65	2,047	2,426
Finland	59	100	111	92	98	99	93	95	99	99	3	2
France	117	110	114	56	100	99	..	99	99	99	19	9
Gabon	..	152	..	..	94	..	..	..	..	..	..	..
Gambia, The	17	74	45	1	46	62	..	38	..	..	49	41
Georgia	55	96	85	38	97	89	..	79	87	88	19	14
Germany	97	101	100	..	84	..	..	..	..	..	..	..
Ghana	55	98 ^c	47 ^c	5	54	66 ^c	..	38	64	65	572 ^c	569 ^c
Greece	68	102	102	90	95	100	83	91	100	100	0	1
Guatemala	29	114	53	9	..	94	..	38	97	93	21	62
Guinea	7	88	35	3	27	72	..	28	76	64	159	230
Guinea-Bissau	..	..	..	..	38	..	..	..	..	..	..	..
Haiti	..	..	..	..	21	..	..	..	..	..	..	..

Participation in education

2.11

PEOPLE

	Gross enrollment ratio				Net enrollment ratio ^a				Total net enrollment ratio, primary		Children out of school	
	% of relevant age group				% of relevant age group				% of primary-school-age children		thousand primary-school-age children	
	Preprimary	Primary	Secondary	Tertiary	Primary	Secondary			Male	Female	Male	Female
	2006 ^b	2006 ^b	2006 ^b	2006 ^b	1991	2006 ^b	1991	2006 ^b	2006 ^b	2006 ^b	2006 ^b	2006 ^b
Honduras	38	118	76	17	88	96	21	..	96	97	21	11
Hungary	84	98	96	65	91	89	75	90	96	96	10	9
India	39	115	54	11	..	88	..	..	96	92	2,780	4,713
Indonesia	33	115	62	17	96	95	39	57	99	96	142	544
Iran, Islamic Rep.	53	118	81	27	92	94	..	77	91	100	305	0
Iraq	..	..	..	..	94	..	..	..	..	..	..	..
Ireland	..	104	112	58	90	95	80	87	94	95	13	11
Israel	93	110	93	58	92	97	..	89	97	98	11	7
Italy	104	102	99	65	100	99	..	92	100	99	4	12
Jamaica	92	95	87	..	96	90	64	78	91	91	16	15
Japan	85	100	102	55	100	100	97	100	100	100	12	0
Jordan	32	97	89	40	94	91	..	79	95	96	23	17
Kazakhstan	36	105 ^c	93 ^c	51 ^c	88	90 ^c	..	86 ^c	98	99	6 ^c	3 ^c
Kenya	50	108	48	3	..	76	..	42	76	77	670	649
Korea, Dem. Rep.	..	..	..	..	..	..	..	..	..	..	..	..
Korea, Rep.	96	105	96	91	100	98	86	94	..	..	..	..
Kuwait	75	96	89	18	49	83	..	..	89	88	12	12
Kyrgyz Republic	14	97	86	43	92	86	..	80	94	93	14	14
Lao PDR	11	116	43	9	62	84	..	35	85	80	54	71
Latvia	87	95	99	75	94	90	..	..	90	94	4	3
Lebanon	64	94	81	48	66	82	..	73	83	83	40	40
Lesotho	18	114	37	4	72	72	15	24	73	78	55	48
Liberia	100	91	..	..	..	39	..	..	..	..	177	179
Libya	9	110	111	..	93	..	..	..	..	..	..	..
Lithuania	65	94	100	76	..	88	..	94	90	91	8	7
Macedonia, FYR	33	98	84	30	94	92	..	81	97	97	2	1
Madagascar	8	139	24	3	64	96	..	..	93	93	54	52
Malawi	..	119	29	0 ^d	49	91	..	24	91	96	136	66
Malaysia	122	100	72	31	..	99	..	72	99	99	11	15
Mali	3	80	28	3	25	61	6	..	67	52	328	466
Mauritania	2	102	22	4	36	79	..	16	75	79	52	40
Mauritius	101	102	86	17	91	95	..	79	94	96	3	2
Mexico	96	112	85	25	98	98	45	69	100	99	15	52
Moldova	68	91	82	36	88	83	..	75	85	85	14	13
Mongolia	54	101	89	47	90	91	..	82	95	99	6	1
Morocco	59	106	52	12	56	88	..	..	90	85	168	261
Mozambique	..	105	16	1	42	69	..	4	80	73	568	662
Myanmar	6	114	49	..	99	100	..	46	98	100	16	0
Namibia	31	107	57	6	..	76	..	35	74	79	49	40
Nepal	27	126	43	6	..	79	..	..	85	75	267	436
Netherlands	90	107	118	59	95	98	84	87	99	97	8	15
New Zealand	93	102	121	82	98	99	85	..	99	99	1	1
Nicaragua	52	116	66	..	70	90	..	43	93	94	38	34
Niger	2	51	11	1	24	43	6	9	49	36	565	680
Nigeria	14	96	32	10	55	63	..	26	70	60	3,550	4,547
Norway	88	98	113	78	100	98	88	96	98	98	5	4
Oman	8	82	89	25	69	74	..	77	76	77	44	38
Pakistan	52	84	30	5	33	66	..	30	76	58	2,705	4,116
Panama	67	112	70	45	..	98	..	64	99	99	1	2
Papua New Guinea	..	55	..	..	..	..	..	..	..	..	..	..
Paraguay	34	112	67	25	94	94	26	..	94	95	24	21
Peru	66	116	92	34	..	96	..	70	98	100	30	2
Philippines	40	111	85	28	96	93	..	60	92	95	463	315
Poland	55	98	100	64	97	97	76	93	97	97	50	38
Portugal	79	116	97	55	98	98	..	82	100	99	1	3
Puerto Rico	..	..	..	..	..	..	..	..	..	..	..	..



2.11

Participation in education

	Gross enrollment ratio				Net enrollment ratio ^a				Total net enrollment ratio, primary		Children out of school	
	% of relevant age group				% of relevant age group				% of primary-school-age children		thousand primary-school-age children	
	Preprimary	Primary	Secondary	Tertiary	Primary	Secondary			Male	Female	Male	Female
	2006 ^b	2006 ^b	2006 ^b	2006 ^b	1991	2006 ^b	1991	2006 ^b	2006 ^b	2006 ^b	2006 ^b	2006 ^b
Romania	74	105	86	45	81	91	..	81	95	95	24	24
Russian Federation	88	129	91	70	98	92	..	..	92	93	170	140
Rwanda	..	140	13	3	67	91	8	..	72	75	78	45
Saudi Arabia	12	108	96	27	87	93	39	60	87	87	110	108
Senegal	9	80	22	6	45	71	..	17	75	71	250	262
Serbia	..	..	..	..	..	..	..	..	..	..	..	..
Sierra Leone	..	145 ^c	32 ^c	..	43	..	..	23 ^c	..	..	..	..
Singapore	..	78	63	..	..	..	..	..	..	..	..	..
Slovak Republic	95	99	96	41	..	92	..	..	92	92	10	9
Slovenia	78	98	96	79	96	96	..	91	97	97	1	1
Somalia	..	..	..	..	9	19	..	..	..	..	..	..
South Africa	38	106	95	15	90	88	45	..	93	94	262	207
Spain	119	105	118	66	100	100	..	94	100	99	3	6
Sri Lanka	..	108	87	..	..	97	..	..	..	..	..	..
Sudan	24	66	34	..	40	54	..	19	..	..	..	..
Swaziland	17	106	47	4	75	78	30	32	76	77	23	22
Sweden	93	98	103	82	100	97	85	99	97	97	10	10
Switzerland	96	98	93	45	84	90	80	82	94	94	16	14
Syrian Arab Republic	11	126	70	..	91	..	43	63	..	..	..	..
Tajikistan	9	100	83	19	77	97	..	80	99	95	2	17
Tanzania	28	112 ^c	..	1	51	100 ^c	..	..	99	97	0 ^c	10 ^c
Thailand	92	108	78	46	88	94	..	71	100	100	0	1
Timor-Leste	10	99	53	..	..	68	..	..	70	67	28	29
Togo	2	102	40	..	64	80	15	..	87	74	58	120
Trinidad and Tobago	85	95	76	11	89	85	..	65	89	90	8	7
Tunisia	..	110	83	30	93	97	..	..	98	99	12	6
Turkey	10	94	74	31	89	90	42	66	92	88	329	499
Turkmenistan	..	..	..	..	..	..	..	..	..	..	..	..
Uganda	3	117	18	3	..	..	..	16	..	..	..	..
Ukraine	90	102	93	73	81	90	..	84	91	91	81	79
United Arab Emirates	78	104	90	..	99	88	60	79	93	92	7	6
United Kingdom	71	107	105	59	98	99	80	95	100	100	3	0 ^d
United States	61	98	94	82	97	92	84	88	93	94	954	750
Uruguay	67	113	107	42	91	94	..	..	97	98	5	4
Uzbekistan	27	95 ^c	102 ^c	10 ^c	78	..	..	..	..	..	..	..
Venezuela, RB	60	104	78	52	87	91	18	67	91	91	123	103
Vietnam	60	90	76	16	90	84	..	69	..	..	..	..
West Bank and Gaza	30	83	94	41	..	76	..	90	80	80	48	45
Yemen, Rep.	1	87	46	9	50	75	..	37	86	62	275	632
Zambia	..	117	36	..	..	92	..	28	92	94	96	54
Zimbabwe	..	..	..	..	..	..	..	..	..	..	..	..
World	40 w	106 w	65 w	24 w	84 w	86 w	.. w	58 w	90 w	87 w		
Low income	34	102	45	9	..	78	..	39	84	78		
Middle income	..	112	78	27	93	93	..	70	95	94		
Lower middle income	41	112	73	23	93	93	..	68	94	94		
Upper middle income	63	113	92	40	91	94	..	76	96	95		
Low & middle income	34	107	61	19	82	85	..	54	89	86		
East Asia & Pacific	41	111	72	20	96	93	..	68	94	94		
Europe & Central Asia	54	103	89	51	90	91	..	81	93	91		
Latin America & Carib.	62	119	89	30	85	94	31	69	96	96		
Middle East & N. Africa	23	104	74	24	82	91	..	67	94	90		
South Asia	41	110	49	9	..	85	..	..	92	87		
Sub-Saharan Africa	16	93	31	5	49	68	..	25	72	66		
High income	78	101	101	67	95	95	85	91	96	96		
Euro area	103	..	..	..	95	..	..	..	..	..

a. Because of the change from International Standard Classification of Education 1976 (ISCED76) to ISCED97 in 1998, data for 1991 are not fully comparable with data from 1999 onward. b. Provisional data. c. Data are for 2007. d. Less than 0.5.

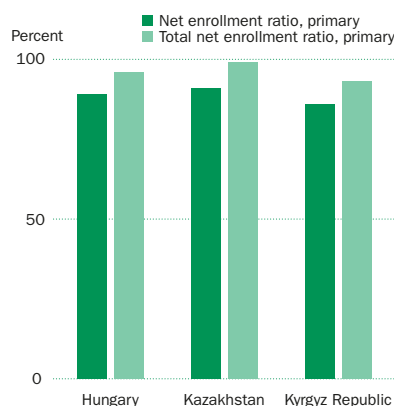
About the data

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

Enrollment ratios, while a useful measure of participation in education, have limitations. They are based on data from annual school surveys, which are typically conducted at the beginning of the school year. They do not reflect actual attendance or drop-out rates during the year. And school administrators may exaggerate enrollments, especially if there is a financial incentive to do so.

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

In some countries close to 10 percent of primary-school-age children are enrolled in secondary school 2.11a



The difference between net enrollment and total primary net enrollment is small in most countries. But it is larger in some countries because many children start primary school earlier than the official entrance age and are younger than the official age when they reach secondary school.

Source: United Nations Educational, Scientific, and Cultural Organization Institute for Statistics.

Definitions

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

Overage or underage enrollments are frequent, particularly when, for cultural or economic reasons, parents prefer children to start school at other than the official age. Age at enrollment may be inaccurately estimated or misstated, especially in communities where registration of births is not strictly enforced.

Other problems of cross-country comparison of enrollment data stem from errors in school-age population estimates. Age-sex structures drawn from censuses or vital registrations, the primary data sources on school-age population, commonly underenumerate (especially young children) to circumvent laws or regulations. Errors are also introduced when parents round children's ages. While census data are often adjusted for age bias, adjustments are rarely made for inadequate vital registration systems. Compounding these problems, pre- and postcensus estimates of school-age children are model interpolations or projections that may miss important demographic events (see discussion of demographic data in *About the data* for table 2.1).

Gross enrollment ratios indicate the capacity of each level of the education system, but a high ratio may reflect a substantial number of overage children enrolled in each grade because of repetition rather than a successful education system. The net enrollment ratio excludes overage and underage students to capture more accurately the system's coverage and internal efficiency but does not account for children who fall outside the official school age because of late or early entry rather than grade repetition. Differences between gross and net enrollment ratios show the incidence of overage and underage enrollments.

Total net primary enrollment was recently added as a Millennium Development Goal indicator. It captures the children of primary-school age who have progressed to secondary education, which the traditional net enrollment ratio excludes.

Children out of school are primary-school-age children not enrolled in primary or secondary education. The data are calculated by the UNESCO Institute for Statistics using administrative data. Children out of school include dropouts, children never enrolled, and children of primary age enrolled in preprimary education. Large numbers of children out of school create pressure to enroll children and provide classrooms, teachers, and educational materials, a task made difficult in many developing countries by limited education budgets. However, getting children into school is a high priority for countries and crucial for achieving the Millennium Development Goal of universal primary education.

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

Data sources

Data on gross and net enrollment ratios and out of school children are from the UNESCO Institute for Statistics.



2.12

Education efficiency

	Gross intake rate in grade 1		Cohort survival rate						Repeaters in primary school		Transition to secondary school	
			% of grade 1 students									
	% of relevant age group		Reaching grade 5 ^a		Reaching last grade of primary education		% of enrollment					
	Male 2006 ^b	Female 2006 ^b	Male 1991	Female 2005 ^b	Male 1991	Female 2005 ^b	Male 2005 ^b	Female 2005 ^b	Male 2006 ^b	Female 2006 ^b	Male 2005 ^b	Female 2005 ^b
Afghanistan	..	..	..	..	..	..	..	..	18	14	..	..
Albania	100	99	..	..	..	..	89	91	3	2	100	99
Algeria	99	97	95	95	94	96	90	92	14	9	74	79
Angola	..	..	..	..	..	..	..	..	..	..	..	..
Argentina	110	109	..	96	..	98	94	97	8	5	93	96
Armenia	102	106	..	..	..	..	100	99	0 ^c	0 ^c	100	99
Australia	106	105	98	..	99	..	..	..	..	..	..	..
Austria	102	100	..	..	..	..	97	100	1	1	..	..
Azerbaijan	99	97	..	..	..	..	100	94	0 ^c	0 ^c	100	98
Bangladesh	122	124	..	63	..	67	63	67	7	7	86	92
Belarus	102	100	..	..	..	..	99	100	0 ^c	0 ^c	99	100
Belgium	97	99	90	..	92	..	..	..	3	3	..	..
Benin	109	96	54	53	56	50	48	44	17	17	..	..
Bolivia	122	122	..	85	..	85	83	81	1	1	90	90
Bosnia and Herzegovina	..	..	..	..	..	..	..	..	..	..	..	..
Botswana	111	104	81	89	87	92	83	88	5	4	95	95
Brazil	106	97	..	..	..	..	..	..	20	20	..	..
Bulgaria	97	94	91	..	90	..	91	93	3	2	95	96
Burkina Faso	79	67	71	71	68	74	63	66	12	12	45	43
Burundi	164	164	65	66	58	68	57	61	29	28	37	31
Cambodia	135	127	..	61	..	64	54	57	14	11	83	80
Cameroon	111	97	..	..	..	..	..	..	28	23	43	47
Canada	97	95	95	..	98	..	..	..	..	..	..	..
Central African Republic	73	55	24	..	22	..	..	..	29	30	46	52
Chad	109	79	56	34	41	32	27	23	22	24	56	42
Chile	101	99	94	100	91	99	98	98	3	2	96	98
China	88	87	58	..	78	..	..	..	0 ^c	0 ^c	..	..
Hong Kong, China	..	..	..	99	..	100	99	100	1	1	100	100
Colombia	127	123	..	78	..	86	78	86	4	3	99	100
Congo, Dem. Rep.	..	..	58	..	50	..	..	..	..	..	..	..
Congo, Rep.	78	78	56	..	65	..	..	..	21	21	58	58
Costa Rica	108	108	83	93	85	95	89	92	8	6	100	97
Côte d'Ivoire	73	61	75	..	70	..	..	..	23	24	..	..
Croatia	..	..	..	..	..	..	..	..	0 ^c	1	100 ^d	100 ^d
Cuba	102	104	..	96	..	98	96	98	1	0 ^c	98	99
Czech Republic	102	103	..	98	..	99	98	99	1	1	99	100
Denmark	98	97	94	93	94	93	92	92	..	..	100	99
Dominican Republic	102	100	..	66	..	71	58	65	10	6	81	87
Ecuador	133	131	..	75	..	77	75	77	2	1	81	76
Egypt, Arab Rep.	106	102	..	98	..	99	98	99	3	2	72	82
El Salvador	121	116	56	70	60	74	65	70	9	6	91	92
Eritrea	53	45	..	77	..	69	77	69	15	15	86	79
Estonia	100	97	..	98	..	99	99	99	2	1	96	99
Ethiopia	125	113	16	57 ^d	23	59 ^d	62	63	6	5	91	91
Finland	98	98	100	99	100	100	99	100	1	0 ^c	100	100
France	..	..	69	..	95	..	..	..	..	..	..	..
Gabon	..	..	..	..	..	..	..	..	..	..	..	..
Gambia, The	65	71	..	..	..	..	..	..	6	6	..	..
Georgia	97	103	..	86	..	90	83	89	0 ^c	0 ^c	98	100
Germany	104	103	..	..	..	..	99	100	1	1	99	99
Ghana	105	110	81	..	79	..	..	..	6	6	..	..
Greece	100	100	100	98	100	100	98	100	1	0 ^c	99	100
Guatemala	125	122	..	70	..	68	65	62	13	11	92	90
Guinea	94	87	64	83	48	78	79	72	8	9	75	66
Guinea-Bissau	..	..	..	..	..	..	..	..	..	..	..	..
Haiti	..	..	..	..	..	..	..	..	..	..	..	..

Education efficiency

2.12 PEOPLE

	Gross intake rate in grade 1		Cohort survival rate						Repeaters in primary school		Transition to secondary school	
			% of grade 1 students									
	% of relevant age group		Reaching grade 5 ^a		Reaching last grade of primary education		% of enrollment					
	Male 2006 ^b	Female 2006 ^b	Male 1991	Female 2005 ^b	Male 1991	Female 2005 ^b	Male 2005 ^b	Female 2005 ^b	Male 2006 ^b	Female 2006 ^b	Male 2005 ^b	Female 2005 ^b
Honduras	139	134	..	80	..	87	77	85	8	6	68	74
Hungary	97	95	77	..	98	..	98	98	3	2	99	99
India	132	125	..	73	..	73	73	73	3	3	87	83
Indonesia	120	116	34	92	78	87	88	83	6	4	79	78
Iran, Islamic Rep.	112	150	91	..	89	..	..	..	3	1	93	83
Iraq	..	..	..	87	..	73	78	61	9	7	73	66
Ireland	99	99	99	100	100	100	..	..	1	1	..	..
Israel	96	99	..	100	..	100	100	100	2	1	74	73
Italy	104	102	..	100	..	100	100	100	0 ^c	0 ^c	100	99
Jamaica	94	92	..	..	..	..	..	..	3	2	100	97
Japan	98	99	100	..	100	..	..	..	..	..	..	..
Jordan	92	92	..	97	..	96	96	95	1	1	96	97
Kazakhstan	107	107	..	..	..	..	100 ^d	100 ^d	0 ^{c,e}	0 ^{c,e}	100 ^d	100 ^d
Kenya	112	108	75	81	78	85	74	71	6	6	..	..
Korea, Dem. Rep.	..	..	..	..	..	..	..	..	..	..	..	..
Korea, Rep.	105	106	99	99	100	99	99	99	0 ^c	0 ^c	99	99
Kuwait	96	93	..	95	..	97	95	97	2	2	95	100
Kyrgyz Republic	98	97	..	..	..	..	97	100	0 ^c	0 ^c	100	100
Lao PDR	129	120	..	62	..	62	62	62	19	17	79	75
Latvia	94	93	..	..	..	..	99	98	4	2	97	98
Lebanon	86	86	..	88	..	94	83	91	11	8	83	88
Lesotho	105	99	58	68	73	80	53	71	21	16	67	65
Liberia	109	106	..	..	..	..	..	..	6	6	..	..
Libya	..	..	..	..	..	..	..	..	..	..	..	..
Lithuania	94	93	..	..	..	..	98	98	1	0 ^c	98	99
Macedonia, FYR	99	99	..	..	..	..	98	99	0 ^c	0 ^c	100	99
Madagascar	181	176	22	35	21	37	35	37	20	19	56	54
Malawi	145	156	71	44	57	44	36	36	21	20	74	71
Malaysia	102	101	97	..	97	..	..	..	..	..	..	..
Mali	89	76	71	83	67	79	75	70	17	17	63	48
Mauritania	124	129	76	59	75	56	46	43	10	10	51	45
Mauritius	104	104	97	98	98	100	97	100	5	4	61	72
Mexico	111	109	35	93	71	94	91	92	6	4	95	93
Moldova	90	87	..	..	..	..	96	98	0 ^c	0 ^c	98	99
Mongolia	117	119	..	..	..	..	91	91	0 ^c	0 ^c	95	99
Morocco	104	100	75	82	76	79	76	72	15	10	78	77
Mozambique	153	143	36	60	32	55	41	39	5	5	52	56
Myanmar	139	136	..	71	..	72	71	72	1	0 ^c	76	72
Namibia	104	105	60	84	65	90	73	80	19	14	72	77
Nepal	160	160	51	75	51	83	75	83	21	20	79	74
Netherlands	101	100	..	99	..	100	..	..	..	..	96	100
New Zealand	105	104	..	..	..	..	..	..	..	..	..	..
Nicaragua	173	163	11	50	37	57	46	55	11	8	..	..
Niger	76	59	61	58	65	54	55	50	5	5	61	58
Nigeria	116	99	..	71	..	75	61	64	3	3	..	..
Norway	97	97	99	100	100	100	100	100	..	..	100	100
Oman	76	76	97	100	96	100	100	99	0 ^c	1	99	98
Pakistan	125	100	..	68	..	72	68	72	2	2	69	75
Panama	116	114	..	87	..	89	84	86	7	5	92	95
Papua New Guinea	..	..	70	..	68	..	..	..	..	..	..	..
Paraguay	117	114	73	79	75	83	74	79	8	5	90	90
Peru	110	112	..	91	..	90	86	85	9	9	96	94
Philippines	137	128	..	71	..	80	66	77	3	2	91	92
Poland	97	98	89	..	96	..	..	..	1	0 ^c	..	..
Portugal	106	106	..	..	..	..	..	..	13	7	..	..
Puerto Rico	..	..	..	..	..	..	..	..	..	..	..	..



2.12

Education efficiency

	Gross intake rate in grade 1		Cohort survival rate						Repeaters in primary school		Transition to secondary school	
	% of relevant age group		% of grade 1 students						% of enrollment		%	
	Male	Female	Reaching grade 5 ^a		Reaching last grade of primary education				Male	Female	Male	Female
	2006 ^b	2006 ^b	1991	2005 ^b	1991	2005 ^b	2005 ^b	2005 ^b	2006 ^b	2006 ^b	2005 ^b	2005 ^b
Romania	97	96	..	..	..	..	94	95	3	2	98	98
Russian Federation	..	..	..	..	..	..	..	..	..	..	..	..
Rwanda	209	206	61	43	59	49	30	32	15	15	..	..
Saudi Arabia	102	105	82	100	84	93	100	94	6	4	93	97
Senegal	95	98	..	65	..	65	54	53	11	10	52	48
Serbia	..	..	..	..	..	..	..	..	..	..	..	..
Sierra Leone	..	..	..	..	..	..	..	..	10 ^e	10 ^e	..	..
Singapore	..	..	..	..	..	..	..	..	..	..	..	..
Slovak Republic	100	98	..	..	..	..	97	98	3	2	98	99
Slovenia	98	96	..	..	..	..	..	..	1	0 ^c	..	..
Somalia	..	..	..	..	..	..	..	..	..	..	..	..
South Africa	118	112	..	82	..	83	75	79	8	8	89	91
Spain	103	101	..	100	..	100	100	100	3	2	..	..
Sri Lanka	109	109	92	..	93	..	..	..	1	1	..	..
Sudan	67	58	90	78	99	79	73	75	1	2	94	100
Swaziland	111	103	74	81	80	87	66	75	19	15	88	89
Sweden	96	95	100	..	100	..	..	..	..	..	..	..
Switzerland	86	91	..	..	..	..	..	..	2	1	99	100
Syrian Arab Republic	125	122	97	..	95	..	92	93	7	5	95	97
Tajikistan	103	99	..	..	..	..	100	97	0 ^c	0 ^c	98	97
Tanzania	105	104	81	85 ^d	82	89 ^d	81 ^d	85 ^d	4 ^e	4 ^e	47	45
Thailand	..	..	..	..	..	..	..	..	..	..	..	..
Timor-Leste	118	105	..	..	..	..	..	..	..	..	..	..
Togo	101	95	52	79	42	70	74	62	23	23	68	61
Trinidad and Tobago	96	92	..	90	..	92	80	87	6	4	94	92
Tunisia	100	101	94	97	77	97	93	95	10	7	86	90
Turkey	97	93	98	97	97	97	95	93	3	3	93	90
Turkmenistan	..	..	..	..	..	..	..	..	..	..	..	..
Uganda	145	147	..	49	..	49	26	25	30	29	42	43
Ukraine	99	99	..	..	..	..	..	..	0 ^c	0 ^c	100	100
United Arab Emirates	103	101	80	98	80	100	98	100	2	2	99	100
United Kingdom	..	..	..	..	..	..	..	..	0	0	..	..
United States	102	100	..	..	..	..	..	..	..	..	..	..
Uruguay	107	105	96	90	98	93	88	91	9	6	75	87
Uzbekistan	97	94	..	..	..	..	..	..	0 ^e	0 ^e	..	..
Venezuela, RB	102	99	82	90	90	94	87	93	8	5	99	99
Vietnam	99	94	..	..	..	..	..	..	..	..	..	..
West Bank and Gaza	78	78	..	..	..	..	97	100	1	1	98	99
Yemen, Rep.	122	102	..	67	..	65	61	57	5	4	83	82
Zambia	119	125	..	92	..	87	79	73	7	6	49	60
Zimbabwe	..	..	72	..	81	..	..	..	..	..	..	..
World	116 w	111 w	.. w	.. w	.. w	.. w	.. w	.. w	.. w	.. w	.. w	.. w
Low income	126	116	..	71	..	71	69	69	6	6	79	77
Middle income	..	..	61	..	80	..	..	..	..	..	..	..
Lower middle income	94	95	59	..	79	..	..	..	3	2	..	..
Upper middle income	105	101	..	..	..	..	..	..	10	9	..	..
Low & middle income	..	..	..	..	..	..	..	..	..	..	..	..
East Asia & Pacific	91	90	55	..	78	..	..	..	1	1	..	..
Europe & Central Asia	..	..	..	..	..	..	..	..	..	..	..	..
Latin America & Carib.	112	108	..	..	..	..	..	..	10	9	..	..
Middle East & N. Africa	108	110	..	90	..	87	87	84	7	4	82	83
South Asia	130	120	..	72	..	73	72	73	4	4	84	82
Sub-Saharan Africa	117	108	..	..	..	..	..	..	9	9	..	..
High income	101	101	..	..	..	..	..	..	..	..	..	..
Euro area	103	102	..	..	..	..	..	..	1	1	..	..

a. Because of the change from International Standard Classification of Education 1976 (ISCED76) to ISCED97 in 1998, data for 1991 are not fully comparable with data from 1999 onward. b. Provisional data. c. Less than 0.5. d. Data are for 2006. e. Data are for 2007.

About the data

The United Nations Educational, Scientific, and Cultural Organization (UNESCO) Institute for Statistics estimates indicators of students' progress through school. These indicators measure an education system's success in reaching all students, efficiently moving students from one grade to the next, and imparting a particular level of education.

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

The cohort survival rate is the estimated proportion of an entering cohort of grade 1 students that eventually reaches grade 5 or the last grade of primary education. It measures an education system's holding

power and internal efficiency. Rates approaching 100 percent indicate high retention and low dropout levels. Cohort survival rates are typically estimated from data on enrollment and repetition by grade for two consecutive years. This procedure, called the reconstructed cohort method, makes three simplifying assumptions: dropouts never return to school; promotion, repetition, and dropout rates remain constant over the period in which the cohort is enrolled in school; and the same rates apply to all pupils enrolled in a grade, regardless of whether they previously repeated a grade (Fredricksen 1993). Cross-country comparisons should thus be made with caution, because other flows—caused by new entrants, reentrants, grade skipping, migration, or transfers during the school year—are not considered.

Research suggests that five to six years of schooling, which is how long primary education lasts in most countries, is a critical threshold for achieving sustainable basic literacy and numeracy skills. But the indicator only indirectly reflects the quality of schooling, and a high rate does not guarantee these learning outcomes. Measuring actual learning outcomes requires setting curriculum standards and measuring students' learning progress against those standards through standardized assessments, actions that many countries do not systematically undertake.

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

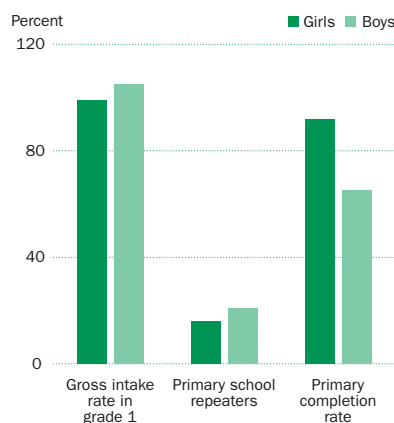
The transition rate from primary to secondary school conveys the degree of access or transition between the two levels. As completing primary education is a prerequisite for participating in lower secondary school, growing numbers of primary completers will inevitably create pressure for more available places at the secondary level. A low transition rate can signal such problems as an inadequate examination and promotion system or insufficient secondary school capacity. The quality of data on the transition rate is affected when new entrants and repeaters are not correctly distinguished in the first grade of secondary school. Students who interrupt their studies after completing primary school could also affect data quality.

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

Definitions

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

In Lesotho more girls who enroll in primary school stay in and complete school than boys do 2.12a



In many developing countries, especially in Sub-Saharan Africa, fewer girls than boys enroll and stay in school. But in Lesotho more girls complete primary school because they repeat grades less often and are less likely to drop out.

Source: United Nations Educational, Scientific, and Cultural Organization Institute for Statistics.

Data sources

Data on education efficiency are from the UNESCO Institute for Statistics.



Education completion and outcomes

	Primary completion rate ^a						Youth literacy rate				Adult literacy rate	
	% of relevant age group						% ages 15–24				% ages 15 and older	
	Total		Male		Female		Male		Female		Male	Female
	1991	2006 ^b	1991	2006 ^b	1991	2006 ^b	1990	2005	1990	2005	2005	2005
Afghanistan	..	..	..	..	..	..	..	..	..	..	..	..
Albania	..	96	..	97	..	96	..	99	..	99	99	98
Algeria	80	85	86	86	73	84	86	94	62	86	80	60
Angola	35	..	..	..	..	..	..	84	..	63	83	54
Argentina	..	99	..	97	..	102	98	99	99	99	97	97
Armenia	90	91	..	90	..	93	100	100	100	100	100	99
Australia	..	..	..	..	..	..	..	..	..	..	..	..
Austria	..	103	..	103	..	102	..	..	..	..	..	..
Azerbaijan	..	92	..	94	..	90	..	..	..	..	..	..
Bangladesh	49	72	..	70	..	74	52	67	38	60	54	41
Belarus	94	95	95	96	96	93	100	..	100	..	..	..
Belgium	79	..	76	..	82	..	..	..	..	..	..	..
Benin	21	65	28	78	13	51	55	59	27	33	48	23
Bolivia	..	101	..	102	..	100	96	99	92	96	93	81
Bosnia and Herzegovina	..	..	..	..	..	..	..	100	..	100	99	94
Botswana	89	95	82	75	97	115	86	92	92	96	80	82
Brazil	93	105	..	..	..	..	..	96	..	98	88	89
Bulgaria	84	99	86	98	83	99	..	98	..	98	99	98
Burkina Faso	20	31	24	35	15	28	27	40	14	26	31	17
Burundi	46	36	49	40	43	32	59	77	48	70	67	52
Cambodia	..	87	..	87	..	86	..	88	..	79	85	64
Cameroon	53	58	57	65	49	51	..	..	..	..	77	60
Canada	..	..	..	..	..	..	..	..	..	..	..	..
Central African Republic	27	24	35	31	18	18	63	70	35	47	65	33
Chad	18	31	29	41	7	21	..	56	..	23	41	13
Chile	..	123	..	130	..	116	98	99	99	99	96	96
China	105	..	..	..	..	..	97	99	91	99	95	87
Hong Kong, China	102	..	..	..	..	..	..	..	..	..	..	..
Colombia	70	105	67	103	73	107	89	98	92	98	93	93
Congo, Dem. Rep.	46	38	58	46	34	31	..	78	..	63	81	54
Congo, Rep.	54	73	59	77	49	69	..	98	..	97	91	79
Costa Rica	79	89	77	87	81	91	..	97	..	98	95	95
Côte d'Ivoire	43	43	55	53	32	33	60	71	38	52	61	39
Croatia	85	92	..	93	..	92	100	100	100	100	99	97
Cuba	99	92	..	92	..	91	..	100	..	100	100	100
Czech Republic	..	102	..	102	..	102	..	..	..	..	..	..
Denmark	98	99	98	99	98	99	..	..	..	..	..	..
Dominican Republic	61	83	..	80	..	87	..	93	..	95	87	87
Ecuador	91	106	91	105	92	106	97	96	96	96	92	90
Egypt, Arab Rep.	..	98	..	102	..	94	..	90	..	79	83	59
El Salvador	41	88	38	88	43	88	85	87	85	90	82	79
Eritrea	19	48	22	56	17	41	..	..	..	..	..	..
Estonia	93	106	93	107	94	104	100	100	100	100	100	100
Ethiopia	26	49	32	55	19	42	..	62	..	39	50	23
Finland	97	100	98	101	97	99	..	..	..	..	..	..
France	104	..	..	..	..	..	..	..	..	..	..	..
Gabon	58	75	55	73	61	76	94	97	92	95	88	80
Gambia, The	44	63	55	62	33	64	..	..	..	..	..	..
Georgia	..	85	..	83	..	86	..	..	..	..	..	..
Germany	100	95	99	94	100	95	..	..	..	..	..	..
Ghana	61	71	69	73	54	68	..	76	..	65	66	50
Greece	99	100	99	100	98	100	99	99	99	99	98	94
Guatemala	..	77	..	80	..	73	..	86	..	78	75	63
Guinea	17	64	25	74	9	53	..	59	..	34	43	18
Guinea-Bissau	..	..	..	..	..	..	..	..	..	..	..	..
Haiti	27	..	29	..	26	..	..	..	..	..	..	..

Education completion and outcomes

2.13 PEOPLE

	Primary completion rate ^a						Youth literacy rate				Adult literacy rate	
	Total		% of relevant age group				% ages 15–24				% ages 15 and older	
			Male		Female		Male		Female		Male	Female
	1991	2006 ^b	1991	2006 ^b	1991	2006 ^b	1990	2005	1990	2005	2005	2005
Honduras	64	89	67	86	61	91	..	87	..	91	80	80
Hungary	93	94	88	94	90	94	..	..	..	..	..	..
India	64	85	75	87	52	82	74	84 ^c	49	68 ^c	73 ^c	48 ^c
Indonesia	91	99	..	99	..	100	97	99	95	99	94	87
Iran, Islamic Rep.	91	101	97	95	85	108	92	98	81	97	88	77
Iraq	59	..	64	..	53	..	..	..	..	..	..	..
Ireland	..	97	..	96	..	97	..	..	..	..	..	..
Israel	..	101	..	101	..	101	..	..	..	..	..	..
Italy	104	100	104	100	104	99	..	100	..	100	99	98
Jamaica	90	82	86	81	94	84	..	..	..	..	..	..
Japan	101	..	101	..	102	..	..	..	..	..	..	..
Jordan	72	100	69	100	77	101	..	99	..	99	95	87
Kazakhstan	..	101 ^d	..	100 ^d	..	101 ^d	100	..	100	..	..	..
Kenya	..	93	..	94	..	92	..	80	..	81	78	70
Korea, Dem. Rep.	..	..	..	..	..	..	..	..	..	..	..	..
Korea, Rep.	98	101	98	107	98	95	..	..	..	..	..	..
Kuwait	..	91	..	90	..	92	..	100	..	100	94	91
Kyrgyz Republic	..	99	..	99	..	100	..	..	..	..	..	..
Lao PDR	43	75	48	80	38	70	..	83	..	75	77	61
Latvia	..	92	..	93	..	92	100	100	100	100	100	100
Lebanon	..	80	..	79	..	82	..	..	..	..	..	..
Lesotho	59	78	42	65	76	92	..	..	..	..	74	90
Liberia	..	63	..	69	..	58	..	65	..	69	58	46
Libya	..	..	..	..	..	..	..	100	..	96	93	75
Lithuania	89	91	..	91	..	91	100	100	100	100	100	100
Macedonia, FYR	98	97	..	96	..	98	..	99	..	98	98	94
Madagascar	33	57	33	57	34	57	..	73	..	68	77	65
Malawi	29	55	36	55	21	55	70	..	49	..	..	..
Malaysia	91	95	91	95	91	95	96	97	95	97	92	85
Mali	13	49	15	59	10	40	..	..	..	..	33	16
Mauritania	34	47	41	47	27	47	..	68	..	55	60	43
Mauritius	107	92	107	91	107	94	91	94	92	95	88	81
Mexico	88	103	89	102	90	103	96	98	95	98	93	90
Moldova	..	90	..	90	..	91	100	100	100	100	100	99
Mongolia	..	109	..	108	..	110	..	97	..	98	98	98
Morocco	48	84	57	88	39	80	..	81	..	60	66	40
Mozambique	26	42	32	49	21	35	..	..	..	..	..	..
Myanmar	..	95	..	93	..	98	..	96	..	93	94	86
Namibia	78	76	70	73	86	80	86	91	90	93	87	83
Nepal	51	76	68	80	40	72	68	81	33	60	63	35
Netherlands	..	100	..	101	..	99	..	..	..	..	..	..
New Zealand	100	..	101	..	99	..	..	..	..	..	..	..
Nicaragua	42	73	43	70	59	77	..	84	..	89	77	77
Niger	18	33	22	39	13	26	..	52	..	23	43	15
Nigeria	..	76	..	83	..	68	81	87	62	81	78	60
Norway	100	99	100	99	100	98	..	..	..	..	..	..
Oman	74	94	78	95	70	92	..	98	..	97	87	74
Pakistan	..	62	..	70	..	53	..	77	..	53	64	35
Panama	86	94	86	94	86	95	95	97	95	96	93	91
Papua New Guinea	46	..	51	..	42	..	..	69	..	64	63	51
Paraguay	68	94	68	94	69	95	96	96	95	96	94	93
Peru	..	100	..	100	..	100	97	98	94	96	94	82
Philippines	86	96	84	92	84	100	96	94	97	97	92	94
Poland	98	97	..	..	..	..	..	..	..	..	..	..
Portugal	95	104	94	102	95	107	99	100	99	100	96	92
Puerto Rico	..	..	..	..	..	..	92	86	94	86	90	90



	Primary completion rate ^a						Youth literacy rate				Adult literacy rate	
	% of relevant age group						% ages 15–24				% ages 15 and older	
	Total		Male		Female		Male		Female		Male	Female
	1991	2006 ^b	1991	2006 ^b	1991	2006 ^b	1990	2005	1990	2005	2005	2005
Romania	96	99	96	99	96	98	99	98	99	98	98	96
Russian Federation	93	94	92	..	93	..	100	100	100	100	100	99
Rwanda	35	35	40	36	31	35	..	79	..	77	71	60
Saudi Arabia	55	85	60	..	51	..	94	97	81	95	88	78
Senegal	39	49	47	51	30	47	49	58	28	41	51	29
Serbia	..	..	..	..	..	..	..	99 ^e	..	99 ^e	99 ^e	94 ^e
Sierra Leone	..	81 ^d	..	92 ^d	..	70 ^d	..	60	..	37	47	24
Singapore	..	..	..	..	..	..	99	99	99	100	97	89
Slovak Republic	96	94	95	95	96	94	..	..	..	..	..	..
Slovenia	95	99	..	100	..	99	100	100	100	100	100	100
Somalia	..	..	..	..	..	..	..	..	..	..	..	..
South Africa	76	100	71	100	80	100	..	..	..	..	..	..
Spain	..	103	..	103	..	103	100	..	100	..	..	..
Sri Lanka	102	108	103	107	102	108	..	95 ^f	..	96 ^f	92 ^f	89 ^f
Sudan	42	47	47	50	37	43	..	85 ^g	..	71 ^g	71 ^g	52 ^g
Swaziland	60	67	57	64	63	69	..	87	..	90	81	78
Sweden	96	..	96	..	96	..	..	..	..	..	..	..
Switzerland	53	91	53	91	54	92	..	..	..	..	..	..
Syrian Arab Republic	89	115	94	116	84	113	..	95	..	90	88	74
Tajikistan	..	106	..	108	..	104	100	100	100	100	100	99
Tanzania	62	85 ^d	62	87 ^d	63	83 ^d	86	81	78	76	78	62
Thailand	..	..	..	..	..	..	..	98	..	98	95	91
Timor-Leste	..	..	..	..	..	..	..	..	..	..	..	..
Togo	35	67	48	78	22	56	..	84	..	64	69	38
Trinidad and Tobago	101	88	98	86	104	90	..	99	..	99	99	98
Tunisia	74	99	79	98	70	100	..	96	..	92	83	65
Turkey	90	86	93	90	86	82	97	98	88	93	95	80
Turkmenistan	..	..	..	..	..	..	..	..	..	..	..	..
Uganda	..	54	..	57	..	51	77	83	63	71	77	58
Ukraine	94	105	98	105	97	105	..	100	..	100	100	99
United Arab Emirates	103	100	104	101	103	100	..	98	..	95	89	88
United Kingdom	..	..	..	..	..	..	..	..	..	..	..	..
United States	..	..	..	..	..	..	..	..	..	..	..	..
Uruguay	94	93	91	92	96	93	..	..	..	..	..	..
Uzbekistan	..	98	..	98	..	98	..	..	..	..	..	..
Venezuela, RB	43	96	37	93	49	98	95	96	96	98	93	93
Vietnam	..	92	..	103	..	97	94	..	93	..	..	..
West Bank and Gaza	..	89	..	89	..	89	..	99	..	99	97	88
Yemen, Rep.	..	60	..	74	..	46	..	91	..	59	73	35
Zambia	..	84	..	89	..	79	67	..	66	..	..	..
Zimbabwe	97	81	99	83	96	79	97	97	94	98	93	86
World	79 w	86 w	85 w	88 w	74 w	84 w	88 w	91 w	79 w	84 w	87 w	77 w
Low income	57	73	68	77	48	69	72	80	54	66	72	50
Middle income	93	97	96	98	90	97	95	97	91	96	93	87
Lower middle income	95	97	98	97	90	96	95	97	90	95	93	85
Upper middle income	88	99	88	99	88	99	97	98	96	98	94	92
Low & middle income	78	85	84	87	72	83	86	90	76	82	85	73
East Asia & Pacific	101	98	103	98	95	98	97	98	92	98	95	87
Europe & Central Asia	93	95	94	96	91	94	99	99	98	98	99	96
Latin America & Carib.	82	99	82	98	83	100	93	96	94	96	91	89
Middle East & N. Africa	77	91	83	93	71	88	84	93	68	84	83	63
South Asia	62	80	75	83	52	76	71	81	48	65	70	46
Sub-Saharan Africa	51	60	56	65	46	55	71	76	58	64	69	50
High income	..	97	..	99	..	96	99	99	99	99	99	98
Euro area	100	..	..	..	..	..	..	..	..	..	..	..

a. Because of the change from International Standard Classification of Education 1976 (ISCED76) to ISCED97 in 1998, data for 1991 are not fully comparable with data from 1999 onward. b. Provisional data. c. Excludes Mao Maram, Paomata, and Purul of Senapati district of Manipur. d. Data are for 2007. e. Includes Montenegro and excludes Kosovo and Metohija. f. Covers 18 of 25 districts. g. Covers northern Sudan only.

About the data

Many governments publish statistics that indicate how their education systems are working and developing—statistics on enrollment and such efficiency indicators as repetition rates, pupil-teacher ratios, and cohort progression. The World Bank and the United Nations Educational, Scientific, and Cultural Organization (UNESCO) Institute for Statistics jointly developed the primary completion rate indicator. Increasingly used as a core indicator of an education system's performance, it reflects an education system's coverage and the educational attainment of students. The indicator is a key measure of educational outcome at the primary level and of progress on the Millennium Development Goals and the Education for All initiative. However, because curricula and standards for school completion vary across countries, a high primary completion rate does not necessarily mean high levels of student learning.

The primary completion rate reflects the primary cycle as defined by the International Standard Classification of Education, ranging from three or four years of primary education (in a very small number of countries) to five or six years (in most countries) and seven (in a small number of countries).

The table shows the proxy primary completion rate, calculated by subtracting the number of repeaters in the last grade of primary school from the total number of students in that grade and dividing by the total number of children of official graduation age. Data limitations preclude adjusting for students who drop out during the final year of primary school. Thus

proxy rates should be taken as an upper estimate of the actual primary completion rate.

There are many reasons why the primary completion rate can exceed 100 percent. The numerator may include late entrants and overage children who have repeated one or more grades of primary school as well as children who entered school early, while the denominator is the number of children of official completing age. Other data limitations contribute to completion rates exceeding 100 percent, such as the use of estimates for the population of varying reliability, the conduct of school and population surveys at different times of year, and other discrepancies in the numbers used in the calculation.

Basic student outcomes include achievements in reading and mathematics judged against established standards. National assessments are enabling many countries' ministries of education to monitor progress in these outcomes. International comparable assessments are not yet available, although a few exist for some countries. The UNESCO Institute for Statistics has established literacy as an outcome indicator based on an internationally agreed definition.

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

The reported literacy data are compiled by the UNESCO Institute for Statistics based on national censuses and household surveys during 1985–2005. For detailed information on sources and definitions, consult the original source.

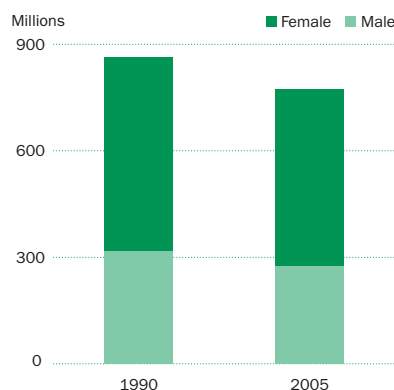
Literacy statistics for most countries cover the population ages 15 and older, but some include younger ages or are confined to age ranges that tend to inflate literacy rates. The literacy data in the narrower age range of 15–24 captures the ability of participants in the formal education system better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

Definitions

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

In 2005 more than 770 million people were illiterate—64 percent of them women, a share unchanged since 1990

2.13a



Source: United Nations Educational, Scientific, and Cultural Organization Institute for Statistics.

Data sources

Data on primary completion rates and literacy rates are from the UNESCO Institute for Statistics.



2.14

Education gaps by income and gender

	Survey year	Gross intake rate in grade 1		Gross primary participation rate		Average years of schooling		Primary completion rate				Children out of school	
		% of relevant age group		% of relevant age group		Ages 15–24		% of relevant age group				% of children ages 6–11	
		Poorest quintile	Richest quintile	Poorest quintile	Richest quintile	Poorest quintile	Richest quintile	Poorest quintile	Richest quintile	Male	Female	Poorest quintile	Richest quintile
Armenia	2000	105	93	177	181	9	11	96	98	96	98	14	13
Bangladesh	2004	193	156	107	120	3	8	26	70	47	58	25	10
Benin	2001	74	112	51	115	1	6	7	45	23	15	66	21
Bolivia	2003	98	95	92	98	6	11	48	90	75	75	24	5
Burkina Faso	2003	24	97	20	98	1	6	8	52	24	20	87	32
Cambodia	2000	146	187	78	134	2	7	4	45	18	17	50	12
Cameroon	2004	115	100	94	122	3	9	12	69	36	37	42	4
Central African Republic	1994–95	103	118	57	130	2	6	0 ^a	18	8	6	65	21
Chad	2004	3	14	15	98	0 ^a	5	1	36	15	8	91	36
Colombia	2005	157	85	126	99	6	11	50	90	70	77	8	1
Comoros	1996	84	119	56	147	2	6	4	29	12	12	72	26
Côte d'Ivoire	1994	26	39	41	103	2	6	6	41	25	17	70	23
Dominican Republic	2002	170	103	149	156	6	11	38	87	57	69	14	4
Egypt, Arab Rep.	2003	87	120	96	103	6	11	58	87	77	71	24	5
Eritrea	1995	55	117	42	154	1	7	3	65	21	24	84	10
Ethiopia	2000	87	257	61	186	1	5	4	44	15	12	87	42
Gabon	2000	..	..	155	140	5	8	12	60	35	40	8	3
Ghana	2003	90	90	71	108	4	9	15	66	38	41	57	20
Guatemala	1995	114	124	62	122	2	9	9	76	41	40	58	8
Guinea	1999	13	39	10	38	1	5	3	27	18	9	95	77
Haiti	2000	141	200	94	152	3	8	1	40	13	18	64	21
India	1999	99	72	87	122	3	10	31	87	64	55	35	2
Indonesia	2002–03	85	92	103	104	7	11	75	97	86	89	19	6
Jordan	2002	..	..	101	99	10	12	93	98	97	97	11	9
Kazakhstan	1999	..	..	125	130	10	11	98	100	98	99	24	18
Kenya	2003	128	123	104	118	5	9	14	57	30	36	24	4
Kyrgyz Republic	1997	..	..	133	138	10	10	86	88	85	87	21	18
Madagascar	1997	84	87	59	134	2	7	1	47	13	16	60	6
Malawi	2002	180	226	103	126	4	8	10	52	32	14	29	9
Mali	2001	45	89	36	101	1	5	3	37	16	11	75	29
Morocco	2003–04	109	85	98	116	2	9	17	78	47	46	26	2
Mozambique	2003	104	134	79	150	2	5	2	17	8	7	59	13
Namibia	1992	..	..	138	116	5	8	15	65	25	34	22	9
Nepal	2001	240	249	116	160	3	7	18	59	37	28	33	6
Nicaragua	2001	127	108	79	104	3	10	14	88	47	59	46	5
Niger	1998	11	69	15	77	1	4	8	46	22	13	90	44
Nigeria	2003	77	106	67	111	4	10	16	70	39	37	56	5
Pakistan	1990–91	68	173	45	127	2	8	11	55	32	22	72	13
Paraguay	1990	137	106	103	114	5	10	29	77	49	54	21	10
Peru	2000	114	94	112	109	6	11	41	93	72	72	9	1
Philippines	2003	131	102	103	102	6	11	46	88	67	79	17	2
Rwanda	2000	216	197	100	126	3	6	7	28	14	14	43	23
Tanzania	1999	95	231	63	119	4	7	27	55	34	34	74	27
Uganda	2000–01	145	127	106	120	4	8	7	43	19	21	28	6
Uzbekistan	1996	..	..	102	114	10	10	84	87	84	86	29	23
Vietnam	2002	121	105	139	127	5	10	58	97	84	84	8	2
Zambia	2001–02	83	119	74	112	4	9	16	79	38	43	61	18
Zimbabwe	1994	138	114	104	109	7	10	36	80	51	57	22	8

a. Less than 0.5.

About the data

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

Typically, Demographic and Health Surveys collect basic information on educational attainment and enrollment levels from every household member ages 5 or 6 and older as background characteristics. As the surveys are intended for the collection of demographic and health information, the education section of the survey is not as robust and detailed as the health section; however, it still provides useful micro-level information on education that cannot be explained by aggregate national-level data.

Socioeconomic status as displayed in the table is based on a household's assets, including ownership of consumer items, features of the household's dwelling, and other characteristics related to wealth. Each household asset on which information was collected was assigned a weight generated through principal-component analysis. The resulting scores were standardized in relation to a standard normal distribution with a mean of zero and a standard deviation of one. The standardized scores were then used to create break-points defining wealth quintiles, expressed as quintiles of individuals in the population.

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

Creating one index that includes all asset indicators limits the types of analysis that can be

performed. In particular, the use of a unified index does not permit a disaggregated analysis to examine which asset indicators have a more or less important association with education status. In addition, some asset indicators may reflect household wealth better in some countries than in others—or reflect different degrees of wealth in different countries. Taking such information into account and creating country-specific asset indexes with country-specific choices of asset indicators might produce a more effective and accurate index for each country. The asset index used in the table does not have this flexibility.

The analysis was carried out for 48 countries. The table shows the estimates for the poorest and richest quintiles only; the full set of estimates for 32 indicators is available in the country reports (see *Data sources*). The data in the table differ from data for similar indicators in preceding tables either because the indicator refers to a period a few years preceding the survey date or because the indicator definition or methodology is different. Findings should be interpreted with caution because of measurement error inherent in the use of survey data.

Definitions

- **Survey year** is the year in which the underlying data were collected.
- **Gross intake rate in grade 1** is the number of students in the first grade of primary education regardless of age as a percentage of the population of the official primary school entrance age. These data may differ from those in table 2.12.
- **Gross primary participation rate** is the ratio of total students attending primary school regardless of age to the population of the age group that officially corresponds to primary education.
- **Average years of schooling** are the years of formal schooling received, on average, by youths and adults ages 15–24.
- **Primary completion rate** is the percentage of children of the official primary school completing age plus four who have completed the last year of primary school or higher. These data differ from those in table 2.13 because the definition and methodology are different.
- **Children out of school** are the percentage of children ages 6–11 who are not in school. These data differ from those in table 2.11 because the definition and methodology are different.

Data sources

Data on education gaps by income and gender are from an analysis of Demographic and Health Surveys by Macro International and the World Bank. Country reports are available at www.worldbank.org/education/edstats/.



2.15

Health expenditure, services, and use

	Health expenditure							Health workers			Hospital beds
	Total % of GDP	% of GDP	Public				Per capita \$	per 1,000 people			per 1,000 people
			% of total	% of government expenditure	Out of pocket % of private	External resources ^a % of total		Physicians	Nurses and midwives	Community health workers	
2005	2005	2005	2005	2005	2005	2005	2000-06 ^b	2000-06 ^b	2000-06 ^b	2000-06 ^b	
Afghanistan	5.2	1.0	20.0	3.3	97.4	13.1	..	..	..	..	..
Albania	6.5	2.6	40.3	8.6	97.0	1.9	169	1.2	4.7	..	3.0
Algeria	3.5	2.6	75.3	9.5	94.6	0.1	108	1.1	2.2	0.0 ^c	1.7
Angola	1.8	1.5	81.5	4.7	100.0	7.3	36	0.1	1.4	..	..
Argentina	10.2	4.5	43.9	14.2	43.4	0.0	484	..	..	..	4.1
Armenia	5.4	1.8	32.9	8.2	89.2	12.7	88	3.7	4.9	..	4.5
Australia	8.8	5.9	67.0	17.0	55.2	0.0	3,181	2.5	9.7	0.2	4.0
Austria	10.2	7.7	75.7	15.5	67.4	0.0	3,788	3.7	6.6	..	7.7
Azerbaijan	3.9	1.0	24.8	3.8	84.6	0.4	62	3.6	8.4	..	8.2
Bangladesh	2.8	0.8	29.1	5.5	88.3	12.2	12	0.3	0.3	0.2	0.3
Belarus	6.6	5.0	75.8	10.5	69.0	..	204	4.8	12.5	..	11.1
Belgium	9.6	6.9	71.4	13.9	78.7	0.0	3,451	4.2	14.2	..	5.3
Benin	5.4	3.0	55.6	13.5	99.9	19.7	28	0.0 ^c	0.8	0.0 ^c	0.5
Bolivia	6.9	4.3	61.6	12.4	81.4	6.8	71	1.2	2.1	0.1	1.0
Bosnia and Herzegovina	8.8	5.2	58.7	14.0	100.0	0.6	243	1.4	4.7	..	3.0
Botswana	7.0	4.5	63.6	12.4	26.2	4.7	362	0.4	2.7	..	2.2
Brazil	7.9	3.5	44.1	6.7	54.6	0.0	371	1.2	3.8	..	2.6
Bulgaria	7.7	4.7	60.6	12.1	96.3	1.1	272	0.3	4.6	..	6.4
Burkina Faso	6.7	4.0	59.5	18.4	94.2	29.5	27	0.1	0.5	0.1	..
Burundi	3.4	1.0	28.6	2.3	100.0	50.9	3	0.0 ^c	0.2	0.1	0.7
Cambodia	6.4	1.5	24.2	12.0	79.3	25.7	29	0.2	0.9	..	0.6
Cameroon	5.2	1.5	28.0	11.0	94.6	5.3	49	0.2	1.6	..	..
Canada	9.7	6.8	70.3	17.5	48.7	0.0	3,430	1.9	10.1	..	3.6
Central African Republic	4.0	1.5	37.5	10.9	95.3	38.5	13	0.1	0.4	0.1	..
Chad	3.7	1.5	39.8	9.5	96.2	12.5	22	0.0 ^c	0.3	0.0 ^c	0.4
Chile	5.4	2.8	51.4	13.2	54.3	0.1	397	1.1	0.6	..	2.4
China	4.7	1.8	38.8	1.0	85.3	0.1	81	1.5	1.0	0.1	2.5
Hong Kong, China	..	..	..	..	..	..	..	..	..	..	..
Colombia	7.3	6.2	84.8	17.7	45.1	0.0	201	1.4	0.6	..	1.2
Congo, Dem. Rep.	4.2	1.5	34.6	7.2	100.0	23.6	5	0.1	0.5	..	..
Congo, Rep.	1.9	0.9	47.1	4.0	100.0	4.7	31	0.2	1.0	0.0 ^c	..
Costa Rica	7.1	5.4	76.0	21.0	79.4	0.2	327	1.3	0.9	1.3	1.4
Cote d'Ivoire	3.9	0.8	21.5	4.2	87.8	6.6	34	0.1	0.6	..	..
Croatia	8.4 ^d	6.3 ^d	75.5 ^d	13.1 ^d	93.6	0.0	812 ^d	2.5	5.5	..	5.5
Cuba	7.6	6.9	90.8	11.7	93.2	0.3	310	5.9	7.4	..	4.9
Czech Republic	7.1	6.3	88.6	14.4	95.3	0.0	868	3.6	8.9	..	8.4
Denmark	9.1	7.7	84.1	14.4	90.1	0.0	4,350	3.6	10.1	..	3.8
Dominican Republic	5.4	1.7	31.1	9.3	86.4	2.5	197	1.9	1.8	..	2.2
Ecuador	5.3	2.1	40.0	8.0	85.0	0.4	147	1.5	1.7	..	1.4
Egypt, Arab Rep.	6.1	2.3	38.0	7.3	94.9	0.9	78	2.4	3.4	..	2.2
El Salvador	8.1 ^d	4.0 ^d	50.0 ^d	22.0 ^d	94.0 ^d	2.7 ^d	220 ^d	1.5	0.8	..	0.9
Eritrea	3.7	1.7	44.9	4.2	100.0	50.5	8	0.1	0.6	..	..
Estonia	5.0	3.8	76.9	11.5	88.7	0.3	516	3.3	7.0	0.0 ^c	5.8
Ethiopia	4.9	3.0	61.0	10.8	80.6	37.9	6	0.0 ^c	0.2	0.3	0.2
Finland	7.5	5.8	77.8	11.6	80.0	0.0	2,824	3.3	8.9	..	7.0
France	11.1	8.9	79.8	16.5	34.2	0.0	3,807	3.4	8.0	..	7.5
Gabon	4.1	3.0	74.0	13.9	100.0	1.5	276	0.3	5.0	..	..
Gambia, The	5.2	3.4	65.4	11.2	70.3	29.3	15	0.1	1.3	0.7	0.8
Georgia	8.6	1.7	19.5	6.7	95.7	5.1	123	4.7	4.0	..	3.8
Germany	10.7	8.2	76.9	17.6	56.8	0.0	3,628	3.4	8.0	..	8.4
Ghana	6.2	2.1	34.1	6.9	79.1	26.0	30	0.2	0.9	..	0.9
Greece	10.1	4.3	42.8	11.5	62.0	..	2,580	5.0	3.6	..	4.7
Guatemala	5.2	2.0	37.9	15.7	92.2	1.1	132	..	..	..	0.7
Guinea	5.6	0.7	11.9	4.7	99.5	12.2	21	0.1	0.5	0.0 ^c	..
Guinea-Bissau	5.2	1.7	31.9	4.0	85.7	31.8	10	0.1	0.7	2.9	..
Haiti	6.2	3.2	51.3	27.7	90.1	18.9	28	..	..	..	0.8

Health expenditure, services, and use

2.15 PEOPLE

	Health expenditure							Health workers			Hospital beds
	Total % of GDP	% of GDP	Public % of total	% of government expenditure	Out of pocket % of private	External resources ^a % of total	Per capita \$	per 1,000 people			per 1,000 people
								Physicians	Nurses and midwives	Community health workers	
2005	2005	2005	2005	2005	2005	2005	2000–06 ^b	2000–06 ^b	2000–06 ^b	2000–06 ^b	
Honduras	7.5	3.8	50.6	16.1	87.0	6.8	91	0.6	1.3	..	1.0
Hungary	7.8	5.5	70.8	11.1	86.8	..	855	3.0	9.2	..	7.9
India	5.0	1.0	19.0	3.5	94.0	0.4	36	0.6	1.3	0.1	0.9
Indonesia	2.1	1.0	46.6	5.1	66.4	4.6	26	0.1	0.8	0.0	..
Iran, Islamic Rep.	7.8	4.4	55.8	9.2	94.8	0.1	212	0.9	1.6	0.4	1.7
Iraq	4.1 ^e	3.1 ^e	74.4 ^e	3.4 ^e	100.0 ^e	4.9 ^e	..	..	..	..	..
Ireland	8.2	6.5	79.5	19.0	59.3	0.0	3,993	2.9	19.5	..	5.7
Israel	7.9	4.8	61.3	10.4	61.0	0.0	1,533	3.7	6.2	..	6.3
Italy	8.9	6.8	76.6	14.1	86.6	0.0	2,692	3.7	7.2	..	4.0
Jamaica	4.7	2.3	48.8	3.5	63.6	1.8	170	0.9	1.7	..	1.7
Japan	8.2	6.7	82.2	17.8	83.5	0.0	2,936	2.1	9.5	..	14.3
Jordan	10.5 ^f	4.8 ^f	45.3 ^f	9.5 ^f	76.1	4.5	241	2.4	3.2	0.2	1.7
Kazakhstan	4.1 ^d	2.2 ^d	67.4 ^d	10.8 ^d	100.0 ^d	0.3 ^d	204 ^d	3.9	7.6	..	7.7
Kenya	4.5	2.1	46.6	6.1	80.0	18.1	24	0.1	1.2	..	1.9
Korea, Dem. Rep.	3.5	3.0	85.6	6.0	100.0	36.6	0 ^g	3.3	4.1	..	13.2
Korea, Rep.	5.9	3.1	53.0	10.9	80.1	0.0	973	1.6	1.9	..	7.1
Kuwait	2.2	1.7	77.2	6.2	91.6	0.0	687	1.8	3.7	..	1.9
Kyrgyz Republic	6.1	2.5	40.3	8.6	95.0	7.5	29	2.4	5.8	..	5.1
Lao PDR	3.6	0.7	20.6	4.1	92.7	11.3	18	0.4	1.0	..	0.9
Latvia	6.4	3.9	60.5	10.8	97.7	0.3	443	3.1	5.6	..	7.7
Lebanon	8.7	3.8	43.5	11.9	74.7	2.3	460	2.4	1.3	..	3.6
Lesotho	9.4	8.5	90.1	18.2	18.3	10.7	69	0.1	0.6	..	..
Liberia	6.4	4.4	68.2	36.3	98.7	41.2	10	0.0 ^c	0.3	0.0 ^c	..
Libya	3.2	2.2	69.5	6.5	100.0	0.0	223	1.3	4.8	..	3.4
Lithuania	5.9	4.0	67.3	11.9	98.6	0.0	448	4.0	7.7	..	8.1
Macedonia, FYR	7.8	5.5	70.4	15.8	100.0	1.0	224	2.6	4.3	..	4.7
Madagascar	3.2	2.0	62.5	9.6	52.6	46.1	9	0.3	0.3	0.0 ^c	0.4
Malawi	12.2	8.7	71.3	16.6	30.6	61.2	19	0.0 ^c	0.6	..	..
Malaysia	4.2	1.9	44.8	7.0	75.7	0.0	222	0.7	1.8	..	1.8
Mali	5.8	2.9	50.6	12.0	99.5	15.6	28	0.1	0.6	0.0 ^c	..
Mauritania	2.7	1.7	63.2	5.0	100.0	26.1	17	0.1	0.6	0.1	0.6
Mauritius	4.3	2.2	51.5	9.2	81.4	1.1	218	1.1	3.7	0.2	3.0
Mexico	6.4	2.9	45.5	12.5	93.9	0.0	474	1.5	0.9	..	1.0
Moldova	7.5	4.2	55.5	11.3	96.4	2.6	58	2.7	6.2	..	6.4
Mongolia	4.3	3.3	77.5	11.0	86.5	1.5	35	2.6	3.5	1.5	7.5
Morocco	5.3	1.9	36.6	5.5	76.0	1.0	89	0.5	0.8	..	0.9
Mozambique	4.3	2.7	63.6	12.6	40.5	66.5	14	0.0 ^c	0.3	..	..
Myanmar	2.2	0.3	11.6	1.2	99.4	12.7	4	0.4	1.0	1.0	0.6
Namibia	5.3	3.5	65.2	10.1	15.5	13.5	165	0.3	3.1	..	..
Nepal	5.8	1.6	28.1	8.4	87.0	16.4	16	0.2	0.5	0.6	0.2
Netherlands	9.2	6.0	64.9	13.2	21.9	0.0	3,560	3.7	14.6	..	5.0
New Zealand	8.9	6.9	77.4	18.0	74.4	0.0	2,403	2.2	8.9	1.4	6.0
Nicaragua	8.3	4.1	49.6	13.7	96.2	9.2	75	0.4	1.1	..	0.9
Niger	3.8	1.9	50.5	10.2	85.2	17.0	9	0.0 ^c	0.2	..	..
Nigeria	3.9	1.2	30.9	3.5	90.4	4.8	27	0.3	1.7	0.9	1.2
Norway	9.0	7.5	83.6	17.9	95.3	0.0	5,910	3.8	16.2	..	4.2
Oman	2.5	2.1	85.0	6.1	64.4	0.0	312	1.7	3.7	..	2.1
Pakistan	2.1	0.4	17.5	1.5	98.0	3.6	15	0.8	0.5	0.4	0.7
Panama	7.3	5.0	68.9	12.3	80.8	0.2	351	1.5	2.8	0.5	2.4
Papua New Guinea	4.2	3.6	86.2	9.6	42.5	37.0	34	0.1	0.5	..	..
Paraguay	7.3	2.7	36.5	15.3	87.7	0.6	92	1.1	1.8	1.2	1.2
Peru	4.3	2.1	49.0	8.4	80.0	1.7	125	..	..	..	1.1
Philippines	3.2	1.2	36.6	5.5	80.3	5.1	37	1.2	6.1	..	1.2
Poland	6.2	4.3	69.3	9.9	85.1	0.1	495	2.0	5.2	..	5.3
Portugal	10.2	7.4	72.3	15.5	79.8	0.0	1,800	3.4	4.7	..	3.7
Puerto Rico	..	..	..	..	..	..	..	..	..	..	..



2.15

Health expenditure, services, and use

	Health expenditure							Health workers			Hospital beds
	Total % of GDP	% of GDP	Public % of total	% of government expenditure	Out of pocket % of private	External resources ^a % of total	Per capita \$	per 1,000 people			per 1,000 people
								Physicians	Nurses and midwives	Community health workers	
2005	2005	2005	2005	2005	2005	2005	2000-06 ^b	2000-06 ^b	2000-06 ^b	2000-06 ^b	
Romania	5.5	3.9	70.3	12.4	85.0	0.8	250	1.9	4.2	..	6.6
Russian Federation	5.2	3.2	62.0	10.1	82.4	0.0	277	4.3	8.5	3.0	9.7
Rwanda	7.2	4.1	56.9	16.9	36.9	43.9	19	0.1	0.4	1.4	1.7
Saudi Arabia	3.4	2.6	76.2	8.7	16.5	0.0	448	1.7	3.0	..	2.3
Senegal	5.4	1.7	31.7	6.7	90.3	13.0	38	0.1	0.3	..	..
Serbia	8.0 ^h	5.8 ^h	71.9 ^h	15.1 ^h	86.7 ^h	0.5 ^h	212 ^h	2.0	4.3	..	5.9
Sierra Leone	3.7	1.9	51.5	7.8	100.0	41.0	8	0.0 ^c	0.5	0.1	0.4
Singapore	3.5	1.1	31.9	5.6	93.8	0.0	944	1.5	4.5	..	2.8
Slovak Republic	7.0	5.2	74.4	13.9	88.1	0.0	626	3.1	6.6	..	6.9
Slovenia	8.5	6.2	72.4	13.4	45.0	0.1	1,495	2.4	8.0	..	4.8
Somalia	..	..	..	..	..	..	..	..	..	..	..
South Africa	8.7	3.6	41.7	9.9	17.4	0.5	437	0.8	4.1	0.2	..
Spain	8.2	5.9	71.4	15.4	73.1	0.0	2,152	3.3	7.6	..	3.5
Sri Lanka	4.1	1.9	46.2	7.8	86.0	1.2	51	0.6	1.7	..	3.1
Sudan	3.8	1.4	37.6	7.0	98.3	6.8	29	0.3	0.9	0.2	0.7
Swaziland	6.3	4.0	64.1	10.9	41.7	5.6	146	0.2	6.3	4.3	..
Sweden	8.9	7.5	84.6	13.6	89.6	0.0	3,598	3.3	10.9	..	3.6
Switzerland	11.4	6.8	59.7	18.7	75.7	0.0	5,694	4.0	11.0	..	5.7
Syrian Arab Republic	4.2	2.1	50.5	6.8	100.0	0.5	61	0.5	1.4	..	1.3
Tajikistan	5.0	1.1	22.8	5.0	96.6	11.8	18	2.0	5.0	..	6.2
Tanzania	5.1	2.9	56.9	12.6	83.4	27.8	17	0.0 ^c	0.4	..	..
Thailand	3.5	2.2	63.9	11.3	76.6	0.2	98	0.4	2.8	0.1	2.2
Timor-Leste	13.7	11.9	86.6	19.1	37.2	57.2	45	0.1	2.2	2.0	..
Togo	5.3	1.4	25.5	6.9	84.7	13.3	18	0.0 ^c	0.4	0.1	0.9
Trinidad and Tobago	4.5	2.4	53.7	8.3	87.8	2.4	513	..	..	..	3.3
Tunisia	5.5	2.4	44.3	6.5	82.2	0.8	158	1.3	2.9	..	1.8
Turkey	7.6	5.4	71.4	13.9	69.5	0.0	383	1.6	2.9	..	2.6
Turkmenistan	4.8	3.2	66.7	14.9	100.0	0.3	156	2.5	4.7	..	4.9
Uganda	7.0	2.0	28.6	10.0	51.8	33.1	22	0.1	0.7	..	0.7
Ukraine	7.0	3.7	52.8	8.4	84.8	0.6	128	3.1	8.5	..	8.7
United Arab Emirates	2.6	1.9	71.6	8.6	77.9	0.0	833	1.7	3.5	..	2.2
United Kingdom	8.2	7.1	87.1	16.2	92.1	0.0	3,064	2.2	..	..	3.9
United States	15.9	7.2	45.4	0.7	23.9	0.0	6,657	2.3	9.4	..	3.3
Uruguay	8.1	3.4	42.5	10.1	31.1	0.6	404	3.7	0.9	..	2.4
Uzbekistan	5.0	2.4	47.7	7.4	97.1	3.5	26	2.7	10.9	..	5.2
Venezuela, RB	4.7	2.1	45.3	7.9	88.2	0.1	247	1.9	1.1	..	0.9
Vietnam	6.0	1.5	25.7	5.1	86.1	2.0	37	0.6	0.8	..	1.4
West Bank and Gaza	..	..	..	..	..	..	..	0.8	..	..	..
Yemen, Rep.	5.1	2.1	41.8	5.6	95.2	15.0	39	0.3	0.7	0.3	0.6
Zambia	5.6	2.7	49.0	10.7	71.5	40.5	36	0.1	2.0	..	2.0
Zimbabwe	8.1	3.6	44.8	8.9	52.0	20.6	21	0.2	0.7	0.0 ^c	..
World	10.1 w	6.0 w	59.3 w	10.4 w	43.5 w	0.1 w	703 w	.. w	.. w	.. w	.. w
Low income	4.6	1.2	24.9	6.9	92.0	5.6	27	0.5	..	0.2	..
Middle income	5.8	2.9	51.1	8.2	74.5	0.4	162	1.6	..	..	3.1
Lower middle income	4.8	2.2	46.9	5.9	84.9	0.8	86	1.3	1.0	..	2.7
Upper middle income	6.7	3.6	53.8	..	66.8	0.1	374	2.3	..	..	..
Low & middle income	5.6	2.7	48.1	7.3	77.4	1.0	104	..	..	..	..
East Asia & Pacific	4.3	1.8	40.3	2.1	83.8	0.7	70	1.5	1.0	0.1	2.5
Europe & Central Asia	6.2	4.1	66.2	10.5	82.8	0.2	279	3.1	6.8	..	7.2
Latin America & Carib.	7.1	3.3	47.9	..	68.0	0.2	329	..	..	..	..
Middle East & N. Africa	5.8	3.0	53.4	8.2	90.5	1.1	123	..	..	..	..
South Asia	4.5	0.9	20.2	3.5	93.9	1.3	31	0.6	1.3	0.1	0.9
Sub-Saharan Africa	6.1	2.6	42.9	..	45.7	7.4	49	..	..	..	..
High income	11.4	7.0	60.9	10.9	36.8	0.0	3,979	2.6	..	..	6.2
Euro area	9.9	7.4	75.1	15.6	58.2	0.0	3,155	3.5	..	..	6.6

a. 0.0 is not applicable or less than 0.05. b. Data are for the most recent year available. c. Less than 0.05. d. Data are for 2006. e. Excludes northern Iraq. f. Includes contributions from the United Nations Relief and Works Agency for Palestine Refugees. g. Less than 0.5. h. Excludes Kosovo and Metohija.

About the data

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

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

Indicators on health services (physicians, nurses and midwives, community health workers, and hospital beds) are compiled by the WHO based on household and labor force surveys, censuses, and professional and administrative records. Data comparability is limited by differences in definitions. In estimates of health personnel, for example, some countries incorrectly include retired physicians (because deletions to physician rosters are made only periodically) or physicians working outside the health sector. Caution must be exercised in using

the data for nurses and midwives, because for some countries the available information does not clearly distinguish between the two groups. There is no universally accepted definition of hospital beds. Moreover, figures on physicians and hospital beds are indicators of availability, not of quality or use. They do not show how well trained the physicians are or how well equipped the hospitals or medical centers are. And physicians and hospital beds tend to be concentrated in urban areas, so these indicators give only a partial view of health services available to the entire population.

Meeting the minimum of 2.5 physicians, nurses, and midwives per 1,000 people is critical for countries to provide the adequate primary health care interventions needed to achieve the health-related Millennium Development Goals (WHO, World Health Report 2006).

Definitions

- **Total health expenditure** is the sum of public and private health expenditure. It covers the provision of health services (preventive and curative), family planning and nutrition activities, and emergency aid for health but excludes provision of water and sanitation.
- **Public health expenditure** is recurrent and capital spending from central and local governments, external borrowing and grants (including donations from international agencies and nongovernmental organizations), and social (or compulsory) health insurance funds.
- **Out of pocket health expenditure**, part of private health expenditure, is direct household outlays including gratuities and in-kind payments to health practitioners and pharmaceutical suppliers, therapeutic appliances, and other goods and services whose primary intent is to contribute to health restoration or enhancement.
- **External resources for health**, part of total health expenditure, are funds or services in kind provided by entities not part of the country. Resources may come from international organizations, other countries, or foreign nongovernmental organizations.
- **Health expenditure per capita** is total health expenditure divided by population.
- **Physicians** are graduates of any faculty or school of medicine working in the country in any medical field (practice, teaching, or research).
- **Nurses and midwives** are professional nurses, auxiliary nurses, enrolled nurses, and other nurses, such as dental nurses and primary care nurses, and professional midwives, auxiliary midwives, and enrolled midwives.
- **Community health workers** are traditional medicine practitioners, faith healers, assistant and community health education workers, community health officers, family health workers, lady health visitors, health extension package workers, community midwives, and traditional birth attendants.
- **Hospital beds** are inpatient beds for both acute and chronic care available in public, private, general, and specialized hospitals and rehabilitation centers.

Data sources

Data on health expenditure come mostly from the WHO's National Health Account database (www.who.int/nha/en) and from the OECD for its member countries, supplemented by country data. Data on physicians, nurses and midwives, community health workers, and hospital beds are from the WHO, OECD, and TransMONEE, supplemented by country data.



Disease prevention coverage and quality

	Access to an improved water source		Access to improved sanitation facilities		Child immunization rate		Children with acute respiratory infection taken to health provider	Children with diarrhea who received oral rehydration and continuous feeding	Children sleeping under treated bednets ^a	Children with fever receiving antimalarial drugs	Tuberculosis treatment success rate	DOTS detection rate
	% of population		% of population		% of children ages 12–23 months ^b		% of children under age 5 with ARI	% of children under age 5 with diarrhea	% of children under age 5	% of children under age 5 with fever	% of new registered cases	% of new estimated cases
	1990	2004	1990	2004	2006	2006	2000–06 ^c	2000–06 ^c	2000–06 ^c	2000–06 ^c	2005	2006
Afghanistan	..	..	..	..	..	..	..	..	..	..	90	66
Albania	96	96	..	91	97	98	45	50	..	..	77	37
Algeria	94	85	88	92	91	95	53	24	..	..	87	102
Angola	36	53	29	31	48	44	58	32	2.3	63.0	72	76
Argentina	94	96	81	91	97	91	..	..	..	..	53	71
Armenia	..	92	..	83	92	87	36	59	..	..	72	59
Australia	100	100	100	100	94	92	..	..	..	..	80	40
Austria	100	100	100	100	80	83	..	..	..	..	75	46
Azerbaijan	68	77	..	54	96	95	36	40	1.4	0.8	59	50
Bangladesh	72	74	20	39	81	88	30	49	..	..	91	65
Belarus	100	100	..	84	97	99	90	54	..	..	73	40
Belgium	..	..	..	..	88	97	..	42	..	..	66	55
Benin	63	67	12	33	89	93	36	42	20.1	54.0	87	86
Bolivia	72	85	33	46	81	81	52	54	..	..	78	69
Bosnia and Herzegovina	97	97	..	95	90	87	91	53	..	..	97	62
Botswana	93	95	38	42	90	97	14	7	..	..	70	80
Brazil	83	90	71	75	99	99	..	..	..	..	77	55
Bulgaria	99	99	99	99	96	95	..	..	..	..	86	94
Burkina Faso	38	61	7	13	88	95	39	42	9.6	48.0	71	17
Burundi	69	79	44	36	75	74	38	23	8.3	30.0	79	24
Cambodia	..	41	..	17	78	80	48	59	4.2	0.2	93	62
Cameroon	50	66	48	51	73	81	35	22	13.1	57.8	74	91
Canada	100	100	100	100	94	94	..	..	..	..	68	55
Central African Republic	52	75	23	27	35	40	32	47	15.1	57.0	65	69
Chad	19	42	7	9	23	20	7	27	0.6	44.0	69	19
Chile	90	95	84	91	91	94	..	..	..	..	78	141
China	70	77	23	44	93	93	..	..	..	..	94	79
Hong Kong, China	..	..	..	..	..	..	..	..	..	..	77	56
Colombia	92	93	82	86	88	86	62	39	0.7	..	71	83
Congo, Dem. Rep.	43	46	16	30	73	77	36	17	5.8 ^d	29.8 ^d	85	61
Congo, Rep.	..	58	..	27	66	79	48	39	6.1	48.0	28	51
Costa Rica	..	97	..	92	89	91	..	..	..	..	89	102
Côte d'Ivoire	69	84	21	37	73	77	35	45	5.9	36.0	75	37
Croatia	100	100	100	100	96	96	..	..	..	..	..	..
Cuba	..	91	98	98	96	89	..	..	..	..	91	94
Czech Republic	100	100	99	98	97	98	..	..	..	..	72	57
Denmark	100	100	..	..	99	93	..	..	..	..	83	62
Dominican Republic	84	95	52	78	99	81	64	42	..	..	85	66
Ecuador	73	94	63	89	97	98	..	..	..	..	83	34
Egypt, Arab Rep.	94	98	54	70	98	98	63	27	..	..	79	59
El Salvador	67	84	51	62	98	96	62	..	..	..	91	61
Eritrea	43	60	7	9	95	97	44	54	4.2	3.6	88	35
Estonia	100	100	97	97	96	95	..	..	..	..	72	66
Ethiopia	23	22	3	13	63	72	19	15	1.5	3.0	78	27
Finland	100	100	100	100	97	97	..	..	..	..	..	..
France	100	100	..	..	87	98	..	..	..	..	..	..
Gabon	..	88	..	36	55	38	48	44	..	..	46	58
Gambia, The	..	82	..	53	95	95	69	38	49.0	62.6	87	64
Georgia	80	82	97	94	95	87	99	..	..	..	73	109
Germany	100	100	100	100	94	90	..	..	..	..	71	54
Ghana	55	75	15	18	85	84	59	29	21.8	60.8	73	38
Greece	..	..	..	..	88	88	..	..	..	..	..	..
Guatemala	79	95	58	86	95	80	64	..	..	..	85	56
Guinea	44	50	14	18	67	71	42	38	0.3	43.5	72	55
Guinea-Bissau	..	59	..	35	60	77	57	25	39.0	45.7	69	64
Haiti	47	54	24	30	58	53	35	43	..	5.1	81	55

Disease prevention coverage and quality

2.16 PEOPLE

	Access to an improved water source		Access to improved sanitation facilities		Child immunization rate		Children with acute respiratory infection taken to health provider	Children with diarrhea who received oral rehydration and continuous feeding	Children sleeping under treated bednets ^a	Children with fever receiving antimalarial drugs	Tuberculosis treatment success rate	DOTS detection rate
	% of population 1990	2004	% of population 1990	2004	% of children ages 12-23 months ^b Measles 2006	DTP3 2006	% of children under age 5 with ARI 2000-06 ^c	% of children under age 5 with diarrhea 2000-06 ^c	% of children under age 5 2000-06 ^c	% of children under age 5 with fever 2000-06 ^c	% of new registered cases 2005	% of new estimated cases 2006
Honduras	84	87	50	69	91	87	56	49	..	0.5	88	85
Hungary	99	99	..	95	99	99	..	..	..	..	45	49
India	70	86	14	33	59	55	69	32	..	12.0	86	64
Indonesia	72	77	46	55	72	70	61	56	0.1	0.7	91	73
Iran, Islamic Rep.	92	94	83	..	99	99	93	..	..	..	83	69
Iraq	83	..	81	..	..	..	..	..	..	..	86	40
Ireland	..	..	..	..	86	91	..	..	..	..	..	..
Israel	100	100	..	..	95	95	..	..	..	..	78	31
Italy	..	..	..	..	87	96	..	..	..	..	74	71
Jamaica	92	93	75	80	87	85	75	39	..	..	57	73
Japan	100	100	100	100	99	99	..	..	..	..	60	79
Jordan	97	97	93	93	99	98	72	44	..	..	83	76
Kazakhstan	87	86	72	72	99	99	71	48	..	..	74 ^e	69
Kenya	45	61	40	43	77	80	49	33	4.6	26.5	82	70
Korea, Dem. Rep.	100	100	..	59	96	89	93	..	..	..	89	97
Korea, Rep.	..	92	..	..	99	98	..	..	..	..	83	18
Kuwait	..	..	..	..	99	99	..	..	..	..	63	95
Kyrgyz Republic	78	77	60	59	97	92	62	22	..	..	85	63
Lao PDR	..	51	..	30	48	57	36	37	17.7	8.7	90	77
Latvia	99	99	..	78	95	98	..	..	..	..	74	85
Lebanon	100	100	..	98	96	92	74	..	..	..	92	55
Lesotho	..	79	37	37	85	83	59	53	..	..	73	79
Liberia	55	61	39	27	94	88	70	..	2.6	..	76	55
Libya	71	..	97	97	98	98	..	..	..	..	69	156
Lithuania	..	..	..	..	97	94	..	..	..	..	70	109
Macedonia, FYR	..	..	..	..	94	93	93	45	..	..	84	66
Madagascar	40	46	14	32	59	61	48	47	0.2	34.2	74	73
Malawi	40	73	47	61	85	99	51	26	23.0	23.9	73	42
Malaysia	98	99	..	94	90	96	..	..	..	..	70	80
Mali	34	50	36	46	86	85	43	45	8.4	38.0	75	26
Mauritania	38	53	31	34	62	68	41	9	2.1	33.4	55	34
Mauritius	100	100	..	94	99	97	..	..	..	..	86	67
Mexico	82	97	58	79	96	98	..	..	..	..	77	118
Moldova	..	92	..	68	96	97	60	48	..	..	62	69
Mongolia	63	62	..	59	99	99	63	47	..	..	88	97
Morocco	75	81	56	73	95	97	38	46	..	..	81	95
Mozambique	36	43	20	32	77	72	55	47	..	15.0	79	47
Myanmar	57	78	24	77	78	82	66	65	..	..	85	109
Namibia	57	87	24	25	63	74	53	39	3.4	14.4	75	83
Nepal	70	90	11	35	85	89	43	43	..	..	88	64
Netherlands	100	100	100	100	96	98	..	..	..	..	84	36
New Zealand	97	..	..	..	82	89	..	..	..	..	60	61
Nicaragua	70	79	45	47	99	87	57	49	..	1.8	85	89
Niger	39	46	7	13	47	39	47	43	7.4	33.0	74	49
Nigeria	49	48	39	44	62	54	33	28	1.2	33.9	75	20
Norway	100	100	..	..	91	93	..	..	..	..	91	39
Oman	80	..	83	..	96	98	..	..	..	..	90	122
Pakistan	83	91	37	59	80	83	..	..	..	..	83	50
Panama	90	90	71	73	94	99	..	..	..	..	80	134
Papua New Guinea	39	39	44	44	65	75	..	..	..	..	71	21
Paraguay	62	86	58	80	88	73	..	..	..	..	91	48
Peru	74	83	52	63	99	94	68	71	..	..	91	96
Philippines	87	85	57	72	92	88	55	76	..	..	89	77
Poland	..	..	..	..	99	99	..	..	..	..	77	67
Portugal	..	..	..	..	93	93	..	..	..	..	89	88
Puerto Rico	..	..	..	..	..	..	..	..	..	..	75	82



	Access to an improved water source		Access to improved sanitation facilities		Child immunization rate		Children with acute respiratory infection taken to health provider	Children with diarrhea who received oral rehydration and continuous feeding	Children sleeping under treated bednets ^a	Children with fever receiving antimalarial drugs	Tuberculosis treatment success rate	DOTS detection rate
	% of population 1990	% of population 2004	% of population 1990	% of population 2004	% of children ages 12–23 months ^b Measles 2006	% of children ages 12–23 months ^b DTP3 2006	% of children under age 5 with ARI 2000–06 ^c	% of children under age 5 with diarrhea 2000–06 ^c	% of children under age 5 2000–06 ^c	% of children under age 5 with fever 2000–06 ^c	% of new registered cases 2005	% of new estimated cases 2006
Romania	..	57	..	..	95	97	..	..	..	..	82	79
Russian Federation	94	97	87	87	99	99	..	..	13.0	..	58	44
Rwanda	59	74	37	42	95	99	28	24	5.0	12.3	83	27
Saudi Arabia	94	96	91	99	95	96	..	..	..	..	65	40
Senegal	65	76	33	57	80	89	47	43	7.1	26.8	74	48
Serbia	93 ^f	93 ^f	87 ^f	87 ^f	88	92	93	31	..	..	85	79
Sierra Leone	..	57	..	39	67	64	48	31	5.3	51.9	86	35
Singapore	100	100	100	100	93	95	..	..	..	..	83	107
Slovak Republic	100	100	99	99	98	99	..	..	..	..	92	43
Slovenia	..	..	..	..	96	97	..	..	..	..	84	71
Somalia	..	29	..	26	35	35	13	7	9.2	7.9	89	83
South Africa	83	88	69	65	85	99	..	..	..	..	71	71
Spain	100	100	100	100	97	98	..	..	..	..	..	..
Sri Lanka	68	79	69	91	99	99	..	..	..	..	86	85
Sudan	64	70	33	34	73	78	57	56	27.6	54.2	82	30
Swaziland	..	62	..	48	57	68	60	24	0.1	25.5	42	49
Sweden	100	100	100	100	95	99	..	..	..	..	64	58
Switzerland	100	100	100	100	86	95	..	..	..	..	..	..
Syrian Arab Republic	80	93	73	90	98	99	77	34	..	..	89	48
Tajikistan	..	59	..	51	87	86	64	22	1.3	1.2	86	33
Tanzania	46	62	47	47	93	90	57	53	16.0	58.2	82	46
Thailand	95	99	80	99	96	98	84	46	..	..	75	73
Timor-Leste	..	58	..	36	64	67	24	..	8.0	47.4	82	33
Togo	50	52	37	35	83	87	23	22	38.4	47.7	71	19
Trinidad and Tobago	92	91	100	100	89	92	74	32	..	..	..	..
Tunisia	81	93	75	85	98	99	43	..	..	..	90	81
Turkey	85	96	85	88	98	90	41	..	..	..	89	80
Turkmenistan	..	72	..	62	99	98	83	25	..	..	81	58
Uganda	44	60	42	43	89	80	74	28	9.7	61.8	73	44
Ukraine	..	96	..	96	98	98	..	..	..	..	..	65
United Arab Emirates	100	100	97	98	92	94	..	..	..	..	73	17
United Kingdom	100	100	..	..	85	92	..	..	..	..	..	..
United States	100	100	100	100	93	96	..	..	..	..	64	88
Uruguay	100	100	100	100	94	95	..	..	..	..	84	77
Uzbekistan	94	82	51	67	95	95	68	28	..	..	81	48
Venezuela, RB	..	83	..	68	55	71	72	51	..	..	83	71
Vietnam	65	85	36	61	93	94	71	65	5.1	2.6	92	85
West Bank and Gaza	..	92	..	73	..	..	65	..	..	..	100	5
Yemen, Rep.	71	67	32	43	80	85	47	18	..	..	80	43
Zambia	50	58	44	55	84	80	69	48	22.8	57.9	84	53
Zimbabwe	78	81	50	53	90	90	26	..	2.9	4.7	68	42
World	76 w	83 w	45 w	57 w	80 w	80 w				.. w	85 w	62 w
Low income	64	75	21	38	69	68				21.1	84	54
Middle income	78	84	47	62	91	91				..	86	74
Lower middle income	74	81	37	55	90	89				..	90	77
Upper middle income	88	93	77	81	94	95				..	71	66
Low & middle income	72	80	36	51	79	79				..	85	62
East Asia & Pacific	72	79	30	51	89	89				..	91	78
Europe & Central Asia	92	92	84	85	97	95				..	70	56
Latin America & Carib.	83	91	67	77	93	92				..	79	69
Middle East & N. Africa	88	89	70	76	92	93				..	83	69
South Asia	71	84	17	37	65	64				12.0	86	63
Sub-Saharan Africa	49	56	31	37	71	72				34.5	76	46
High income	100	99	100	100	93	96				..	68	52
Euro area	100	100	100	100	91	95				..	..	33

a. For malaria prevention only. b. Refers to children who were immunized before age 12 months or in some cases at any time before the survey (12–23 months). c. Data are for the most recent year available. d. Data are for 2007. e. Data are for 2006. f. Includes Montenegro.

Disease prevention coverage and quality

About the data

People's health is influenced by the environment in which they live. Lack of clean water and basic sanitation is the main reason diseases transmitted by feces are so common in developing countries. Access to drinking water from an improved source and access to improved sanitation do not ensure safety or adequacy, as these characteristics are not tested at the time of the surveys. But improved drinking water technologies and improved sanitation facilities are more likely than those characterized as unimproved to provide safe drinking water and to prevent contact with human excreta. The data are derived by the Joint Monitoring Programme (JMP) of the World Health Organization (WHO) and United Nations Children's Fund (UNICEF) based on national censuses and nationally representative household surveys. The coverage rates for water and sanitation are based on information from service users on the facilities their households actually use rather than on information from service providers, which may include nonfunctioning systems. While the estimates are based on use, the JMP reports use as access, because access is the term used in the Millennium Development Goal target for drinking water and sanitation.

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

Acute respiratory infection continues to be a leading cause of death among young children, killing about 2 million children under age 5 in developing countries each year. An estimated 60 percent of these deaths can be prevented by the selective use of antibiotics by appropriate health care providers. Data are drawn mostly from household health surveys in which mothers report on number of episodes and treatment for acute respiratory infection.

Since 1990 diarrhea-related deaths among children have declined tremendously. Most diarrhea-related deaths are due to dehydration, and many of these deaths can be prevented with the use of oral

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

Malaria is endemic to the poorest countries in the world, mainly in tropical and subtropical regions of Africa, Asia, and the Americas. An estimated 300–500 million clinical malaria cases and more than 1 million malaria deaths occur each year—the vast majority in Sub-Saharan Africa and among children under age 5. Insecticide-treated bednets, if properly used and maintained, are one of the most important malaria-preventive strategies to limit human-mosquito contact. Studies have emphasized that mortality rates could be reduced by about 25–30 percent if every child under age 5 in malaria-risk areas such as Africa slept under a treated bednet every night.

Prompt and effective treatment of malaria is a critical element of malaria control. It is vital that sufferers, especially children under age 5, start treatment within 24 hours of the onset of symptoms, to prevent progression—often rapid—to severe malaria and death.

Data on the success rate of tuberculosis treatment are provided for countries that have implemented DOTS, the internationally recommended tuberculosis control strategy. The treatment success rate for tuberculosis provides a useful indicator of the quality of health services. A low rate or no success suggests that infectious patients may not be receiving adequate treatment. An essential complement to the tuberculosis treatment success rate is the DOTS detection rate, which indicates whether there is adequate coverage by the recommended case detection and treatment strategy. A country with a high treatment success rate may still face big challenges if its DOTS detection rate remains low.

For indicators that are from household surveys, the year in the table refers to the survey year. For more information, consult the original sources.

Definitions

• **Access to an improved water source** is the percentage of 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** is the percentage of 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. • **Child immunization rate** is the percentage of children ages 12–23 months who, before 12 months or at any time before the survey, had received measles vaccine and three doses of diphtheria, pertussis (whooping cough), and tetanus (DTP3) vaccine. One dose of measles vaccine and three doses of DTP vaccine are considered adequate. • **Children with acute respiratory infection taken to a health provider** are the percentage of children under age 5 with acute respiratory infection in the two weeks before the survey who were taken to an appropriate health provider. • **Children with diarrhea who received oral rehydration and continuous feeding** are the percentage of children under age 5 with diarrhea in the two weeks before the survey who received either oral rehydration therapy or increased fluids, with continuous feeding. • **Children sleeping under treated bednets** are the percentage of children under age 5 who slept under an insecticide-treated bednet to prevent malaria in the two weeks before the survey. • **Children with fever receiving antimalarial drugs** are the percentage of children under age 5 who were ill with fever in the two weeks before the survey and received any appropriate (locally defined) antimalarial drugs. • **Tuberculosis treatment success rate** is the percentage of new registered infectious tuberculosis cases that were cured or completed a full course of treatment. • **DOTS detection rate** is the percentage of estimated new infectious tuberculosis cases detected under the internationally recommended tuberculosis detection and treatment strategy.

Data sources

Data on access to water and sanitation are from the WHO and UNICEF's *Meeting the MDG Drinking Water and Sanitation Target* (www.who.int/water_sanitation_health/monitoring). Data on immunization are from WHO and UNICEF estimates (www.who.int/immunization_monitoring). Data on children with acute respiratory infection, with diarrhea, sleeping under treated bednets, and receiving antimalarial drugs are from UNICEF's *State of the World's Children 2008*, Childinfo, and Demographic and Health Surveys by Macro International. Data on tuberculosis are from the WHO's *Global Tuberculosis Control Report 2008: Surveillance, Planning, Financing*.



2.17

Reproductive health

	Total fertility rate		Adolescent fertility rate	Unmet need for contraception	Contraceptive prevalence rate	Newborns protected against tetanus	Pregnant women receiving prenatal care	Births attended by skilled health staff		Maternal mortality ratio	
	births per woman		births per 1,000 women ages 15–19	% of married women ages 15–49	% of married women ages 15–49	% of births	%	% of total		per 100,000 live births	
	1990	2006	2006	2000–06 ^a	2000–06 ^a	2006	2000–06 ^a	1990	2000–06 ^a	1990–2006 ^a	Modeled estimates 2005
Afghanistan	..	..	..	..	..	..	16	..	14	..	..
Albania	2.9	1.4	16	..	60	87	97	..	100	16	92
Algeria	4.6	2.4	8	..	61	70	89	77	95	117	180
Angola	7.1	6.5	139	..	6	80	66	..	45	..	1,400
Argentina	3.0	2.3	58	..	..	..	99	96	99	39	77
Armenia	2.5	1.3	30	13	53	..	93	..	98	16	76
Australia	1.9	1.8	15	..	..	..	..	100	100	..	4
Austria	1.5	1.4	12	..	..	..	..	..	..	..	4
Azerbaijan	2.7	2.3	29	..	55	..	70	..	100	26	82
Bangladesh	4.3	2.9	129	11	58	92	48	..	20	322	570
Belarus	1.9	1.3	22	..	73	..	99	..	100	10	18
Belgium	1.6	1.7	7	..	..	94	..	..	..	..	8
Benin	6.7	5.5	123	30	17	84	84	..	79	498	840
Bolivia	4.9	3.6	79	23	58	..	79	43	67	230	290
Bosnia and Herzegovina	1.7	1.2	21	23	36	85	99	97	100	3	3
Botswana	4.6	3.0	54	..	44	71	97	77	94	326	380
Brazil	2.8	2.3	89	..	..	84	97	72	97	76	110
Bulgaria	1.8	1.4	41	..	..	65	..	..	99	10	11
Burkina Faso	7.3	6.1	129	29	17	..	85	..	54	484	700
Burundi	6.8	6.8	55	..	9	84	92	..	34	615	1,100
Cambodia	5.7	3.3	43	25	40	80	69	..	44	472	540
Cameroon	5.9	4.4	122	20	29	52	82	58	63	669	1,000
Canada	1.8	1.5	14	..	..	82	..	..	100	..	7
Central African Republic	5.6	4.7	119	..	19	74	69	..	53	543	980
Chad	6.7	6.3	169	21	3	60	39	..	14	1,099	1,500
Chile	2.6	2.0	60	..	..	..	..	..	100	17	16
China	2.1	1.8	7	..	87	..	90	50	98	48	45
Hong Kong, China	1.3	1.0	5	..	..	..	..	..	100	..	..
Colombia	3.0	2.3	67	6	78	88	94	82	96	78	130
Congo, Dem. Rep.	6.7	6.3	224	..	21 ^b	77	85 ^b	..	74 ^b	1,289	1,100
Congo, Rep.	5.3	4.6	118	16	44	84	86	..	86	781	740
Costa Rica	3.1	2.1	73	..	96	..	92	98	99	36	30
Cote d'Ivoire	6.5	4.6	112	29	13	..	85	..	57	543	810
Croatia	1.6	1.4	13	..	69	..	100	100	100	7	7
Cuba	1.7	1.5	48	8	73	..	100	..	100	37	45
Czech Republic	1.9	1.3	11	..	..	..	..	..	100	5	4
Denmark	1.7	1.9	6	..	..	..	..	..	..	10	3
Dominican Republic	3.3	2.8	109	11	61	85	99	93	96	92	150
Ecuador	3.6	2.6	83	..	73	66	84	..	75	107	210
Egypt, Arab Rep.	4.3	2.9	41	10	59	86	70	37	74	84	130
El Salvador	3.7	2.7	82	..	67	91	86	52	92	71	170
Eritrea	6.2	5.1	75	27	8	79	70	..	28	998	450
Estonia	2.0	1.5	22	..	..	..	..	..	100	29	25
Ethiopia	6.8	5.3	97	34	15	80	28	..	6	673	720
Finland	1.8	1.8	10	..	..	..	..	..	100	6	7
France	1.8	2.0	7	..	..	..	..	..	..	10	8
Gabon	4.7	3.1	85	28	33	63	94	..	86	519	520
Gambia, The	6.0	4.8	106	..	18	94	98	44	57	730	690
Georgia	2.1	1.4	31	..	47	87	94	..	92	23	66
Germany	1.5	1.3	10	..	..	..	..	..	100	8	4
Ghana	5.7	3.9	58	34	17	..	92	40	50	..	560
Greece	1.4	1.4	9	..	..	69	..	..	..	1	3
Guatemala	5.6	4.2	109	..	43	91	84	..	41	153	290
Guinea	6.6	5.5	153	21	9	79	82	31	38	980	910
Guinea-Bissau	7.1	7.1	190	..	10	91	78	..	39	405	1,100
Haiti	5.4	3.6	48	38	32	94	85	23	26	630	670

Reproductive health

2.17

PEOPLE

	Total fertility rate		Adolescent fertility rate	Unmet need for contraception	Contraceptive prevalence rate	Newborns protected against tetanus	Pregnant women receiving prenatal care	Births attended by skilled health staff		Maternal mortality ratio	
	births per woman							births per 1,000 women ages 15–19	% of married women ages 15–49	% of married women ages 15–49	% of births	%	% of total	per 100,000 live births
	1990	2006	2006	2000–06 ^a	2000–06 ^a	2006	2000–06 ^a	1990	2000–06 ^a	1990–2006 ^a	Modeled estimates
Honduras	5.1	3.4	95	17	65	..	92	45	67	108	280
Hungary	1.8	1.4	20	..	..	..	..	..	100	4	6
India	3.8	2.5	63	..	56	83	74	..	47	301	450
Indonesia	3.1	2.2	41	9	57	87	92	32	72	307	420
Iran, Islamic Rep.	4.8	2.1	21	..	74	..	..	..	90	37	140
Iraq	5.9	..	..	..	..	..	84	54	89	..	..
Ireland	2.1	1.9	17	..	..	..	..	..	100	6	1
Israel	2.8	2.7	14	..	..	..	..	..	..	5	4
Italy	1.3	1.4	6	..	..	52	..	..	99	7	3
Jamaica	2.9	2.3	80	..	69	72	91	79	97	95	170
Japan	1.5	1.3	3	..	56	86	..	100	100	8	6
Jordan	5.4	3.2	25	11	56	..	99	87	100	41	62
Kazakhstan	2.7	2.1	30	..	51	..	100	..	100	70	140
Kenya	5.8	5.0	104	25	39	74	88	50	42	414	560
Korea, Dem. Rep.	2.4	1.9	1	..	..	..	..	..	97	105	370
Korea, Rep.	1.6	1.1	4	..	..	..	..	98	100	20	14
Kuwait	3.5	2.3	13	..	..	90	..	..	100	5	4
Kyrgyz Republic	3.7	2.4	31	1	48	82	97	..	98	104	150
Lao PDR	6.1	3.3	75	..	32	52	27	..	19	405	660
Latvia	2.0	1.4	15	..	..	..	..	..	100	10	10
Lebanon	3.1	2.2	25	..	58	72	96	..	98	..	150
Lesotho	4.9	3.5	77	31	37	72	90	..	55	762	960
Liberia	6.9	6.8	220	..	10	..	85	..	51	..	1,200
Libya	4.7	2.8	3	..	..	..	..	..	..	77	97
Lithuania	2.0	1.3	19	..	..	..	..	..	100	16	11
Macedonia, FYR	2.0	1.5	22	34	14	..	98	..	98	21	10
Madagascar	6.2	4.9	136	24	27	67	80	57	51	469	510
Malawi	6.9	5.7	140	28	42	84	92	55	54	984	1,100
Malaysia	3.7	2.7	13	..	..	88	79	..	98	28	62
Mali	7.4	6.6	183	29	8	..	57	..	41	582	970
Mauritania	5.8	4.5	88	32	8	94	64	40	57	747	820
Mauritius	2.3	2.0	41	..	76	..	..	91	99	22	15
Mexico	3.4	2.2	66	..	71	87	..	..	83	62	60
Moldova	2.3	1.2	33	..	68	..	98	..	100	19	22
Mongolia	4.0	2.3	46	14	66	87	99	..	99	93	46
Morocco	4.0	2.4	19	10	63	..	68	31	63	227	240
Mozambique	6.2	5.2	155	18	17	85	85	..	48	408	520
Myanmar	3.4	2.1	17	..	34	87	76	..	68	316	380
Namibia	5.7	3.3	61	22	44	81	91	68	76	271	210
Nepal	5.1	3.1	116	25	48	83	44	7	19	281	830
Netherlands	1.6	1.7	5	..	..	..	..	..	100	7	6
New Zealand	2.2	2.1	23	..	..	..	..	..	97	15	9
Nicaragua	4.7	2.8	114	15	69	94	86	..	67	87	170
Niger	7.9	7.0	201	16	11	53	46	15	18	648	1,800
Nigeria	6.7	5.4	131	17	13	71	58	33	36	..	1,100
Norway	1.9	1.9	9	..	..	..	..	100	..	6	7
Oman	6.5	3.1	11	..	32	94	100	..	98	15	64
Pakistan	5.8	3.9	33	..	28	80	36	19	31	533	320
Panama	3.0	2.6	84	..	..	..	..	..	91	40	130
Papua New Guinea	4.8	3.9	55	..	..	81	..	..	42	..	470
Paraguay	4.7	3.2	74	..	73	82	94	66	77	174	150
Peru	3.9	2.6	61	8	46	64	92	80	87	185	240
Philippines	4.3	3.3	48	17	49	57	88	..	60	172	230
Poland	2.0	1.3	13	..	..	..	..	..	100	4	8
Portugal	1.4	1.4	14	..	..	..	..	98	100	8	11
Puerto Rico	2.2	1.8	50	..	..	..	..	..	100	..	18



	Total fertility rate		Adolescent fertility rate	Unmet need for contraception	Contraceptive prevalence rate	Newborns protected against tetanus	Pregnant women receiving prenatal care	Births attended by skilled health staff		Maternal mortality ratio	
	births per woman		births per 1,000 women ages 15–19	% of married women ages 15–49	% of married women ages 15–49	% of births	%	% of total		per 100,000 live births	
	1990	2006	2006	2000–06 ^a	2000–06 ^a	2006	2000–06 ^a	1990	2000–06 ^a	1990–2006 ^a	Modeled estimates 2005
Romania	1.8	1.3	33	..	70	..	94	..	98	17	24
Russian Federation	1.9	1.3	28	..	..	..	..	..	99	23	28
Rwanda	7.4	5.9	41	38	17	82	94	26	39	750	1,300
Saudi Arabia	5.9	3.4	29	..	..	56	..	..	96	10	18
Senegal	6.5	5.3	91	32	12	86	87	..	52	434	980
Serbia	1.8	1.4	25	29	41	..	98	..	99	7 ^c	14 ^c
Sierra Leone	6.5	6.5	166	..	5	..	81	..	43	1,800	2,100
Singapore	1.9	1.3	5	..	..	4	..	..	100	6	14
Slovak Republic	2.1	1.2	20	..	..	73	..	..	100	6	6
Slovenia	1.5	1.3	7	..	..	74	..	100	100	17	6
Somalia	6.8	6.1	67	..	15	..	26	..	33	1,044	1,400
South Africa	3.3	2.7	63	..	60	88	92	..	92	150	400
Spain	1.3	1.4	9	..	..	72	..	..	..	6	4
Sri Lanka	2.5	1.9	26	..	70	93	100	..	96	43	58
Sudan	5.9	4.3	59	6	8	..	70	69	49	..	450
Swaziland	5.3	3.5	34	..	48	..	90	..	74	229	390
Sweden	2.1	1.9	4	..	..	86	..	..	..	5	3
Switzerland	1.6	1.4	4	..	..	93	..	..	100	5	5
Syrian Arab Republic	5.4	3.2	38	..	58	87	84	..	93	65	130
Tajikistan	5.1	3.4	28	..	38	88	77	..	83	97	170
Tanzania	6.1	5.3	123	22	26	..	78	53	46	578	950
Thailand	2.1	1.8	42	..	77	..	98	..	97	24	110
Timor-Leste	4.9	7.3	56	..	10	63	61	..	18	..	380
Togo	6.4	4.9	92	..	17	84	89	31	62	480	510
Trinidad and Tobago	2.4	1.6	35	..	43	..	96	..	98	45	45
Tunisia	3.5	2.0	7	..	63	89	92	69	90	69	100
Turkey	3.0	2.2	39	..	71	67	81	..	83	29	44
Turkmenistan	4.2	2.6	16	10	48	..	99	..	100	14	130
Uganda	7.1	6.7	156	41	24	88	94	38	42	505	550
Ukraine	1.8	1.3	28	..	66	..	99	..	100	13	18
United Arab Emirates	4.3	2.3	19	..	..	..	..	..	100	3	37
United Kingdom	1.8	1.9	24	..	84	..	..	..	..	7	8
United States	2.1	2.1	43	..	..	..	..	99	99	8	11
Uruguay	2.5	2.0	62	..	..	..	..	..	99	26	20
Uzbekistan	4.1	2.4	34	8	65	87	99	..	100	28	24
Venezuela, RB	3.4	2.6	90	..	..	88	94	..	95	60	57
Vietnam	3.6	2.1	18	5	76	61	91	..	88	162	150
West Bank and Gaza	6.3	4.6	82	..	50	..	99	..	99	..	..
Yemen, Rep.	8.0	5.6	73	..	23	..	41	16	27	365	430
Zambia	6.4	5.3	130	27	34	90	93	51	43	729	830
Zimbabwe	5.1	3.8	62	13	60	80	94	70	80	555	880
World	3.1 w	2.5 w	52 w		60 w	.. w	80 w	.. w	65 w		400 w
Low income	4.7	3.5	82		44	81	69	..	43		650
Middle income	2.7	2.1	32		75	..	90	53	88		160
Lower middle income	2.6	2.1	24		76	..	89	50	86		180
Upper middle income	2.7	2.0	56		..	..	..	..	94		97
Low & middle income	3.4	2.7	56		60	..	80	..	62		440
East Asia & Pacific	2.4	2.0	16		79	..	89	47	87		150
Europe & Central Asia	2.3	1.6	29		63	..	91	81	95		43
Latin America & Carib.	3.2	2.4	77		69	84	95	73	88		130
Middle East & N. Africa	4.8	2.9	30		60	..	76	48	77		200
South Asia	4.1	2.8	69		53	84	66	32	41		500
Sub-Saharan Africa	6.2	5.2	122		22	76	72	44	45		900
High income	1.8	1.7	22		..	..	..	..	99		9
Euro area	1.5	1.5	8		..	..	..	..	..		5

a. Data are for most recent year available. b. Data are for 2007. c. Includes Montenegro.

About the data

Reproductive health is a state of physical and mental well-being in relation to the reproductive system and its functions and processes. Means of achieving reproductive health include education and services during pregnancy and childbirth, safe and effective contraception, and prevention and treatment of sexually transmitted diseases. Pregnancy and childbirth complications are the leading cause of death and disability among women of reproductive age in developing countries.

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

More couples in developing countries want to limit or postpone childbearing but are not using effective contraception. These couples have an unmet need for contraception. Common reasons are lack of knowledge about contraceptive methods and concerns about possible side effects. This indicator excludes women not exposed to the risk of unintended pregnancy because of menopause, infertility, or postpartum anovulation.

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

An important cause of infant mortality in some developing countries, neonatal tetanus can be prevented through immunization of the mother during pregnancy. The data on tetanus in this year's edition are estimated by the "protection at birth" model, which tracks the immunization status of women of child-bearing age. The estimates account for the number of doses received and the time since the mother's last immunization. A currently immune woman's child is considered protected. Because the methodology behind this indicator has changed,

these data cannot be compared with those in previous editions.

Good prenatal and postnatal care improve maternal health and reduce maternal and infant mortality. But data may not reflect such improvements because health information systems are often weak, maternal deaths are underreported, and rates of maternal mortality are difficult to measure.

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

The national estimates of maternal mortality ratios in the table are based on national surveys, vital registration records, and surveillance data or are derived from community and hospital records. The modeled estimates are based on an exercise by the World Health Organization (WHO), United Nations Children's Fund (UNICEF), United Nations Population Fund (UNFPA), and World Bank. For countries with complete vital registration systems with good attribution of cause of death information, the data are used as reported. For countries with national data, either from complete vital registration systems with uncertain or poor attribution of cause of death information, or from household surveys, reported maternal mortality was adjusted usually by a factor of underenumeration and misclassification. For countries with no empirical national data (about 35 percent of countries), maternal mortality was estimated with a regression model using socioeconomic information, including fertility, birth attendants, and GDP. Neither set of ratios can be assumed to provide an exact estimate of maternal mortality for any of the countries in the table.

For the indicators that are from household surveys, the year in the table refers to the survey year. For more information, consult the original sources.

Definitions

- **Total fertility rate** is the number of children that would be born to a woman if she were to live to the end of her childbearing years and bear children in accordance with current age-specific fertility rates.
- **Adolescent fertility rate** is the number of births per 1,000 women ages 15–19.
- **Unmet need for contraception** is the percentage of fertile, married women of reproductive age who do not want to become pregnant and are not using contraception.
- **Contraceptive prevalence rate** is the percentage of women married or in-union ages 15–49 who are practicing, or whose sexual partners are practicing, any form of contraception.
- **Newborns protected against tetanus** are the percentage of births by women of child-bearing age who are immunized against tetanus.
- **Pregnant women receiving prenatal care** are the percentage of women attended at least once during pregnancy by skilled health personnel for reasons related to pregnancy.
- **Births attended by skilled health staff** are the percentage of deliveries attended by personnel trained to give the necessary care to women during pregnancy, labor, and postpartum; to conduct deliveries on their own; and to care for newborns.
- **Maternal mortality ratio** is the number of women who die from pregnancy-related causes during pregnancy and childbirth per 100,000 live births.

Data sources

Data on fertility rates are compiled and estimated by the World Bank's Development Data Group. Inputs come from the United Nations Population Division's *World Population Prospects: The 2006 Revision*, census reports and other statistical publications from national statistical offices, and household surveys such as Demographic and Health Surveys. Data on women with unmet need for contraception and contraceptive prevalence rates are from household surveys, including Demographic and Health Surveys by Macro International and Multiple Indicator Cluster Surveys by UNICEF. Data on tetanus vaccinations, pregnant women receiving prenatal care, births attended by skilled health staff, and national estimates of maternal mortality ratios are from UNICEF's *State of the World's Children 2008* and Childinfo and Demographic and Health Surveys by Macro International. Modeled estimates for maternal mortality ratios are from "Maternal Mortality in 2005: Estimates Developed by WHO, UNICEF, UNFPA and the World Bank" (2007).



2.18

Nutrition

	Prevalence of undernourishment		Prevalence of child malnutrition		Prevalence of overweight children	Low-birthweight babies	Exclusive breastfeeding	Consumption of iodized salt	Vitamin A supplementation
	% of population 1990-92	2002-04 ^a	% of children under age 5 Underweight 2000-06 ^b	% of children under age 5 Stunting 2000-06 ^b	% of children under age 5 2000-06 ^b	% of births 2000-06 ^b	% of children under 6 months 2000-06 ^b	% of households 2000-06 ^b	% of children 6-59 months 2005
Afghanistan	..	..	..	..	..	..	..	28	..
Albania	5 ^c	6	17.0	39.2	30.0	7	2	62	..
Algeria	5	4	10.2	21.6	15.4	6	7	61	..
Angola	58	35	27.5	50.8	5.3	12	11	35	79
Argentina	<2.5	3	2.3	8.2	9.9	7	..	..	..
Armenia	52 ^c	24	4.2	18.2	11.7	8	33	97	..
Australia	<2.5	<2.5	..	..	..	7	..	..	..
Austria	<2.5	<2.5	..	..	..	7	..	..	..
Azerbaijan	34 ^c	7	14.0	24.1	6.2	12	7	26	29 ^d
Bangladesh	35	30	39.2	47.8	0.9	22	37	84	83
Belarus	<2.5 ^c	4	..	..	..	4	9	55	..
Belgium	<2.5	<2.5	..	..	..	..	..	..	..
Benin	20	12	21.5	39.1	3.0	13	70	55	94
Bolivia	28	23	5.9	32.5	9.2	7	54	90	39
Bosnia and Herzegovina	9 ^c	9	4.2	12.1	16.3	5	18	62	..
Botswana	23	32	10.7	29.1	10.4	10	34	66	62
Brazil	12	7	3.7	..	..	8	..	88	..
Bulgaria	8 ^c	8	1.6	8.8	13.6	10	..	100	..
Burkina Faso	21	15	35.2	43.1	5.4	16	7	34	95
Burundi	48	66	38.9	63.1	1.4	11	45	98	69
Cambodia	43	33	28.4	43.7	1.7	11	60	73	79
Cameroon	33	26	15.1	35.4	8.7	11	21	49	95
Canada	<2.5	<2.5	..	..	..	6	..	..	..
Central African Republic	50	44	21.8	44.6	10.8	13	23	62	79
Chad	58	35	33.9	44.8	4.4	22	2	56	95
Chile	8	4	..	..	..	6	63	100	..
China	16	12	6.8	21.8	9.2	2	51	90	..
Hong Kong, China	..	..	..	..	..	5	..	..	..
Colombia	17	13	5.1	16.2	4.2	6	47	90	..
Congo, Dem. Rep.	31	74	33.6	44.4	6.5	12	36 ^e	72	92
Congo, Rep.	54	33	11.8	31.2	8.5	13	19	82	90
Costa Rica	6	5	..	..	..	7	..	..	60
Côte d'Ivoire	18	13	..	..	..	17	4	84	95
Croatia	16 ^c	7	..	..	..	6	..	..	..
Cuba	7	<2.5	..	..	..	5	26	88	..
Czech Republic	<2.5 ^c	<2.5	2.1	2.6	4.4	7	..	..	..
Denmark	<2.5	<2.5	..	..	..	5	..	..	..
Dominican Republic	27	29	4.2	11.7	8.6	11	4	19	40
Ecuador	8	6	6.2	29.0	5.1	..	40	..	..
Egypt, Arab Rep.	4	4	5.4	23.8	14.1	14	38	78	..
El Salvador	12	11	6.1	24.6	5.8	7	24	62	..
Eritrea	70 ^c	75	34.5	43.7	1.6	14	52	68	57
Estonia	9 ^c	<2.5	..	..	..	4	..	..	..
Ethiopia	69 ^c	46	34.6	50.7	5.1	14	49	20	59
Finland	<2.5	<2.5	..	..	..	4	..	..	..
France	<2.5	<2.5	..	..	..	..	..	..	..
Gabon	10	5	8.8	26.3	5.6	14	6	36	30
Gambia, The	22	29	15.4	24.1	3.0	20	41	7	95
Georgia	44 ^c	9	..	..	..	7	..	91	..
Germany	<2.5	<2.5	..	..	..	..	..	..	..
Ghana	37	11	18.8	35.6	4.5	9	54	32	95
Greece	<2.5	<2.5	..	..	..	..	..	..	..
Guatemala	16	22	17.7	54.3	5.6	12	51	67	44 ^d
Guinea	39	24	22.5	39.3	5.1	12	27	51	95
Guinea-Bissau	24	39	21.9	36.1	5.1	24	16	1	64
Haiti	65	46	18.9	29.7	3.9	25	41	3	42

	Prevalence of undernourishment		Prevalence of child malnutrition		Prevalence of overweight children	Low-birthweight babies	Exclusive breastfeeding	Consumption of iodized salt	Vitamin A supplementation
	% of population		% of children under age 5		% of children under age 5	% of births	% of children under 6 months	% of households	% of children 6–59 months
	1990–92	2002–04 ^a	2000–06 ^b	2000–06 ^b	2000–06 ^b	2000–06 ^b	2000–06 ^b	2000–06 ^b	2005
Honduras	23	23	8.6	29.9	5.8	10	30	..	40
Hungary	<2.5 ^c	<2.5	..	..	..	9	..	..	..
India	25	20	43.5	47.9	1.9	..	46	51	64 ^d
Indonesia	9	6	24.4	28.6	5.1	9	40	73	76
Iran, Islamic Rep.	4	4	..	..	..	..	44	99	..
Iraq	..	..	..	..	..	..	..	28	..
Ireland	<2.5	<2.5	..	..	..	..	..	..	..
Israel	<2.5	<2.5	..	..	..	8	..	..	..
Italy	<2.5	<2.5	..	..	..	..	..	..	..
Jamaica	14	9	3.1	4.5	7.5	12	15	..	..
Japan	<2.5	<2.5	..	..	..	8	..	..	..
Jordan	4	6	3.6	12.0	4.7	12	27	88	..
Kazakhstan	<2.5 ^c	6	..	..	..	6	17	92	..
Kenya	39	31	16.5	35.8	5.8	10	13	91	69
Korea, Dem. Rep.	18	33	17.8	44.7	0.9	7	65	40	95
Korea, Rep.	<2.5	<2.5	..	..	..	4	..	..	..
Kuwait	24	5	..	..	..	..	..	..	..
Kyrgyz Republic	21 ^c	4	..	..	..	5	32	76	88
Lao PDR	29	19	36.4	48.2	2.7	14	23	75	63
Latvia	3 ^c	3	..	..	..	5	..	..	..
Lebanon	<2.5	3	..	..	..	6	27	92	..
Lesotho	17	13	16.6	45.2	6.8	13	36	91	9
Liberia	34	50	22.8	45.3	4.6	..	35	..	95
Libya	<2.5	<2.5	..	..	..	..	..	..	..
Lithuania	4 ^c	<2.5	..	..	..	4	..	..	..
Macedonia, FYR	15 ^c	5	1.2	1.2	7.9	6	16	94	95
Madagascar	35	38	36.8	52.8	6.2	17	67	75	95
Malawi	50	35	18.4	52.5	10.2	13	56	48	94
Malaysia	3	3	..	..	..	9	..	..	..
Mali	29	29	30.1	42.7	3.1	23	25	74	66
Mauritania	15	10	30.4	39.5	3.8	..	20	2	96
Mauritius	6	5	..	..	..	14	21	..	..
Mexico	5	5	3.4	15.5	7.6	8	..	91	68
Moldova	5 ^c	11	3.2	11.3	9.1	6	46	60	..
Mongolia	34	27	4.8	23.5	6.1	6	57	83	92
Morocco	6	6	9.9	23.1	13.3	15	31	59	..
Mozambique	66	44	21.2	47.0	6.3	15	30	54	95
Myanmar	10	5	29.6	40.6	2.4	15	15	60	95
Namibia	34	24	20.3	29.5	3.3	14	19	63	68
Nepal	20	17	38.8	49.3	0.6	21	53	63	96
Netherlands	<2.5	<2.5	..	..	..	..	..	..	..
New Zealand	<2.5	<2.5	..	..	..	6	..	..	..
Nicaragua	30	27	7.8	25.2	7.1	12	31	97	98
Niger	41	32	39.9	54.8	3.5	13	14	46	94
Nigeria	13	9	27.2	43.0	6.2	14	17	97	73
Norway	<2.5	<2.5	..	..	..	5	..	..	..
Oman	..	..	..	..	..	8	..	..	95
Pakistan	24	24	31.3	41.5	4.8	..	..	17	95
Panama	21	23	..	..	..	10	..	..	4
Papua New Guinea	..	..	..	..	..	..	..	..	90
Paraguay	18	15	..	..	..	9	22	88	..
Peru	42	12	5.2	31.3	11.8	7	63	91	..
Philippines	26	18	20.7	33.8	2.4	20	34	56	85
Poland	<2.5 ^c	<2.5	..	..	..	6	..	..	..
Portugal	<2.5	<2.5	..	..	..	8	..	..	..
Puerto Rico	..	..	..	..	..	..	..	..	..



2.18

Nutrition

	Prevalence of undernourishment		Prevalence of child malnutrition		Prevalence of overweight children	Low-birthweight babies	Exclusive breastfeeding	Consumption of iodized salt	Vitamin A supplementation
	% of population 1990–92	2002–04 ^a	% of children under age 5 Underweight 2000–06 ^b	Stunting 2000–06 ^b	% of children under age 5 2000–06 ^b	% of births 2000–06 ^b	% of children under 6 months 2000–06 ^b	% of households 2000–06 ^b	% of children 6–59 months 2005
Romania	<2.5 ^c	<2.5	3.5	12.8	8.3	8	16	74	..
Russian Federation	4 ^c	3	..	..	..	6	..	35	..
Rwanda	43	33	18.0	51.7	6.7	6	88	88	100
Saudi Arabia	4	4	..	..	..	..	..	..	..
Senegal	23	20	14.5	20.1	2.4	19	34	41	95
Serbia	5 ^{c,f}	9 ^f	..	..	..	5	15	..	..
Sierra Leone	46	51	24.7	38.4	4.7	24	8	45	95
Singapore	..	..	3.3	4.4	2.6	8	..	..	..
Slovak Republic	4 ^c	7	..	..	..	7	..	..	..
Slovenia	3 ^c	3	..	..	..	6	..	..	..
Somalia	..	..	..	..	..	11	9	1	6
South Africa	<2.5	<2.5	..	..	..	..	7	..	33
Spain	<2.5	<2.5	..	..	..	..	..	..	..
Sri Lanka	28	22	22.8	18.4	1.0	22	53	94	64 ^d
Sudan	31	26	38.4	47.6	5.2	..	34	11	90
Swaziland	14	22	9.1	36.6	14.9	9	24	59	59
Sweden	<2.5	<2.5	..	..	..	..	..	..	..
Switzerland	<2.5	<2.5	..	..	..	..	..	..	..
Syrian Arab Republic	5	4	..	..	..	9	29	79	..
Tajikistan	22 ^c	56	..	..	..	10	25	46	98
Tanzania	37	44	16.7	44.4	4.9	10	41	43	95
Thailand	30	22	..	..	..	9	5	58	..
Timor-Leste	11	9	40.6	55.7	5.7	12	31	72	91
Togo	33	24	..	..	..	12	28	25	95
Trinidad and Tobago	13	10	4.4	5.3	4.9	19	13	28	..
Tunisia	<2.5	<2.5	..	..	..	7	47	97	..
Turkey	<2.5	3	..	..	..	..	21	64	..
Turkmenistan	12 ^c	7	..	..	..	4	11	87	..
Uganda	24	19	19.0	44.8	4.9	12	60	96	78
Ukraine	<2.5 ^c	<2.5	4.1	22.9	26.5	4	6	18	..
United Arab Emirates	4	3	..	..	..	..	..	..	..
United Kingdom	<2.5	<2.5	..	..	..	8	..	..	..
United States	<2.5	<2.5	1.1	3.3	7.0	8	..	..	..
Uruguay	7	<2.5	6.0	13.9	9.4	8	..	..	..
Uzbekistan	8 ^c	25	..	..	..	5	26	53	82
Venezuela, RB	11	18	..	..	..	9	..	..	..
Vietnam	31	16	26.7	43.4	2.5	7	17	93	99 ^d
West Bank and Gaza	..	16	..	..	..	7	27	86	..
Yemen, Rep.	34	38	..	..	..	..	12	30	15 ^d
Zambia	48	46	23.3	52.5	5.9	12	40	77	66
Zimbabwe	45	47	14.0	35.8	9.1	..	22	..	81
World	17 w	14 w	23.5 w	.. w	5.5 w	10 w	39 w	68 w	.. w
Low income	27	24	35.3	45.9	3.4	..	38	55	76
Middle income	14	10	9.5	23.8	8.5	7	40	79	..
Lower middle income	16	11	10.7	24.8	8.5	7	41	81	..
Upper middle income	..	5	..	..	..	8	..	72	..
Low & middle income	20	16	24.5	37.1	5.4	10	39	68	..
East Asia & Pacific	17	12	12.9	26.2	7.3	6	44	84	..
Europe & Central Asia	6 ^c	6	..	..	..	6	..	50	..
Latin America & Carib.	13	10	5.1	..	..	9	..	85	..
Middle East & N. Africa	6	7	..	..	..	12	30	72	..
South Asia	26	21	41.0	46.7	2.1	..	45	51	72
Sub-Saharan Africa	29	30	27.0	44.5	5.7	13	31	61	79
High income	3	3	..	..	..	..	..	..	..
Euro area	3	3	..	..	..	..	..	..	..

a. Preliminary data. b. Data are for the most recent year available. c. Data are for 1993–95. d. Country's vitamin A supplementation programs do not target children all the way up to 59 months of age. e. Data are for 2007. f. Includes Montenegro.

About the data

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

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

Estimates of children who are overweight are also from national survey data. Overweight children have become a growing concern in developing countries. Researchers show an association between obesity in childhood and a high prevalence of diabetes, respiratory disease, high blood pressure, and psychosocial and orthopedic disorders (de Onis and Blössner 2000).

New international child growth reference standards for infants and young children were released in 2006 by the World Health Organization (WHO) as a tool for monitoring the nutritional status of children. They are also key in measuring and monitoring health targets for the Millennium Development Goals. The differences in children's growth to age 5 are influenced

more by nutrition, feeding practices, environment, and healthcare than by genetics or ethnicity. The data reported previously were based on the U.S. National Center for Health Statistics–WHO growth reference. Because of the change in standards, the data in this edition should not be compared with data in previous editions.

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

Improved breastfeeding practice can save an estimated 1.3 million children a year. Breast milk alone contains all the nutrients, antibodies, hormones, and antioxidants an infant needs to thrive. It protects babies from diarrhea and acute respiratory infections, stimulates their immune systems and response to vaccination, and according to some studies confers cognitive benefits as well. The data on breastfeeding are derived from national surveys.

Iodine deficiency is the single most important cause of preventable mental retardation, and it contributes significantly to the risk of stillbirth and miscarriage. Widely used and inexpensive, iodized salt is the best source of iodine, and a global campaign to iodize edible salt is significantly reducing the risks (UNICEF, *Childinfo* 2006). The data on iodized salt are derived from household surveys.

Vitamin A is essential for the functioning of the immune system. Besides being a leading cause of blindness, vitamin A deficiency causes a 23 percent greater risk of dying from a range of childhood ailments such as measles, malaria, and diarrhea. Giving vitamin A to new mothers who are breastfeeding helps protect their children during the first months of life. Food fortification with vitamin A is being introduced in many developing countries.

For indicators from household surveys, the year in the table refers to the survey year. For more information, consult the original sources.

Definitions

• **Prevalence of undernourishment** is the percentage of the population that is undernourished—whose dietary energy consumption is continuously below a minimum dietary energy requirement for maintaining a healthy life and carrying out light physical activity.

• **Prevalence of child malnutrition** is the percentage of children under age 5 whose weight for age (underweight) or height for age (stunting) is more than two standard deviations below the median for the international reference population ages 0–59 months. For children up to two years old height is measured by recumbent length. For older children height is measured by stature while standing. The table presents data for the WHO's new child growth standards released in 2006.

• **Prevalence of overweight children** is the percentage of children under age 5 whose weight for height is more than two standard deviations above the median for the international reference population of the corresponding age as established by the WHO's new child growth standards released in 2006.

• **Low-birthweight babies** are the percentage of newborns weighing less than 2.5 kilograms, with the measurement taken within the first hours of life, before significant postnatal weight loss has occurred.

• **Exclusive breastfeeding** is the percentage of children less than six months old who were fed breast milk alone (no other liquids) in the past 24 hours.

• **Consumption of iodized salt** is the percentage of households that use edible salt fortified with iodine.

• **Vitamin A supplementation** is the percentage of children ages 6–59 months old who received at least one dose of vitamin A in the previous six months, as reported by mothers.

Data sources

Data on undernourishment are from www.fao.org/faostat/foodsecurity/index_en.htm. Data on malnutrition and overweight children are from the WHO's Global Database on Child Growth and Malnutrition (www.who.int/nutgrowthdb). Data on low-birthweight babies, breastfeeding, iodized salt consumption, and vitamin A supplementation are from the United Nations Children's Fund's *State of the World's Children 2008* and *Childinfo*.



	Prevalence of smoking		Incidence of tuberculosis	Prevalence of diabetes	Prevalence of HIV						Condom use	
	% of adults				per 100,000 people 2006	% of population ages 20–79 2007	Total % of population ages 15–49		Female % of total population with HIV 2003	Youth % of population ages 15–24 2005	% of population ages 15–24	
	Male 2000–05 ^a	Female 2000–05 ^a					2003	2005			Male 2000–06 ^a	Female 2000–06 ^a
Afghanistan	..	..	..	..	..	..	..	..	..	..	..	..
Albania	60	18	19	4.5	0.2	0.2	..	..	..	..	..	..
Algeria	32	0 ^b	56	8.4	0.1	0.1	20.6	21.6	..	..	..	..
Angola	..	..	285	3.3	3.7	3.7	59.3	60.7	0.9	2.5	..	..
Argentina	32	25	39	5.6	0.6	0.6	26.7	27.7	..	..	..	..
Armenia	62	2	72	7.7	0.1	0.1	..	..	..	..	32	7
Australia	19	16	6	5.0	0.1	0.1	..	..	..	..	..	..
Austria	..	..	13	7.9	0.3	0.3	19.2	19.2	..	..	..	..
Azerbaijan	..	1	77	7.3	<0.1	0.1	..	..	..	..	..	..
Bangladesh	55	27	225	5.3	<0.1	<0.1	..	12.7	..	..	..	..
Belarus	53	7	61	7.6	0.3	0.3	24.4	25.5	..	..	..	..
Belgium	30	25	13	5.2	0.2	0.3	45.5	38.6	..	..	..	..
Benin	..	..	90	4.4	2.0	1.8	59.3	58.4	0.4	1.1	32	8
Bolivia	..	..	198	5.8	0.1	0.1	27.0	27.9	..	..	29	10
Bosnia and Herzegovina	49	30	51	7.0	..	<0.1	..	..	..	..	..	..
Botswana	..	..	551	5.2	24.0	24.1	56.0	53.8	5.7	15.3	..	..
Brazil	22	14	50	6.2	0.5	0.5	34.5	36.1	..	..	..	..
Bulgaria	44	23	40	7.6	..	<0.1	..	..	..	..	..	..
Burkina Faso	..	..	248	3.7	1.8 ^c	2.0	59.2	57.1	0.5	1.4	54	17
Burundi	..	..	367	1.7	3.3	3.3	60.8	60.8	0.8	2.3	..	..
Cambodia	..	..	500	5.0	2.0	1.6	46.4	45.4	..	..	..	3
Cameroon	..	..	192	3.7	5.5	5.5 ^d	62.2	61.7	1.4	4.9	52	24
Canada	22	17	5	7.4	0.3	0.3	12.2	16.3	..	..	..	..
Central African Republic	..	..	345	4.4	10.8	10.7	59.1	56.5	2.5	7.3	..	..
Chad	..	..	299	3.6	3.4	3.5	54.7	56.3	0.9	2.2	18	7
Chile	48	37	15	5.6	0.3	0.3	26.4	27.1	..	..	..	..
China	67	4	99	4.1	0.1 ^e	0.1 ^e	24.5 ^e	27.7 ^e	..	..	..	..
Hong Kong, China	22	4	62	8.2	..	..	..	..	..	..	..	..
Colombia	..	..	45	5.0	0.5	0.6	26.4	28.1	..	..	..	23
Congo, Dem. Rep.	..	..	392	3.0	3.2	3.2	59.0	58.4	0.8	2.2	..	..
Congo, Rep.	..	..	403	5.0	5.4	5.3	58.6	61.0	1.2	3.7	36	16
Costa Rica	29	10	14	9.3	0.3	0.3	27.0	27.4	..	..	..	..
Côte d'Ivoire	..	..	420	4.6	7.0	7.1	57.8	58.8	1.7	5.1	..	..
Croatia	32	23	40	7.1	..	<0.1	..	..	..	..	..	..
Cuba	..	..	9	9.3	0.1	0.1	54.8	55.3	..	..	..	..
Czech Republic	31	20	10	7.6	<0.1	0.1	..	..	..	..	..	..
Denmark	31	25	8	5.5	<0.1	0.2	24.0	23.6	..	..	..	..
Dominican Republic	16	11	89	8.7	1.0 ^f	1.1	49.2	50.0	..	..	40	10
Ecuador	..	..	128	5.7	0.3	0.3	52.4	54.5	..	..	..	..
Egypt, Arab Rep.	40	18	24	11.0	<0.1	<0.1	..	..	..	..	..	..
El Salvador	42	15	50	9.0	0.9	0.9	27.1	28.3	0.6	0.4	..	..
Eritrea	..	..	94	2.3	2.4	2.4	59.2	58.5	0.6	1.6	..	2
Estonia	45	18	39	7.6	1.1	1.3	22.1	24.0	..	..	..	..
Ethiopia	6	0 ^b	378	2.3	..	1.4 ^g	..	..	0.2	1.1	18	2
Finland	26	19	5	5.9	0.1	0.1	..	..	..	..	..	..
France	30	21	14	5.9	0.4	0.4	33.3	34.6	..	..	..	..
Gabon	..	..	354	4.9	7.7	7.9	59.6	58.9	1.8	5.4	..	..
Gambia, The	..	..	257	4.1	2.2	2.4	58.8	57.9	0.6	1.7	..	..
Georgia	53	6	84	7.4	0.1	0.2	..	..	..	..	..	..
Germany	37	28	6	7.9	0.1	0.1	29.5	30.6	..	..	..	..
Ghana	7	1	203	4.2	2.2 ^c	2.3	60.7	60.0	0.2	1.3	45	19
Greece	47	29	18	5.9	0.2	0.2	20.7	21.5	..	..	..	..
Guatemala	21	2	79	8.6	0.9	0.9	26.4	27.1	..	..	..	..
Guinea	..	..	265	4.1	1.6	1.5	68.9	67.9	0.6	1.2	35	10
Guinea-Bissau	..	..	219	3.8	3.8	3.8	59.3	58.6	0.9	2.5	..	..
Haiti	15	6	299	9.0	3.8	2.2 ^h	52.9	53.3	0.6	1.5	28	20

Health risk factors and public health challenges

2.19

PEOPLE

	Prevalence of smoking		Incidence of tuberculosis	Prevalence of diabetes	Prevalence of HIV						Condom use		
	% of adults				per 100,000 people	% of population ages 20–79	Total		Female % of total population with HIV	Youth % of population ages 15–24		% of population ages 15–24	
	Male	Female					% of population ages 15–49			Male	Female	Male	Female
	2000–05 ^a	2000–05 ^a					2003	2005		2003	2005	2000–06 ^a	2000–06 ^a
Honduras	..	..	76	9.1	1.5	1.5	25.0	26.2	..	..	..	7
Hungary	41	28	19	7.6	0.1	0.1	..	..	..	..	..	..
India	47	17	168	6.7	0.9	0.9	28.8	28.6	..	..	..	..
Indonesia	58	3	234	2.3	0.1	0.1	13.6	17.1	..	..	..	1
Iran, Islamic Rep.	22	2	22	7.8	0.1	0.2	13.0	16.7	..	..	..	..
Iraq	..	..	..	..	..	..	..	..	..	..	..	..
Ireland	28	26	13	5.1	0.2	0.2	32.0	36.0	..	..	..	..
Israel	32	18	8	6.9	0.2	0.2	..	..	..	..	..	..
Italy	31	17	7	5.8	0.5	0.5	33.6	33.3	..	..	..	..
Jamaica	..	..	7	10.3	1.5	1.5	27.1	27.6	..	..	..	..
Japan	47	15	22	4.9	<0.1	<0.1	56.5	58.2	..	..	..	..
Jordan	51	8	5	9.8	0.2	0.2	..	..	..	..	..	4
Kazakhstan	65	9	130	5.6	0.1	0.1	56.0	56.7	..	..	..	..
Kenya	21	1	384	3.3	6.7 ^c	6.1	64.2	61.7	1.0	5.2	39	9	
Korea, Dem. Rep.	..	..	178	5.2	0.2	0.2	..	..	..	..	..	..
Korea, Rep.	..	..	88	7.8	<0.1	<0.1	59.1	56.9	..	..	..	..
Kuwait	..	..	24	14.4	0.2	0.2	..	..	..	..	..	..
Kyrgyz Republic	51	5	123	5.1	<0.1	0.1	..	..	..	..	..	..
Lao PDR	59	13	152	3.1	0.1	0.1	..	..	..	..	..	..
Latvia	51	19	57	7.6	0.6	0.8	20.3	22.0	..	..	..	..
Lebanon	42	31	11	7.7	0.1	0.1	..	..	..	..	..	..
Lesotho	..	..	635	3.8	23.7	23.4 ^d	56.0	60.0	5.9	14.1	44	26
Liberia	..	..	331	4.6	..	..	..	..	..	..	..	..
Libya	..	..	18	4.4	0.2	0.2	..	..	..	..	..	..
Lithuania	44	13	62	7.6	0.1	0.2	..	..	..	..	..	..
Macedonia, FYR	..	..	29	7.1	<0.1	<0.1	..	..	..	..	..	..
Madagascar	..	..	248	3.0	0.5	0.5	28.2	27.7	0.6	0.3	8	2
Malawi	21	5	377	2.1	14.2	14.1	59.3	58.8	3.4	9.6	28	9	
Malaysia	43	2	103	10.7	0.4	0.5	25.0	25.4	..	..	..	..
Mali	..	..	280	4.1	1.8 ⁱ	1.7	57.3	60.0	0.4	1.2	32	9
Mauritania	..	..	316	4.6	0.7	0.7	59.2	57.3	0.2	0.5	..	..
Mauritius	32	1	23	11.1	0.2	0.6	..	..	..	..	..	..
Mexico	13	5	21	10.6	0.3	0.3	20.0	23.3	..	..	..	..
Moldova	34	2	141	7.6	0.9	1.1	56.5	57.1	..	..	55	22
Mongolia	68	26	188	1.9	<0.1	<0.1	..	..	..	..	..	..
Morocco	29	0 ^b	93	8.1	0.1	0.1	18.2	21.1	..	..	..	..
Mozambique	..	..	443	3.7	16.0	16.1	57.5	60.0	3.6	10.7	27	12
Myanmar	36	12	171	3.2	1.4	1.3	31.6	31.4	..	..	..	..
Namibia	23	10	767	4.2	19.5	19.6	60.0	61.9	4.4	13.4	65	42	
Nepal	49	24	176	4.2	0.5	0.5	20.3	21.6	..	..	24	8
Netherlands	36	28	8	5.2	0.2	0.2	33.8	34.7	..	..	..	..
New Zealand	24	22	9	6.4	0.1	0.1	..	..	..	..	..	..
Nicaragua	..	5	58	10.1	0.2	0.2	22.4	23.6	..	..	..	7
Niger	..	..	174	3.7	1.1	1.1	59.7	59.2	0.2	0.8	..	..
Nigeria	..	1	311	4.5	3.7	3.9	58.3	61.5	0.9	2.7	38	8	
Norway	27	25	6	3.6	0.1	0.1	..	..	..	..	..	..
Oman	..	..	13	13.1	0.2	0.2	..	..	..	..	..	..
Pakistan	..	..	181	9.6	0.1	0.1	13.3	16.7	..	..	..	..
Panama	..	..	45	9.7	0.9	0.9	26.0	25.3	..	..	..	..
Papua New Guinea	..	..	250	2.9	1.6	1.8	59.2	59.6	..	..	..	..
Paraguay	23	7	71	4.8	0.4	0.4	27.3	26.9	..	..	..	..
Peru	..	..	162	6.0	0.5	0.6	26.8	28.6	..	..	..	9
Philippines	41	8	287	7.6	<0.1	<0.1	20.2	28.3	..	..	13	3
Poland	40	25	25	7.6	0.1	0.1	30.0	30.0	..	..	..	..
Portugal	..	..	32	5.7	0.4	0.4	3.9	4.1	..	..	..	..
Puerto Rico	17	10	5	10.7	..	..	..	..	..	..	..	..



	Prevalence of smoking		Incidence of tuberculosis	Prevalence of diabetes	Prevalence of HIV						Condom use	
	%				Total		Female % of total population with HIV	Youth % of population ages 15–24		% of population ages 15–24		
	Male	Female			% of population ages 15–49	Male		Female	Male	Female		
	2000–05 ^a	2000–05 ^a			2006	2007		2003	2005	2005	2005	2000–06 ^a	2000–06^{a}
Romania	32	10	128	7.6	..	<0.1	..	..	..	..	..	..
Russian Federation	60	16	107	7.6	0.9	1.1	21.1	22.3	..	..	..	..
Rwanda	..	..	397	1.5	3.8	3.0 ^g	52.6	56.9	0.4	1.5	19	5
Saudi Arabia	19	8	44	16.7	0.2	0.2	..	..	..	..	..	..
Senegal	..	..	270	4.6	0.9	0.7 ^g	58.5	58.9	0.1	0.4	48	5
Serbia	48 ^j	34 ^j	32 ^j	7.1 ^j	0.2 ^j	0.2 ^j	22.2 ^j	20.0 ^j	..	..	..	..
Sierra Leone	..	..	517	4.3	1.6	1.6	60.0	60.5	0.4	1.1	..	..
Singapore	24	4	26	10.1	0.3	0.3	25.5	27.3	..	..	..	..
Slovak Republic	..	..	15	7.6	<0.1	<0.1	..	..	..	..	..	..
Slovenia	28	20	13	7.6	<0.1	<0.1	..	..	..	..	..	..
Somalia	..	..	218	2.8	0.9	0.9	60.5	57.5	0.2	0.6	..	..
South Africa	23	8	940	4.4	15.6 ^f	18.8	56.9	58.5	4.5	14.8	57	46
Spain	39	25	30	5.7	0.7	0.6	22.9	22.9	..	..	..	..
Sri Lanka	23	2	60	8.4	<0.1	<0.1	..	..	..	..	..	..
Sudan	..	..	242	4.0	1.6	1.6	56.7	56.3	..	..	..	..
Swaziland	11	3	1,155	4.0	32.4	33.4	63.2	57.1	7.7	22.7	..	..
Sweden	17	18	6	5.2	0.2	0.2	31.3	31.3	..	..	..	..
Switzerland	27	23	7	7.9	0.4	0.4	36.0	36.9	..	..	..	..
Syrian Arab Republic	..	..	32	10.6	0.2	0.2	..	..	..	..	..	..
Tajikistan	..	..	204	4.9	<0.1	0.1	..	..	..	..	..	..
Tanzania	..	..	312	2.9	7.0 ^k	6.5	52.3	54.6	2.8	3.8	36	13
Thailand	49	3	142	6.9	1.4	1.4	38.6	39.3	..	..	..	..
Timor-Leste	..	..	556	1.7	0.2	0.2	..	..	..	..	..	..
Togo	..	..	389	4.1	3.2	3.2	58.9	61.0	0.8	2.2	..	..
Trinidad and Tobago	..	..	8	11.5	2.6	2.6	56.0	57.7	..	..	..	..
Tunisia	50	2	25	5.2	0.1	0.1	..	22.1	..	..	..	..
Turkey	49	18	29	7.8	0.2	0.2	..	..	..	..	..	..
Turkmenistan	..	..	65	5.2	..	<0.1	..	..	..	..	..	1
Uganda	25	3	355	2.0	6.8	6.4 ^l	57.6	57.8	1.1	4.3	38	15
Ukraine	53	11	106	7.6	1.3	1.4	47.4	48.8	..	..	..	..
United Arab Emirates	17	1	16	19.5	0.2	0.2	..	..	..	..	..	..
United Kingdom	27	25	15	2.9	0.2	0.2	..	..	..	..	..	..
United States	24	19	4	7.8	0.6	0.6	25.5	25.0	..	..	..	..
Uruguay	35	24	27	5.6	0.4	0.5	55.6	55.8	..	..	..	..
Uzbekistan	24	1	121	5.1	0.1	0.2	..	13.2	..	..	18	2
Venezuela, RB	..	..	41	5.4	0.6	0.7	27.7	28.2	..	..	..	..
Vietnam	35	2	173	2.9	0.4	0.5 ^g	30.5	33.6	0.8	..	..	8
West Bank and Gaza	..	..	20	8.4	..	..	..	..	..	..	..	..
Yemen, Rep.	..	..	78	2.9	0.2	0.2	..	..	..	..	..	..
Zambia	16	1	553	3.8	15.6 ^m	17.0	56.3	57.0	3.8	12.7	36	19
Zimbabwe	20	2	557	4.0	22.1	18.1 ^h	58.1	59.3	4.4	14.7	52	9
World	.. w	.. w	139 w	5.8 w	1.0 w	1.0 w	30.4 w	31.4 w				
Low income	..	15	221	5.7	1.7	1.7	35.8	34.3				
Middle income	..	..	114	5.6	0.6	0.7	26.1	28.7				
Lower middle income	..	..	116	5.0	0.3	0.3	24.9	27.9				
Upper middle income	..	..	109	7.3	1.6	1.7	29.9	31.3				
Low & middle income	..	..	161	5.6	1.1	1.1	29.9	31.1				
East Asia & Pacific	67	4	135	4.2	0.2	0.2	24.3	27.4				
Europe & Central Asia	..	..	82	7.3	0.5	0.6	..	..		
Latin America & Carib.	..	..	57	7.1	0.5	0.6	30.3	31.9				
Middle East & N. Africa	..	..	42	8.7	0.1	0.1	..	..		
South Asia	47	18	174	6.9	0.7	0.7	26.9	25.4				
Sub-Saharan Africa	..	..	368	3.6	6.4	5.8	57.6	58.5				
High income	..	..	16	6.8	0.4	0.4	33.1	33.3				
Euro area	..	..	13	6.4	0.4	0.3	29.3	29.7				

a. Data are for the most recent year available. b. Less than 0.5. c. Survey data, 2003. d. Survey data, 2004. e. Includes Hong Kong, China. f. Survey data, 2002. g. Survey data, 2005. h. Survey data, 2005–06. i. Survey data, 2001. j. Includes Montenegro. k. Survey data, 2003–04. l. Survey data, 2004–05. m. Survey data, 2001–02.

About the data

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

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

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

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

Adult HIV prevalence rates reflect the rate of HIV infection in each country's population. Low national prevalence rates can be very misleading, however.

They often disguise serious epidemics that are initially concentrated in certain localities or among specific population groups and threaten to spill over into the wider population. In many developing countries most new infections occur in young adults, with young women especially vulnerable.

The current HIV estimates from the Joint United Nations Programme on HIV/AIDS (UNAIDS) and the WHO are lower than the previous estimates, due mostly to increased availability of reliable data, including more population-based HIV prevalence surveys, new and improved HIV surveillance data, and improved quality and coverage of sentinel surveillance in many countries, including rural areas, where prevalence is known to be lower.

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

Data on condom use are from household surveys and refer to condom use at last intercourse. However, condoms are not as effective at preventing the transmission of HIV unless used consistently. Some surveys have tried to ask directly about consistent use, but the question is subject to recall and other biases. Caution should be used in interpreting the data.

For indicators from household surveys, the year in the table refers to the survey year. For more information, consult the original sources.

Definitions

- **Prevalence of smoking** is the percentage of men and women who smoke cigarettes. The age range varies, but in most countries is 18 and older or 15 and older.
- **Incidence of tuberculosis** is the estimated number of new tuberculosis cases (pulmonary, smear positive, extrapulmonary).
- **Prevalence of diabetes** refers to the percentage of people ages 20–79 who have type 1 or type 2 diabetes.
- **Prevalence of HIV** is the percentage of people who are infected with HIV. Total and youth rates are as a percentage of the relevant age group. Female rate is as a percentage of the total population with HIV.
- **Condom use** is the percentage of the population ages 15–24 who used condom at last intercourse in the last 12 months.

Data sources

Data on smoking are from J. McCay, M. Erksen, and O. Shafey's *Tobacco Atlas*, 2nd edition (2006). Data on tuberculosis are from the WHO's *Global Tuberculosis Control Report 2008: Surveillance, Planning, Financing*. Data on diabetes are from the International Diabetes Federation's *Diabetes Atlas*, 3rd edition. Data on prevalence of HIV are from UNAIDS and the WHO's *2006 Report on the Global AIDS Epidemic*. Data on condom use are from Demographic and Health Surveys by Macro International.

Health gaps by income and gender

	Survey year	Prevalence of child malnutrition				Child immunization rate				Infant mortality rate		Under-five mortality rate	
		Moderate underweight % of children under age 5				% of children ages 12–23 months ^a				per 1,000 live births		per 1,000	
		New reference		Old reference		Measles		DTP3		Poorest quintile	Richest quintile	Poorest quintile	Richest quintile
		Poorest quintile	Richest quintile	Poorest quintile	Richest quintile	Poorest quintile	Richest quintile	Poorest quintile	Richest quintile				
Armenia	2000	3	2	3	1	68	74 ^b	89	84 ^b	52	27	61	30
Bangladesh	2004	36	19	41	24	60	91	71	91	90	65	121	71
Benin	2001	18	6	21	9	57	83	63	89	112	50	198	93
Bolivia	2003	7	1	10	1	62	74	64	85	87	32	119	37
Brazil	1996	7	2	10	3	78	90	66	82	83	29	99	33
Burkina Faso	2003	19	13	26	16	48	71	45	73	97	78	206	144
Cambodia	2000	27	23	35	28	44	82	39	75	110	50	155	64
Cameroon	2004	..	..	..	..	57	86	55	86	101	52	189	88
Central African Republic	1994–95	20	11	25	15	31	80	27	76	132	54	193	98
Chad	2004	24	16	27	19	8	38	5	42	109	101	176	187
Colombia	2005	7	2	11	3	70	91	73	91	32	14	39	16
Côte d'Ivoire	1994	17	7	21	10	31	79	26	74	117	63	190	97
Dominican Republic	2002	7	1	9	1	83	94	46	66	50	20	66	22
Egypt, Arab Rep.	2000	4	2	5	2	95	99	94	93	76	30	98	34
Eritrea	1995	..	..	..	..	37	92	30	89	74	68	152	104
Ethiopia	2000	25	22	32	29	18	52	14	43	93	95	159	147
Gabon	2000	10	4	14	7	34	71	18	49	57	36	93	55
Ghana	2003	17	6	22	10	74	88	64	87	61	58	128	88
Guatemala	1998–99	21	9	26	10	80	91	74	76	58	39	78	39
Guinea	1999	17	9	22	13	33	73	30	69	119	70	230	133
Haiti	2000	14	4	18	6	43	63	31	58	100	97	164	109
India	1998–99	28	16	33	21	28	81	36	85	97	38	141	46
Indonesia	2002–03	..	..	..	..	59	85	42	72	61	17	77	22
Jordan	1997	..	..	..	..	90	93	98	93	35	23	42	25
Kazakhstan	1999	3	5	5	6	74	76 ^b	90	82 ^b	68	42	82	45
Kenya	2003	17	6	22	7	54	88	56	73	96	62	149	91
Kyrgyz Republic	1997	6	5	10	7	82	81	82	87	83	46	96	49
Madagascar	1997	24	18	29	24	32	79	32	81	119	58	195	101
Malawi	2000	18	9	24	12	80	90	79	93	132	86	231	149
Mali	2001	20	10	26	13	40	77	28	71	137	90	248	148
Mauritania	2000–01	18	11	23	15	42	86	18	61	61	62	98	79
Morocco	2003–04	11	2	13	3	83	98	89	98	62	24	78	26
Mozambique	2003	16	5	21	7	61	96	52	96	143	71	196	108
Namibia	2000	17	6	22	9	76	86	76	83	36	23	55	31
Nepal	2001	34	20	40	26	61	83	62	85	86	53	130	68
Nicaragua	2001	9	2	13	2	76	94	77	83	50	16	64	19
Niger	1998	27	18	30	26	23	66	9	68	131	86	282	184
Nigeria	2003	20	9	24	10	16	71	7	61	133	52	257	79
Pakistan	1990–91	28	14	33	19	28	75	24	64	89	63	125	74
Paraguay	1990	3	1	5	1	48	69	40	69	43	16	57	20
Peru	2000	9	1	13	1	81	92	76	93	64	14	93	18
Philippines	2003	..	..	..	..	70	89	64	92	42	19	66	21
Rwanda	2000	15	8	19	12	84	89	80	89	139	88	246	154
Senegal	1997	..	..	..	..	..	..	..	..	85	45	181	70
South Africa	1998	..	..	..	..	74	85	64	85	62	17	87	22
Tanzania	2004	14	8	20	11	65	91	34	36	88	64	137	93
Togo	1998	17	8	23	10	35	63	29	68	84	66	168	97
Turkey	1998	..	..	..	..	64	89	45	81	68	30	85	33
Turkmenistan	2000	..	..	..	..	91	80	97	86	89	58	106	70
Uganda	2000–01	16	7	21	10	49	65	35	55	106	60	192	106
Uzbekistan	1996	11	8	15	10	96	93	89	82	54	46	70	50
Vietnam	2002	..	..	..	..	64	98	53	94	39	14	53	16
Yemen, Rep.	1997	..	..	36	24	16	73	14	71	109	60	163	73
Zambia	2001–02	18	12	24	17	81	88	74	89	115	57	192	92
Zimbabwe	1999	10	5	16	6	80	86	81	86	59	44	100	62

a. Refers to children who were immunized at any time before the survey. b. The data contain large sampling errors because of the small number of cases.

Health gaps by income and gender

2.20 PEOPLE

	Survey year	Prevalence of child malnutrition		Child immunization rate				Infant mortality rate		Under-five mortality rate	
		Old reference		% of children ages 12–23 months ^a				per 1,000 live births		per 1,000	
		Moderate underweight % of children under age 5		Measles		DTP3					
		Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Armenia	2000	2	3	71	79	90	89	46	42	51	45
Bangladesh	2004	34	35	76	76	81	81	80	64	102	91
Benin	2001	19	17	69	67	74	71	98	92	162	163
Bolivia	2003	6	6	65	63	70	73	71	64	94	91
Brazil	1996	6	5	87	87	82	80	52	44	60	53
Burkina Faso	2003	25	23	54	58	57	57	95	89	195	192
Cambodia	2000	32	33	57	54	50	47	103	82	133	110
Cameroon	2004	14	15	65	66	65	68	88	74	154	141
Central African Republic	1994–95	21	19	52	53	49	46	109	94	165	152
Chad	2004	23	23	23	23	20	21	122	108	207	198
Colombia	2005	6	6	83	82	84	81	26	18	30	21
Côte d'Ivoire	1994	19	16	54	52	49	45	99	83	163	137
Dominican Republic	2002	5	5	89	88	54	61	38	31	46	40
Egypt, Arab Rep.	2000	4	3	97	97	94	94	55	55	69	70
Eritrea	1995	26	27	52	50	49	49	82	69	163	141
Ethiopia	2000	32	31	28	26	22	19	124	101	197	178
Gabon	2000	10	9	55	55	40	33	74	49	103	80
Ghana	2003	17	17	82	83	81	77	70	59	111	108
Guatemala	1998–99	21	18	82	87	73	74	50	48	64	65
Guinea	1999	17	19	52	52	46	47	112	101	202	188
Haiti	2000	14	13	54	54	43	43	97	83	143	132
India	1998–99	28	30	52	50	56	54	75	71	98	105
Indonesia	2002–03	..	..	73	71	58	59	46	40	58	51
Jordan	1997	4	5	90	90	96	96	34	23	38	30
Kazakhstan	1999	4	4	79	78	89	88	62	47	72	53
Kenya	2003	18	14	73	72	71	74	84	67	122	103
Kyrgyz Republic	1997	11	8	84	85	83	81	72	60	81	70
Madagascar	1997	27	27	47	45	48	49	109	90	176	152
Malawi	2000	20	19	83	83	84	85	117	108	207	199
Mali	2001	24	21	49	48	41	38	136	116	250	226
Mauritania	2000–01	22	22	61	63	39	41	74	59	110	94
Morocco	2003–04	9	8	88	92	95	95	51	37	59	48
Mozambique	2003	18	17	77	76	73	71	127	120	181	176
Namibia	2000	19	18	79	82	78	81	45	34	67	54
Nepal	2001	35	36	73	69	74	70	79	75	105	112
Nicaragua	2001	9	7	87	86	84	81	39	32	48	41
Niger	1998	29	30	36	34	25	25	141	131	299	306
Nigeria	2003	19	20	34	38	19	24	116	102	222	212
Pakistan	1990–91	27	27	55	46	45	40	102	86	122	119
Paraguay	1990	3	4	56	61	50	57	39	33	49	45
Peru	2000	6	6	84	85	85	84	46	40	64	57
Philippines	2003	..	..	78	81	78	80	35	25	48	34
Rwanda	2000	19	19	86	88	85	87	123	112	215	198
Senegal	1997	..	..	..	..	..	..	74	65	144	134
South Africa	1998	..	..	84	81	74	78	49	35	66	48
Tanzania	2004	18	18	80	80	37	33	83	82	135	130
Togo	1998	19	18	45	40	43	41	89	71	156	132
Turkey	1998	7	7	79	78	60	57	51	46	61	58
Turkmenistan	2000	11	10	87	88	93	92	83	60	101	76
Uganda	2000–01	18	17	56	57	45	48	93	85	164	149
Uzbekistan	1996	15	13	91	92	87	90	50	37	65	46
Vietnam	2002	..	..	84	82	72	73	25	25	34	31
Yemen, Rep.	1997	33	30	45	40	41	39	98	80	128	114
Zambia	2001–02	21	21	83	86	78	82	95	93	176	160
Zimbabwe	1999	12	11	77	81	80	82	63	56	95	85

a. Refers to children who were immunized at any time before the survey.



	Survey year	Pregnant women receiving prenatal care		Contraceptive prevalence rate		Births attended by skilled health staff ^a		Total fertility rate		Exclusive breastfeeding	
		%		modern methods % of married women ages 15–49		% of total		births per woman		% of children under 4 months	
		Poorest quintile	Richest quintile	Poorest quintile	Richest quintile	Poorest quintile	Richest quintile	Poorest quintile	Richest quintile	Poorest quintile	Richest quintile
Armenia	2000	85	97	16	29	93	100	2.5	1.6	..	..
Bangladesh	2004	25	81	45	50	3	39	4.1	2.2	62	31
Benin	2001	73	100	4	15	50	99	7.2	3.5	50	42 ^b
Bolivia	2003	62	98	23	49	27	98	6.7	2.0	79	31
Brazil	1996	72	98	56	77	72	99	4.8	1.7	33	60 ^b
Burkina Faso	2003	56	96	2	27	19	84	6.6	3.6	17	28
Cambodia	2000	22	80	13	25	15	81	4.7	2.2	14	18
Cameroon	2004	65	97	2	27	29	95	6.5	3.2	33	30 ^b
Central African Republic	1994–95	39	91	1	9	14	82	5.1	4.9	9	4
Chad	2004	9	77	0	7	1	51	5.1	6.0	1	2
Colombia	2005	84	99	60	72	72	99	4.1	1.4	60	64
Côte d'Ivoire	1994	62	98	1	13	17	84	6.4	3.7	0	5
Dominican Republic	2002	97	99	59	70	94	100	4.5	2.1	18	6
Egypt, Arab Rep.	2000	31	84	43	61	31	94	4.0	2.9	72	57
Eritrea	1995	34	90	0 ^c	19	5	74	8.0	3.7	64	73
Ethiopia	2000	15	60	3	23	1	25	6.3	3.6	63	46
Gabon	2000	85	98	6	18	67	97	6.3	3.0	6	5 ^b
Ghana	2003	83	98	9	26	21	90	6.4	2.8	62 ^b	..
Guatemala	1998–99	37	97	5	60	9	92	7.6	2.9	62	..
Guinea	1999	58	97	1	9	12	82	5.8	4.0	9	8
Haiti	2000	65	91	17	24	4	70	6.8	2.7	40	15 ^b
India	1998–99	44	93	29	55	16	84	3.4	1.8	64	37
Indonesia	2002–03	78	99	49	58	40	94	3.0	2.2	58	35
Jordan	1997	93	97	28	47	91	99	5.2	3.1	14	14 ^b
Kazakhstan	1999	97	91	49	55	99	99	3.4	1.2	..	..
Kenya	2003	75	94	12	44	17	75	7.6	3.1	22	17
Kyrgyz Republic	1997	96	99	44	54	96	100	4.6	2.0	18 ^b	..
Madagascar	1997	67	96	2	24	30	89	8.1	3.4	57	65
Malawi	2000	89	98	20	40	43	83	7.1	4.8	53	72
Mali	2001	42	92	4	18	22	89	7.3	5.3	38	18
Mauritania	2000–01	33	89	0 ^c	17	15	93	5.4	3.5	28	30
Morocco	2003–04	40	93	51	57	29	95	3.3	1.9	53	36
Mozambique	2003	67	98	14	37	25	89	6.3	3.8	47	27
Namibia	2000	81	96	29	64	55	97	6.0	2.7	100 ^b	85 ^b
Nepal	2001	30	80	24	55	4	45	5.3	2.3	76	67
Nicaragua	2001	69	97	50	71	78	99	5.6	2.1	53	15 ^b
Niger	1998	24	85	1	18	4	63	8.4	5.7	1	3
Nigeria	2003	37	96	4	21	13	85	6.5	4.2	15	34
Pakistan	1990–91	8	72	1	23	5	55	5.1	4.0	36	9
Paraguay	1990	73	98	21	46	41	98	7.9	2.7	7	0
Peru	2000	41	74	37	58	13	88	5.5	1.6	88	59
Philippines	2003	72	97	24	35	25	92	5.9	2.0	60	20
Rwanda	2000	90	95	2	15	17	60	6.0	5.4	89	79
Senegal	1997	67	97	1	24	20	86	7.4	3.6	13	19
South Africa	1998	96	94	34	70	68	98	4.8	1.9	15	11 ^b
Tanzania	2004	91	97	11	36	31	87	7.3	3.3	58	55
Togo	1998	69	97	3	13	25	91	7.3	2.9	7	34
Turkey	1998	38	96	24	48	53	98	3.9	1.7	10	4 ^b
Turkmenistan	2000	98	97	51	50	97	98	3.4	2.1	11	28 ^b
Uganda	2000–01	88	98	11	41	20	77	8.5	4.1	73	59
Uzbekistan	1996	93	96	46	52	92	100	4.4	2.2	..	..
Vietnam	2002	68	100	58	52	58	100	2.2	1.4	18	..
Yemen, Rep.	1997	17	68	1	24	7	50	7.3	4.7	20	13
Zambia	2001–02	89	99	11	53	20	91	7.3	3.6	39	70 ^b
Zimbabwe	1999	94	97	41	67	57	94	4.9	2.6	36	46 ^b

a. Based on births in the five years before the survey. b. The data contain large sampling errors because of the small number of cases. c. Less than 0.5.

About the data

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

Socioeconomic status as displayed in the table is based on a household's assets, including ownership of consumer items, features of the household's dwelling, and other characteristics related to wealth. Each household asset on which information was collected was assigned a weight generated through principal-component analysis. The resulting scores were standardized in relation to a standard normal distribution with a mean of zero and a standard deviation of one. The standardized scores were then used to create break-points defining wealth quintiles, expressed as quintiles of individuals in the population rather than quintiles of individuals at risk with respect to any one health indicator.

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

Creating one index that includes all asset indicators limits the types of analysis that can be performed. In particular, the use of a unified index does not permit a disaggregated analysis to examine which asset indicators have a more or less important association with health status or use of health services. In addition, some asset indicators may reflect household wealth better in some countries than in others—or reflect different degrees of wealth in different countries. Taking such information into

account and creating country-specific asset indexes with country-specific choices of asset indicators might produce a more effective and accurate index for each country. The asset index used in the table does not have this flexibility.

The analysis was carried out for 56 countries, with the results issued in country reports. The table shows the estimates for the poorest and richest quintiles and by sex only; the full set of estimates for up to 117 indicators is available in the country reports (see *Data sources*).

Demographic and Health Surveys try to collect cross-country comparable data, but the age group of the reference population could differ across countries. Caution should be exercised when comparing the data. The estimates in the table are based on survey data, which refer to a period preceding the survey date, or use a definition or methodology different from the estimates in tables 2.16–2.18 and 2.21. Thus the estimates may differ from those in the other tables, and caution should be exercised in using the data.

Definitions

- **Survey year** is the year in which the underlying data were collected.
- **Prevalence of child malnutrition** is the percentage of children under age 5 whose weight for age is two to three standard deviations below the median reference standard for their age. New international child growth standards were released in 2006 by the World Health Organization. The table presents malnutrition data using both the new and old reference standards. For more information about the change in standards, see *About the data* for table 2.18.
- **Child immunization rate** is the percentage of children ages 12–23 months at the time of the survey who, at any time before the survey, had received measles vaccine and three doses of diphtheria, tetanus, and pertussis (whooping cough) vaccine (DTP3).
- **Infant mortality rate** is the number of infants dying before reaching one year of age, per 1,000 live births.
- **Under-five mortality rate** is the probability that a newborn baby will die before reaching age 5, per 1,000, if subject to current age-specific mortality rates.
- **Pregnant women receiving prenatal care** are the percentage of women with one or more births during the five years preceding the survey who were attended at least once during pregnancy by skilled health personnel for reasons related to pregnancy.
- **Contraceptive prevalence rate** is the percentage of women married or in-union ages 15–49 who are practicing, or whose sexual partners are practicing, any modern method of contraception.
- **Births attended by skilled health staff** are the percentage of deliveries attended by personnel trained to give the necessary supervision, care, and advice to women during pregnancy, labor, and the postpartum period; to conduct deliveries on their own; and to care for newborns. Skilled health staff include doctors, nurses, and trained midwives, but exclude trained or untrained traditional birth attendants.
- **Total fertility rate** is the number of children that would be born to a woman if she were to live to the end of her childbearing years and bear children in accordance with current age-specific fertility rates.
- **Exclusive breastfeeding** refers to the percentage of children ages 0–3 months who received only breast milk in the 24 hours preceding the survey.

Data sources

Data on health gaps by income and gender are from an analysis of Demographic and Health Surveys by the World Bank and Macro International. Country reports are available at www.worldbank.org/povertyandhealth/countrydata.



2.21

Mortality

	Life expectancy at birth		Infant mortality rate		Under-five mortality rate		Child mortality rate		Adult mortality rate		Survival to age 65	
	years		per 1,000 live births		per 1,000		per 1,000		per 1,000		% of cohort	
	1990	2006	1990	2006	1990	2006	Male 1997-2006 ^a	Female 1997-2006 ^a	Male 2004-06 ^a	Female 2004-06 ^a	Male 2006	Female 2006
Afghanistan	..	..	..	..	..	..	..	..	..	..	..	..
Albania	72	76	37	15	45	17	..	..	108	52	81	90
Algeria	67	72	54	33	69	38	..	..	123	105	77	81
Angola	40	42	154	154	260	260	..	..	486	437	30	35
Argentina	72	75	25	14	29	16	..	..	168	80	74	87
Armenia	68	72	47	21	56	24	8	3	197	88	68	83
Australia	77	81	8	5	10	6	..	..	85	49	87	93
Austria	76	80	8	4	10	5	..	..	111	55	84	92
Azerbaijan	71	72	84	73	105	88	..	..	218	103	62	77
Bangladesh	55	64	100	52	149	69	24	29	235	203	61	66
Belarus	71	69	20	12	24	13	..	..	368	128	52	82
Belgium	76	79	8	4	10	4	..	..	114	62	84	92
Benin	53	56	111	88	185	148	64	65	287	239	52	58
Bolivia	59	65	89	50	125	61	25	29	238	178	63	71
Bosnia and Herzegovina	72	75	18	13	22	15	..	..	148	77	76	86
Botswana	63	50	45	90	58	124	..	..	586	575	31	35
Brazil	67	72	48	19	57	20	..	..	234	123	66	80
Bulgaria	72	73	15	12	19	14	..	..	221	92	69	86
Burkina Faso	50	52	123	122	206	204	110	113	288	187	46	57
Burundi	46	49	114	109	190	181	..	..	412	377	39	44
Cambodia	55	59	85	65	116	82	20	20	359	248	49	61
Cameroon	55	50	85	87	139	149	73	72	416	420	41	43
Canada	77	80	7	5	8	6	..	..	95	57	86	91
Central African Republic	50	44	114	115	173	175	..	..	566	536	28	33
Chad	51	51	120	124	201	209	96	101	352	303	43	50
Chile	74	78	18	8	21	9	..	..	130	62	80	89
China	69	72	36	20	45	24	..	..	153	92	75	82
Hong Kong, China	77	82	..	..	..	..	..	..	78	34	87	94
Colombia	68	73	26	17	35	21	4	3	206	97	71	83
Congo, Dem. Rep.	46	46	129	129	205	205	..	..	439	401	35	40
Congo, Rep.	57	55	67	79	103	126	49	43	402	377	44	50
Costa Rica	76	79	16	11	18	12	..	..	116	62	82	89
Côte d'Ivoire	53	48	105	90	153	127	83	58	429	408	38	42
Croatia	72	76	11	5	12	6	..	..	159	62	75	89
Cuba	75	78	11	5	13	7	..	..	119	74	82	88
Czech Republic	71	76	11	3	13	4	..	..	139	60	78	90
Denmark	75	78	8	4	9	5	..	..	116	68	83	88
Dominican Republic	68	72	50	25	65	29	9	9	222	134	68	78
Ecuador	69	75	43	21	57	24	..	..	171	91	75	85
Egypt, Arab Rep.	62	71	67	29	91	35	10	10	158	94	72	82
El Salvador	66	72	47	22	60	25	..	..	209	127	70	80
Eritrea	49	57	88	48	147	74	55	50	430	326	41	54
Estonia	69	73	12	5	16	7	..	..	282	100	59	84
Ethiopia	48	52	122	77	204	123	56	56	367	329	44	49
Finland	75	79	6	3	7	4	..	..	132	57	83	92
France	77	81	7	4	9	4	..	..	127	57	84	93
Gabon	61	57	60	60	92	91	32	33	378	374	49	51
Gambia, The	51	59	103	84	153	113	..	..	221	180	57	62
Georgia	70	71	39	28	46	32	..	..	214	82	67	83
Germany	75	79	7	4	9	4	..	..	112	58	84	92
Ghana	57	60	76	76	120	120	44	52	289	283	56	58
Greece	77	79	9	4	11	4	..	..	93	42	85	92
Guatemala	63	70	60	31	82	41	15	18	237	131	67	79
Guinea	47	56	139	98	235	161	89	86	275	236	52	58
Guinea-Bissau	42	46	142	119	240	200	..	..	447	396	35	41
Haiti	55	60	105	60	152	80	33	36	309	245	54	62

Mortality

2.21 PEOPLE

	Life expectancy at birth		Infant mortality rate		Under-five mortality rate		Child mortality rate		Adult mortality rate		Survival to age 65	
	years		per 1,000 live births		per 1,000		per 1,000		per 1,000		% of cohort	
	1990	2006	1990	2006	1990	2006	Male 1997-2006 ^a	Female 1997-2006 ^a	Male 2004-06 ^a	Female 2004-06 ^a	Male 2006	Female 2006
Honduras	66	70	45	23	58	27	8	9	245	141	65	78
Hungary	69	73	15	6	17	7	..	..	256	107	66	85
India	59	64	80	57	115	76	25	37	260	168	59	69
Indonesia	62	68	60	26	91	34	13	11	172	123	71	79
Iran, Islamic Rep.	65	71	54	30	72	34	..	..	155	104	73	81
Iraq	62	..	42	..	53	..	..	..	..	..	..	..
Ireland	75	79	8	4	9	5	..	..	90	52	85	91
Israel	77	80	10	4	12	5	..	..	82	39	87	93
Italy	77	81	8	4	9	4	..	..	86	45	85	93
Jamaica	71	71	28	26	33	31	..	..	222	140	70	79
Japan	79	82	5	3	6	4	..	..	93	45	87	94
Jordan	68	72	33	21	40	25	5	5	167	116	73	80
Kazakhstan	68	66	51	26	60	29	11	6	369	147	49	76
Kenya	59	53	64	79	97	121	42	39	432	408	42	47
Korea, Dem. Rep.	70	67	42	42	55	55	..	..	182	128	65	75
Korea, Rep.	71	78	8	5	9	5	..	..	114	47	81	92
Kuwait	75	78	14	9	16	11	..	..	87	53	85	89
Kyrgyz Republic	68	68	63	36	75	41	10	11	281	132	57	75
Lao PDR	55	64	120	59	163	75	..	..	238	196	61	67
Latvia	69	71	14	8	18	9	..	..	311	111	63	86
Lebanon	69	72	32	26	37	30	..	..	155	103	73	82
Lesotho	59	43	81	102	101	132	22	19	715	698	20	24
Liberia	43	45	157	157	235	235	..	..	466	430	33	37
Libya	68	74	35	17	41	18	..	..	152	94	74	83
Lithuania	71	71	10	7	13	8	..	..	326	110	62	86
Macedonia, FYR	71	74	33	15	38	17	..	..	137	81	77	85
Madagascar	51	59	103	72	168	115	45	45	289	231	54	61
Malawi	49	48	131	76	221	120	101	67	540	525	32	37
Malaysia	70	74	16	10	22	12	..	..	156	89	75	85
Mali	48	54	140	119	250	217	132	125	263	184	48	58
Mauritania	58	64	85	78	133	125	38	38	177	111	64	73
Mauritius	69	73	20	13	23	14	..	..	210	108	68	82
Mexico	71	74	42	29	53	35	..	..	144	81	78	86
Moldova	67	69	30	16	37	19	7	4	296	140	58	77
Mongolia	63	67	79	34	109	43	..	..	268	175	59	70
Morocco	64	71	69	34	89	37	9	11	151	101	73	82
Mozambique	44	42	158	96	235	138	61	64	609	589	25	29
Myanmar	59	62	91	74	130	104	..	..	304	192	54	66
Namibia	62	52	60	45	86	61	22	20	523	508	37	41
Nepal	54	63	99	46	142	59	21	19	235	211	61	65
Netherlands	77	80	7	4	9	5	..	..	83	53	86	91
New Zealand	75	80	8	5	11	6	..	..	81	53	86	91
Nicaragua	64	72	52	29	68	36	10	9	214	124	70	80
Niger	47	56	191	148	320	253	138	136	169	182	59	57
Nigeria	47	47	120	99	230	191	120	123	432	410	37	40
Norway	77	80	7	3	9	4	..	..	86	53	86	92
Oman	70	76	25	10	32	12	..	..	103	76	82	87
Pakistan	59	65	100	78	130	97	..	..	177	145	66	69
Panama	72	75	27	18	34	23	..	..	140	75	78	87
Papua New Guinea	55	57	69	54	94	73	..	..	422	305	41	55
Paraguay	68	72	33	19	41	22	..	..	176	129	72	79
Peru	66	71	58	21	78	25	19	8	201	125	70	79
Philippines	66	71	41	24	62	32	14	9	161	107	73	81
Poland	71	75	19	6	18	7	..	..	190	66	71	89
Portugal	74	78	11	3	14	5	..	..	139	58	83	91
Puerto Rico	75	78	..	..	..	..	..	..	138	54	79	91



2.21

Mortality

	Life expectancy at birth		Infant mortality rate		Under-five mortality rate		Child mortality rate		Adult mortality rate		Survival to age 65	
	years		per 1,000 live births		per 1,000		per 1,000		per 1,000		% of cohort	
	1990	2006	1990	2006	1990	2006	Male 1997-2006 ^a	Female 1997-2006 ^a	Male 2004-06 ^a	Female 2004-06 ^a	Male 2006	Female 2006
Romania	70	72	27	16	31	18	..	..	205	87	69	85
Russian Federation	69	66	23	14	27	16	..	..	429	158	43	77
Rwanda	32	46	106	98	176	160	90	87	471	422	33	39
Saudi Arabia	68	73	35	21	44	25	3	4	143	93	75	84
Senegal	57	63	72	60	149	116	69	69	174	106	63	72
Serbia	71	73	..	7	..	8	..	..	159	85	74	85
Sierra Leone	39	42	169	159	290	270	..	..	412	349	33	39
Singapore	74	80	7	2	8	3	..	..	83	47	86	92
Slovak Republic	71	74	12	7	14	8	..	..	196	76	71	88
Slovenia	73	78	8	3	10	4	..	..	149	57	80	91
Somalia	42	48	121	90	203	145	..	..	389	339	39	44
South Africa	62	51	45	56	60	69	18	13	605	568	29	36
Spain	77	81	8	4	9	4	..	..	110	45	85	94
Sri Lanka	71	75	26	11	32	13	..	..	241	102	66	83
Sudan	53	58	74	61	120	89	38	30	311	270	52	58
Swaziland	57	41	78	112	110	164	..	..	750	727	17	21
Sweden	78	81	6	3	7	3	..	..	78	49	88	93
Switzerland	77	82	7	4	9	5	..	..	80	47	87	93
Syrian Arab Republic	68	74	31	12	38	14	..	..	126	86	78	85
Tajikistan	63	67	91	56	115	68	..	..	213	141	63	73
Tanzania	51	52	102	74	161	118	56	52	444	412	40	45
Thailand	67	70	26	7	31	8	..	..	276	162	63	77
Timor-Leste	46	57	133	47	177	55	..	..	272	237	56	61
Togo	58	58	88	69	149	108	73	65	280	235	54	61
Trinidad and Tobago	70	70	30	33	34	38	..	..	243	191	66	73
Tunisia	70	74	41	19	52	23	..	..	126	73	78	86
Turkey	66	71	67	24	82	26	10	13	154	87	73	84
Turkmenistan	63	63	81	45	99	51	19	17	300	144	53	72
Uganda	50	51	93	78	160	134	71	61	446	433	39	43
Ukraine	70	68	22	20	25	24	..	..	375	132	51	80
United Arab Emirates	73	79	13	8	15	8	..	..	75	50	86	91
United Kingdom	76	79	8	5	10	6	..	..	88	56	85	90
United States	75	78	9	6	11	8	..	..	140	82	81	88
Uruguay	73	76	20	11	23	12	..	..	145	68	76	88
Uzbekistan	69	67	61	38	74	43	..	..	242	138	61	74
Venezuela, RB	71	74	27	18	33	21	..	..	181	96	73	84
Vietnam	65	71	38	15	53	17	10	7	139	93	78	84
West Bank and Gaza	69	73	34	20	40	22	..	..	131	95	77	83
Yemen, Rep.	54	62	98	75	139	100	33	36	259	210	58	65
Zambia	48	42	101	102	180	182	89	74	636	632	23	26
Zimbabwe	61	43	52	68	76	105	21	21	706	729	21	21
World	65 w	68 w	63 w	50 w	92 w	73 w			226 w	155 w	67 w	76 w
Low income	57	60	93	74	143	112			285	223	56	63
Middle income	68	71	43	26	56	33			195	116	70	80
Lower middle income	67	71	44	27	60	36			173	108	72	81
Upper middle income	69	70	38	22	47	26			260	137	64	80
Low & middle income	63	66	69	54	101	79			232	159	64	73
East Asia & Pacific	67	71	42	24	56	29			165	104	73	81
Europe & Central Asia	69	69	40	22	49	26			298	122	58	81
Latin America & Carib.	68	73	43	22	55	26			197	107	71	82
Middle East & N. Africa	64	70	58	34	77	42			166	115	71	79
South Asia	59	64	86	62	123	83			251	172	60	68
Sub-Saharan Africa	50	50	109	94	184	157			421	391	40	45
High income	76	79	9	6	12	7			117	63	83	91
Euro area	76	80	8	4	9	4			112	54	84	92

a. Data are for the most recent year available.

About the data

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

The main sources of mortality data are vital registration systems and direct or indirect estimates based on sample surveys or censuses. A "complete" vital registration system—covering at least 90 percent of vital events in the population—is the best source of age-specific mortality data. Where reliable age-specific mortality data are available, life expectancy at birth is directly estimated from the life table constructed based on age-specific mortality data. But "complete" vital registration systems are fairly uncommon in developing countries. Thus estimates must be obtained from sample surveys or derived by applying indirect estimation techniques to registration, census, or survey data (see *Primary data documentation*). Survey data are subject to recall error, and surveys estimating infant deaths require large samples because households in which a birth or an infant death has occurred during a given year cannot ordinarily be preselected for sampling. Indirect estimates rely on estimated actuarial "life" tables that may be inappropriate for the population concerned. Because life expectancy at birth is estimated using infant mortality data and model life tables for many developing countries, similar reliability issues arise for this indicator. Extrapolations based on outdated surveys may not be reliable for monitoring changes in health status or for comparative analytical work.

To produce harmonized estimates of infant and under-five mortality rates that transparently use all available information, the United Nations Children's Fund (UNICEF) and the World Bank developed a methodology that fits a regression line to the relationship between mortality rates and their reference dates using weighted least squares. (For further discussion of childhood mortality estimates, see UNICEF, WHO, World Bank, and United Nations Population Division 2007.)

Infant and child mortality rates are higher for boys than for girls in countries in which parental gender preferences are insignificant. Child mortality captures the effect of gender discrimination better than does infant mortality, as malnutrition and medical

interventions are more important in this age group. Where female child mortality is higher, as in some countries in South Asia, girls probably have unequal access to resources. Child mortality rates in the table are not compatible with infant mortality and under-five mortality rates because of differences in methodologies and reference years. Child mortality data were directly estimated from surveys, based on vital events that occurred during the 10 years preceding the survey. The reference year for the child mortality data is the survey year.

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

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

Revised lower estimates of HIV prevalence have led adult mortality estimates for many countries, notably in Sub-Saharan Africa, to be revised drastically downward from previous estimates from 1990 onward and life expectancy at birth and survival to age 65 to be revised upward.

Definitions

- **Life expectancy at birth** is the number of years a newborn infant would live if prevailing patterns of mortality at the time of its birth were to stay the same throughout its life.
- **Infant mortality rate** is the number of infants dying before reaching one year of age per 1,000 live births in a given year.
- **Under-five mortality rate** is the probability per 1,000 that a newborn baby will die before reaching age 5, if subject to current age-specific mortality rates.
- **Child mortality rate** is the probability per 1,000 of dying between ages 1 and 5—that is, the probability of a 1-year-old dying before reaching age 5—if subject to current age-specific mortality rates.
- **Adult mortality rate** is the probability per 1,000 of dying between the ages of 15 and 60—that is, the probability of a 15-year-old dying before reaching age 60—if subject to current age-specific mortality rates between those ages.
- **Survival to age 65** refers to the percentage of a cohort of newborn infants that would survive to age 65, if subject to current age-specific mortality rates.

Data sources

Data on infant and under-five mortality rates are the harmonized estimates of the World Health Organization, UNICEF, and the World Bank, based mainly on household surveys, censuses, and vital registration data, supplemented by the World Bank's estimates based on household surveys and vital registration and sample registration data. Data on child mortality rates are from Demographic and Health Surveys by Macro International. Other estimates are compiled and produced by the World Bank's Human Development Network and Development Data Group in consultation with its operational staff and country offices. Important inputs to the World Bank's demographic work come from the United Nations Population Division's *World Population Prospects: The 2006 Revision*, census reports and other statistical publications from national statistical offices, Eurostat, Demographic and Health Surveys by Macro International, and the Human Mortality Database by the University of California, Berkeley, and the Max Planck Institute for Demographic Research (www.mortality.org).

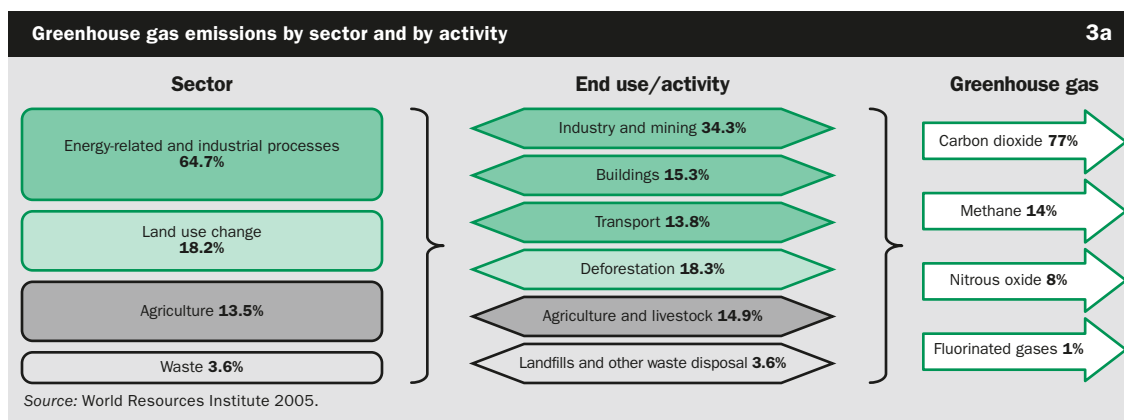
ENVIRONMENT

3





Climate change by the numbers



Numbers tell the story. The natural climate has changed, and the change is accelerating as our planet warms. The rate of warming has been nearly twice as fast in the last 50 years as in the last 100 years, with the 13 warmest years since 1880 experienced in the last 15 years. Since 1978 annual mean arctic sea ice has been declining. Temperatures at the top of the permafrost have increased by up to 3 degrees centigrade. Sea levels rose more from 1993 to 2003 than in the previous 30 years. Concentration of atmospheric carbon dioxide, the main cause of global warming, increased one-third faster in the last decade than over the last 50 years (IPCC 2007a).

Climate change poses risks for the environment and for development in most economies, disproportionately affecting those with the lowest capacity to adapt to such impacts. That makes climate change a development issue critical to poverty reduction. It is also an environmental issue vital to sustaining growth and preserving the ecosystem. Countries need measures to mitigate it—and to adapt to its unavoidable outcomes.

Knowledge about climate change has grown greatly in the last few years. The most comprehensive treatment is in the Fourth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC), which presents the findings of hundreds of experts in the field:

- All greenhouse gas concentrations—the main causes of climate change—have increased since the start of the industrial revolution. From 1750 to 2005 carbon dioxide grew from 280 parts per million to 379, methane from 715 parts per billion to 1,774, and nitrous oxide from 270 parts per billion to 319.
- Warming of the climate system is unequivocal—now evident in global averages of air, surface, and ocean temperatures; in widespread melting of snow and ice; and in rising global mean sea level.
- The likely consequences of climate change are uneven across regions, with more profound negative impacts for developing countries and for more vulnerable socioeconomic groups.
- It is very likely (90+ percent confidence) that human activities are causing global warming.
- Changes in technology, management, and behavior can mitigate climate change.
- Even with mitigation, climate change will continue, and adaptation will be needed.

Why the natural climate has changed

The IPCC's assessment concluded that global greenhouse gas emissions have drastically increased since preindustrial times, with a 70 percent increase between 1970 and 2004. More than 75 percent of these emissions come from carbon dioxide, mainly from burning fossil fuels, manufacturing cement, and cutting forests. Carbon dioxide emissions grew by about 80 percent, accelerating in recent years (a 28 percent increase since 1990).

The other major greenhouse gases are methane and nitrous oxide, mainly from agriculture, energy use, industrial processes, waste, and savannah burning (see figure 3a for a schematic representation of greenhouse gas emissions). Their emissions have grown as well (table 3.9). But emissions of ozone-depleting substances, also greenhouse gases, have declined significantly since the 1990s, controlled under the international treaty known as the Montreal Protocol. By 2005 consumption of these substances was less than 10 percent of their 1990 level (figure 3b).

Global energy intensity declined 33 percent during 1970–2004. But the favorable impact on carbon dioxide

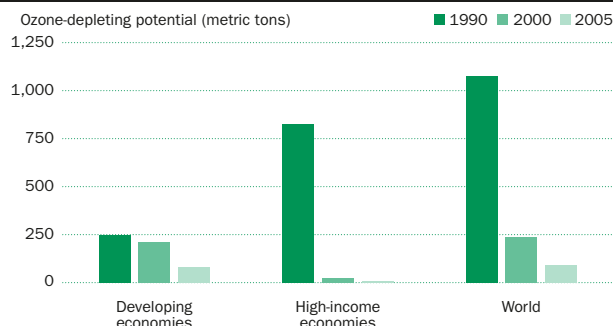
emissions has been more than offset by per capita income growth (67 percent) and population growth (73 percent).

Country trends and contributions to climate change vary substantially, with the United States and China contributing most (figure 3c and tables 3.7 and 3.8). The average resident of a rich country produces far more carbon dioxide than does the average resident of a low- and middle-income country. Per capita emissions of carbon dioxide in 2004 averaged 0.9 metric tons in low-income countries, 4.0 metric tons in middle-income countries, and 13.2 metric tons in high-income countries (figure 3d). High-income economies, with 15 percent of the world's people, produced 55 percent of global GDP (in purchasing power parity terms) and emitted nearly half of the global carbon dioxide emissions in 2004 (figure 3e and table 3.8).

Global trends in emissions of greenhouse gas sources also vary substantially. The power sector contributes almost a quarter of global greenhouse gases, and transport, industry, buildings, and other energy-related activities account for another 41 percent (figure 3f). The biggest growth between

Use of ozone-depleting substances has dropped substantially since 1990

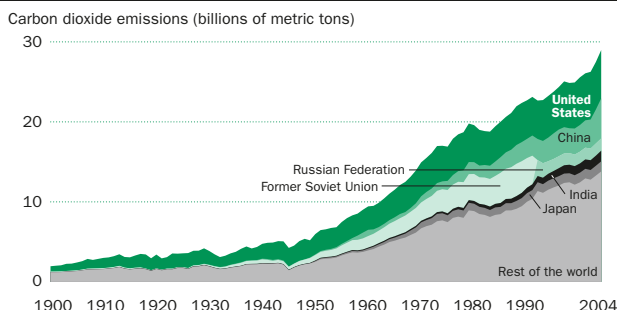
3b



Source: United Nations Millennium Development Goals database.

The United States and China lead the world in carbon dioxide emissions

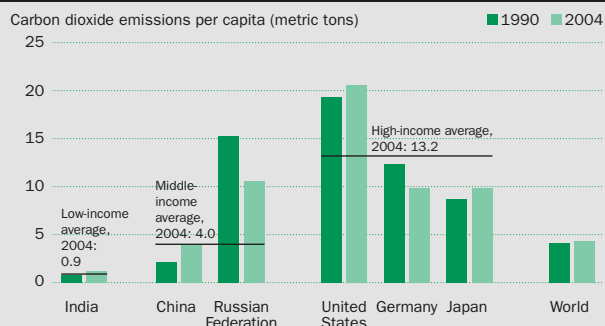
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Source: Carbon Dioxide Information Analysis Center.

High-income countries produce far more carbon dioxide emissions per capita than low- or middle-income countries

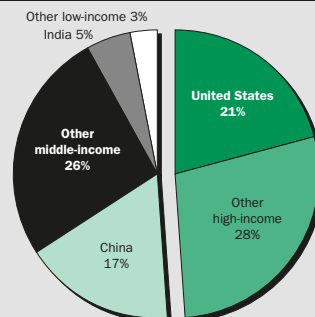
3d



Source: Table 3.8.

High-income economies emitted half the global carbon dioxide emissions in 2004

3e



Source: Table 3.8 and Carbon Dioxide Information Analysis Center.

1970 and 2004 was from power generation (145 percent) followed by transport (120 percent). Fossil fuels account for three-quarters of the energy used in the power sector, with coal dominant (figure 3g and table 3.10). Coal is responsible for the majority of emissions from the power sector (figure 3h). Almost half the electricity and heat produced is used in buildings (residential and commercial), and around one-third in industry (WRI 2006).

North America accounts for by far the largest amount of power sector emissions (3 gigatons of carbon dioxide equivalent), followed by China (1.7 gigatons), European Union (1.6 gigatons), and transition economies (1.4 gigatons). North America also has among the highest emissions per capita (7 tons of carbon dioxide per person), more than twice those of the European Union and six times those of China (WRI 2006).

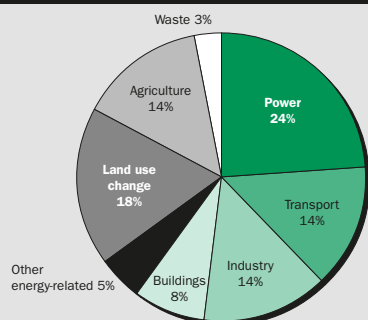
Transport accounts for 14 percent of global greenhouse gas emissions, behind power and land use change but about the same as agriculture (see figure 3f). Most of these emissions are from road transport (76 percent) and aviation

(12 percent; figure 3i). By far the largest source of transport emissions is North America, producing 37 percent of the global total. This partly reflects the fact that the United States has the highest vehicle ownership in the world (814 vehicles per 1,000 people, compared with 604 in the European Union and 15 in China) and also lags in fuel efficiency, which is about two-thirds that in the European Union (An and Sauer 2004).

Agriculture and deforestation are responsible for one-third of greenhouse gas emissions. In many countries soil degradation, along with the loss of agricultural land through urbanization and population growth, has led to substantial deforestation. The global forested area in 2005 was about 4 billion hectares, covering 30 percent of total land area (table 3.4). But deforestation continues at about 13 million hectares a year. Reforestation reduced the net loss of forest areas to 7.3 million hectares a year during 2000–05, an improvement from losses of 8.9 million hectares a year during 1990–2000. Sub-Saharan Africa and Latin America continued to have the largest forest loss after 1990.

Power generation and land use change were the two largest sources of greenhouse gas emissions in 2000

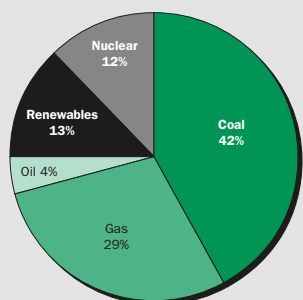
3f



Source: WRI 2006.

Fossil fuels accounted for three-quarters of the fuel used in the power sector in 2002

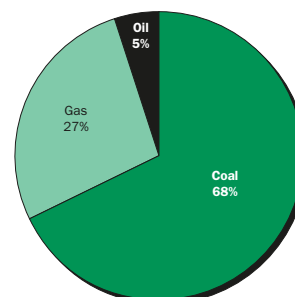
3g



Source: WRI 2006.

Coal was responsible for the majority of emissions from the power sector in 2002

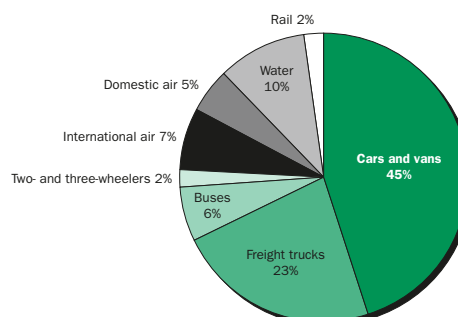
3h



Source: WRI 2006.

Road transport accounted for more than three-quarters of total transport carbon dioxide emissions in 2000

3i



Source: WRI 2006.

Climate change and vulnerable people and regions

Climate change will have different effects on different regions (depending on geography) and different income groups (depending on livelihoods and adaptive capacity). The effects will also vary by the extent of adaptation, exposure to temperature change, and socioeconomic conditions. Potential impacts could include:

- **Lower agricultural productivity.** Climate change has the potential to drastically affect food production (figure 3j). In parts of Sub-Saharan Africa and South and East Asia losses in agricultural productivity are linked to drought and rainfall variation. Drought has already become more frequent in Sub-Saharan Africa (figure 3k). Because a large share of the world's poor people depend directly on agriculture, drought and other negative effects of climate change put poverty reduction efforts at risk. But global warming could potentially benefit agriculture in some temperate areas—mostly in developed countries.
- **Greater water scarcity.** The rise in global temperature is accelerating (figure 3l). If it exceeds the 2° C threshold (as some scenarios project), the distribution of the world's

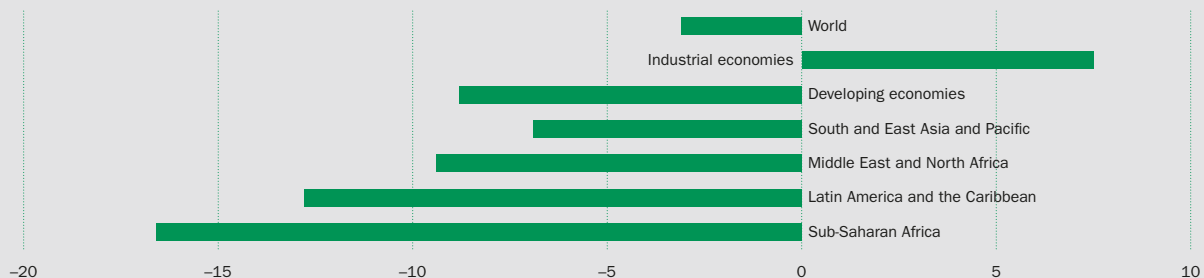
water resources will change drastically. While water's availability could increase in the moist tropics and in high latitudes, it will decline in the midlatitudes and in semiarid low altitudes, increasing droughts and water shortages. Accelerated glacial melt in the Himalayas will compound severe ecological problems in northern China, India, and Pakistan, increasing floods but reducing water flow to major river systems vital for irrigation. In Latin America accelerated melting of tropical glaciers will threaten water supplies for urban populations, agriculture, and hydroelectricity, especially in the Andean region. Water shortages could contribute to regional conflicts.

- **Heightened health risks.** Climate change will affect human health. Globally, 220–400 million more people could be at increased risk of malaria, particularly in Sub-Saharan Africa, where exposure to malaria is projected to increase 16–28 percent (UNDP 2007b; IPCC 2007b). Climate change could also increase the incidence of malnutrition, diarrhea, and infectious diseases—and change the distribution of disease vectors, adding to the burden on health services.

Climate change would hurt developing countries' agricultural output

3j

Change in agricultural output potential in 2080s (% of 2000 potential)

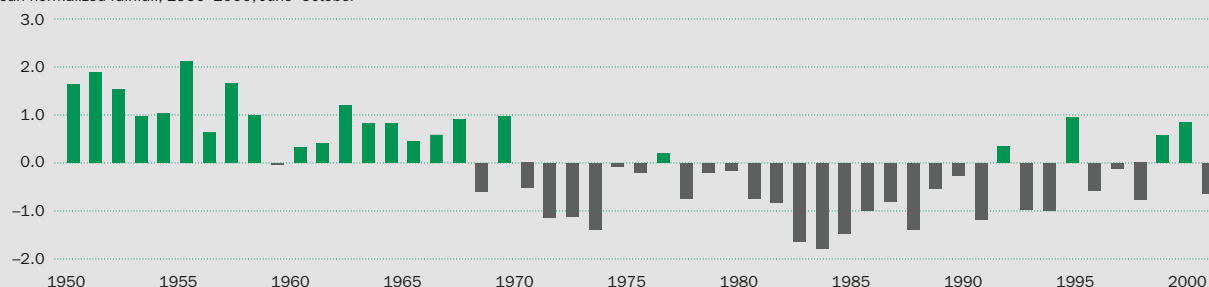


Source: Cline 2007.

Less rain is falling in the Sahel, with dire consequences

3k

Mean normalized rainfall, 1950–2000, June–October



Note: The averages are standardized for the period 1950–2000 so that the mean of the series is zero and the standard deviation is one.
Source: World Bank 2002e.

- **More exposure to climate disasters.** Climate-related disasters, mainly floods and droughts, have already increased. On average 262 million people a year were affected between 2000 and 2004, more than twice the number in the 1980s (figure 3m), and most of them (98 percent) live in developing countries (figure 3n). Temperature increases greater than 2° C would accelerate the rise in sea level, causing widespread displacement of people in countries such as Bangladesh, Egypt, and Vietnam and the inundation of several small-island economies. Rising sea levels and more intense tropical storm activity could raise the number of people experiencing coastal flooding by 180–230 million (Dasgupta and others 2007; Anthoff and others 2006; UNDP 2007b).
- **Harm to ecosystems.** Coral reef systems, already in decline, would suffer extensive bleaching, transforming marine ecologies, with large losses of biodiversity and ecosystem services. This would adversely affect hundreds of millions of people dependent on fish for their livelihoods and nutrition (UNDP 2007b).

The negative impacts will not occur everywhere (IPCC 2007a). These impacts depend on two main factors: exposure to the effects of climate change and capacity to adapt to them.

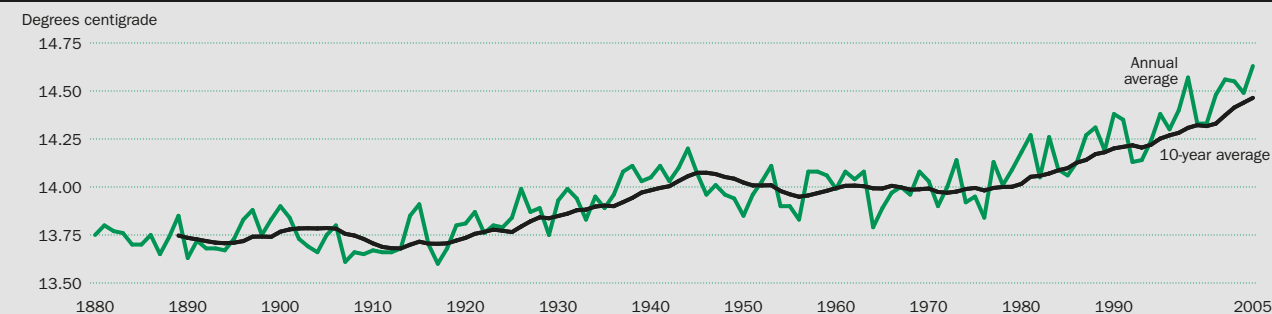
Exposure is partly determined by environmental factors. People, flora, and fauna in areas prone to flooding or facing water scarcity have far greater exposure. The level of exposure also depends on the population density or the infrastructure in environmentally sensitive areas. Adaptive capacity is the ability to deal with climate change, such as by building levies to combat flooding or irrigation systems to deal with drought. It is closely associated with a society's wealth, education, institutional strength, and access to technology (Burton, Diringer, and Smith 2006; IPCC 2007e).

High exposure and low adaptive capacity occur mostly in developing countries, making them highly vulnerable to climate change.

Poverty and political instability make the negative impacts of climate change more severe and weaken the ability to adapt.

The rise in global mean surface temperature is accelerating

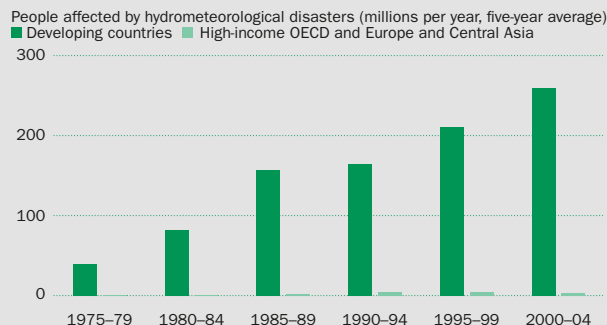
3l



Source: Goddard Institute for Space Science Studies Analysis.

Climate disasters are affecting more and more people, mostly in developing countries

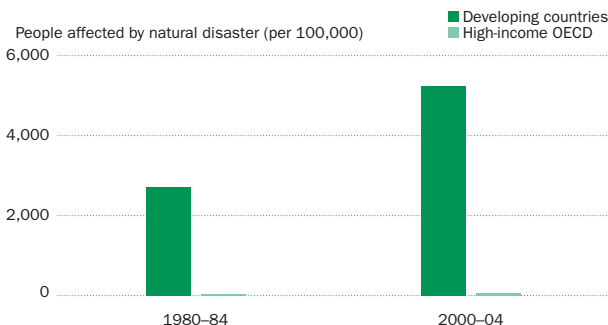
3m



Source: UNDP 2007b, based on OFDA and CRED 2007.

Developing countries are exposed to higher risk of natural disaster

3n



Source: UNDP 2007b, based on OFDA and CRED 2007.

The enormous costs of inaction

The impacts of climate change are costly—so is mitigating the causes of the climate change or adapting to the unavoidable outcomes of change. There is substantial economic and social justification for mitigating global greenhouse gases emissions over the coming decades (IPCC 2007d), offsetting the projected growth of global emissions or even reducing emissions below current levels. The costs of mitigation depend on the level at which emissions stabilize.

But the cost of inaction is significantly higher. The range of estimates is wide, depending on underlying assumptions, on which consensus is lacking. For example, the Stern Review (Stern 2006) estimates that without action the overall costs of climate change will be equivalent to losing at least 5 percent of global GDP each year, now and forever. They would be much higher under a wider range of risks and impacts.

Some steps to reduce carbon dioxide are economically and socially desirable, regardless of their mitigating impact. Conserving energy and promoting new technologies and energy alternatives (such as capturing and storing carbon and shifting to renewable and cleaner sources of energy) would

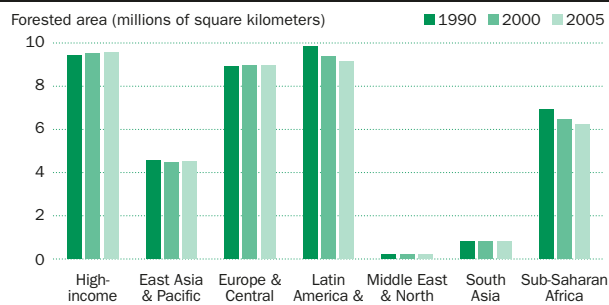
reduce pollution while economizing on exhaustible resources. Preventing deforestation is important because forests protect biodiversity and provide livelihood for millions of poor people (figure 3o). But taking a low carbon path by shifting to alternative energy may be difficult for many developing countries that need to grow but can afford to use only fossil fuels—particularly coal, the “dirtiest” of energy sources.

With some 1.6 billion people lacking electricity (figure 3p; IEA 2006b), cheap and abundant coal is the fuel of choice in much of the world, powering economic booms in most developing economies, notably China and India, that have lifted millions of people out of poverty. Low-income countries use coal to generate 47 percent of their electricity. Coal generates 78 percent of China’s electricity and 69 percent of India’s (figure 3q). Worldwide, coal demand is projected to rise about 60 percent by 2030, to 6.9 billion metric tons a year, most of it going to electrical plants. So, greater coal efficiency can reduce carbon dioxide emissions (figure 3r).

Burning coal does more than add to global warming—it is also linked to other environmental and health issues,

Forested areas are shrinking in Latin America and Sub-Saharan Africa—recovering in East Asia

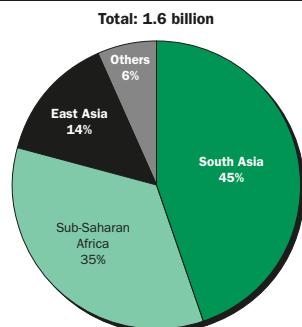
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Source: Table 3.4.

The vast majority of people without access to electricity in 2004 lived in developing countries

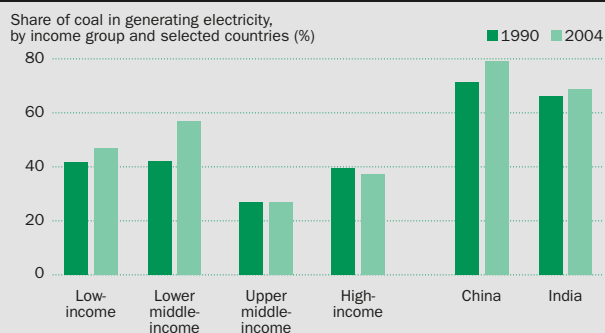
3p



Source: IEA 2006b.

China and India generate more than two-thirds of their electricity from coal

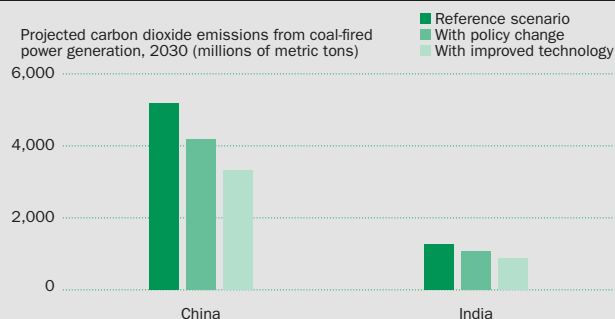
3q



Source: Table 3.10.

Greater coal efficiency can reduce carbon dioxide emissions

3r



Source: Watson 2007; UNDP 2007b.

including acid rain and asthma. Air pollution prematurely kills more than 2 million people a year. In China the health costs attributable to air pollution are estimated at \$68 billion a year, nearly 4 percent of its economic output (World Bank 2007c). And acid rain has contaminated one-third of the country, destroying some \$4 billion worth of crops every year. Chinese authorities have closed some polluting factories and by 2010 will retire 50 gigawatts of inefficient power plants (about 8 percent of the power grid; Pew Center on Global Climate Change 2007). The authorities have also mandated that solar, wind, hydroelectric, and other forms of renewable energy provide 10 percent of the nation's power by 2010—and ordered key industries to reduce energy consumption by 20 percent.

There is considerable agreement and much evidence that, even with current mitigation policies, global greenhouse gas emissions will continue to grow over the coming decades (IPCC 2007d). So, countries need to adapt to the unavoidable effects of climate change that are already affecting the well-being of their people, particularly those who are poor, the

unintended victims of industrialized economies' past energy consumption.

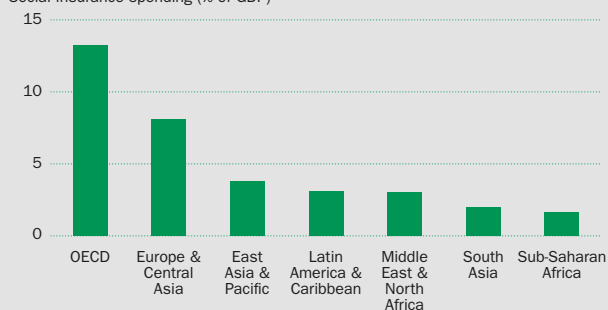
With poor adaptive capacity, inadequate social protection, and gaps in climate information, developing countries will find it difficult to respond (figures 3s and 3t). Because climate change crosses national borders, a coordinated program of funding and new technologies is required. But the funding needed for adaptation is enormous, and the amount available for climate adaptation in developing countries is still insufficient. In June 2007 pledges totaled less than \$220 million, with even smaller amounts allocated and disbursed (figure 3u). The Netherlands has already spent \$2.2 billion for flood protection, and Austria has a \$1.3 billion project to deal with water scarcity and extreme weather (WRI 2007).

There is still a window of opportunity to act before the economic and human costs become insurmountable (Stern 2006; IPCC 2007c). But action requires measuring and monitoring the state of the environment and human well-being and how they are changing. There are still information gaps, and many of the available data are not up to date. The impacts of carbon dioxide emissions are not well quantified, especially in developing countries. The impacts of extreme climate events are poorly tracked. Local impacts are not widely researched. Few projections on aquatic resources are available. Research on adaptation is still not comprehensive across a range of climate and socioeconomic futures. There is much to be learned about the impacts on biofuel and industrial crops.

Numbers tell the story. But we still lack many of the numbers to tell the whole story.

Social insurance spending is lower in developing countries, where people are exposed to higher risk of climate change impact 3s

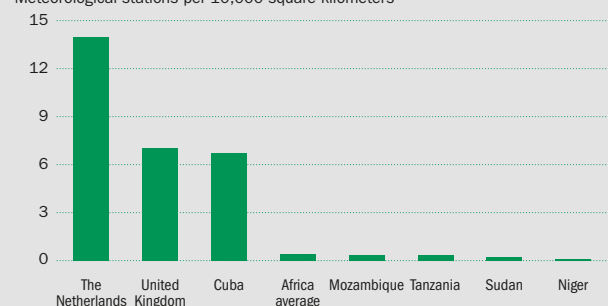
Social insurance spending (% of GDP)



Source: World Bank 2005d.

The climate information gap makes adaptation more difficult 3t

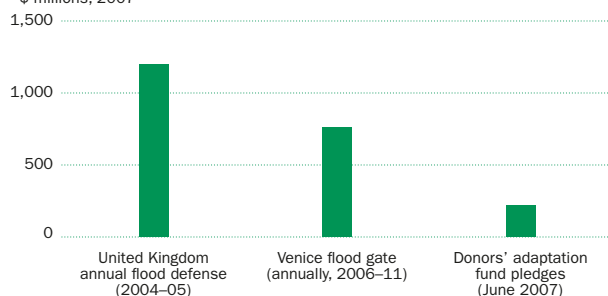
Meteorological stations per 10,000 square kilometers



Source: UNDP 2007b; WMO 2007; UN 2007.

Adaptation is expensive, and funding for developing countries is inadequate 3u

\$ millions, 2007



Source: UNDP 2007b; Abott 2004; DEFRA 2007; GEF 2007.



	Rural population			Land area thousand sq. km	Land use							
	% of total		average annual % growth		% of land area							
1990	2006	1990–2006	2006	1990	2005	1990	2005	1990	2005	1990–92	2003–05	
Afghanistan	..	..	..	652.1	2.0	1.3	0.2	0.2	12.1	12.1	..	..
Albania	63.6	53.9	–1.3	27.4	28.8	29.0	4.6	4.5	21.1	21.1	18.7	18.4
Algeria	47.9	36.1	0.0	2,381.7	0.8	1.0	0.2	0.4	3.0	3.1	24.5	23.1
Angola	62.9	46.0	0.9	1,246.7	48.9	47.4	0.4	0.2	2.3	2.6	21.2	21.1
Argentina	13.0	9.7	–0.7	2,736.7	12.9	12.1	0.4	0.4	9.6	10.4	75.2	74.0
Armenia	32.5	36.0	–0.4	28.2	12.3	10.0	2.7	2.1	17.7	17.6	16.1 ^c	16.4
Australia	14.6	11.6	–0.2	7,682.3	21.9	21.3	0.0	0.0	6.2	6.4	248.9	240.6
Austria	34.2	33.9	0.4	82.5	45.8	46.8	1.0	0.8	17.3	16.8	17.3	17.0
Azerbaijan	46.3	48.4	1.3	82.7	11.3	11.3	3.7	2.7	20.5	22.3	22.6	22.2
Bangladesh	80.2	74.5	1.5	130.2	6.8	6.7	2.3	3.5	70.2	61.1	5.7	5.3
Belarus	33.6	27.3	–1.6	207.5	35.6	38.0	0.9	0.6	29.3	26.3	58.4 ^c	56.2
Belgium	3.6	2.8	–1.3	30.2	22.4	22.1	..	0.8	..	27.9	8.2	8.1
Benin	65.5	59.5	2.7	110.6	30.0	21.3	0.9	2.4	14.6	24.9	33.0	33.0
Bolivia	44.4	35.3	0.7	1,084.4	57.9	54.2	0.1	0.2	1.9	2.8	34.9	33.9
Bosnia and Herzegovina	60.8	53.7	–1.4	51.2	43.2	42.7	2.9	1.9	16.6	19.5	26.1 ^c	25.9
Botswana	58.1	41.8	–0.1	566.7	24.2	21.1	0.0	0.0	0.7	0.7	21.5	20.8
Brazil	25.2	15.3	–1.6	8,459.4	61.5	56.5	0.8	0.9	6.0	7.0	33.1	32.0
Bulgaria	33.6	29.7	–1.5	108.6	30.1	33.4	2.7	1.9	34.9	29.2	43.4	42.0
Burkina Faso	86.2	81.3	2.6	273.6	26.1	24.8	0.2	0.2	12.9	17.7	35.9	35.9
Burundi	93.7	89.7	2.0	25.7	11.3	5.9	14.0	14.2	36.2	37.8	14.2	13.0
Cambodia	87.4	79.7	1.8	176.5	73.3	59.2	0.6	0.9	20.9	21.0	28.4	27.0
Cameroon	59.3	44.5	0.7	465.4	52.7	45.6	2.6	2.6	12.8	12.8	36.7	34.2
Canada	23.4	19.8	0.0	9,093.5	34.1	34.1	0.7	0.7	5.0	5.0	147.4	142.8
Central African Republic	63.2	61.8	2.0	623.0	37.2	36.5	0.1	0.1	3.1	3.1	49.1	46.8
Chad	79.2	74.2	3.0	1,259.2	10.4	9.5	0.0	0.0	2.6	3.3	40.7	40.1
Chile	16.7	12.1	–0.6	748.8	20.4	21.5	0.3	0.5	3.7	2.6	12.7	12.2
China	72.6	58.7	–0.4	9,360.8 ^a	16.8	21.2	0.8	1.4	13.3	15.4	11.1	11.0
Hong Kong, China	0.5	0.0	..	1.0	..	..	..	..	..	..	..	..
Colombia	31.3	27.0	0.7	1,109.5	55.4	54.7	1.5	1.5	3.0	1.8	5.9	4.9
Congo, Dem. Rep.	72.2	67.3	2.5	2,267.1	62.0	58.9	0.5	0.5	2.9	3.0	12.9	11.8
Congo, Rep.	45.7	39.4	1.7	341.5	66.5	65.8	0.1	0.1	1.4	1.4	15.0	14.0
Costa Rica	49.3	37.8	0.6	51.1	50.2	46.8	4.9	6.5	5.1	4.4	5.6	5.3
Côte d'Ivoire	60.3	54.6	1.8	318.0	32.1	32.7	11.0	11.3	7.6	11.0	18.2	18.8
Croatia	46.0	43.2	–0.8	55.9	37.8	38.2	2.0	2.1	21.7	19.8	32.7 ^c	27.6
Cuba	26.6	24.6	–0.1	109.8	18.7	24.7	7.4	6.1	27.6	33.4	32.8	32.7
Czech Republic	24.8	26.5	0.4	77.3	34.0	34.3	..	3.1	..	39.4	30.1	29.9
Denmark	15.2	14.3	0.0	42.4	10.5	11.8	0.2	0.2	60.4	52.7	42.6	41.8
Dominican Republic	44.8	32.5	–0.3	48.4	28.4	28.4	9.3	10.3	18.6	16.9	9.2	8.8
Ecuador	44.9	36.7	0.3	276.8	49.9	39.2	4.8	4.4	5.8	4.9	12.0	10.1
Egypt, Arab Rep.	56.5	57.0	1.9	995.5	0.0	0.1	0.4	0.5	2.3	3.0	4.2	4.1
El Salvador	50.8	39.9	0.2	20.7	18.1	14.4	12.5	12.1	26.5	31.9	10.4	10.0
Eritrea	84.2	80.2	2.2	101.0	16.0	15.4	..	0.0	..	6.3	14.6	14.0
Estonia	28.9	30.9	–0.6	42.4	51.0	53.9	0.3	0.3	26.3	13.9	52.1 ^c	40.9
Ethiopia	87.4	83.7	2.3	1,000.0	13.7	13.0	0.6	0.8	9.8	13.1	15.1	16.7
Finland	38.6	38.8	0.4	304.6	72.9	73.9	0.0	0.0	7.4	7.3	42.2	42.5
France	25.9	23.1	–0.2	550.1	26.4	28.3	2.2	2.1	32.7	33.6	31.1	30.5
Gabon	30.9	15.9	–1.9	257.7	85.1	84.5	0.6	0.7	1.1	1.3	27.0	25.6
Gambia, The	61.7	45.3	1.5	10.0	44.2	47.1	0.5	0.5	18.2	35.0	21.3	21.9
Georgia	44.8	47.7	–0.9	69.5	39.7	39.7	4.8	3.8	11.4	11.5	17.1 ^c	17.8
Germany	26.6	24.7	–0.2	348.8	30.8	31.8	1.3	0.6	34.3	34.1	14.3	14.4
Ghana	63.5	51.5	1.1	227.5	32.7	24.2	6.6	9.7	11.9	18.4	19.7	19.0
Greece	41.2	40.9	0.5	128.9	25.6	29.1	8.3	8.8	22.5	20.4	24.9	24.1
Guatemala	58.9	52.3	1.6	108.4	43.8	36.3	4.5	5.6	12.0	13.3	12.2	11.6
Guinea	72.0	66.5	2.1	245.7	30.1	27.4	2.0	2.7	3.0	4.9	12.1	13.2
Guinea-Bissau	71.9	70.3	2.9	28.1	78.8	73.7	4.2	8.9	10.7	10.7	21.2	19.4
Haiti	70.5	60.5	0.8	27.6	4.2	3.8	11.6	11.6	28.3	28.3	8.9	8.5

Rural population and land use

3.1

ENVIRONMENT

	Rural population			Land area thousand sq. km	Land use									
	% of total		average annual % growth		% of land area								Arable land hectares per 100 people	
					Forest area		Permanent cropland		Arable land					
1990	2006	1990-2006	2006	1990	2005	1990	2005	1990	2005	1990-92	2003-05			
Honduras	59.7	53.0	1.5	111.9	66.0	41.5	3.2	3.2	13.1	9.5	16.9	15.9		
Hungary	34.2	33.3	-0.4	89.6	20.0	22.1	2.6	2.3	56.2	51.3	45.2	45.5		
India	74.5	71.0	1.4	2,973.2	21.5	22.8	2.2	3.4	54.8	53.7	15.5	14.8		
Indonesia	69.4	50.8	-0.6	1,811.6	64.3	48.8	6.5	7.5	11.2	12.7	10.3	10.6		
Iran, Islamic Rep.	43.7	32.6	-0.3	1,628.6	6.8	6.8	0.8	1.0	9.3	10.2	24.0	24.0		
Iraq	30.3	..	..	437.4	1.8	1.9	0.7	0.6	12.1	13.1	22.0	..
Ireland	43.1	39.2	0.6	68.9	6.4	9.7	0.0	0.0	15.1	17.6	29.7	29.5		
Israel	9.6	8.4	1.7	21.6	7.1	7.9	4.1	3.5	15.9	14.6	5.3	4.8		
Italy	33.3	32.2	0.0	294.1	28.5	33.9	10.1	8.6	30.6	26.3	14.7	13.6		
Jamaica	50.6	46.6	0.2	10.8	31.9	31.3	9.2	10.2	11.0	16.1	6.7	6.6		
Japan	36.9	34.0	-0.3	364.5	68.4	68.2	1.3	0.9	13.1	12.0	3.5	3.4		
Jordan	27.8	17.4	0.6	88.2	0.9	0.9	0.8	1.0	2.0	2.1	3.9	3.6		
Kazakhstan	43.7	42.4	-0.6	2,699.7	1.3	1.2	0.1	0.1	13.0	8.3	148.7	149.3		
Kenya	81.8	79.0	2.6	569.1	6.5	6.2	0.8	0.8	8.8	9.2	15.7	15.1		
Korea, Dem. Rep.	41.6	38.0	0.5	120.4	68.1	51.4	1.5	1.7	19.0	23.3	11.4	11.7		
Korea, Rep.	26.2	19.0	-1.3	98.7	64.5	63.5	1.6	2.0	19.8	16.4	3.6	3.4		
Kuwait	2.0	1.7	0.2	17.8	0.2	0.3	0.1	0.2	0.2	0.8	0.6 ^c	0.6		
Kyrgyz Republic	62.2	64.0	1.2	191.8	4.4	4.5	0.4	0.4	6.9	6.7	27.2 ^c	25.9		
Lao PDR	84.6	79.0	1.7	230.8	75.0	69.9	0.3	0.4	3.5	4.3	17.0	17.8		
Latvia	30.7	32.1	-0.7	62.3	44.7	47.2	0.4	0.2	27.2	17.5	41.0 ^c	44.1		
Lebanon	16.9	13.3	0.4	10.2	11.8	13.3	11.9	13.9	17.9	18.2	4.7	4.7		
Lesotho	82.8	81.0	1.2	30.4	0.2	0.3	0.1	0.1	10.4	10.9	17.3	16.8		
Liberia	54.7	41.2	1.5	96.3	42.1	32.7	2.2	2.3	4.2	4.0	12.0	11.4		
Libya	21.4	14.9	-0.2	1,759.5	0.1	0.1	0.2	0.2	1.0	1.0	33.3	30.6		
Lithuania	32.4	33.4	-0.3	62.7	31.0	33.5	0.7	0.6	46.0	30.4	58.8 ^c	49.0		
Macedonia, FYR	42.2	30.4	-1.6	25.4	35.6	35.6	2.2	1.8	23.8	22.3	27.9 ^c	27.9		
Madagascar	76.4	72.9	2.6	581.5	23.5	22.1	1.0	1.0	4.7	5.1	17.6	16.3		
Malawi	88.4	82.3	1.8	94.1	41.4	36.2	1.2	1.5	19.3	27.6	18.4	19.8		
Malaysia	50.2	31.8	-0.6	328.6	68.1	63.6	16.0	17.6	5.2	5.5	7.6	7.1		
Mali	76.7	68.9	2.1	1,220.2	11.5	10.3	0.0	0.0	1.7	3.9	45.3	42.6		
Mauritania	60.3	59.4	2.7	1,030.7	0.4	0.3	0.0	0.0	0.4	0.5	18.5	17.1		
Mauritius	56.1	57.5	1.2	2.0	19.2	18.2	3.0	3.0	49.3	49.3	8.3	8.1		
Mexico	27.5	23.7	0.5	1,944.0	35.5	33.0	1.0	1.3	12.5	12.9	25.4	24.6		
Moldova	53.2	53.0	-0.9	32.9	9.7	10.0	14.2	9.1	52.8	56.2	45.1 ^c	47.1		
Mongolia	43.0	43.1	1.3	1,566.5	7.3	6.5	0.0	0.0	0.9	0.7	49.1	46.7		
Morocco	51.6	40.7	0.0	446.3	9.6	9.8	1.6	2.1	19.5	19.0	29.7	28.4		
Mozambique	78.9	64.7	1.5	786.4	25.4	24.5	0.3	0.3	4.4	5.6	21.6	21.8		
Myanmar	75.1	68.7	0.6	657.6	59.6	49.0	0.8	1.4	14.5	15.3	21.4	21.1		
Namibia	72.3	64.3	1.6	823.3	10.6	9.3	0.0	0.0	0.8	1.0	42.7	40.9		
Nepal	91.1	83.7	1.8	143.0	33.7	25.4	0.5	0.9	16.0	16.5	9.4	8.9		
Netherlands	31.3	19.3	-2.5	33.9	10.2	10.8	0.9	1.0	25.9	26.8	5.7	5.6		
New Zealand	15.3	13.7	0.5	267.7	28.8	31.0	5.1	7.1	9.9	5.6	38.5	36.7		
Nicaragua	46.9	40.6	0.9	121.4	53.9	42.7	1.6	1.9	10.7	15.9	37.1	35.7		
Niger	84.6	83.0	3.4	1,266.7	1.5	1.0	0.0	0.0	8.7	11.4	125.7	113.1		
Nigeria	65.0	51.0	1.2	910.8	18.9	12.2	2.8	3.3	32.4	35.1	22.6	22.6		
Norway	28.0	22.5	-0.8	304.3	30.0	30.8	..	..	2.8	2.8	19.6	19.0
Oman	34.6	28.5	0.8	309.5	0.0	0.0	0.1	0.1	0.1	0.2	1.6	2.2		
Pakistan	69.4	64.7	2.0	770.9	3.3	2.5	0.6	1.0	26.6	27.6	15.2	14.1		
Panama	46.1	28.4	-1.1	74.4	58.8	57.7	2.1	2.0	6.7	7.4	18.1	17.3		
Papua New Guinea	86.9	86.5	2.5	452.9	69.6	65.0	1.3	1.4	0.4	0.5	3.8	3.9		
Paraguay	51.3	40.9	0.8	397.3	53.3	46.5	0.2	0.2	5.3	10.6	61.2	70.2		
Peru	31.1	27.2	0.6	1,280.0	54.8	53.7	0.3	0.5	2.7	2.9	14.2	13.7		
Philippines	51.2	36.6	0.0	298.2	35.5	24.0	14.8	16.8	18.4	19.1	7.3	6.9		
Poland	38.7	37.8	-0.2	306.3	29.2	30.0	1.1	1.2	47.3	39.6	35.3	32.6		
Portugal	52.1	41.8	-1.0	91.5	33.9	41.3	8.5	7.1	25.6	13.8	15.4	13.3		
Puerto Rico	27.8	2.2	-15.3	8.9	45.5	46.0	5.6	4.7	7.3	8.0	1.7	1.8		



3.1

Rural population and land use

	Rural population			Land area thousand sq. km	Land use							
	% of total		average annual % growth		Arable land hectares per 100 people							
					Forest area		% of land area		Permanent cropland		Arable land	
1990	2006	1990–2006	2006	1990	2005	1990	2005	1990	2005	1990–92	2003–05	
Romania	45.7	46.1	−0.4	230.0	27.8	27.7	2.6	2.3	41.2	40.4	42.4	43.2
Russian Federation	26.6	27.1	−0.1	16,381.4	49.4	49.4	0.1	0.1	8.1	7.4	84.9 ^c	84.9
Rwanda	94.6	79.8	0.6	24.7	12.9	19.5	12.4	11.1	35.7	48.6	11.8	13.2
Saudi Arabia	23.4	18.8	0.9	2,000.0 ^b	1.4	1.4	0.0	0.1	1.7	1.8	17.0	15.7
Senegal	61.0	58.1	2.4	192.5	48.6	45.0	0.1	0.2	12.1	13.2	22.9	21.8
Serbia ^d	49.1	47.6	..	102.0	25.1	26.4	3.5	3.1	36.5	34.4	41.9 ^c	42.4
Sierra Leone	69.9	58.6	1.0	71.6	42.5	38.5	0.8	1.1	6.8	8.4	10.8	11.0
Singapore	0.0	0.0	..	0.7	3.0	2.9	1.5	0.3	1.5	0.9	0.0	0.0
Slovak Republic	43.5	43.7	0.2	48.1	40.0	40.1	..	0.5	..	28.9	27.1	26.0
Slovenia	49.6	48.8	−0.1	20.1	59.0	62.8	1.8	1.3	9.9	8.7	8.6 ^c	8.7
Somalia	70.3	64.3	0.9	627.3	13.2	11.4	0.0	0.0	1.6	2.2	15.1	16.5
South Africa	48.0	40.2	0.8	1,214.5	7.6	7.6	0.7	0.8	11.1	12.1	33.0	31.8
Spain	24.6	23.2	0.4	499.2	27.0	35.9	9.7	9.9	30.7	27.4	32.2	32.0
Sri Lanka	82.8	84.9	1.1	64.6	36.4	29.9	15.9	15.5	13.5	14.2	4.7	4.7
Sudan	73.4	58.3	0.9	2,376.0	32.1	28.4	0.0	0.1	5.4	8.2	48.1	51.2
Swaziland	77.1	75.6	2.3	17.2	27.4	31.5	0.7	0.8	10.5	10.3	16.7	15.9
Sweden	16.9	15.7	−0.1	410.3	66.7	67.1	0.0	0.0	6.9	6.6	30.3	29.8
Switzerland	31.6	24.4	−0.9	40.0	28.9	30.5	0.5	0.6	9.8	10.3	5.7	5.5
Syrian Arab Republic	51.1	49.2	2.4	183.8	2.0	2.5	4.0	4.7	26.6	26.5	27.1	25.9
Tajikistan	68.5	75.4	2.0	140.0	2.9	2.9	0.9	0.9	6.1	6.6	14.9 ^c	14.4
Tanzania	81.1	75.4	2.3	885.8	46.8	39.8	1.1	1.3	10.2	10.4	25.9	24.5
Thailand	70.6	67.4	0.7	510.9	31.2	28.4	6.1	7.0	34.2	27.8	25.9	22.7
Timor-Leste	79.2	73.1	1.5	14.9	65.0	53.7	3.9	4.6	7.4	8.2	15.2	13.2
Togo	69.9	59.2	2.0	54.4	12.6	7.1	1.7	2.6	38.6	45.8	45.1	41.2
Trinidad and Tobago	91.5	87.5	0.2	5.1	45.8	44.1	9.0	9.2	14.4	14.6	5.7	5.7
Tunisia	40.4	34.3	0.3	155.4	4.1	6.8	12.5	13.9	18.7	17.6	29.0	27.9
Turkey	40.8	32.2	0.2	769.6	12.6	13.2	3.9	3.6	32.0	31.0	34.8	33.2
Turkmenistan	54.9	53.4	1.6	469.9	8.8	8.8	0.1	0.1	2.9	4.9	40.5 ^c	46.9
Uganda	88.9	87.3	3.1	197.1	25.0	18.4	9.4	11.2	25.4	27.4	20.0	18.9
Ukraine	33.2	32.0	−0.9	579.4	16.0	16.5	1.9	1.6	57.6	56.0	66.9 ^c	68.4
United Arab Emirates	20.9	23.3	6.1	83.6	2.9	3.7	0.2	2.3	0.4	0.8	2.0	1.6
United Kingdom	11.3	10.2	−0.3	241.9	10.8	11.8	0.3	0.2	27.4	23.7	9.7	9.6
United States	24.7	18.9	−0.5	9,161.9	32.6	33.1	0.2	0.3	20.3	19.0	61.6	59.6
Uruguay	11.0	7.9	−1.7	175.0	5.2	8.6	0.3	0.2	7.2	7.8	41.5	41.5
Uzbekistan	59.9	63.3	2.0	425.4	7.2	7.7	0.9	0.8	10.5	11.0	18.0 ^c	18.2
Venezuela, RB	16.0	6.3	−3.9	882.1	59.0	54.1	0.9	0.9	3.2	3.0	10.5	10.1
Vietnam	79.7	73.1	1.0	310.1	28.8	41.7	3.2	7.6	16.4	21.3	8.2	8.0
West Bank and Gaza	32.1	28.3	3.3	6.0	1.5	1.5	19.1	19.1	18.4	17.8	3.4	3.0
Yemen, Rep.	79.1	72.3	3.0	528.0	1.0	1.0	0.2	0.3	2.9	2.9	8.1	7.4
Zambia	60.6	64.9	2.7	743.4	66.1	57.1	0.0	0.0	7.1	7.1	49.3	46.7
Zimbabwe	71.0	63.6	0.8	386.9	57.5	45.3	0.3	0.3	7.5	8.3	25.2	24.7
World	57.0 w	50.9 w	0.6 w	129,644.6 w	31.5 w	30.5 w	1.1 w	1.1 w	10.9 w	11.0 w	23.0 w	22.3 w
Low income	74.6	69.6	1.6	28,147.5	26.2	23.9	1.0	1.3	13.2	14.1	17.4	16.9
Middle income	55.8	45.5	−0.2	68,468.3	34.8	33.8	1.4	1.2	9.1	9.7	22.4	21.8
Lower middle income	64.9	52.7	−0.2	27,976.6	27.0	26.5	1.6	1.9	9.4	11.4	14.5	14.2
Upper middle income	30.6	25.0	−0.3	40,491.7	40.2	38.8	1.1	0.7	8.9	8.5	44.6	43.2
Low & middle income	63.3	56.1	0.7	96,615.8	32.2	30.9	1.2	1.2	10.6	11.0	20.3	19.7
East Asia & Pacific	71.2	57.6	−0.2	15,871.1	28.8	28.4	2.2	2.9	12.1	13.5	11.6	11.4
Europe & Central Asia	37.0	36.2	0.0	23,247.6	38.2	38.3	0.4	0.4	12.3	11.1	57.7	57.0
Latin America & Carib.	29.0	22.3	−0.1	20,156.5	48.8	45.4	0.9	1.0	6.5	7.2	27.5	26.7
Middle East & N. Africa	48.0	42.5	1.2	8,953.2	2.2	2.4	0.8	0.9	5.6	5.9	18.1	17.5
South Asia	75.1	71.2	1.5	4,781.3	16.5	16.8	1.8	2.6	42.6	41.9	14.5	13.8
Sub-Saharan Africa	72.0	64.2	1.9	23,606.1	29.2	26.5	0.8	0.9	6.7	8.0	25.5	25.0
High income	26.4	22.4	−0.3	33,028.8	29.1	29.5	0.7	0.7	11.4	11.0	37.3	36.4
Euro area	29.0	26.5	−0.2	2,464.9	33.4	37.2	4.7	4.4	27.1	25.4	20.4	20.1

a. Includes Taiwan, China; Macao, China; and Hong Kong, China. b. Provisional estimate. c. Data for all three years are not available. d. Includes Montenegro.

About the data

With 3 billion people, including 70 percent of the world's poor people, living in rural areas, adequate indicators to monitor progress in rural areas are essential. However, few indicators are disaggregated between rural and urban areas (for some that are, see tables 2.7, 3.5, and 3.11). The table shows indicators of rural population and land use. Rural population is approximated as the midyear nonurban population. While a practical means of identifying the rural population, it is not precise (see box 3.1a for further discussion).

The data in the table show that land use patterns are changing. They also indicate major differences in resource endowments and uses among countries. True comparability of the data is limited, however, by variations in definitions, statistical methods, and quality of data. Countries use different definitions of rural and urban population and land use. The Food and Agriculture Organization of the United Nations (FAO), the primary compiler of the data, occasionally adjusts its definitions of land use categories and revises earlier data. Because the data reflect changes in reporting procedures as well as actual changes in land use, apparent trends should be interpreted cautiously.

Satellite images show land use that differs from that of ground-based measures in area under cultivation and type of land use. Moreover, land use data in some countries (India is an example) are based on reporting systems designed for collecting tax revenue. With land taxes no longer a major source of government revenue, the quality and coverage of land use data have declined. Data on forest area may be particularly unreliable because of irregular surveys and differences in definitions (see *About the data* for table 3.4). FAO's *Global Forest Resources Assessment 2005* aims to address this limitation. The FAO has been coordinating global forest resources assessments every 5–10 years since 1946. *Global Forest Resources Assessment 2005*, conducted during 2003–05, covers 229 countries and territories at three points: 1990, 2000, and 2005. The most comprehensive assessment of forests, forestry, and the benefits of forest resources in both scope and number of countries and people involved, it examines status and trends for about 40 variables on the extent, condition, uses, and values of forests and other wooded land.

Definitions

- **Rural population** is calculated as the difference between the total population and the urban population (see *Definitions* for tables 2.1 and 3.11).
- **Land area** is a country's total area, excluding area under inland water bodies and national claims to the continental shelf and to exclusive economic zones. In most cases definitions of inland water bodies includes major rivers and lakes. (See table 1.1 for the total surface area of countries.)
- **Land use** can be broken into several categories, three of which are presented in the table (not shown are land used as permanent pasture and land under urban developments).
- **Forest area** is land under natural or planted stands of trees, whether productive or not.
- **Permanent cropland** is land cultivated with crops that occupy the land for long periods and need not be replanted after each harvest, such as cocoa, coffee, and rubber. Land under flowering shrubs, fruit trees, nut trees, and vines is included, but land under trees grown for wood or timber is not.
- **Arable land** is land defined by the FAO as under temporary crops (double-cropped areas are counted once), temporary meadows for mowing or for pasture, land under market or kitchen gardens, and land temporarily fallow. Land abandoned as a result of shifting cultivation is excluded.

What is rural? Urban?

3.1a

The rural population identified in table 3.1 is approximated as the difference between total population and urban population, calculated using the urban share reported by the United Nations Population Division. There is no universal standard for distinguishing rural from urban areas, and any urban-rural dichotomy is an oversimplification (see *About the data* for table 3.11). The two distinct images—isolated farm, thriving metropolis—represent poles on a continuum. Life changes along a variety of dimensions, moving from the most remote forest outpost through fields and pastures, past tiny hamlets, through small towns with weekly farm markets, into intensively cultivated areas near large towns and small cities, eventually reaching the center of a megacity. Along the way access to infrastructure, social services, and nonfarm employment increase, and with them population density and income. Because rurality has many dimensions, for policy purposes the rural-urban dichotomy presented in tables 3.1 and 3.11 is inadequate.

A recent World Bank Policy Research Paper proposes an operational definition of rurality based on population density and distance to large cities (Chomitz, Buys, and Thomas 2005). The report argues that these criteria are important gradients along which economic behavior and appropriate development interventions vary substantially. Where population densities are low, markets of all kinds are thin, and the unit cost of delivering most social services and many types of infrastructure is high. Where large urban areas are distant, farm-gate or factory-gate prices of outputs will be low and input prices will be high, and it will be difficult to recruit skilled people to public service or private enterprises. Thus, low population density and remoteness together define a set of rural areas that face special development challenges.

Using these criteria and the Gridded Population of the World (CIESIN 2005), the authors' estimates of the rural population for Latin America and the Caribbean differ substantially from those in table 3.1. Their estimates range from 13 percent of the population, based on a population density of less than 20 people per square kilometer, to 64 percent, based on a population density of more than 500 people per square kilometer. Taking remoteness into account, the estimated rural population would be 13–52 percent. The estimate for Latin America and the Caribbean in table 3.1 is 22 percent.

Data sources

Data on urban population shares used to estimate rural population come from the United Nations Population Division's *World Urbanization Prospects: The 2005 Revision*. The total population figures are World Bank estimates. Data on land area and land use are from the FAO's electronic files. The FAO gathers these data from national agencies through annual questionnaires and by analyzing the results of national agricultural censuses. Data on forest area are from the FAO's *Global Forest Resources Assessment 2005*.



3.2

Agricultural inputs

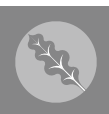
	Agricultural land ^a		Irrigated land		Land under cereal production		Fertilizer consumption		Agricultural employment		Agricultural machinery	
	% of land area		% of cropland		thousand hectares		hundred grams per hectare of arable land		% of total employment		Tractors per 100 sq. km of arable land	
	1990-92	2003-05	1990-92 ^b	2003-05 ^{b,c}	1990-92	2004-06	1990-92 ^b	2003-05 ^b	1990-92	2003-05	1990-92	2001-03
Afghanistan	58.3	58.3	33.9	33.8	2,283	2,702	59	..	..	..	1	1
Albania	41.1	40.9	55.6	49.5	243	145	903	924	..	58.3	177	141
Algeria	16.3	17.1	6.4	6.9	3,105	2,675	144	137	..	21.1	128	129
Angola	46.1	46.2	2.3	2.3	893	1,441	29	29	..	..	35	33
Argentina	46.6	47.2	5.6	4.7 ^d	8,510	9,309	73	480	0.4	1.2	103	107
Armenia	44.7 ^d	49.3	49.9 ^d	51.2	163 ^d	171	502 ^d	232	..	46.5	293	289
Australia	60.5	57.5	4.2	4.9	12,814	19,004	275	469	5.5	3.8	67	65
Austria	42.5	40.0	0.3	2.5 ^{d,e}	903	798	1,995	2,309	7.5	5.4	2,367	2,380
Azerbaijan	53.4 ^d	57.5	68.0 ^d	69.1	627	791	440 ^d	134	32.5	39.6	195 ^d	164
Bangladesh	73.5	69.2	33.8	54.3	10,985	11,312	1,136	2,094	66.4	51.7	6	7
Belarus	45.3 ^d	42.7	2.1 ^d	2.0	2,578 ^d	2,186	2,293 ^d	1,886	21.7	..	207 ^d	111
Belgium	..	46.0	..	4.6	..	320	..	..	2.8	1.9	..	1,146
Benin	20.6	31.9	0.6	0.4	660	937	78	3	..	..	1	1
Bolivia	32.9	34.6	5.5	4.1	633	846	42	62	1.7	..	25	20
Bosnia and Herzegovina	43.0 ^d	42.1	0.2 ^d	0.3	305 ^d	318	..	453	..	..	235 ^d	289
Botswana	45.9	45.8	0.2	0.3	140	75	22	..	..	21.2	143	159
Brazil	28.9	31.2	4.6	4.4	19,633	19,368	656	1,539	25.6	20.9	142	137
Bulgaria	55.7	48.5	29.6	16.5	2,174	1,701	1,194	1,541	19.7	9.6	128	95
Burkina Faso	34.9	39.8	0.6	0.5	2,725	3,249	60	75	..	..	3	4
Burundi	82.9	90.9	1.2	1.6	219	209	34	16	..	..	2	2
Cambodia	25.5	29.6	6.6	7.0	1,801	2,431	19	50 ^c	..	..	3	7
Cameroon	19.7	19.7	0.3	0.4	816	1,107	34	94	60.6	..	1	1
Canada	7.5	7.4	1.4	1.5	20,864	16,772	476	581	4.2	2.7	162	160
Central African Republic	8.0	8.4	0.0	0.1	104	177	5	..	..	..	0	0
Chad	38.4	38.9	0.5	0.8	1,242	2,264	25	..	..	..	1	0
Chile	21.0	20.4	57.1	81.1	742	663	1,215	2,910	18.8	13.4	144	272
China	57.0	59.5	36.9	35.5	93,430	81,957	2,321	3,214	53.5	..	64	65
Hong Kong, China	..	..	..	..	..	..	..	..	0.8	0.3	..	..
Colombia	40.5	38.2	14.3	23.3	1,598	1,210	1,822	2,940	1.4	21.3	98	91
Congo, Dem. Rep.	10.1	10.1	0.1	0.1	1,868	1,964	8	..	..	..	4	4
Congo, Rep.	30.8	30.9	0.3	0.4	9	12	35	..	..	..	15	14
Costa Rica	55.7	56.5	15.2	20.4	83	62	4,522	8,528	25.2	15.0	259	311
Côte d'Ivoire	59.8	63.4	1.1	1.1	1,434	842	151	203	..	..	15	12
Croatia	43.0 ^d	50.8	0.2 ^d	0.4	593 ^d	598	1,514 ^d	1,337	..	16.8	35 ^d	25
Cuba	61.5	60.0	22.6	19.5	235	286	1,288	156	25.1	21.5	250	209
Czech Republic	..	55.2	..	0.7	..	1,589	..	1,404	10.1	4.3	..	305
Denmark	65.4	62.0	16.9	9.7	1,581	1,499	2,249	1,159	5.4	3.0	625	540
Dominican Republic	71.6	70.7	16.5	20.9	134	156	1,003	..	19.5	14.4	25	23
Ecuador	28.6	26.9	27.9	28.3	861	881	508	1,731	7.0	8.9	67	106
Egypt, Arab Rep.	2.7	3.5	100.0	100.0	2,410	2,918	3,977	6,707	36.2	29.9	251	309
El Salvador	71.1	82.2	4.9	4.9	453	335	1,336	904	17.9	18.7	60	52
Eritrea	..	75.1	..	3.6	..	371	..	13	..	..	..	8
Estonia	32.4 ^d	19.1	0.5 ^d	0.6	454	274	1,011 ^d	4,846	19.5	5.8	419 ^d	889
Ethiopia	51.0	33.0	1.4	2.6	4,586	9,126	..	32	..	44.1	4	3
Finland	7.9	7.4	2.8	2.9	1,050	1,154	1,647	1,286	8.8	4.9	1,040	882
France	55.3	53.9	11.0	13.3	9,212	9,226	2,918	2,162	..	4.0	784	685
Gabon	20.0	20.0	1.1	1.4	14	20	25	38	..	..	50	46
Gambia, The	63.2	80.7	0.9	0.6	90	200	44	..	..	..	2	1
Georgia	46.5 ^d	43.3	39.9 ^d	44.1	249	314	906 ^d	319	..	54.4	296 ^d	254
Germany	49.8	48.8	4.0	4.0	6,673	6,829	2,616	2,208	4.0	2.4	1,253	801
Ghana	55.7	64.8	0.7	0.5	1,078	1,377	38	63	62.0	..	15	9
Greece	71.3	65.2	31.1	37.4	1,455	1,156	2,289	1,691	22.7	13.4	774	939
Guatemala	39.5	42.9	6.8	6.4	768	790	1,072	1,285	..	..	33	30
Guinea	48.9	51.0	7.0	5.6	774	1,398	16	27	..	..	5	5
Guinea-Bissau	53.2	58.0	4.1	4.6	112	139	15	..	..	..	1	1
Haiti	57.9	57.7	8.0	8.4	406	444	35	..	..	..	2	2

Agricultural inputs

3.2

ENVIRONMENT

	Agricultural land ^a		Irrigated land		Land under cereal production		Fertilizer consumption		Agricultural employment		Agricultural machinery	
	% of land area		% of cropland		thousand hectares		hundred grams per hectare of arable land		% of total employment		Tractors per 100 sq. km of arable land	
	1990-92	2003-05	1990-92 ^b	2003-05 ^{b,c}	1990-92	2004-06	1990-92 ^b	2003-05 ^b	1990-92	2003-05	1990-92	2001-03
Honduras	29.8	26.2	3.8	5.6	502	354	203	545	42.1	37.2	31	49
Hungary	70.7	65.4	4.1	2.5	2,803	2,939	796	1,197	11.3	5.3	158	247
India	60.9	60.6	28.3	32.7	100,760	97,347	758	1,140	68.1	..	65	141
Indonesia	23.5	26.3	14.5	12.7	13,861	15,151	1,330	1,449	54.9	44.5	18	41
Iran, Islamic Rep.	38.5	36.1	39.9	47.2	9,612	9,056	750	571	25.6	24.9	136	158
Iraq	21.9	22.9	63.0	58.6	3,506	3,509	347	..	..	17.0	72	80
Ireland	70.2	62.4	..	..	298	287	6,591	4,529	14.1	6.3	1,667	1,324
Israel	26.7	24.4	44.4	40.9	108	88	2,836	20,008	3.7	2.0	763	714
Italy	55.4	50.7	22.9	25.8 ^d	4,347	4,025	2,195	1,817	8.4	4.6	1,619	2,031
Jamaica	44.0	47.4	11.0	8.8	3	1	1,737	432	27.3	19.0	242	177
Japan	15.5	12.9	54.3	35.8	2,439	2,015	3,779	3,924	6.8	4.5	4,297	4,588
Jordan	12.0	11.5	25.0	27.5	112	57	969	7,295	..	3.6	352	308
Kazakhstan	82.0 ^d	76.9	9.8 ^d	15.7	22,152 ^d	14,517	136 ^d	68	..	33.7	62 ^d	22
Kenya	47.3	47.4	1.1	1.7	1,766	2,103	209	442	19.0	..	20	25
Korea, Dem. Rep.	21.0	24.9	58.2	50.9	1,569	1,282	3,522	..	..	..	297	241
Korea, Rep.	21.9	19.2	47.1	47.1	1,368	1,072	4,932	4,379	16.7	8.3	275	1,239
Kuwait	7.9	8.6	60.0	77.0	0	1	2,000 ^d	15,602 ^{c,e}	..	0.0	215	69
Kyrgyz Republic	52.6 ^d	56.2	72.6 ^d	73.1	579 ^d	611	242 ^d	152	35.5	43.4	189 ^d	167
Lao PDR	7.2	8.5	16.2	17.2	630	770	31	..	..	..	11	12
Latvia	40.8 ^d	26.5	1.1 ^d	2.1	699 ^d	475	995 ^d	876	..	13.0	364 ^d	580
Lebanon	31.1	38.1	28.1	32.3	41	64	1,639	1,619	..	..	188	465
Lesotho	76.7	76.9	0.6	0.9	178	182	167	..	..	..	57	61
Liberia	27.1	27.0	0.5	0.5	135	..	8	..	..	..	8	9
Libya	8.8	8.8	21.8	21.9	355	356	458	506	..	..	187	219
Lithuania	54.1 ^d	42.5	0.5 ^d	0.4	1,134 ^d	933	541 ^d	1,470	18.8	15.9	256 ^d	641
Macedonia, FYR	51.4 ^d	48.8	12.1 ^d	9.0	235 ^d	192	..	200	..	19.4	730 ^d	954
Madagascar	62.5	70.2	30.7	30.6	1,321	1,486	34	32	..	78.0	11	12
Malawi	40.2	48.3	1.2	2.3	1,443	1,491	351	236	..	..	8	6
Malaysia	22.7	24.0	4.8	4.8	699	692	5,264	8,536	23.9	14.6	161	241
Mali	26.3	32.4	3.7	5.0	2,393	3,206	91	..	..	41.5	11	6
Mauritania	38.5	38.6	11.8	9.8	133	203	132	..	..	..	8	8
Mauritius	55.7	55.7	16.0	20.1	1	0	2,732	2,301	14.7	10.0	36	37
Mexico	53.8	55.3	22.0	22.8	10,075	9,941	686	733	24.7	15.9	128	129
Moldova	77.9 ^d	76.7	14.2 ^d	11.5	676 ^d	969	776 ^d	122	..	41.4	310 ^d	221
Mongolia	79.9	83.3	5.8	7.0	620	153	111	38	..	40.6	73	42
Morocco	68.2	68.1	13.2	15.5	5,374	5,584	353	570	..	45.0	46	58
Mozambique	60.7	61.8	2.8	2.7	1,509	2,046	12	51	..	..	16	14
Myanmar	15.8	17.1	10.1	17.9	5,283	7,670	79	11	69.4	..	12	10
Namibia	47.0	47.2	0.7	1.0	215	290	..	22	48.2	..	47	39
Nepal	29.0	29.5	43.0	47.0	2,957	3,352	340	124	81.9	..	23	24
Netherlands	58.9	56.8	61.0	60.0	185	215	6,298	5,839	4.3	2.9	2,056	1,645
New Zealand	65.0	64.5	7.6	11.4 ^d	153	114	1,911	6,741	10.7	7.6	324	507
Nicaragua	33.5	43.5	4.0	2.8	299	484	270	317	38.7	29.0	20	15
Niger	27.0	30.4	0.5	0.5	7,011	7,666	1	4	..	..	0	0
Nigeria	79.4	80.4	0.7	0.8	16,417	18,399	142	64	..	..	8	10
Norway	3.3	3.4	..	..	361	324	2,362	1,886	5.9	3.5	1,723	1,486
Oman	3.5	5.1	71.6	88.4	4	5	2,441	3,424	..	..	42	50
Pakistan	33.7	35.2	78.5	84.2	11,777	12,714	962	1,621 ^{c,e}	48.9	42.7	133	149
Panama	28.7	30.0	4.8	6.2	182	188	666	421	25.8	16.4	103	148
Papua New Guinea	2.0	2.3	..	..	2	3	622	1,806	..	..	59	53
Paraguay	56.0	60.7	2.9	1.8	455	791	92	581	1.7	31.5	72	46
Peru	17.1	16.6	29.9	27.9	683	1,110	246	854	1.0	0.7	36	36
Philippines	37.4	40.9	15.7	14.5	6,957	6,632	935	1,579	45.3	37.1	20	20
Poland	61.6	52.8	0.7	0.6 ^{d,e}	8,523	8,362	895	1,297	25.2	17.9	821	1,034
Portugal	42.8	41.2	20.5	23.8 ^d	780	403	1,123	1,884	15.6	12.1	569	1,100
Puerto Rico	47.5	25.1	36.8	15.7 ^d	0	0	..	..	3.5	2.1	478	449



3.2

Agricultural inputs

	Agricultural land ^a		Irrigated land		Land under cereal production		Fertilizer consumption		Agricultural employment		Agricultural machinery	
	% of land area		% of cropland		thousand hectares		hundred grams per hectare of arable land		% of total employment		Tractors per 100 sq. km of arable land	
	1990-92	2003-05	1990-92 ^b	2003-05 ^{b,c}	1990-92	2004-06	1990-92 ^b	2003-05 ^b	1990-92	2003-05	1990-92	2001-03
Romania	64.4	63.8	31.0	3.2	5,842	5,663	788	429	30.6	33.1	146	179
Russian Federation	13.5 ^d	13.2	4.2 ^d	3.6	59,541 ^d	40,742	417	137	..	10.4	98 ^d	52
Rwanda	75.6	78.6	0.3	0.7	258	336	20	..	..	..	1	1
Saudi Arabia	..	..	44.2	42.7	1,062	666	1,446	1,060	..	..	20	28
Senegal	41.9	42.6	3.3	4.6	1,154	1,133	65	221	..	..	2	3
Serbia	..	..	..	..	..	1,856 ^d	..	..	..	..	..	..
Sierra Leone	38.3	40.0	5.2	5.0	452	576	23	..	..	..	3	2
Singapore	2.2	1.2	..	..	..	..	54,333	160,533	0.3	0.2	637	794
Slovak Republic	..	42.3	..	3.8	1 ^d	782	..	965	..	5.2	..	159
Slovenia	28.0 ^d	25.0	0.8 ^d	1.2	112 ^d	97	3,168	3,835	..	8.9	..	..
Somalia	70.2	70.7	19.2	16.9	531	704	26 ^d	..	..	..	21	15
South Africa	80.2	82.0	8.3	9.5	5,736	3,875	549	521	..	10.3	101	46
Spain	60.8	58.3	16.9	20.6	7,588	6,485	1,186	1,472	10.7	5.5	494	712
Sri Lanka	36.2	36.5	28.0	34.4	834	879	2,016	2,873	44.3	33.9	71	113
Sudan	51.9	57.2	14.1	10.9	6,267	7,883	51	36	..	..	8	7
Swaziland	75.8	80.9	24.1	26.0	69	54	688	..	..	..	251	222
Sweden	8.2	7.8	4.1	4.3	1,184	1,040	1,112	1,051	3.3	2.1	604	615
Switzerland	46.9	38.1	6.0	5.8	207	164	4,032	2,100	4.2	4.0	2,870	2,649
Syrian Arab Republic	73.7	75.6	14.3	24.0	3,812	3,214	621	857	28.2	27.0	137	224
Tajikistan	32.1 ^d	30.4	72.9 ^d	68.2	266 ^d	392	1,488 ^d	..	57.9	..	415 ^d	233
Tanzania	38.4	38.8	1.4	1.8	3,003	3,519	53	70	84.2	..	7	8
Thailand	41.9	36.3	21.0	26.6	10,594	11,252	598	1,411	61.7	43.3	39	144
Timor-Leste	21.9	22.9	..	..	84	115	..	..	..	..	10	9
Togo	58.7	66.7	0.3	0.3	610	729	56	61	..	..	0	0
Trinidad and Tobago	25.7	25.9	3.3	3.3	6	2	1,111	6,764	11.8	4.9	354	360
Tunisia	58.4	63.0	7.3	7.2	1,525	1,457	330	461	..	..	88	126
Turkey	51.8	53.3	14.8	19.7	13,760	13,929	757	836	46.5	32.5	287	410
Turkmenistan	68.6 ^d	70.2	106.1 ^d	89.2	331 ^d	1,013	1,296 ^d	..	..	..	465 ^d	256
Uganda	61.0	63.9	0.1	0.1	1,098	1,611	1	15	91.5	69.1	9	9
Ukraine	72.4 ^d	71.4	7.6 ^d	6.8	12,542 ^d	14,144	807 ^d	157	20.0	19.8	153 ^d	124
United Arab Emirates	3.7	6.7	106.7	29.2	1	0	4,810	5,531	..	..	50	55
United Kingdom	75.0	70.2	2.5	3.0	3,549	2,970	3,323	3,020	2.2	1.3	762	878
United States	46.6	45.3	11.3	12.5	64,547	56,333	1,015	1,153	2.9	1.6	245	270
Uruguay	84.7	85.4	10.2	14.3	509	557	610	1,257	1.5	4.6	259	241
Uzbekistan	65.2 ^d	65.6	87.3 ^d	87.4	1,225 ^d	1,632	1,632	..	..	..	402 ^d	373
Venezuela, RB	24.7	24.6	13.9	16.9	799	1,119	1,388	1,747	12.6	10.7	176	189
Vietnam	21.0	30.8	44.6	33.9	6,730	8,393	1,299	3,309	73.8	58.8	60	247
West Bank and Gaza	62.5	61.8	..	6.9	31	33	..	..	..	15.8	441	710
Yemen, Rep.	33.4	33.6	24.3	31.4	738	710	127	25	52.6	..	40	43
Zambia	31.4	34.4	0.7	2.8	813	647	131	..	..	..	11	11
Zimbabwe	34.1	39.9	3.6	5.2	1,431	1,606	508	316	..	..	61	75
World	38.6 w	37.5 w	17.4 w	18.1 w	632,022 s	677,485 s	958 w	1,145 w	42.5 w	.. w	189 w	191 w
Low income	43.3	45.0	21.5	24.0	209,966	229,649	522	..	66.5	..	46	82
Middle income	37.3	35.3	19.4	18.2	279,067	312,815	1,096	1,289	45.9	..	125	123
Lower middle income	40.5	42.4	27.1	26.3	170,383	175,242	1,502	1,949	49.5	..	75	90
Upper middle income	34.5	30.5	8.5	9.0	108,684	137,573	644	694	..	17.1	187	153
Low & middle income	39.3	38.2	20.2	20.4	489,033	542,464	851	1,104	51.9	..	91	108
East Asia & Pacific	48.3	50.7	..	..	142,273	136,511	..	..	54.3	..	56	72
Europe & Central Asia	47.8	28.4	10.5	10.9	67,977	114,139	782	371	..	20.0	175	171
Latin America & Carib.	34.4	35.7	11.3	12.5	47,713	49,115	586	1,091	17.4	16.5	123	122
Middle East & N. Africa	22.8	22.9	29.6	33.8	30,625	29,638	643	928	..	..	116	143
South Asia	54.7	54.7	33.9	39.2	129,690	128,361	767	1,220	66.1	..	67	129
Sub-Saharan Africa	42.5	43.8	3.3	3.5	70,755	84,700	130	..	..	..	17	13
High income	36.9	35.5	10.9	..	142,990	135,021	1,206	1,260	5.8	3.4	415	434
Euro area	49.9	47.4	14.9	16.8	32,589	31,089	2,303	2,027	7.3	4.5	986	1,003

a. Includes permanent pastures, arable land, and land under permanent crops. b. Time series have been revised but are available only from 2001 onward; data for earlier years are from the Food and Agriculture Organization's previous release of time series data. c. The averages in italics are for years other than those specified. d. Data for all three years are not available. e. The average is not for consecutive years.

About the data

Agriculture is still a major sector in many economies, and agricultural activities provide developing countries with food and revenue. But agricultural activities also can degrade natural resources. Poor farming practices can cause soil erosion and loss of soil fertility. Efforts to increase productivity through the use of chemical fertilizers, pesticides, and intensive irrigation have environmental costs and health impacts. Excessive use of chemical fertilizers can alter the chemistry of soil. Pesticide poisoning is common in developing countries. And salinization of irrigated land diminishes soil fertility. Thus inappropriate use of inputs for agricultural production has far-reaching effects.

The table provides indicators of major inputs to agricultural production: land, fertilizer, labor, and

machinery. There is no single correct mix of inputs: appropriate levels and application rates vary by country and over time and depend on the type of crops, the climate and soils, and the production process used.

The data shown here and in table 3.3 are collected by the Food and Agriculture Organization of the United Nations (FAO) through annual questionnaires. The FAO tries to impose standard definitions and reporting methods, but complete consistency across countries and over time is not possible. For example, despite standard definitions, data on agricultural land in different climates may not be comparable. For example, permanent pastures are quite different in nature and intensity in African countries and dry Middle Eastern countries. Data on agricultural employment, in particular, should be used with caution. In many countries much agricultural employment is informal and unrecorded, including substantial work performed by women and children.

Fertilizer consumption measures the quantity of plant nutrients. Consumption is calculated as production plus imports minus exports. Because some chemical compounds used for fertilizers have other industrial applications, the consumption data may overstate the quantity available for crops. The FAO recently revised the time series for fertilizer consumption and irrigation but only for 2001 onward. The data for earlier years are from the FAO's previous releases and are not necessarily comparable with later data. Caution should thus be exercised when comparing data over time.

To smooth annual fluctuations in agricultural activity, the indicators in the table have been averaged over three years.

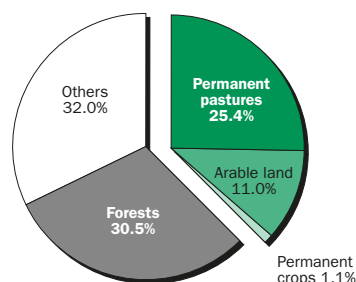
Definitions

- **Agricultural land** is the share of land area that is permanent pastures, arable, or under permanent crops. Permanent pasture is land used for five or more years for forage, including natural and cultivated crops. Arable land includes land defined by the FAO as land under temporary crops (double-cropped areas are counted once), temporary meadows for mowing or for pasture, land under market or kitchen gardens, and land temporarily fallow. Land abandoned as a result of shifting cultivation is excluded. Land under permanent crops is land cultivated with crops that occupy the land for long periods and need not be replanted after each harvest, such as cocoa, coffee, and rubber. Land under flowering shrubs, fruit trees, nut trees, and vines is included, but land under trees grown for wood or timber is not.
- **Irrigated land** refers to areas purposely provided with water, including land irrigated by controlled flooding.
- **Cropland** is arable land and permanent cropland (see table 3.1).
- **Land under cereal production** refers to harvested areas, although some countries report only sown or cultivated area.
- **Fertilizer consumption** is the quantity of plant nutrients used per unit of arable land. Fertilizer products cover nitrogen, potash, and phosphate fertilizers (including ground rock phosphate). Traditional nutrients—animal and plant manures—are not included. The time reference for fertilizer consumption is the crop year (July through June).
- **Agricultural employment** is employment in agriculture, forestry, hunting, and fishing (see table 2.3).
- **Agricultural machinery** refers to wheel and crawler tractors (excluding garden tractors) in use in agriculture at the end of the calendar year specified or during the first quarter of the following year.

Nearly 40 percent of land globally is devoted to agriculture

3.2a

Total land area in 2005: 130 million sq. km

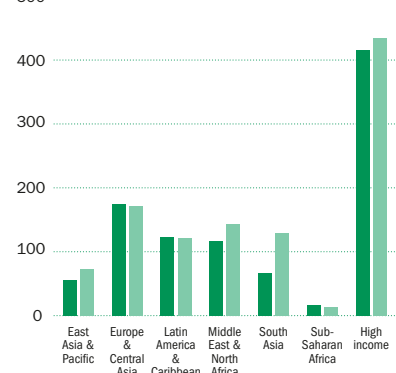


Note: Agricultural land includes permanent pastures, arable land, and land under permanent crops.
Source: Tables 3.1 and 3.2.

Developing regions lag in agricultural machinery, which reduces their agricultural productivity

3.2b

Tractors per 100 square kilometers of arable land



Source: Table 3.2.

Data sources

Data on agricultural inputs are from electronic files that the FAO makes available to the World Bank.



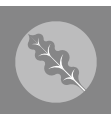
	Crop production index		Food production index		Livestock production index		Cereal yield		Agricultural productivity	
	1999–2001 = 100		1999–2001 = 100		1999–2001 = 100		kilograms per hectare		Agriculture value added per worker 2000 \$	
	1990–92	2002–04	1990–92	2004–06 ^a	1990–92	2002–04	1990–92	2004–06	1990–92	2003–05
Afghanistan	..	..	..	..	..	..	1,153	1,571	..	..
Albania	86.2	100.6	74.2	105.1	66.6	108.9	2,372	3,492	778	1,449
Algeria	85.4	122.9	81.7	116.8	80.7	103.3	915	1,449	1,911	2,225
Angola	60.5	119.4	65.0	112.9	75.6	100.0	378	522	165	174
Argentina	67.2	106.4	73.6	102.0	89.2	92.0	2,652	3,857	6,767	10,072
Armenia	106.5	119.2	112.9	140.6	118.9	123.2	1,843 ^b	2,036	1,476	3,692
Australia	59.7	81.6	69.2	91.9	83.3	96.9	1,739	1,560	22,523	34,880
Austria	93.4	99.1	89.8	102.2	92.5	99.6	5,400	6,128	12,048	22,203
Azerbaijan	137.4	122.7	104.8	121.1	98.2	113.6	2,112 ^b	2,594	1,084	1,143
Bangladesh	75.4	104.7	73.8	104.6	73.8	103.2	2,567	3,648	254	338
Belarus	107.3	124.7	136.1 ^b	116.0	146.5	99.7	2,739 ^b	2,801	1,977 ^b	3,153
Belgium	77.6	106.0	91.3	101.0	94.3	99.7	..	8,680	21,479	41,631
Benin	57.7	125.4	62.7	137.4	89.1	109.2	880	1,136	326	519
Bolivia	63.6	116.4	70.0	110.3	77.2	107.9	1,385	1,865	670	773
Bosnia and Herzegovina	107.2	101.1	120.3 ^b	98.0	122.7 ^b	86.6	3,548 ^b	4,326	..	8,270
Botswana	96.2	111.5	114.8	104.3	118.8	103.4	312	363	536	390
Brazil	77.2	119.6	70.4	124.3	65.5	116.8	1,916	3,076	1,506	3,126
Bulgaria	149.2	110.9	137.5	107.7	147.1	96.2	3,639	3,679	2,500	7,159
Burkina Faso	67.0	126.6	68.7	115.2	70.7	108.1	783	1,065	110	173
Burundi	112.4	107.0	112.1	104.4	135.1	100.2	1,370	1,328	108	70
Cambodia	65.2	105.8	65.1	105.4	65.7	103.5	1,356	2,356	..	306
Cameroon	71.2	103.0	73.9	104.7	84.1	103.1	1,166	1,459	389	652
Canada	87.9	93.8	84.1	101.6	78.3	103.6	2,559	3,114	28,243	43,055
Central African Republic	74.4	97.7	69.9	108.2	68.1	113.5	884	1,033	287	381
Chad	69.0	110.9	72.5	112.2	84.5	105.4	636	727	173	215
Chile	78.2	110.5	74.0	112.8	68.0	107.0	3,949	5,822	3,600	5,308
China	69.6	110.6	60.1	117.8	49.4	116.1	4,307	5,237	254	401
Hong Kong, China	..	..	..	..	..	..	..	..	..	..
Colombia	98.4	107.4	83.9	109.7	80.6	107.1	2,492	3,725	3,405	2,847
Congo, Dem. Rep.	124.7	97.2	121.4	97.5	100.8	99.2	794	776	184	149
Congo, Rep.	80.2	105.1	79.0	108.8	76.0	114.5	688	794	..	..
Costa Rica	71.4	99.6	72.2	99.4	79.9	101.4	3,188	3,135	3,143	4,499
Côte d'Ivoire	73.0	96.2	72.9	101.2	74.9	110.9	869	1,708	598	795
Croatia	79.9	97.2	99.0	96.7	126.6 ^b	108.2	3,975 ^b	5,233	4,921 ^b	9,987
Cuba	112.1	112.6	111.5	109.6	130.0	92.7	2,092	2,755	..	..
Czech Republic	..	94.8	..	104.6	..	95.8	..	4,785	..	5,423
Denmark	103.5	97.7	97.6	101.4	89.0	102.8	5,448	5,976	15,190	40,780
Dominican Republic	119.1	110.0	104.0	102.6	79.5	103.7	4,078	4,262	2,268	4,586
Ecuador	80.1	95.9	72.4	107.2	65.1	115.3	1,724	2,779	1,686	1,676
Egypt, Arab Rep.	69.2	104.2	67.5	110.9	65.4	115.3	5,738	7,536	1,528	2,072
El Salvador	102.2	90.6	86.4	104.8	74.5	108.5	1,871	2,639	1,633	1,638
Eritrea	..	67.7	..	86.3 ^b	..	97.1	..	343	..	61
Estonia	121.4	89.9	181.3 ^b	102.1	193.3	101.7	1,304 ^b	2,412	2,747	3,235
Ethiopia	..	106.7	..	112.1	..	117.7	1,234	1,374	135	145
Finland	97.5	102.4	104.0	103.6	106.5	104.3	3,246	3,309	18,822	31,214
France	94.0	98.8	97.4	101.6	97.3	100.4	6,370	7,099	22,234	44,017
Gabon	87.2	101.9	89.1	101.7	86.5	100.5	1,712	1,574	1,176	1,592
Gambia, The	55.8	65.2	60.2	69.0	98.8	102.6	1,114	1,145	224	233
Georgia	120.6	91.9	102.7	100.8	78.9	110.3	1,998 ^b	1,858	2,443 ^b	1,790
Germany	83.7	95.1	98.0	102.9	107.5	101.0	5,578	6,855	13,724	26,549
Ghana	59.1	117.0	61.1	121.0	89.8	108.7	1,084	1,380	293	320
Greece	86.9	90.4	93.7	95.3	101.5	98.2	3,589	3,951	7,668	9,011
Guatemala	77.6	102.6	75.4	104.4	76.6	100.6	1,882	1,542	2,120	2,547
Guinea	73.7	107.5	72.9	113.8	60.5	111.8	1,423	1,599	142	190
Guinea-Bissau	71.1	104.9	73.1	109.7	81.2	106.6	1,529	1,460	205	238
Haiti	108.5	98.8	99.8	100.6	69.8	111.6	997	882	..	..

Agricultural output and productivity

3.3

ENVIRONMENT

	Crop production index		Food production index		Livestock production index		Cereal yield		Agricultural productivity	
	1999–2001 = 100		1999–2001 = 100		1999–2001 = 100		kilograms per hectare		Agriculture value added per worker 2000 \$	
	1990–92	2002–04	1990–92	2004–06 ^a	1990–92	2002–04	1990–92	2004–06	1990–92	2003–05
Honduras	92.9	118.9	86.5	111.0	69.3	105.8	1,371	1,471	977	1,197
Hungary	114.0	99.7	117.0	111.9	125.5	101.9	4,551	5,403	4,105	6,987
India	79.6	100.0	75.9	104.7	69.4	110.5	1,947	2,428	324	392
Indonesia	82.8	112.7	83.8	117.4	85.8	127.3	3,826	4,354	484	583
Iran, Islamic Rep.	73.8	118.1	72.2	115.4	68.8	103.3	1,523	2,462	1,954	2,542
Iraq	..	..	..	..	..	..	872	1,014	..	1,756
Ireland	92.7	100.3	95.3	98.4	94.3	96.1	6,653	7,473	..	17,879
Israel	97.8	103.3	82.8	108.2	72.4	113.1	3,132	3,096	..	..
Italy	97.3	92.6	97.0	98.1	95.1	99.4	4,340	5,368	11,542	23,967
Jamaica	84.9	96.7	85.7	99.4	87.2	102.8	1,298	1,099	2,016	1,889
Japan	112.9	95.0	108.4	97.7	106.8	100.2	5,713	5,983	20,445	35,517
Jordan	100.1	136.6	85.4	118.2	71.2	94.1	1,168	1,267	1,892	1,360
Kazakhstan	163.8	108.4	163.0 ^b	103.1	178.5	111.6	1,338 ^b	975	1,795 ^b	1,557
Kenya	86.9	103.2	85.7	104.3	83.9	110.4	1,645	1,709	335	333
Korea, Dem. Rep.	126.2	108.4	119.6	109.7	145.1	114.2	5,073	3,787	..	..
Korea, Rep.	88.2	91.3	79.8	92.1	68.1	100.4	5,885	6,400	5,679	11,286
Kuwait	33.6	110.6	26.4	125.9	27.9	115.7	3,112	2,440	..	13,521 ^b
Kyrgyz Republic	68.5	102.9	74.0 ^b	97.9	106.9	98.4	2,771 ^b	2,696	675 ^b	979
Lao PDR	62.2	115.3	59.1	116.8 ^b	60.6	107.5	2,341	3,804	360	458
Latvia	128.7	119.4	222.3 ^b	117.4	273.8	101.1	1,641 ^b	2,499	1,790 ^b	2,704
Lebanon	109.7	94.1	100.4	100.8	65.6	120.4	2,001	2,708	..	30,099
Lesotho	67.5	100.8	87.8	106.0 ^b	115.0	100.0	716	589	422	418
Liberia	62.3	97.7	80.5	97.3	90.4	107.8	951	..	..	..
Libya	79.2	96.9	77.1	104.3	75.9	101.0	706	619	..	..
Lithuania	80.2	113.1	159.9 ^b	112.2	187.0	107.8	1,938 ^b	2,708	..	4,703
Macedonia, FYR	107.4	93.3	107.8	108.5	105.1 ^b	103.3	2,652 ^b	3,345	2,256 ^b	3,487
Madagascar	93.6	103.5	90.4	107.6	93.3	97.1	1,935	2,440	186	174
Malawi	57.5	84.3	49.6	95.6	85.4	101.8	871	1,099	72	116
Malaysia	74.4	114.0	70.5	120.0	81.3	115.1	2,827	3,317	3,803	5,126
Mali	73.8	107.4	78.6	109.6 ^b	81.3	112.9	840	1,008	208	241
Mauritania	63.2	97.2	84.2	108.8 ^b	87.4	109.3	802	771	574	356
Mauritius	110.7	101.6	101.1	105.9	71.1	116.8	4,117	7,269	3,942	5,011
Mexico	82.8	103.8	77.7	107.8	71.4	107.8	2,520	3,083	2,256	2,792
Moldova	136.6	112.2	153.3 ^b	115.7	198.7	103.2	2,928 ^b	2,721	1,286 ^b	816
Mongolia	246.9	107.3	98.3	93.6	93.9	95.9	967	791	870	907
Morocco	101.1	133.4	94.3	132.1	81.3	102.0	1,095	1,307	1,430	1,775
Mozambique	64.7	106.1	70.5	104.0	94.8	100.9	330	938	109	153
Myanmar	61.5	114.7	62.3	115.4	65.0	115.1	2,739	3,424	..	..
Namibia	71.9	111.4	99.5	114.0	104.1	109.3	381	403	820	1,103
Nepal	73.5	111.2	75.2	110.5	80.1	107.3	1,831	2,304	192	209
Netherlands	93.7	97.9	105.5	95.1	105.3	92.6	7,145	8,287	24,914	42,198
New Zealand	78.9	101.9	77.8	116.4	80.7	112.1	5,257	6,876	19,869	25,978
Nicaragua	76.6	115.3	64.0	123.1	57.5	119.9	1,529	1,808	..	2,071
Niger	71.4	119.5	75.4	118.4	82.0	104.7	323	463	152	157 ^b
Nigeria	68.9	103.4	69.1	106.2	76.9	106.6	1,135	1,420	562	950
Norway	120.7	103.4	104.1	99.5	98.2	97.3	3,744	4,085	19,500	37,776
Oman	62.8	87.3	60.2	92.1 ^b	65.7	94.0	2,411	2,621	1,005	1,302
Pakistan	80.6	102.5	70.6	110.6	67.6	109.1	1,818	2,533	594	696
Panama	110.9	104.2	94.8	103.7	76.3	101.1	1,862	1,845	2,363	3,914
Papua New Guinea	78.5	101.6	79.9	107.7 ^b	80.8	110.1	2,504	3,848	390	490 ^b
Paraguay	85.8	120.7	77.4	115.0	87.3	98.2	1,905	2,283	1,596	2,052
Peru	52.6	108.1	57.1	110.2	68.3	114.1	2,463	3,433	930	1,498
Philippines	84.2	109.6	77.9	115.5	62.1	120.7	2,070	3,074	905	1,075
Poland	109.1	91.6	110.0	106.7	114.8	105.0	2,958	3,123	1,502 ^b	2,182
Portugal	103.1	98.6	98.7	98.9	85.7	98.2	1,939	2,744	4,612	5,980
Puerto Rico	167.7	114.6	127.6	98.2	118.4	94.1	1,100	2,119	..	..



3.3

Agricultural output and productivity

	Crop production index		Food production index		Livestock production index		Cereal yield		Agricultural productivity	
	1999–2001 = 100		1999–2001 = 100		1999–2001 = 100		kilograms per hectare		Agriculture value added per worker 2000 \$	
	1990–92	2002–04	1990–92	2004–06 ^a	1990–92	2002–04	1990–92	2004–06	1990–92	2003–05
Romania	92.2	112.2	97.7	123.2	114.5	107.6	2,777	3,478	2,196	4,646
Russian Federation	125.8	116.0	132.6 ^b	111.4	152.1	103.2	1,743 ^b	1,879	1,825 ^b	2,518
Rwanda	111.4	117.6	107.3	113.2	77.7	107.3	1,088	1,087	191	214
Saudi Arabia	120.7	114.8	105.2	118.6	67.8	104.9	4,212	4,545	7,875	15,780
Senegal	73.0	68.3	71.9	81.6	74.8	98.2	803	1,018	225	215
Serbia ^c	97.6	110.0	109.2	114.2	103.8	94.9	2,926	4,910	..	1,679
Sierra Leone	128.1	113.5	118.9	113.5	86.1	105.2	1,223	1,971	..	..
Singapore	157.1	100.0	352.1	70.2 ^b	396.3	74.2	..	..	22,695	40,323
Slovak Republic	..	..	..	..	..	..	1,031 ^b	4,383	..	5,026
Slovenia	93.1	110.2	77.2 ^b	108.5	73.6	103.6	3,270 ^b	5,668	11,531 ^b	..
Somalia	..	..	..	..	..	..	622	558	..	..
South Africa	79.6	102.4	84.2	105.9	94.6	108.2	1,602	3,076	1,786	2,484
Spain	87.9	106.1	87.1	105.9	79.5	107.2	2,310	3,008	9,511	19,030
Sri Lanka	86.2	98.8	88.9	95.6	94.6	109.9	2,950	3,550	679	700
Sudan	68.9	110.8	66.7	107.8	67.6	106.3	596	663	418	666
Swaziland	106.6	100.1	108.9	105.9	130.3	111.9	1,299	1,030	1,225	1,243
Sweden	102.2	102.1	97.9	99.4	95.7	97.7	4,272	4,711	21,463	33,023
Switzerland	112.4	95.3	104.9	99.6	104.8	101.9	6,102	6,393	22,344	23,418
Syrian Arab Republic	73.6	117.1	75.1	121.7	75.0	115.6	947	1,711	2,344	3,261
Tajikistan	123.6	132.9	138.1	145.8	192.6	139.2	1,037 ^b	2,211	397 ^b	465
Tanzania	92.7	103.6	88.7	105.6	82.9	109.4	1,276	1,477	238	295
Thailand	82.0	106.1	84.1	104.7	86.8	105.5	2,186	2,976	497	621
Timor-Leste	93.5	107.2	102.2	112.9	101.6	117.9	1,694	1,322	..	281
Togo	73.4	110.3	74.1	104.2	87.9	106.7	791	1,155	312	347
Trinidad and Tobago	116.3	91.9	88.7	117.5	73.5	142.6	3,159	3,341	1,666	1,989
Tunisia	104.6	104.2	91.2	101.6	60.3	99.9	1,401	1,360	2,422	2,719
Turkey	88.0	104.0	89.5	103.9	92.2	101.6	2,192	2,514	1,890	1,891
Turkmenistan	111.4	116.5	57.1 ^b	131.0	64.0	121.7	2,210 ^b	3,057	1,222 ^b	..
Uganda	78.0	106.6	79.5	109.2	82.3	112.9	1,487	1,508	184	229
Ukraine	130.6	114.0	146.0 ^b	115.4	170.0	108.1	2,834 ^b	2,636	1,195 ^b	1,702
United Arab Emirates	23.4	56.0	26.5	63.7 ^b	57.5	116.9	2,042	7,333	10,454	25,841
United Kingdom	104.9	100.3	107.2	98.0	105.6	98.5	6,321	7,169	22,659	26,933
United States	88.4	101.5	84.8	107.5	83.4	102.6	4,875	6,538	20,793	41,797
Uruguay	70.4	112.7	76.7	115.5	84.2	98.3	2,445	4,203	5,714	7,973
Uzbekistan	107.8	109.0	91.3 ^b	105.2	99.7	104.7	1,777	3,839	1,272 ^b	1,800
Venezuela, RB	79.5	96.0	73.9	98.3	73.5	100.4	2,561	3,401	4,483	6,292
Vietnam	60.1	116.6	63.1	124.4	57.9	124.9	3,096	4,717	214	305
West Bank and Gaza	..	..	..	..	..	..	1,105	2,037	..	..
Yemen, Rep.	75.0	100.1	71.5	110.5	66.3	115.5	906	798	271	328 ^b
Zambia	80.7	102.4	84.3	108.0	80.1	99.2	1,251	1,822	159	206
Zimbabwe	69.2	69.3	77.3	86.4	90.1	100.1	1,123	663	240	222
World	82.5 w	105.7 w	82.0 w	106.2 w	83.4 w	107.0 w	2,866 w	3,306 w	742 w	914 w
Low income	78.5	103.5	76.1	105.2	73.5	109.6	1,752	2,105	303	376
Middle income	80.9	110.2	79.8	110.5	81.2	111.0	2,986	3,354	531	763
Lower middle income	77.5	111.7	72.8	112.5	67.9	114.1	3,424	3,956	388	561
Upper middle income	93.1	104.9	101.8	104.2	115.8	102.7	2,318	2,602	2,163	2,999
Low & middle income	80.1	108.1	78.7	108.9	79.3	110.6	2,451	2,827	438	591
East Asia & Pacific	71.8	110.8	64.5	112.4	52.4	116.6	3,816	4,518	303	445
Europe & Central Asia	113.2	107.1	127.1	106.1	149.3	104.1	2,652	2,359	1,903	2,195
Latin America & Carib.	78.2	111.5	74.4	110.4	72.9	108.9	2,234	3,194	2,151	3,057
Middle East & N. Africa	78.8	113.7	75.7	112.5	70.4	107.7	1,632	2,360	1,576	2,198
South Asia	79.9	101.0	75.5	103.5	69.1	109.8	1,992	2,513	335	406
Sub-Saharan Africa	75.9	103.9	77.6	105.1	84.5	107.1	984	1,120	277	335
High income	89.9	98.2	89.7	99.9	90.1	101.2	4,254	5,160	15,072	26,940
Euro area	91.5	97.8	94.6	98.8	97.9	99.7	4,632	5,664	12,701	23,097

a. Aggregates are for 2002–04. b. Data for all three years are not available. c. Includes Montenegro.

About the data

The agricultural production indexes in the table are prepared by the Food and Agriculture Organization of the United Nations (FAO). The FAO obtains data from official and semiofficial reports of crop yields, area under production, and livestock numbers. If data are unavailable, the FAO makes estimates. The indexes are calculated using the Laspeyres formula: production quantities of each commodity are weighted by average international commodity prices in the base period and summed for each year. Because the FAO's indexes are based on the concept of agriculture as a

single enterprise, estimates of the amounts retained for seed and feed are subtracted from the production data to avoid double counting. The resulting aggregate represents production available for any use except as seed and feed. The FAO's indexes may differ from those from other sources because of differences in coverage, weights, concepts, time periods, calculation methods, and use of international prices.

To facilitate cross-country comparisons, the FAO uses international commodity prices to value production. These prices, expressed in international dollars (equivalent in purchasing power to the U.S. dollar), are derived using a Geary-Khamis formula applied to agricultural outputs (see Inter-Secretariat Working Group on National Accounts 1993, sections 16.93–96). This method assigns a single price to each commodity so that, for example, one metric ton of wheat has the same price regardless of where it was produced. The use of international prices eliminates fluctuations in the value of output due to transitory movements of nominal exchange rates unrelated to the purchasing power of the domestic currency.

Data on cereal yield may be affected by a variety of reporting and timing differences. Millet and sorghum, which are grown as feed for livestock and poultry in Europe and North America, are used as food in Africa, Asia, and countries of the former Soviet Union. So some cereal crops are excluded from the data for some countries and included elsewhere, depending on their use. To smooth annual fluctuations in agricultural activity, the indicators in the table have been averaged over three years.

Definitions

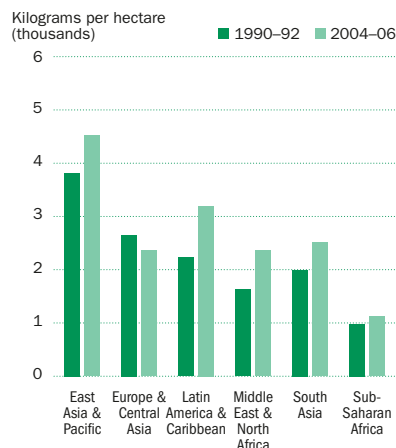
• **Crop production index** is agricultural production for each period relative to the base period 1999–2001. It includes all crops except fodder crops. The regional and income group aggregates for the FAO's production indexes are calculated from the underlying values in international dollars, normalized to the base period 1999–2001. • **Food production index** covers food crops that are considered edible and that contain nutrients. Coffee and tea are excluded because, although edible, they have no nutritive value. • **Livestock production index** includes meat and milk from all sources, dairy products such as cheese, and eggs, honey, raw silk, wool, and hides and skins. • **Cereal yield**, measured in kilograms per hectare of harvested land, includes wheat, rice, maize, barley, oats, rye, millet, sorghum, buckwheat, and mixed grains. Production data on cereals refer to crops harvested for dry grain only. Cereal crops harvested for hay or harvested green for food, feed, or silage, and those used for grazing, are excluded. The FAO allocates production data to the calendar year in which the bulk of the harvest took place. But most of a crop harvested near the end of a year will be used in the following year. • **Agricultural productivity** is the ratio of agricultural value added, measured in 2000 U.S. dollars, to the number of workers in agriculture. Agricultural productivity is measured by value added per unit of input. (For further discussion of the calculation of value added in national accounts, see *About the data* for tables 4.1 and 4.2.) Agricultural value added includes that from forestry and fishing. Thus interpretations of land productivity should be made with caution.

Cereal yield in low-income countries was only 40 percent of the yield in high-income countries 3.3a



Source: Table 3.3.

Sub-Saharan Africa had the lowest yield, while East Asia and Pacific is closing the gap with high-income countries 3.3b



Source: Table 3.3.

Data sources

Data on agricultural production indexes, cereal yield, and agricultural employment are from electronic files that the FAO makes available to the World Bank. The files may contain more recent information than published versions. Data on agricultural value added are from the World Bank's national accounts files.



3.4

Deforestation and biodiversity

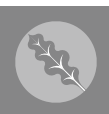
	Forest area		Average annual deforestation ^a		Animal species		Higher plants ^b		GEF benefits index for biodiversity	Nationally protected areas		Marine protected areas	
	thousand sq. km		%		Total known species	Threatened species	Total known species	Threatened species	0–100 (no biodiversity to maximum biodiversity)	thousand sq. km	% of total land area	thousand sq. km	% of surface area
	1990	2005	1990–2000	2000–05	2004	2007	2004	2007	2005	2004 ^c	2004 ^c	2004	2004
Afghanistan	13	9	2.5	3.1	578	33	4,000	2	3.6	2.2	0.3	..	..
Albania	8	8	0.3	–0.6	376	45	3,031	0	0.2	0.7	2.7	0.3	1.0
Algeria	18	23	–1.8	–1.2	472	71	3,164	3	3.0	118.6	5.0	0.9	0.0
Angola	610	591	0.2	0.2	1,226	62	5,185	26	9.6	125.5	10.1	29.1	2.3
Argentina	353	330	0.4	0.4	1,413	152	9,372	42	18.5	174.5	6.4	7.8	0.3
Armenia	3	3	1.3	1.5	380	35	3,553	1	0.3	3.0	10.6	..	..
Australia	1,679	1,637	0.2	0.1	1,227	568	15,638	55	95.8	745.3	9.7	680.8	8.8
Austria	38	39	–0.2	–0.1	513	62	3,100	4	0.3	23.5	28.5	..	..
Azerbaijan	9	9	0.0	0.0	446	38	4,300	0	0.9	4.0	4.8	1.2	1.4
Bangladesh	9	9	0.0	0.3	735	89	5,000	12	1.6	0.7	0.5	0.3	0.2
Belarus	74	79	–0.6	–0.1	297	17	2,100	..	0.0	13.2	6.3	..	..
Belgium ^d	7	7	0.1	0.0	519	29	1,550	1	0.0	1.0	3.5	0.0	0.0
Benin	33	24	2.1	2.5	644	34	2,500	14	0.2	26.4	23.9	..	..
Bolivia	628	587	0.4	0.5	1,775	80	17,367	71	13.8	211.0	19.5	..	..
Bosnia and Herzegovina	22	22	0.1	0.0	390	55	..	1	0.4	0.3	0.5	..	..
Botswana	137	119	0.9	1.0	739	18	2,151	0	1.5	174.9	30.9	..	..
Brazil	5,200	4,777	0.5	0.6	2,290	343	56,215	382	100.0	1,532.6	18.1	47.4	0.6
Bulgaria	33	36	–0.1	–1.4	485	47	3,572	0	0.9	11.2	10.3	0.0	0.0
Burkina Faso	72	68	0.3	0.3	581	13	1,100	2	0.3	42.1	15.4	..	..
Burundi	3	2	3.7	5.2	713	48	2,500	2	0.5	1.5	5.7	..	..
Cambodia	129	104	1.1	2.0	648	82	..	31	3.9	41.5	23.5	1.9	1.1
Cameroon	245	212	0.9	1.0	1,258	157	8,260	355	13.3	37.4	8.0	3.9	0.8
Canada	3,101	3,101	0.0	0.0	683	77	3,270	1	22.2	628.7	6.9	362.7	3.6
Central African Republic	232	228	0.1	0.1	850	17	3,602	15	1.7	103.3	16.6	..	..
Chad	131	119	0.6	0.7	635	21	1,600	2	2.1	119.8	9.5	..	..
Chile	153	161	–0.4	–0.4	604	95	5,284	39	16.2	26.9	3.6	114.5	15.1
China	1,571	1,973	–1.2	–2.2	1,801	351	32,200	446	64.8	1,100.7	11.8	16.0	0.2
Hong Kong, China	..	..	..	..	363	37	..	6	..	0.3	24.7	0.3	..
Colombia	614	607	0.1	0.1	2,288	382	51,220	222	57.3	825.3	74.4	8.1	0.7
Congo, Dem. Rep.	1,405	1,336	0.4	0.2	1,578	126	11,007	65	17.0	194.4	8.6	..	..
Congo, Rep.	227	225	0.1	0.1	763	37	6,000	35	3.4	61.3	18.0	..	..
Costa Rica	26	24	0.8	–0.1	1,070	131	12,119	111	11.1	12.1	23.6	4.8	9.4
Côte d'Ivoire	102	104	–0.1	–0.1	931	73	3,660	105	3.9	54.5	17.1	0.3	0.1
Croatia	21	21	–0.1	–0.1	461	78	4,288	1	0.5	3.6	6.5	2.5	4.4
Cuba	21	27	–1.7	–2.2	423	115	6,522	163	13.5	1.5	1.4	31.7	28.6
Czech Republic	26	26	0.0	–0.1	474	39	1,900	4	0.1	14.4	18.7	..	..
Denmark	4	5	–0.9	–0.6	508	28	1,450	3	0.2	10.9	25.7	5.1	11.8
Dominican Republic	14	14	0.0	0.0	260	81	5,657	30	6.8	11.9	24.6	8.6	17.6
Ecuador	138	109	1.5	1.7	1,856	340	19,362	1,838	30.0	67.2	24.3	141.0	49.7
Egypt, Arab Rep.	0	1	–3.0	–2.6	599	59	2,076	2	3.2	56.0	5.6	76.7	7.7
El Salvador	4	3	1.5	1.7	571	29	2,911	26	0.8	0.4	1.9	0.1	0.4
Eritrea	16	16	0.3	0.3	607	38	..	3	0.9	5.0	5.0	..	..
Estonia	22	23	–0.4	–0.4	334	14	1,630	0	0.0	8.9	21.1	..	..
Ethiopia	151	130	1.0	1.1	1,127	86	6,603	22	8.5	186.2	18.6	..	..
Finland	222	225	–0.1	0.0	501	19	1,102	1	0.2	29.5	9.7	1.1	0.3
France	145	156	–0.5	–0.3	665	117	4,630	7	3.9	16.2	3.0	0.5	0.1
Gabon	219	218	0.0	0.0	798	43	6,651	108	3.4	8.8	3.4	1.0	0.4
Gambia, The	4	5	–0.4	–0.4	668	31	974	4	0.1	0.3	3.5	0.2	1.9
Georgia	28	28	0.0	0.0	366	46	4,350	0	0.7	3.0	4.3	0.0	0.1
Germany	107	111	–0.3	0.0	613	59	2,682	12	0.7	111.5	32.0	9.1	2.6
Ghana	74	55	2.0	2.0	978	56	3,725	117	2.0	36.9	16.2	..	..
Greece	33	38	–0.9	–0.8	530	95	4,992	11	3.0	4.3	3.3	2.5	1.9
Guatemala	47	39	1.2	1.3	877	133	8,681	84	8.9	25.4	23.4	0.1	0.1
Guinea	74	67	0.7	0.5	855	61	3,000	22	2.6	15.6	6.4	..	..
Guinea-Bissau	22	21	0.4	0.5	560	29	1,000	4	0.7	0.0	0.0	..	..
Haiti	1	1	0.6	0.7	312	91	5,242	29	5.8	0.1	0.3	..	..

Deforestation and biodiversity

3.4

ENVIRONMENT

	Forest area		Average annual deforestation ^a		Animal species		Higher plants ^b		GEF benefits index for biodiversity	Nationally protected areas		Marine protected areas	
	thousand sq. km		%		Total known species	Threatened species	Total known species	Threatened species	0–100 (no biodiversity to maximum biodiversity)	thousand sq. km	% of total land area	thousand sq. km	% of surface area
	1990	2005	1990–2000	2000–05	2004	2007	2004	2007	2005	2004 ^c	2004 ^c	2004	2004
Honduras	74	46	3.0	3.1	900	102	5,680	110	7.9	23.4	21.0	1.9	1.7
Hungary	18	20	–0.6	–0.7	455	55	2,214	1	0.2	8.3	9.3	..	..
India	639	677	–0.6	0.0	1,602	313	18,664	247	43.9	156.3	5.3	16.1	0.5
Indonesia	1,166	885	1.7	2.0	2,271	464	29,375	386	90.0	259.9	14.3	130.1	6.8
Iran, Islamic Rep.	111	111	0.0	0.0	656	75	8,000	1	7.9	105.5	6.5	6.2	0.4
Iraq	8	8	–0.2	–0.1	498	40	..	0	1.7	0.0	0.0	..	..
Ireland	4	7	–3.3	–1.9	471	15	950	1	0.7	0.8	1.1	0.0	0.0
Israel	2	2	–0.6	–0.8	649	79	2,317	0	0.9	4.6	21.3	0.1	0.6
Italy	84	100	–1.2	–1.1	610	119	5,599	19	4.4	32.4	11.0	1.5	0.5
Jamaica	3	3	0.1	0.1	333	61	3,308	209	4.9	1.8	16.2	8.2	74.5
Japan	250	249	0.0	0.0	763	190	5,565	12	41.4	52.2	14.3	10.6	2.8
Jordan	1	1	0.0	0.0	490	43	2,100	0	0.3	9.7	11.0	0.0	0.0
Kazakhstan	34	33	0.2	0.2	642	55	6,000	16	5.4	77.4	2.9	0.5	0.0
Kenya	37	35	0.3	0.3	1,510	172	6,506	103	9.9	71.9	12.6	3.1	0.5
Korea, Dem. Rep.	82	62	1.8	1.9	474	44	2,898	3	0.7	3.2	2.6	..	..
Korea, Rep.	64	63	0.1	0.1	512	54	2,898	0	1.8	3.5	3.6	3.5	3.5
Kuwait	0	0	–5.2	–3.7	381	23	234	..	0.1	0.0	0.0	0.3	1.5
Kyrgyz Republic	8	9	–0.3	–0.3	265	22	4,500	14	1.2	7.2	3.7	..	..
Lao PDR	173	161	0.5	0.5	919	77	8,286	21	5.4	37.4	16.2	..	..
Latvia	28	29	–0.4	–0.4	393	23	1,153	0	0.0	9.7	15.6	0.2	0.2
Lebanon	1	1	–0.8	–0.8	447	38	3,000	0	0.2	0.1	0.7	0.0	0.0
Lesotho	0	0	–3.4	–2.7	370	11	1,591	1	0.3	0.1	0.2	..	..
Liberia	41	32	1.6	1.8	759	60	2,200	46	2.9	15.2	15.8	0.6	0.5
Libya	2	2	0.0	0.0	413	31	1,825	1	1.7	1.2	0.1	0.5	0.0
Lithuania	19	21	–0.4	–0.8	298	20	1,796	..	0.0	5.9	9.5	0.5	0.8
Macedonia, FYR	9	9	0.0	0.0	380	34	3,500	0	0.2	2.0	7.9	..	..
Madagascar	137	128	0.5	0.3	427	262	9,505	280	31.4	18.3	3.1	0.2	0.0
Malawi	39	34	0.9	0.9	865	141	3,765	14	3.9	19.4	20.6	..	..
Malaysia	224	209	0.4	0.7	1,083	225	15,500	686	14.8	100.8	30.7	5.0	1.5
Mali	141	126	0.7	0.8	758	21	1,741	6	1.6	46.7	3.8	..	..
Mauritania	4	3	2.7	3.4	615	44	1,100	..	1.4	2.5	0.2	15.0	1.5
Mauritius	0	0	0.3	0.5	151	65	750	88	4.2	0.1	3.3	0.1	4.4
Mexico	690	642	0.5	0.4	1,570	579	26,071	261	75.8	99.0	5.1	82.1	4.2
Moldova	3	3	–0.2	–0.2	253	28	1,752	0	0.0	0.5	1.4	..	..
Mongolia	115	103	0.7	0.8	527	38	2,823	0	4.4	217.9	13.9	..	..
Morocco	43	44	–0.1	–0.2	559	76	3,675	2	4.0	4.7	1.1	0.5	0.1
Mozambique	200	193	0.3	0.3	913	93	5,692	46	8.2	45.3	5.8	22.5	2.8
Myanmar	392	322	1.3	1.4	1,335	118	7,000	38	10.6	35.3	5.4	0.2	0.0
Namibia	88	77	0.9	0.9	811	55	3,174	24	5.9	46.0	5.6	74.0	9.0
Nepal	48	36	2.1	1.4	477	72	6,973	7	2.2	26.6	18.6	..	..
Netherlands	3	4	–0.4	–0.3	539	26	1,221	0	0.1	9.5	28.0	0.8	1.9
New Zealand	77	83	–0.6	–0.2	424	124	2,382	21	22.3	64.7	24.2	22.7	8.4
Nicaragua	65	52	1.6	1.3	813	59	7,590	39	3.6	28.1	23.1	1.3	1.0
Niger	19	13	3.7	1.0	616	20	1,460	2	0.9	96.9	7.7	..	..
Nigeria	172	111	2.7	3.3	1,189	79	4,715	171	6.6	55.0	6.0	..	..
Norway	91	94	–0.2	–0.2	525	32	1,715	2	1.6	19.7	6.5	1.3	0.4
Oman	0	0	0.0	0.0	557	50	1,204	6	4.4	0.2	0.1	29.6	9.6
Pakistan	25	19	1.8	2.1	820	78	4,950	2	5.1	73.1	9.5	2.2	0.3
Panama	44	43	0.2	0.1	1,145	121	9,915	194	11.7	13.1	17.6	10.0	13.3
Papua New Guinea	315	294	0.5	0.5	980	158	11,544	142	27.7	7.3	1.6	3.5	0.8
Paraguay	212	185	0.9	0.9	864	39	7,851	10	3.3	16.6	4.2	..	..
Peru	702	687	0.1	0.1	2,222	238	17,144	274	36.3	216.1	16.9	3.4	0.3
Philippines	106	72	2.8	2.1	812	253	8,931	213	33.7	24.3	8.2	16.6	5.5
Poland	89	92	–0.2	–0.3	534	38	2,450	4	0.6	70.3	23.1	0.7	0.2
Portugal	31	38	–1.5	–1.1	606	147	5,050	16	3.8	4.7	5.1	2.0	2.2
Puerto Rico	4	4	–0.1	0.0	348	47	2,493	53	3.8	0.3	3.5	1.7	19.1



3.4

Deforestation and biodiversity

	Forest area		Average annual deforestation ^a		Animal species		Higher plants ^b		GEF benefits index for biodiversity	Nationally protected areas		Marine protected areas	
	thousand sq. km		%		Total known species	Threatened species	Total known species	Threatened species	0–100 (no biodiversity to maximum biodiversity)	thousand sq. km	% of total land area	thousand sq. km	% of surface area
	1990	2005	1990–2000	2000–05	2004	2007	2004	2007	2005	2004 ^c	2004 ^c	2004	2004
Romania	64	64	0.0	0.0	466	64	3,400	1	..	5.8	2.5	6.1	2.6
Russian Federation	8,090	8,088	0.0	0.0	941	153	11,400	7	37.1	1,287.0	7.9	301.8	1.8
Rwanda	3	5	–0.8	–6.9	871	49	2,288	3	1.1	1.9	7.9	..	..
Saudi Arabia	27	27	0.0	0.0	527	45	2,028	3	3.4	819.1	41.0	5.2	0.2
Senegal	93	87	0.5	0.5	803	55	2,086	7	1.3	21.6	11.2	0.9	0.4
Serbia ^e	26	27	–0.3	–0.3	477	91	4,082	1	..	3.8	3.7	0.1	0.1
Sierra Leone	30	28	0.7	0.7	823	48	2,090	47	1.5	3.2	4.5	..	..
Singapore	0	0	0.0	0.0	473	44	2,282	54	0.1	0.0	4.2	0.0	0.1
Slovak Republic	19	19	0.0	–0.1	419	44	3,124	2	0.1	11.0	22.8	..	..
Slovenia	12	13	–0.4	–0.4	437	80	3,200	..	0.2	2.9	14.5	0.0	0.0
Somalia	83	71	1.0	1.0	824	55	3,028	17	6.7	1.9	0.3	3.3	0.5
South Africa	92	92	0.0	0.0	1,149	323	23,420	73	23.5	74.0	6.1	3.4	0.3
Spain	135	179	–2.0	–1.7	647	170	5,050	49	6.6	46.2	9.3	1.8	0.4
Sri Lanka	24	19	1.2	1.5	504	177	3,314	280	6.6	17.7	27.3	2.3	3.5
Sudan	764	675	0.8	0.8	1,254	47	3,137	17	5.5	123.0	5.2	0.3	0.0
Swaziland	5	5	–0.9	–0.9	614	16	2,715	11	0.1	0.6	3.5	..	..
Sweden	274	275	0.0	0.0	542	30	1,750	3	0.3	44.8	10.9	4.3	1.0
Switzerland	12	12	–0.4	–0.4	475	44	3,030	3	0.2	11.9	29.6	..	..
Syrian Arab Republic	4	5	–1.5	–1.3	432	59	3,000	0	0.9	2.7	1.5	..	..
Tajikistan	4	4	0.0	0.0	427	27	5,000	14	0.7	26.0	18.6	..	..
Tanzania	414	353	1.0	1.1	1,431	299	10,008	240	15.1	374.3	42.3	2.3	0.2
Thailand	160	145	0.7	0.4	1,271	157	11,625	86	8.0	80.3	15.7	5.8	1.1
Timor-Leste	10	8	1.2	1.3	..	..	..	..	..	1.9	12.6	..	..
Togo	7	4	3.4	4.5	740	33	3,085	10	0.4	6.5	11.9	..	..
Trinidad and Tobago	2	2	0.3	0.2	551	38	2,259	1	2.4	0.2	4.7	0.1	1.3
Tunisia	6	11	–4.1	–1.9	438	52	2,196	0	0.5	2.3	1.5	0.2	0.1
Turkey	97	102	–0.4	–0.2	581	121	8,650	3	6.0	20.3	2.6	4.5	0.6
Turkmenistan	41	41	0.0	0.0	421	44	..	3	2.0	19.8	4.2	..	..
Uganda	49	36	1.9	2.2	1,375	131	4,900	38	3.3	64.3	32.6	..	..
Ukraine	93	96	–0.3	–0.1	445	58	5,100	1	0.4	19.4	3.3	3.1	0.5
United Arab Emirates	2	3	–2.4	–0.1	298	27	..	..	0.2	0.2	0.2	..	..
United Kingdom	26	28	–0.7	–0.4	660	38	1,623	13	2.1	60.5	25.0	22.5	9.2
United States	2,986	3,031	–0.1	–0.1	1,356	937	19,473	242	90.3	1,490.1	16.3	909.5	9.4
Uruguay	9	15	–4.5	–1.3	532	66	2,278	1	1.4	0.7	0.4	0.1	0.0
Uzbekistan	30	33	–0.5	–0.5	434	33	4,800	15	1.2	20.5	4.8	..	..
Venezuela, RB	520	477	0.6	0.6	1,745	166	21,073	68	26.8	644.4	73.1	21.3	2.3
Vietnam	94	129	–2.3	–2.0	1,116	152	10,500	146	11.7	13.6	4.4	0.7	0.2
West Bank and Gaza	0	0	0.0	0.0	..	..	..	..	..	..	..	..	..
Yemen, Rep.	5	5	0.0	0.0	459	47	1,650	159	3.4	0.0	0.0	..	..
Zambia	491	425	0.9	1.0	1,025	38	4,747	8	5.0	312.3	42.0	..	..
Zimbabwe	222	175	1.5	1.7	883	35	4,440	17	2.1	57.5	14.9	..	..
World	40,679 s	39,426 s	0.2 w	0.2 w						15,050.8 s	11.6 w	4,348.9 s	3.8 w
Low income	7,392	6,714	0.6	0.7						2,794.9	9.9	73.8	..
Middle income	23,770	23,086	0.2	0.1						7,975.0	11.7	1,233.1	1.9
Lower middle income	7,550	7,413	0.2	–0.1						3,585.7	12.8	632.6	1.7
Upper middle income	16,220	15,673	0.2	0.3						4,389.3	10.9	600.6	2.1
Low & middle income	31,161	29,799	0.3	0.3						10,769.9	11.2	1,307.0	1.6
East Asia & Pacific	4,581	4,507	0.3	–0.2						1,926.6	12.1	192.1	1.3
Europe & Central Asia	8,845	8,869	0.0	0.0						1,630.1	7.0	321.6	1.4
Latin America & Carib.	9,834	9,147	0.5	0.5						3,966.0	19.7	495.7	2.7
Middle East & N. Africa	200	211	–0.4	–0.3						301.1	3.4	114.7	1.5
South Asia	789	801	–0.2	0.1						288.6	6.0	20.9	0.5
Sub-Saharan Africa	6,913	6,263	0.7	0.6						2,657.5	11.3	162.0	..
High income	9,492	9,600	–0.1	–0.1						4,277.1	13.0	3,042.0	8.8
Euro area	822	915	–0.8	–0.6						283.9	11.5	19.5	0.8

a. Negative values indicate an increase in forest area. b. Flowering plants only. c. Data may refer to earlier years. They are the most recent reported by the World Conservation Monitoring Centre in 2004. d. Includes Luxembourg. e. Includes Montenegro.

About the data

Biological diversity is defined in terms of variability in genes, species, and ecosystems. As threats to biodiversity mount, the international community is increasingly focusing on conserving diversity. Deforestation is a major cause of loss of biodiversity, and habitat conservation is vital for stemming this loss. Conservation efforts have focused on protecting areas of high biodiversity.

The Food and Agriculture Organization's (FAO) *Global Forest Resources Assessment 2005* provides detailed information on forest cover in 2005 and adjusted estimates of forest cover in 1990 and 2000. The current survey uses a uniform definition of forest. Because of space limitations, the table does not break down forest cover between natural forest and plantation, a breakdown the FAO provides for developing countries. Thus the deforestation data in the table may underestimate the rate at which natural forest is disappearing in some countries.

Measures of species richness are a straightforward way to indicate an area's importance for biodiversity. The number of threatened species is also an important measure of the immediate need for conservation in an area. Global analyses of the status of threatened species have been carried out for few groups of organisms. Only for mammals, birds, and amphibians has the status of virtually all known species been assessed. Threatened species are defined using the World Conservation Union's (IUCN) classification: *endangered* (in danger of extinction and unlikely to survive if causal factors continue operating); *vulnerable* (likely to move into the endangered category in the near future if causal factors continue operating); *rare* (not endangered or vulnerable but at risk); *indeterminate* (known to be endangered, vulnerable, or rare but not enough information is available to say which); *out of danger* (formerly included in one of the above categories but now considered relatively secure because appropriate conservation measures are in effect); and *insufficiently known* (suspected but not definitely known to belong to one of the above categories).

Unlike birds and mammals, it is difficult to accurately count plants. The number of plant species is highly debated. The IUCN's *2007 IUCN Red List of Threatened Species*, the result of more than 20 years' work by botanists worldwide, is the most comprehensive list of threatened species on a global scale. Only 5 percent of plant species have been evaluated, and 70 percent are threatened with extinction. Plant species data may not be comparable across countries because of differences in taxonomic concepts and coverage and so should be interpreted with caution. However, the data identify countries that are major sources of global biodiversity and that show national commitments to habitat protection.

More than information about species richness is needed to set priorities for conserving biodiversity. The Global Environment Facility's (GEF) benefits index for biodiversity is a comprehensive indicator of national biodiversity status and is used to guide its biodiversity priorities. The indicator incorporates information on individual species range maps available from the IUCN for virtually all mammals (4,863), amphibians (5,915), and endangered birds (1,098); country data from the World Resources Institute for reptiles and vascular plants; country data from FishBase for 31,190 fish species; and the ecological characteristics of 867 world terrestrial ecoregions from WWF International. For each country the biodiversity indicator incorporates the best available and comparable information in four relevant dimensions: represented species, threatened species, represented ecoregions, and threatened ecoregions. To combine these dimensions into one measure, the indicator uses dimensional weights that reflect the consensus of conservation scientists at the GEF, IUCN, WWF International, and other nongovernmental organizations.

The World Conservation Monitoring Centre (WCMC) compiles data on protected areas, numbers of certain species, and numbers of those species under threat from various sources. Because of differences in definitions, reporting practices, and reporting periods, cross-country comparability is limited.

Nationally protected areas are defined using the six IUCN management categories for areas of at least 1,000 hectares: *scientific reserves* and strict nature reserves with limited public access; *national parks* of national or international significance and not materially affected by human activity; *natural monuments* and natural landscapes with unique aspects; *managed nature reserves* and wildlife sanctuaries; *protected landscapes* (which may include cultural landscapes); and *areas managed mainly for the sustainable use* of natural systems to ensure long-term protection and maintenance of biological diversity. Designating land as a protected area does not mean that protection is in force. And for small countries that only have protected areas smaller than 1,000 hectares, the size limit in the definition leads to an underestimate of protected areas.

Due to variations in consistency and methods of collection, data quality is highly variable across countries. Some countries update their information more frequently than others, some have more accurate data on extent of coverage, and many underreport the number or extent of protected areas.

Definitions

- **Forest area** is land under natural or planted stands of trees, whether productive or not.
- **Average annual deforestation** is the permanent conversion of natural forest area to other uses, including agriculture, ranching, settlements, and infrastructure. Deforested areas do not include areas logged but intended for regeneration or areas degraded by fuelwood gathering, acid precipitation, or forest fires.
- **Animal species** are mammals (excluding whales and porpoises) and birds (included within a country's breeding or wintering ranges).
- **Higher plants** are native vascular plant species.
- **Threatened species** are the number of species classified by the IUCN as endangered, vulnerable, rare, indeterminate, out of danger, or insufficiently known.
- **GEF benefits index for biodiversity** is a composite index of relative biodiversity potential based on the species represented in each country and their threat status and diversity of habitat types. The index has been normalized from 0 (no biodiversity potential) to 100 (maximum biodiversity potential).
- **Nationally protected areas** are totally or partially protected areas of at least 1,000 hectares that are designated as scientific reserves with limited public access, national parks, natural monuments, nature reserves or wildlife sanctuaries, and protected landscapes. Marine areas, unclassified areas, littoral (intertidal) areas, and sites protected under local or provincial law are excluded. Total area protected is a percentage of total land area (see table 3.1).
- **Marine protected areas** are areas of intertidal or subtidal terrain—and overlying water and associated flora and fauna and historical and cultural features—that have been reserved to protect part or all of the enclosed environment.

Data sources

Data on forest area and deforestation are from the FAO's *Global Forest Resources Assessment 2005*. Data on species are from the electronic files of the United Nations Environmental Program and WCMC and *2007 IUCN Red List of Threatened Species*. The GEF benefits index for biodiversity is from Kiran Dev Pandey, Piet Buys, Ken Chomitz, and David Wheeler's, "Biodiversity Conservation Indicators: New Tools for Priority Setting at the Global Environment Facility" (2006). Data on protected areas are from the United Nations Environment Programme and WCMC, as compiled by the World Resources Institute.

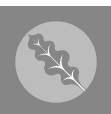


3.5

Freshwater

	Renewable internal freshwater resources ^a		Annual freshwater withdrawals					Water productivity	Access to an improved water source	
	Flows billion cu. m	Per capita cu. m	billion cu. m	% of internal resources	% for agriculture	% for industry	% for domestic	GDP/water use 2000 \$ per cu. m	% of urban population	% of rural population
	2005	2005	1987-2002 ^b	1987-2002 ^b	1987-2002 ^b	1987-2002 ^b	1987-2002 ^b	2002	2004	2004
Afghanistan	55	..	23.3	42.3	98	0	2	..	..	..
Albania	27	8,530	1.7	6.4	62	11	27	2.4	99	94
Algeria	11	341	6.1	54.2	65	13	22	9.7	88	80
Angola	148	9,195	0.4	0.2	60	17	23	30.8	75	40
Argentina	276	7,123	29.2	10.6	74	9	17	8.3	98	80
Armenia	9	3,016	3.0	32.4	66	4	30	0.8	99	80
Australia	492	24,118	23.9	4.9	75	10	15	17.9	100	100
Austria	55	6,680	2.1	3.8	1	64	35	93.4	100	100
Azerbaijan	8	965	17.3	213.0	68	28	5	0.4	95	59
Bangladesh	105	685	79.4	75.6	96	1	3	0.7	82	72
Belarus	37	3,805	2.8	7.5	30	47	23	5.0	100	100
Belgium	12	1,145	..	..	..	..	..	..	100	..
Benin	10	1,213	0.1	1.3	45	23	32	19.0	78	57
Bolivia	304	33,054	1.4	0.5	81	7	13	6.1	95	68
Bosnia and Herzegovina	36	9,067	..	..	..	..	..	..	99	96
Botswana	2	1,307	0.2	8.1	41	18	41	35.4	100	90
Brazil	5,418	29,000	59.3	1.1	62	18	20	11.3	96	57
Bulgaria	21	2,713	10.5	50.0	19	78	3	1.3	100	97
Burkina Faso	13	897	0.8	6.4	86	1	13	3.6	94	54
Burundi	10	1,285	0.3	2.9	77	6	17	2.6	92	77
Cambodia	121	8,642	4.1	3.4	98	0	1	1.0	64	35
Cameroon	273	15,341	1.0	0.4	74	8	18	11.1	86	44
Canada	2,850	88,203	46.0	1.6	12	69	20	16.5	100	99
Central African Republic	141	33,640	0.0	0.0	4	16	80	38.3	93	61
Chad	15	1,478	0.2	1.5	83	0	17	7.3	41	43
Chile	884	54,249	12.6	1.4	64	25	11	6.4	100	58
China	2,812	2,156	630.3	22.4	68	26	7	2.2	93	67
Hong Kong, China	..	..	..	..	..	..	..	..	..	..
Colombia	2,112	46,990	10.7	0.5	46	4	50	8.1	99	71
Congo, Dem. Rep.	900	15,322	0.4	0.0	31	17	53	12.1	82	29
Congo, Rep.	222	61,498	0.0	0.0	9	22	70	76.1	84	27
Costa Rica	112	25,975	2.7	2.4	53	17	29	6.2	100	92
Côte d'Ivoire	77	4,132	0.9	1.2	65	12	24	11.0	97	74
Croatia	38	8,485	..	..	..	..	..	..	100	100
Cuba	38	3,384	8.2	21.5	69	12	19	..	95	78
Czech Republic	13	1,290	2.6	19.5	2	57	41	23.0	100	100
Denmark	6	1,108	1.3	21.2	43	25	32	127.5	100	100
Dominican Republic	21	2,218	3.4	16.1	66	2	32	6.3	97	91
Ecuador	432	33,076	17.0	3.9	82	5	12	1.0	97	89
Egypt, Arab Rep.	2	25	68.3	3,794.4	86	6	8	1.6	99	97
El Salvador	18	2,669	1.3	7.2	59	16	25	10.7	94	70
Eritrea	3	619	0.3	10.7	97	0	3	2.3	74	57
Estonia	13	9,435	0.2	1.2	5	38	57	41.4	100	99
Ethiopia	122	1,623	5.6	4.6	94	0	6	1.6	81	11
Finland	107	20,396	2.5	2.3	3	84	14	51.3	100	100
France	179	2,932	40.0	22.4	10	74	16	34.2	100	100
Gabon	164	127,064	0.1	0.1	42	8	50	43.0	95	47
Gambia, The	3	1,855	0.0	1.0	65	12	23	14.1	95	77
Georgia	58	12,988	3.6	6.2	59	21	20	0.9	96	67
Germany	107	1,297	47.1	44.0	20	68	12	40.9	100	100
Ghana	30	1,345	1.0	3.2	66	10	24	5.5	88	64
Greece	58	5,223	7.8	13.4	80	3	16	20.1	..	..
Guatemala	109	8,592	2.0	1.8	80	13	6	10.0	99	92
Guinea	226	25,104	1.5	0.7	90	2	8	2.2	78	35
Guinea-Bissau	16	10,019	0.2	1.1	82	5	13	1.1	79	49
Haiti	13	1,398	1.0	7.6	94	1	5	3.8	52	56

	Renewable internal freshwater resources ^a		Annual freshwater withdrawals					Water productivity	Access to an improved water source	
	Flows billion cu. m	Per capita cu. m	billion cu. m	% of internal resources	% for agriculture	% for industry	% for domestic	GDP/water use 2000 \$ per cu. m	% of urban population	% of rural population
	2005	2005	1987-2002 ^b	1987-2002 ^b	1987-2002 ^b	1987-2002 ^b	1987-2002 ^b	2002	2004	2004
Honduras	96	14,033	0.9	0.9	80	12	8	7.3	95	81
Hungary	6	595	7.6	127.3	32	59	9	6.8	100	98
India	1,261	1,152	645.8	51.2	86	5	8	0.8	95	83
Indonesia	2,838	12,867	82.8	2.9	91	1	8	2.2	87	69
Iran, Islamic Rep.	129	1,860	72.9	56.7	91	2	7	1.5	99	84
Iraq	35	..	42.7	121.3	92	5	3	0.5	..	..
Ireland	49	11,781	1.1	2.3	0	77	23	95.7	100	..
Israel	1	116	2.1	256.3	62	7	31	58.1	100	100
Italy	183	3,114	44.4	24.3	45	37	18	25.3	100	..
Jamaica	9	3,541	0.4	4.4	49	17	34	20.2	98	88
Japan	430	3,365	88.4	20.6	62	18	20	53.0	100	100
Jordan	1	129	1.0	144.3	75	4	21	9.3	99	91
Kazakhstan	75	4,978	35.0	46.4	82	17	2	0.7	97	73
Kenya	21	581	1.6	7.6	64	6	30	8.4	83	46
Korea, Dem. Rep.	67	2,837	9.0	13.5	55	25	20	..	100	100
Korea, Rep.	65	1,344	18.6	28.6	48	16	36	30.6	97	71
Kuwait	..	..	0.4	..	52	2	45	90.8	..	..
Kyrgyz Republic	47	9,041	10.1	21.7	94	3	3	0.1	98	66
Lao PDR	190	33,616	3.0	1.6	90	6	4	0.6	79	43
Latvia	17	7,259	0.3	1.8	13	33	53	30.0	100	96
Lebanon	5	1,197	1.4	28.8	67	1	33	13.2	100	100
Lesotho	5	2,625	0.1	1.0	20	40	40	17.9	92	76
Liberia	200	58,109	0.1	0.1	55	18	27	5.4	72	52
Libya	1	101	4.3	711.3	83	3	14	8.7	72	68
Lithuania	16	4,569	0.3	1.7	7	15	78	48.2	..	..
Macedonia, FYR	5	2,655	..	..	..	..	..	..	..	..
Madagascar	337	18,077	15.0	4.4	96	2	3	0.2	77	35
Malawi	16	1,217	1.0	6.3	80	5	15	1.6	98	68
Malaysia	580	22,609	9.0	1.6	62	21	17	10.5	100	96
Mali	60	5,167	6.5	10.9	90	1	9	0.4	78	36
Mauritania	0	135	1.7	425.0	88	3	9	0.7	59	44
Mauritius	3	2,252	0.6	21.8	..	..	..	7.9	100	100
Mexico	409	3,967	78.2	19.1	77	5	17	7.5	100	87
Moldova	1	258	2.3	231.0	33	58	10	0.6	97	88
Mongolia	35	13,626	0.4	1.3	52	27	20	2.7	87	30
Morocco	29	962	12.6	43.4	87	3	10	3.3	99	56
Mozambique	100	4,885	0.6	0.6	87	2	11	8.2	72	26
Myanmar	881	18,358	33.2	3.8	98	1	1	..	80	77
Namibia	6	3,070	0.3	4.8	71	5	24	12.4	98	81
Nepal	198	7,315	10.2	5.1	96	1	3	0.6	96	89
Netherlands	11	674	7.9	72.2	34	60	6	49.5	100	100
New Zealand	327	79,102	2.1	0.6	42	9	48	27.0	100	..
Nicaragua	190	34,727	1.3	0.7	83	2	15	3.1	90	63
Niger	4	264	2.2	62.3	95	0	4	0.9	80	36
Nigeria	221	1,563	8.0	3.6	69	10	21	6.0	67	31
Norway	382	82,625	2.2	0.6	11	67	23	79.6	100	100
Oman	1	399	1.4	136.0	90	2	7	16.1	85	73
Pakistan	52	336	169.4	323.3	96	2	2	0.5	96	89
Panama	147	45,613	0.8	0.6	28	5	67	14.6	99	79
Papua New Guinea	801	131,967	..	..	..	..	..	..	88	32
Paraguay	94	15,936	0.5	0.5	71	8	20	14.7	99	68
Peru	1,616	59,250	20.1	1.2	82	10	8	2.8	89	65
Philippines	479	5,664	28.5	6.0	74	9	17	2.8	87	82
Poland	54	1,404	16.2	30.2	8	79	13	10.9	100	..
Portugal	38	3,602	11.3	29.6	78	12	10	10.3	..	..
Puerto Rico	7	1,815	..	..	..	..	..	..	..	..



3.5

Freshwater

	Renewable internal freshwater resources ^a		Annual freshwater withdrawals					Water productivity	Access to an improved water source	
	Flows billion cu. m	Per capita cu. m	billion cu. m	% of internal resources	% for agriculture	% for industry	% for domestic	GDP/water use 2000 \$ per cu. m	% of urban population	% of rural population
	2005	2005	1987-2002 ^b	1987-2002 ^b	1987-2002 ^b	1987-2002 ^b	1987-2002 ^b	2002	2004	2004
Romania	42	1,955	23.2	54.8	57	34	9	1.8	91	16
Russian Federation	4,313	30,127	76.7	1.8	18	63	19	3.7	100	88
Rwanda	10	1,029	0.2	1.6	68	8	24	14.1	92	69
Saudi Arabia	2	104	17.3	721.7	89	1	10	11.0	97	63
Senegal	26	2,192	2.2	8.6	93	3	4	2.2	92	60
Serbia ^c	44	5,456	..	..	..	..	..	..	99	86
Sierra Leone	160	28,641	0.4	0.2	92	3	5	2.5	75	46
Singapore	1	138	..	..	..	..	..	..	100	..
Slovak Republic	13	2,339	..	..	..	..	..	..	100	99
Slovenia	19	9,348	..	..	..	..	..	..	..	..
Somalia	6	732	3.3	54.8	100	0	0	..	32	27
South Africa	45	955	12.5	27.9	63	6	31	11.3	99	73
Spain	111	2,562	35.6	32.0	68	19	13	17.3	100	100
Sri Lanka	50	2,542	12.6	25.2	95	2	2	1.3	98	74
Sudan	30	813	37.3	124.4	97	1	3	0.4	78	64
Swaziland	3	2,299	1.0	40.1	97	1	2	1.4	87	54
Sweden	171	18,949	3.0	1.7	9	54	37	84.3	100	100
Switzerland	40	5,432	2.6	6.4	2	74	24	97.0	100	100
Syrian Arab Republic	7	370	20.0	285.0	95	2	3	1.1	98	87
Tajikistan	66	10,122	12.0	18.0	92	5	4	0.1	92	48
Tanzania	84	2,183	5.2	6.2	89	0	10	2.0	85	49
Thailand	210	3,333	87.1	41.5	95	2	2	1.5	98	100
Timor-Leste	..	..	..	..	..	..	..	..	..	..
Togo	12	1,843	0.2	1.5	45	2	53	8.2	80	36
Trinidad and Tobago	4	2,871	0.3	8.2	6	26	68	29.6	92	88
Tunisia	4	419	2.6	62.9	82	4	14	7.9	99	82
Turkey	227	3,150	37.5	16.5	74	11	15	5.3	98	93
Turkmenistan	1	290	24.7	1,760.7	98	1	2	..	93	54
Uganda	39	1,347	0.3	0.8	40	17	43	22.1	87	56
Ukraine	53	1,127	37.5	70.7	52	35	12	1.0	99	91
United Arab Emirates	0	49	2.3	1,150.0	68	9	23	34.0	100	100
United Kingdom	145	2,408	9.5	6.6	3	75	22	157.9	100	100
United States	2,800	9,443	479.3	17.1	41	46	13	20.9	100	100
Uruguay	59	17,848	3.2	5.3	96	1	3	5.6	100	100
Uzbekistan	16	623	58.3	357.9	93	2	5	0.3	95	75
Venezuela, RB	723	27,185	8.4	1.2	47	7	46	13.2	85	70
Vietnam	367	4,410	71.4	19.5	68	24	8	0.5	99	80
West Bank and Gaza	..	..	..	..	..	..	..	..	94	88
Yemen, Rep.	4	194	6.6	161.7	95	1	4	1.5	71	65
Zambia	80	6,987	1.7	2.2	76	7	17	2.0	90	40
Zimbabwe	12	938	4.2	34.2	79	7	14	1.6	98	72
World	43,507 s	6,778 w	3,807.4 s	9.1 w	70 w	20 w	10 w	8.6 w	94 w	72 w
Low income	7,404	3,077	1,240.7	18.9	89	5	6	0.8	88	69
Middle income	26,662	8,754	1,667.0	6.3	71	19	10	3.3	95	72
Lower middle income	18,455	5,769	1,337.3	7.3	75	17	8	2.1	93	71
Upper middle income	8,207	17,199	329.6	4.0	54	29	18	6.7	98	78
Low & middle income	34,066	6,268	2,907.6	8.8	78	13	8	2.3	93	70
East Asia & Pacific	9,454	5,022	958.8	11.1	74	20	7	2.1	92	70
Europe & Central Asia	5,255	11,473	383.2	7.5	59	31	10	2.5	99	80
Latin America & Carib.	13,429	24,471	265.3	2.0	71	10	19	7.8	96	73
Middle East & N. Africa	228	757	239.8	105.0	89	4	7	2.0	96	81
South Asia	1,816	1,230	941.1	51.8	90	4	6	0.7	94	81
Sub-Saharan Africa	3,884	5,093	119.3	3.1	87	3	10	3.1	80	42
High income	9,441	9,579	899.7	10.2	42	42	15	28.3	100	98
Euro area	929	2,951	199.7	22.3	38	48	15	30.7	100	100

a. Excludes river flows from other countries because of data unreliability. b. Data are for the most recent year available (see *Primary data documentation*). c. Includes Montenegro.

About the data

The data on freshwater resources are based on estimates of runoff into rivers and recharge of groundwater. These estimates are based on different sources and refer to different years, so cross-country comparisons should be made with caution. Because the data are collected intermittently, they may hide significant variations in total renewable water resources from year to year. The data also fail to distinguish between seasonal and geographic variations in water availability within countries. Data for small countries and countries in arid and semiarid zones are less reliable than those for larger countries and countries with greater rainfall.

Caution should also be exercised in comparing data on annual freshwater withdrawals, which are subject to variations in collection and estimation methods. In addition, inflows and outflows are estimated at different times and at different levels of quality and precision, requiring caution in interpreting the data, particularly for water-short countries, notably in the Middle East and North Africa.

Water productivity is an indication only of the efficiency by which each country uses its water resources. Given the different economic structure of each country, these indicators should be used carefully, taking into account the countries' sectoral activities and natural resource endowments.

The data on access to an improved water source measure the percentage of the population with ready access to water for domestic purposes. The data are based on surveys and estimates provided by governments to the Joint Monitoring Programme of the World Health Organization (WHO) and the United Nations Children's Fund (UNICEF). The coverage rates are based on information from service users on actual household use rather than on information from service providers, which may include nonfunctioning systems. Access to drinking water from an improved source does not ensure that the water is safe or adequate, as these characteristics are not tested at the time of survey. While information on access to an improved water source is widely used, it is extremely subjective, and such terms as *safe*, *improved*, *adequate*, and *reasonable* may have different meaning in different countries despite official WHO definitions (see *Definitions*). Even in high-income countries treated water may not always be safe to drink. Access to an improved water source is equated with connection to a supply system; it does not take into account variations in the quality and cost (broadly defined) of the service.

Definitions

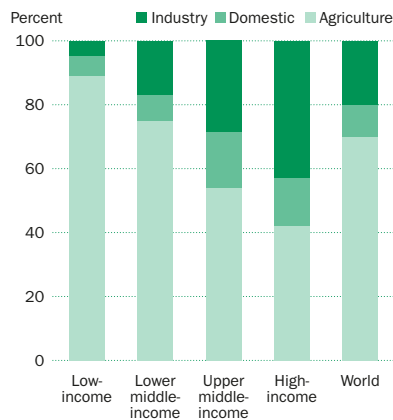
• **Renewable internal freshwater resources flows** are internal renewable resources (internal river flows and groundwater from rainfall) in the country.

• **Renewable internal freshwater resources per capita** are calculated using the World Bank's population estimates (see table 2.1).

• **Annual freshwater withdrawals** are total water withdrawals, not counting evaporation losses from storage basins. Withdrawals also include water from desalination plants in countries where they are a significant source. Withdrawals can exceed 100 percent of total renewable resources where extraction from nonrenewable aquifers or desalination plants is considerable or where water reuse is significant. Withdrawals for agriculture and industry are total withdrawals for irrigation and livestock production and for direct industrial use (including for cooling thermoelectric plants). Withdrawals for domestic uses include drinking water, municipal use or supply, and use for public services, commercial establishments, and homes.

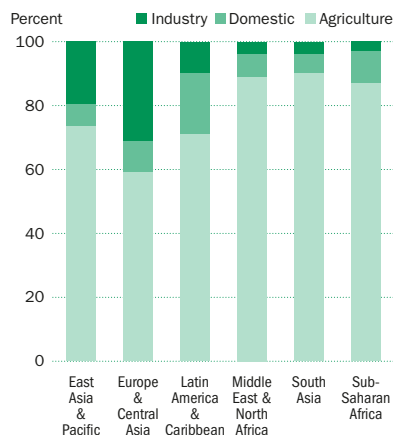
• **Water productivity** is calculated as GDP in constant prices divided by annual total water withdrawal. • **Access to an improved water source** is the percentage of the population with reasonable access to an adequate amount of water from an improved source, such as piped water into a dwelling, plot, or yard; public tap or standpipe; tubewell or borehole; protected dug well or spring; and rainwater collection. Unimproved sources include unprotected dug wells or springs, carts with small tank or drum, bottled water, and tanker trucks. Reasonable access is defined as the availability of at least 20 liters a person a day from a source within 1 kilometer of the dwelling.

Agriculture is still the largest user of water, accounting for some 70 percent of global withdrawals 3.5a



Source: Table 3.5.

The share of withdrawals for agriculture approaches 90 percent in some developing regions 3.5b



Source: Table 3.5.

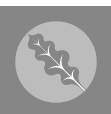
Data sources

Data on freshwater resources and withdrawals are compiled by the World Resources Institute from various sources and published in *World Resources 2005* (produced in collaboration with the United Nations Environment Programme, United Nations Development Programme, and World Bank). These data are supplemented by the Food and Agriculture Organization's AQUASTAT data. The GDP estimates used to calculate water productivity are from the World Bank national accounts database. Data on access to water are from WHO and UNICEF's *Meeting the MDG Drinking Water and Sanitation Target* (www.unicef.org/wes/mdgreport).



	Emissions of organic water pollutants				Industry shares of emissions of organic water pollutants							
	thousand kilograms per day		kilograms per day per worker		Primary metals 2004 ^a	Paper and pulp 2004 ^a	Chemicals 2004 ^a	Food and beverages 2004 ^a	% of total Stone, ceramics, and glass 2004 ^a	Textiles 2004 ^a	Wood 2004 ^a	Other 2004 ^a
	1990	2004 ^a	1990	2004 ^a								
Afghanistan	5.9	0.2	0.16	0.21	..	37.7	17.5	31.1	0.4	13.2	..	..
Albania	34.8	2.0	0.14	0.20	0.0	0.0	0.0	25.0	0.0	75.0	0.0	0.0
Algeria	107.0	..	0.25	..	..	..	..	..	..	..	..	..
Angola	4.5	..	0.19	..	..	..	..	..	..	..	..	..
Argentina	186.7	164.3	0.20	0.23	5.6	14.6	8.6	58.9	0.1	7.6	1.1	3.5
Armenia	37.9	7.1	0.11	0.28	..	..	..	77.6	..	22.4	..	..
Australia	186.1	111.7	0.18	0.18	12.4	22.8	6.7	43.5	0.2	5.3	2.8	6.3
Austria	94.1	36.9	0.15	0.08	14.6	21.0	7.8	34.9	0.3	3.3	6.1	12.1
Azerbaijan	53.3	16.1	0.15	0.17	9.9	2.4	21.0	15.0	5.9	14.3	1.0	30.4
Bangladesh	171.1	..	0.17	..	..	..	..	..	..	..	..	..
Belarus	..	..	..	..	..	..	..	..	..	..	..	..
Belgium	118.0	102.3	0.16	0.17	13.6	18.4	11.2	40.3	0.2	5.9	2.2	8.2
Benin	..	..	..	..	..	..	..	..	..	..	..	..
Bolivia	8.4	11.5	0.24	0.25	1.2	15.1	6.8	64.9	0.2	8.7	2.3	0.7
Bosnia and Herzegovina	50.7	..	0.14	..	..	..	..	..	..	..	..	..
Botswana	4.5	3.3	0.19	0.34	0.0	3.4	0.0	69.5	0.0	5.6	0.0	21.4
Brazil	780.4	..	0.19	..	..	..	..	..	..	..	..	..
Bulgaria	149.4	101.9	0.11	0.17	7.9	9.5	6.6	46.1	0.2	22.2	2.3	5.2
Burkina Faso	..	..	..	..	..	..	..	..	..	..	..	..
Burundi	1.6	..	0.24	..	..	..	..	..	..	..	..	..
Cambodia	11.8	..	0.14	..	..	..	..	..	..	..	..	..
Cameroon	14.0	10.0	0.28	0.19	0.4	5.2	36.1	48.8	0.0	3.8	5.0	0.8
Canada	321.5	312.5	0.17	0.16	9.6	22.1	8.6	39.5	0.1	5.8	5.4	8.9
Central African Republic	1.0	..	0.18	..	..	..	..	..	..	..	..	..
Chad	..	..	..	..	..	..	..	..	..	..	..	..
Chile	66.8	72.9	0.22	0.24	6.9	11.3	8.9	62.7	0.1	5.0	2.6	2.5
China	7,038.1	6,088.7	0.14	0.14	20.4	10.9	14.8	28.1	0.5	15.5	0.9	8.8
Hong Kong, China	86.1	34.3	0.12	0.20	1.2	43.5	3.9	30.5	0.1	16.2	0.2	4.6
Colombia	93.3	93.9	0.19	0.21	3.1	16.2	9.7	53.2	0.2	14.2	1.0	2.4
Congo, Dem. Rep.	..	..	..	..	..	..	..	..	..	..	..	..
Congo, Rep.	2.5	..	0.32	..	..	..	..	..	..	..	..	..
Costa Rica	27.2	31.2	0.20	0.22	1.6	10.0	8.2	65.7	0.1	10.2	1.3	2.9
Côte d'Ivoire	7.9	..	0.22	..	..	..	..	..	..	..	..	..
Croatia	80.0	42.9	0.15	0.17	6.1	15.9	7.5	48.4	0.2	12.0	3.6	6.3
Cuba	173.0	..	0.25	..	..	..	..	..	..	..	..	..
Czech Republic	205.1	..	0.13	..	..	..	..	..	..	..	..	..
Denmark	91.9	..	0.18	..	..	..	..	..	..	..	..	..
Dominican Republic	47.9	..	0.36	..	..	..	..	..	..	..	..	..
Ecuador	25.6	41.5	0.23	0.28	1.9	7.5	12.6	45.4	4.6	12.9	2.6	12.5
Egypt, Arab Rep.	211.5	186.1	0.20	0.20	10.8	8.2	9.0	50.7	0.3	17.7	0.6	2.8
El Salvador	5.5	..	0.22	..	..	..	..	..	..	..	..	..
Eritrea	..	..	..	..	..	..	..	..	..	..	..	..
Estonia	..	..	..	..	..	..	..	..	..	..	..	..
Ethiopia	18.6	22.1	0.23	0.23	2.3	11.0	5.5	61.0	0.3	17.3	2.0	0.7
Finland	79.5	67.4	0.18	0.16	8.7	40.1	7.6	26.6	0.2	2.4	3.9	10.6
France	653.5	564.6	0.15	0.15	7.2	13.8	12.9	49.5	0.2	2.9	2.3	11.1
Gabon	2.0	..	0.25	..	..	..	..	..	..	..	..	..
Gambia, The	0.8	..	0.34	..	..	..	..	..	..	..	..	..
Georgia	..	..	..	..	..	..	..	..	..	..	..	..
Germany	835.0	966.7	0.12	0.14	9.3	20.4	11.8	38.7	0.2	2.3	2.1	15.1
Ghana	16.5	..	0.20	..	..	..	..	..	..	..	..	..
Greece	63.5	..	0.18	..	..	..	..	..	..	..	..	..
Guatemala	21.6	..	0.23	..	..	..	..	..	..	..	..	..
Guinea	..	..	..	..	..	..	..	..	..	..	..	..
Guinea-Bissau	..	..	..	..	..	..	..	..	..	..	..	..
Haiti	5.4	..	0.20	..	..	..	..	..	..	..	..	..

	Emissions of organic water pollutants				Industry shares of emissions of organic water pollutants							
	thousand kilograms per day		kilograms per day per worker		Primary metals	Paper and pulp	Chemicals	Food and beverages	% of total Stone, ceramics, and glass	Textiles	Wood	Other
	1990	2004 ^a	1990	2004 ^a								
Honduras	17.8	..	0.23	..	..	..	..	..	..	..	..	..
Hungary	178.0	60.7	0.16	0.10	6.4	11.8	7.6	49.1	0.2	12.8	2.4	9.8
India	1,410.6	1,519.8	0.20	0.20	12.2	7.6	9.2	53.7	0.3	12.7	0.3	3.9
Indonesia	495.6	733.0	0.19	0.18	2.5	8.2	9.2	53.7	0.1	19.4	4.5	2.4
Iran, Islamic Rep.	102.7	164.8	0.16	0.15	15.6	8.0	10.7	46.7	0.7	9.5	0.9	8.1
Iraq	26.7	..	0.19	..	..	..	..	..	..	..	..	..
Ireland	34.6	11.6	0.18	0.21	..	58.5	10.4	22.9	0.7	..	7.5	..
Israel	46.4	54.0	0.16	0.16	3.6	22.3	10.5	45.5	0.1	6.0	1.9	10.1
Italy	358.1	488.9	0.13	0.12	9.4	16.6	10.7	30.8	0.3	15.0	3.9	13.3
Jamaica	18.7	..	0.29	..	..	..	..	..	..	..	..	..
Japan	1,556.6	1,184.7	0.14	0.15	7.1	19.0	9.4	45.7	0.2	4.8	1.6	12.3
Jordan	8.3	25.3	0.19	0.18	2.7	6.5	15.5	21.8	11.6	16.9	2.4	22.7
Kazakhstan	..	..	..	..	..	..	..	..	..	..	..	..
Kenya	42.6	56.1	0.23	0.24	..	11.5	5.4	66.8	0.1	12.8	1.7	1.8
Korea, Dem. Rep.	..	..	..	..	..	..	..	..	..	..	..	..
Korea, Rep.	369.2	315.2	0.12	0.12	11.4	18.9	13.0	25.8	0.2	13.6	1.5	15.7
Kuwait	9.1	11.9	0.16	0.17	2.1	16.6	11.1	50.2	0.4	11.6	2.8	5.2
Kyrgyz Republic	30.9	19.1	0.12	0.21	7.3	7.8	3.5	65.4	0.4	11.0	0.9	3.7
Lao PDR	..	..	..	..	..	..	..	..	..	..	..	..
Latvia	39.9	29.2	0.12	0.19	4.1	15.4	3.6	53.8	0.1	9.6	9.7	3.7
Lebanon	..	..	..	..	..	..	..	..	..	..	..	..
Lesotho	3.0	..	0.16	..	..	..	..	..	..	..	..	..
Liberia	0.6	..	0.30	..	..	..	..	..	..	..	..	..
Libya	..	..	..	..	..	..	..	..	..	..	..	..
Lithuania	53.8	43.9	0.13	0.17	0.8	4.8	6.8	20.5	3.8	22.9	11.2	29.2
Macedonia, FYR	32.4	..	0.18	..	..	..	..	..	..	..	..	..
Madagascar	11.0	67.2	0.27	0.14	0.3	1.7	12.4	7.6	2.8	58.9	6.3	10.0
Malawi	10.0	..	0.29	..	..	..	..	..	..	..	..	..
Malaysia	104.7	183.8	0.13	0.12	7.8	14.9	15.5	33.7	0.2	8.3	6.8	12.8
Mali	..	..	..	..	..	..	..	..	..	..	..	..
Mauritania	..	..	..	..	..	..	..	..	..	..	..	..
Mauritius	17.8	17.7	0.16	0.15	0.9	6.6	2.6	32.8	0.1	55.4	0.6	1.1
Mexico	174.3	296.1	0.18	0.20	7.8	12.5	10.4	55.6	0.2	7.5	0.9	5.1
Moldova	55.9	21.6	0.15	0.45	..	2.2	..	97.7	..	..	..	0.1
Mongolia	10.2	..	0.18	..	..	..	..	..	..	..	..	..
Morocco	41.7	91.0	0.14	0.18	1.2	3.0	8.5	21.8	6.0	43.2	1.8	14.5
Mozambique	20.4	10.2	0.27	0.31	1.1	7.1	2.7	81.2	0.1	5.8	1.4	0.7
Myanmar	7.7	6.2	0.17	0.18	56.5	4.6	13.2	14.9	0.4	2.9	1.7	5.8
Namibia	7.4	..	0.35	..	..	..	..	..	..	..	..	..
Nepal	20.9	26.9	0.13	0.16	3.5	9.7	5.9	55.1	1.4	21.7	1.7	1.0
Netherlands	136.7	..	0.18	..	..	..	..	..	..	..	..	..
New Zealand	50.2	46.1	0.22	0.22	3.2	21.7	5.2	57.3	0.1	4.6	3.6	4.2
Nicaragua	10.5	..	0.27	..	..	..	..	..	..	..	..	..
Niger	..	0.4	..	0.32	..	17.0	4.4	76.9	0.3	..	0.8	0.6
Nigeria	70.8	..	0.22	..	..	..	..	..	..	..	..	..
Norway	55.0	51.7	0.20	0.20	9.0	31.3	4.7	42.8	0.1	1.4	3.1	7.5
Oman	0.4	5.8	0.11	0.17	7.3	13.3	10.1	54.3	0.9	8.3	2.4	3.4
Pakistan	104.1	..	0.18	..	..	..	..	..	..	..	..	..
Panama	9.7	11.7	0.26	0.32	1.5	13.2	4.6	76.6	0.2	3.2	0.4	0.4
Papua New Guinea	5.7	..	0.25	..	..	..	..	..	..	..	..	..
Paraguay	3.3	..	0.28	..	..	..	..	..	..	..	..	..
Peru	56.1	..	0.20	..	..	..	..	..	..	..	..	..
Philippines	228.3	..	0.21	..	..	..	..	..	..	..	..	..
Poland	428.9	329.4	0.14	0.17	7.5	11.7	7.6	52.2	0.2	9.1	4.3	7.3
Portugal	147.9	127.5	0.15	0.15	3.1	16.4	4.9	37.8	0.4	26.1	5.3	6.0
Puerto Rico	19.0	9.2	0.15	0.18	1.9	14.9	21.9	34.4	0.2	15.5	1.4	9.7



3.6

Water pollution

	Emissions of organic water pollutants				Industry shares of emissions of organic water pollutants							
	thousand kilograms per day		kilograms per day per worker		Primary metals	Paper and pulp	Chemicals	Food and beverages	% of total Stone, ceramics, and glass	Textiles	Wood	Other
	1990	2004 ^a	1990	2004 ^a								
Romania	413.9	241.5	0.12	0.14	4.8	3.0	6.6	12.2	4.2	30.9	5.4	32.9
Russian Federation	1,911.3	1,470.8	0.13	0.18	9.9	4.4	11.5	18.5	8.0	7.7	4.6	35.4
Rwanda	1.6	..	0.25	..	..	..	..	..	..	..	..	..
Saudi Arabia	18.5	..	0.15	..	..	..	..	..	..	..	..	..
Senegal	10.3	6.6	0.32	0.30	5.8	8.4	10.7	70.1	0.1	4.2	0.4	0.3
Serbia	..	..	..	..	..	..	..	..	..	..	..	..
Sierra Leone	4.2	..	0.32	..	..	..	..	..	..	..	..	..
Singapore	32.4	34.3	0.09	0.10	1.4	24.6	16.0	25.4	0.1	3.9	1.6	26.9
Slovak Republic	77.2	43.3	0.13	0.14	2.9	16.9	8.4	43.7	0.3	12.2	4.0	11.6
Slovenia	55.6	38.4	0.16	0.16	33.7	14.7	8.3	23.7	0.2	10.8	2.0	6.7
Somalia	6.2	..	0.38	..	..	..	..	..	..	..	..	..
South Africa	261.6	181.7	0.17	0.17	6.8	7.4	10.4	16.7	5.0	7.1	4.7	41.9
Spain	320.3	352.9	0.17	0.15	7.5	20.6	9.5	39.6	0.4	8.6	4.3	9.6
Sri Lanka	53.0	78.4	0.19	0.18	0.5	7.2	6.6	51.5	0.2	31.6	1.1	1.2
Sudan	..	38.6	..	0.29	0.7	2.5	3.1	88.6	0.4	3.2	0.6	1.1
Swaziland	6.6	..	0.33	..	..	..	..	..	..	..	..	..
Sweden	109.6	103.9	0.15	0.14	11.3	35.0	7.8	26.6	0.1	1.3	3.0	14.9
Switzerland	146.0	..	0.16	..	..	..	..	..	..	..	..	..
Syrian Arab Republic	21.7	..	0.22	..	..	..	..	..	..	..	..	..
Tajikistan	..	..	..	..	..	..	..	..	..	..	..	..
Tanzania	31.1	35.2	0.24	0.25	1.5	9.4	2.7	69.3	0.1	14.0	1.5	1.4
Thailand	291.6	..	0.17	..	..	..	..	..	..	..	..	..
Timor-Leste	..	..	..	..	..	..	..	..	..	..	..	..
Togo	..	..	..	..	..	..	..	..	..	..	..	..
Trinidad and Tobago	10.0	7.9	0.26	0.23	6.5	18.8	11.9	55.3	0.2	3.8	2.0	1.5
Tunisia	44.6	55.8	0.18	0.14	2.5	6.1	5.5	35.8	0.4	43.3	1.9	4.6
Turkey	177.3	172.2	0.18	0.16	11.4	4.8	8.0	43.7	0.3	26.4	0.4	5.0
Turkmenistan	..	..	..	..	..	..	..	..	..	..	..	..
Uganda	16.7	..	0.30	..	..	..	..	..	..	..	..	..
Ukraine	692.4	525.1	0.14	0.19	14.3	4.1	9.7	18.9	6.4	7.0	2.3	37.2
United Arab Emirates	5.6	..	0.14	..	..	..	..	..	..	..	..	..
United Kingdom	739.6	331.0	0.15	0.12	9.0	48.0	17.5	0.6	0.3	5.2	4.0	15.4
United States	2,565.2	1,805.9	0.15	0.13	9.6	10.6	14.0	42.1	0.2	5.4	4.2	13.9
Uruguay	38.7	15.8	0.23	0.28	1.2	3.7	6.6	79.2	0.1	7.4	0.6	1.2
Uzbekistan	..	..	..	..	..	..	..	..	..	..	..	..
Venezuela, RB	96.5	..	0.21	..	..	..	..	..	..	..	..	..
Vietnam	..	..	..	..	..	..	..	..	..	..	..	..
West Bank and Gaza	..	..	..	..	..	..	..	..	..	..	..	..
Yemen, Rep.	6.9	15.4	0.27	0.23	..	7.7	6.8	74.6	0.4	7.6	0.9	2.0
Zambia	15.9	..	0.23	..	..	..	..	..	..	..	..	..
Zimbabwe	37.1	..	0.20	..	..	..	..	..	..	..	..	..

a. Data are derived using the United Nations Industrial Development Organization's (UNIDO) industry database four-digit International Standard Industrial Classification (ISIC). Data in italics are for the most recent year available and are derived using UNIDO's industry database at the three-digit ISIC.

About the data

Emissions of organic pollutants from industrial activities are a major cause of degradation of water quality. Water quality and pollution levels are generally measured as concentration or load—the rate of occurrence of a substance in an aqueous solution. Polluting substances include organic matter, metals, minerals, sediment, bacteria, and toxic chemicals. The table focuses on organic water pollution resulting from industrial activities. Because water pollution tends to be sensitive to local conditions, the national-level data in the table may not reflect the quality of water in specific locations.

The data in the table come from an international study of industrial emissions that may be the first to include data from developing countries (Hettige, Mani, and Wheeler 1998). These data were updated through 2004 by the World Bank's Development Research Group. Unlike estimates from earlier studies based on engineering or economic models, these estimates are based on actual measurements of plant-level water pollution. The focus is on organic water pollution caused by organic waste, measured in terms of biochemical oxygen demand (BOD), because the data for this indicator are the most plentiful and reliable for cross-country comparisons of emissions. BOD measures the strength of an organic waste by the amount of oxygen consumed in breaking it down. A sewage overload in natural waters exhausts the water's dissolved oxygen content. Wastewater treatment, by contrast, reduces BOD.

Data on water pollution are more readily available than are other emissions data because most industrial pollution control programs start by regulating emissions of organic water pollutants. Such data

are fairly reliable because sampling techniques for measuring water pollution are more widely understood and much less expensive than those for air pollution.

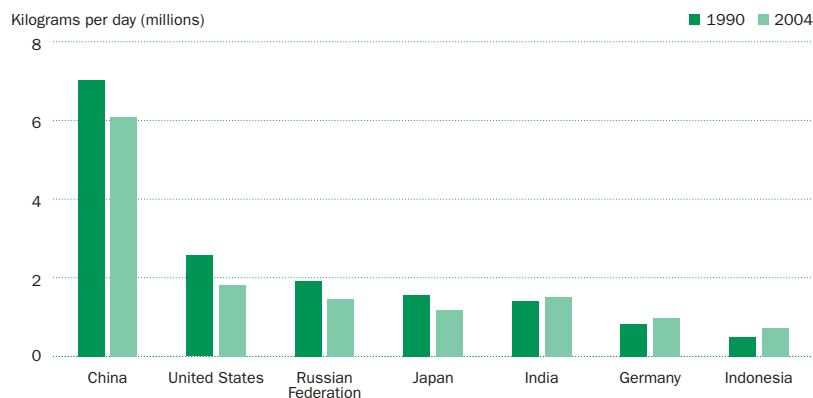
Hettige, Mani, and Wheeler (1998) used plant- and sector-level information on emissions and employment from 13 national environmental protection agencies and sector-level information on output and employment from the United Nations Industrial Development Organization (UNIDO). Their econometric analysis found that the ratio of BOD to employment in each industrial sector is about the same across countries. This finding allowed the authors to estimate BOD loads across countries and over time. The estimated BOD intensities per unit of employment were multiplied by sectoral employment numbers from UNIDO's industry database for 1980–98. These estimates of sectoral emissions were then used to calculate kilograms of emissions of organic water pollutants per day for each country and year. The data in the table were derived by updating these estimates through 2004.

Definitions

• **Emissions of organic water pollutants** are measured as biochemical oxygen demand, or the amount of oxygen that bacteria in water will consume in breaking down waste, a standard water treatment test for the presence of organic pollutants. Emissions per worker are total emissions divided by the number of industrial workers. • **Industry shares of emissions of organic water pollutants** are emissions from manufacturing activities as defined by two-digit divisions of the International Standard Industrial Classification (ISIC) revision 3.

Emissions of organic water pollutants declined in most countries from 1990 to 2004, even in some of the top emitters

3.6a



Source: Table 3.6.

Data sources

Data on water pollutants come from the 1998 study by Hemamala Hettige, Muthukumara Mani, and David Wheeler, "Industrial Pollution in Economic Development: Kuznets Revisited" (available at www.worldbank.org/nipr). The data were updated through 2004 by the World Bank's Development Research Group using the same methodology as the initial study. Data on industrial sectoral employment are from UNIDO's industry database.



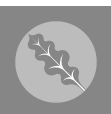
	Total energy production		Energy use									
	million metric tons of oil equivalent		Total million metric tons of oil equivalent		Per capita kilograms of oil equivalent		Fossil fuel		% of total			
									Combustible renewables and waste		Clean energy	
	1990	2005	1990	2005	1990	2005	1990	2005	1990	2005	1990	2005
Afghanistan	..	..	..	..	..	..	..	..	..	..	..	..
Albania	2.4	1.2	2.7	2.4	809	762	76.5	69.8	13.6	9.6	9.2	19.2
Algeria	104.4	175.1	23.9	34.8	944	1,058	99.8	99.6	0.1	0.2	0.1	0.1
Angola	28.7	70.7	6.3	9.9	597	615	30.2	34.7	68.8	63.8	1.0	1.5
Argentina	48.5	81.0	46.1	63.7	1,415	1,644	88.6	88.5	3.7	3.5	7.5	7.4
Armenia	0.1	0.9	7.9	2.6	2,240	848	97.3	66.4	0.1	0.0	1.7	33.6
Australia	157.5	271.0	87.5	122.0	5,130	5,978	94.0	94.5	4.5	4.3	1.4	1.1
Austria	8.1	9.8	25.1	34.4	3,251	4,174	79.4	78.1	9.8	11.6	10.8	9.1
Azerbaijan	21.3	27.3	26.0	13.8	3,637	1,649	98.8	97.3	0.0	0.0	0.2	1.9
Bangladesh	10.8	19.3	12.8	24.2	113	158	45.9	65.2	53.5	34.3	0.6	0.5
Belarus	3.3	3.8	42.2	26.6	4,139	2,720	97.6	93.9	0.5	4.8	0.0	0.0
Belgium	13.1	13.9	49.2	56.7	4,932	5,407	75.8	74.1	1.5	2.8	22.7	21.9
Benin	1.8	1.7	1.7	2.6	324	304	5.8	33.3	93.2	64.7	0.0	0.0
Bolivia	4.9	13.9	2.8	5.3	416	578	69.1	81.9	27.2	14.0	3.6	4.1
Bosnia and Herzegovina	4.6	3.3	7.0	5.0	1,633	1,268	93.9	86.6	2.3	3.7	3.7	9.4
Botswana	0.9	1.1	1.3	1.9	930	1,032	66.3	68.0	33.1	24.1	0.0	0.0
Brazil	98.1	187.8	134.0	209.5	896	1,122	53.5	56.7	31.1	26.5	13.7	15.1
Bulgaria	9.6	10.6	28.8	20.1	3,306	2,592	84.5	70.0	0.6	3.7	13.8	26.3
Burkina Faso	..	..	..	..	..	..	..	..	..	..	..	..
Burundi	..	..	..	..	..	..	..	..	..	..	..	..
Cambodia	..	..	..	..	..	..	..	..	..	..	..	..
Cameroon	12.1	11.9	5.0	7.0	411	392	19.5	16.6	75.9	78.6	4.5	4.8
Canada	273.7	401.3	209.4	272.0	7,535	8,417	74.7	75.1	3.9	4.6	21.4	20.3
Central African Republic	..	..	..	..	..	..	..	..	..	..	..	..
Chad	..	..	..	..	..	..	..	..	..	..	..	..
Chile	7.6	9.1	14.1	29.6	1,067	1,815	74.8	76.9	19.0	15.5	6.2	7.0
China	886.3	1,640.9	863.2	1,717.2	760	1,316	75.5	84.2	23.2	13.0	1.3	2.8
Hong Kong, China	0.0	0.0	10.7	18.1	1,869	2,653	99.5	96.6	0.5	0.3	0.0	0.0
Colombia	48.2	79.5	24.7	28.6	710	636	68.1	73.6	22.3	14.4	9.6	12.0
Congo, Dem. Rep.	12.0	17.4	11.9	17.0	314	289	11.9	3.8	84.0	92.5	4.1	3.7
Congo, Rep.	9.0	13.7	1.1	1.2	436	332	26.4	38.2	69.4	56.3	4.0	2.6
Costa Rica	1.0	1.8	2.0	3.8	658	883	48.3	51.9	36.6	7.0	14.4	40.6
Côte d'Ivoire	3.4	8.2	4.4	7.8	345	422	24.8	40.1	72.1	58.3	2.6	1.6
Croatia	5.1	3.8	9.1	8.9	1,897	2,000	86.6	84.9	3.4	4.0	3.6	6.1
Cuba	6.6	5.5	16.8	10.2	1,587	906	65.1	79.6	34.9	20.3	0.0	0.1
Czech Republic	40.1	32.9	49.0	45.2	4,728	4,417	93.1	81.3	0.0	3.9	6.9	14.8
Denmark	10.0	31.3	17.9	19.6	3,482	3,621	89.9	83.2	6.4	13.2	0.0	0.0
Dominican Republic	1.0	1.5	4.1	7.4	567	777	75.1	79.2	24.2	18.6	0.7	2.2
Ecuador	16.5	28.6	6.1	10.4	597	799	79.5	87.9	13.5	5.1	7.0	5.7
Egypt, Arab Rep.	54.9	76.0	31.9	61.3	578	841	94.0	95.9	3.3	2.3	2.7	1.8
El Salvador	1.7	2.5	2.5	4.6	496	694	32.0	44.4	48.2	32.4	19.8	22.6
Eritrea	..	..	..	..	..	..	..	..	..	..	..	..
Estonia	5.0	3.7	9.6	5.1	6,107	3,786	98.0	87.9	2.0	12.1	0.0	0.0
Ethiopia	14.2	19.9	15.2	21.6	296	288	6.6	8.2	92.8	90.6	0.6	1.1
Finland	12.1	16.6	29.2	35.0	5,851	6,664	60.9	55.0	15.6	19.6	20.4	20.7
France	112.4	136.9	227.8	276.0	4,015	4,534	56.9	51.4	5.1	4.3	38.0	44.3
Gabon	14.6	12.1	1.2	1.7	1,354	1,333	35.3	37.2	59.8	58.7	4.9	4.1
Gambia, The	..	..	..	..	..	..	..	..	..	..	..	..
Georgia	1.8	1.3	12.3	3.2	2,259	718	88.8	59.3	3.7	20.1	5.3	17.0
Germany	186.2	134.5	356.2	344.7	4,485	4,180	87.0	82.9	1.3	3.5	11.6	12.9
Ghana	4.4	6.4	5.3	8.9	343	397	17.7	28.7	73.1	66.0	9.2	5.1
Greece	9.2	10.3	22.2	31.0	2,183	2,790	94.7	93.6	4.0	3.3	0.7	1.4
Guatemala	3.4	5.4	4.5	8.0	503	628	28.8	43.3	67.8	53.2	3.4	3.5
Guinea	..	..	..	..	..	..	..	..	..	..	..	..
Guinea-Bissau	..	..	..	..	..	..	..	..	..	..	..	..
Haiti	1.3	1.9	1.6	2.5	223	269	20.9	23.2	76.5	75.9	2.5	0.9

Energy production and use

3.7

ENVIRONMENT

	Total energy production		Energy use									
	million metric tons of oil equivalent		Total million metric tons of oil equivalent		Per capita kilograms of oil equivalent		Fossil fuel		% of total			
									Combustible renewables and waste		Clean energy	
	1990	2005	1990	2005	1990	2005	1990	2005	1990	2005	1990	2005
Honduras	1.7	1.8	2.4	3.9	494	566	29.9	53.9	62.0	42.0	8.1	4.0
Hungary	14.3	10.3	28.6	27.8	2,753	2,752	82.4	80.6	1.3	4.0	12.9	13.4
India	291.1	419.0	319.9	537.3	377	491	55.8	68.0	41.7	29.4	2.4	2.4
Indonesia	170.3	263.4	103.2	179.5	579	814	54.9	67.8	43.6	28.5	1.5	3.7
Iran, Islamic Rep.	179.7	303.8	68.8	162.5	1,264	2,352	98.2	98.6	1.0	0.5	0.8	0.9
Iraq	104.9	96.0	19.1	30.8	1,029	..	98.7	99.4	0.1	0.1	1.2	0.1
Ireland	3.5	1.7	10.4	15.3	2,957	3,676	98.4	96.3	1.0	1.6	0.6	0.4
Israel	0.4	2.1	12.1	19.5	2,599	2,816	97.3	97.0	0.0	0.0	0.0	0.0
Italy	25.3	27.6	148.0	185.2	2,609	3,160	93.5	91.2	0.6	2.3	3.8	4.1
Jamaica	0.5	0.5	2.9	3.8	1,231	1,445	83.5	87.4	16.2	12.2	0.3	0.3
Japan	75.2	99.8	444.5	530.5	3,598	4,152	84.7	81.9	1.1	1.2	13.9	16.8
Jordan	0.2	0.3	3.5	7.1	1,103	1,311	98.3	98.1	0.1	0.0	0.0	0.1
Kazakhstan	90.5	121.7	73.7	52.4	4,506	3,462	97.0	98.6	0.2	0.1	0.9	1.3
Kenya	10.3	13.9	12.5	17.2	532	484	17.6	19.5	78.4	74.6	4.0	5.9
Korea, Dem. Rep.	28.7	20.2	32.9	21.2	1,632	898	93.0	89.8	2.9	4.9	4.1	5.3
Korea, Rep.	22.6	42.9	93.4	213.8	2,178	4,426	83.9	80.9	0.8	1.0	15.3	18.0
Kuwait	50.4	146.3	8.5	28.1	3,984	11,100	99.9	100.0	0.1	0.0	0.0	0.0
Kyrgyz Republic	2.5	1.4	7.6	2.8	1,723	544	88.6	56.1	0.1	0.1	11.3	43.8
Lao PDR	..	..	..	..	..	..	..	..	..	..	..	..
Latvia	1.2	2.3	7.8	4.7	2,916	2,050	82.2	59.8	8.5	30.2	5.0	6.1
Lebanon	0.1	0.2	2.3	5.6	776	1,391	93.6	95.3	4.5	2.3	1.9	1.6
Lesotho	..	..	..	..	..	..	..	..	..	..	..	..
Liberia	..	..	..	..	..	..	..	..	..	..	..	..
Libya	73.2	95.0	11.5	19.0	2,645	3,218	98.9	99.2	1.1	0.8	0.0	0.0
Lithuania	4.9	3.9	16.2	8.6	4,377	2,515	70.2	59.3	1.8	8.3	28.0	32.4
Macedonia, FYR	1.5	1.5	2.7	2.7	1,421	1,346	98.2	84.2	0.0	5.6	1.5	5.1
Madagascar	..	..	..	..	..	..	..	..	..	..	..	..
Malawi	..	..	..	..	..	..	..	..	..	..	..	..
Malaysia	50.3	93.9	23.3	61.3	1,288	2,389	89.4	94.6	9.1	4.5	1.5	0.8
Mali	..	..	..	..	..	..	..	..	..	..	..	..
Mauritania	..	..	..	..	..	..	..	..	..	..	..	..
Mauritius	..	..	..	..	..	..	..	..	..	..	..	..
Mexico	194.8	259.2	124.3	176.5	1,494	1,712	88.3	88.8	5.9	4.7	5.8	6.5
Moldova	0.1	0.1	10.0	3.6	2,277	917	99.4	90.1	0.4	2.1	0.2	0.1
Mongolia	..	..	..	..	..	..	..	..	..	..	..	..
Morocco	0.8	1.0	6.7	13.8	278	458	93.6	95.2	4.7	3.3	1.6	0.9
Mozambique	6.8	11.7	7.2	10.2	532	497	5.1	3.4	94.4	85.4	0.3	11.2
Myanmar	10.7	22.1	10.7	14.7	266	307	14.6	28.6	84.4	69.6	1.0	1.8
Namibia	0.0	0.3	0.0	1.4	0	683	62.0	66.9	16.0	13.5	17.5	10.4
Nepal	5.5	8.2	5.8	9.2	304	338	5.3	11.1	93.4	86.6	1.3	2.3
Netherlands	60.5	61.9	66.8	81.8	4,464	5,015	96.0	93.3	1.4	3.2	1.4	1.3
New Zealand	12.0	12.2	13.8	16.9	3,990	4,090	65.3	71.1	4.0	5.1	30.7	23.4
Nicaragua	1.5	2.0	2.1	3.3	512	611	29.2	41.3	53.2	50.5	17.3	8.1
Niger	..	..	..	..	..	..	..	..	..	..	..	..
Nigeria	150.5	231.8	70.9	103.8	751	734	19.7	21.3	79.8	78.0	0.5	0.7
Norway	120.3	233.7	21.5	32.1	5,072	6,948	46.8	59.5	4.8	4.1	48.4	36.4
Oman	38.3	59.6	4.6	14.0	2,475	5,570	100.0	100.0	0.0	0.0	0.0	0.0
Pakistan	34.4	61.3	43.4	76.3	402	490	53.3	60.2	43.2	35.5	3.5	4.3
Panama	0.6	0.7	1.5	2.6	618	804	58.4	71.6	28.3	16.1	12.8	12.3
Papua New Guinea	..	..	..	..	..	..	..	..	..	..	..	..
Paraguay	4.6	6.6	3.1	4.0	731	674	21.6	29.2	72.3	54.8	..	..
Peru	10.6	10.8	10.0	13.8	457	506	64.1	70.7	26.9	16.4	9.0	12.4
Philippines	13.7	24.2	26.2	44.7	427	528	50.8	54.9	29.2	24.4	20.0	20.7
Poland	99.4	78.6	99.9	93.0	2,620	2,436	97.7	94.7	2.2	5.1	0.1	0.2
Portugal	3.4	3.6	17.7	27.2	1,793	2,575	81.5	84.7	14.0	10.8	4.5	1.7
Puerto Rico	..	..	..	..	..	..	..	..	..	..	..	..



3.7

Energy production and use

	Total energy production		Energy use									
			Total		Per capita				% of total			
	million metric tons of oil equivalent		million metric tons of oil equivalent		kilograms of oil equivalent				Fossil fuel		Combustible renewables and waste	
	1990	2005	1990	2005	1990	2005	1990	2005	1990	2005	1990	2005
Romania	40.8	27.9	62.4	38.3	2,689	1,772	96.2	83.0	1.0	8.5	1.6	8.5
Russian Federation	1,280.3	1,184.9	878.3	646.7	5,923	4,517	93.4	90.5	1.4	1.1	5.2	8.4
Rwanda	..	..	..	..	..	..	..	..	..	..	..	..
Saudi Arabia	370.8	576.7	61.3	140.3	3,744	6,068	100.0	100.0	0.0	0.0	0.0	0.0
Senegal	1.4	1.3	2.2	3.0	283	258	39.4	58.8	60.6	39.2	0.0	0.8
Serbia ^a	13.2	11.5	21.5	16.2	2,044	2,004	..	..	1.8	4.9	..	..
Sierra Leone	..	..	..	..	..	..	..	..	..	..	..	..
Singapore	0.0	0.0	13.4	30.1	4,384	6,933	100.0	100.0	0.0	0.0	0.0	0.0
Slovak Republic	5.3	6.6	21.3	18.8	4,035	3,496	81.6	70.6	0.8	2.4	15.5	27.0
Slovenia	2.9	3.4	5.6	7.3	2,801	3,657	69.1	68.3	4.8	6.7	26.1	25.0
Somalia	..	..	..	..	..	..	..	..	..	..	..	..
South Africa	114.5	158.6	91.2	127.6	2,592	2,722	86.1	87.0	11.4	10.5	2.5	2.5
Spain	34.6	30.3	91.1	145.2	2,345	3,346	77.6	83.8	4.5	3.5	17.9	11.5
Sri Lanka	4.2	5.3	5.5	9.4	324	477	24.1	43.9	71.0	52.9	4.9	3.2
Sudan	8.8	31.1	10.6	18.4	410	499	17.5	19.9	81.7	79.5	0.8	0.6
Swaziland	..	..	..	..	..	..	..	..	..	..	..	..
Sweden	29.8	34.8	47.6	52.2	5,557	5,782	37.9	34.6	11.6	17.2	50.5	48.2
Switzerland	9.7	10.9	25.0	27.2	3,723	3,651	61.1	57.9	3.7	7.1	35.2	32.9
Syrian Arab Republic	22.3	29.1	11.7	17.9	918	948	98.0	98.3	0.0	0.0	2.0	1.7
Tajikistan	2.0	1.5	5.6	3.5	1,055	528	72.8	57.9	0.0	0.0	25.4	41.5
Tanzania	9.1	19.1	9.8	20.4	385	530	7.6	7.1	91.0	92.1	1.4	0.7
Thailand	26.5	54.0	43.9	100.0	808	1,588	65.5	82.7	33.4	16.5	1.0	0.5
Timor-Leste	..	..	..	..	..	..	..	..	..	..	..	..
Togo	1.2	1.6	1.4	2.0	365	320	15.5	18.1	82.6	79.4	0.6	0.3
Trinidad and Tobago	12.6	31.4	6.0	12.7	4,934	9,599	99.2	99.8	0.8	0.2	0.0	0.0
Tunisia	6.1	6.7	5.5	8.5	679	843	81.2	86.5	18.7	13.3	0.1	0.1
Turkey	25.8	23.6	53.0	85.2	943	1,182	81.8	88.2	13.6	6.3	4.6	5.2
Turkmenistan	74.9	61.1	19.6	16.3	5,353	3,381	99.7	100.0	0.0	0.0	0.3	0.0
Uganda	..	..	..	..	..	..	..	..	..	..	..	..
Ukraine	133.7	81.0	251.7	143.2	4,851	3,041	91.7	82.9	0.1	0.2	8.2	16.9
United Arab Emirates	109.4	167.9	22.5	46.9	12,716	11,436	100.0	100.0	0.0	0.0	0.0	0.0
United Kingdom	208.0	204.3	212.2	233.9	3,686	3,884	90.9	88.6	0.3	1.7	8.3	9.3
United States	1,650.3	1,630.7	1,927.5	2,340.3	7,721	7,893	86.5	86.2	3.2	3.2	10.2	10.4
Uruguay	1.1	1.0	2.3	2.9	725	875	58.7	62.5	24.3	15.4	26.8	19.9
Uzbekistan	38.6	56.6	46.4	47.0	2,262	1,798	98.8	98.9	0.0	0.0	1.2	1.1
Venezuela, RB	148.9	204.7	43.9	60.9	2,224	2,293	91.5	88.5	1.2	0.9	7.2	10.6
Vietnam	24.7	69.5	24.3	51.3	367	617	20.4	49.7	77.7	46.7	1.9	3.6
West Bank and Gaza	..	..	..	..	..	..	..	..	..	..	..	..
Yemen, Rep.	9.4	20.4	2.6	6.7	208	319	97.0	98.8	3.0	1.1	0.0	0.0
Zambia	4.9	6.5	5.5	7.1	673	621	14.1	10.6	73.4	78.7	12.5	10.7
Zimbabwe	8.6	8.9	9.4	9.7	895	741	45.3	30.3	50.4	61.9	4.0	5.2
World	8,804.7 t	11,441.1 t	8,610.9 t	11,209.7 t	1,682 w	1,796 w	81.3 w	81.1 w	10.0 w	9.7 w	8.7 w	9.1 w
Low income	739.4	1,147.0	723.3	1,110.7	426	486	49.1	55.5	48.3	41.7	2.6	2.8
Middle income	4,367.6	5,790.6	3,495.9	4,544.6	1,346	1,486	83.9	84.1	11.7	10.3	4.4	5.6
Lower middle income	1,982.3	3,133.1	1,701.7	2,747.8	894	1,216	78.6	83.3	18.4	12.8	3.0	3.9
Upper middle income	2,385.3	2,657.5	1,794.2	1,796.9	2,586	2,248	88.7	85.4	5.3	6.5	5.8	8.0
Low & middle income	5,106.5	6,929.5	4,213.0	5,639.6	993	1,071	78.2	78.8	17.7	16.2	4.1	5.0
East Asia & Pacific	1,222.6	2,209.1	1,138.3	2,210.7	717	1,182	71.7	81.4	26.5	15.5	1.8	3.1
Europe & Central Asia	1,879.2	1,729.1	1,734.7	1,287.5	3,878	2,826	93.2	89.1	1.5	2.2	5.3	8.7
Latin America & Carib.	604.3	908.0	452.9	656.9	1,039	1,198	72.4	74.3	18.4	14.8	9.2	10.8
Middle East & N. Africa	601.9	874.1	194.4	386.8	861	1,270	97.1	98.0	1.8	1.1	1.0	0.8
South Asia	348.8	517.3	390.7	661.9	350	453	54.0	65.9	43.5	31.5	2.5	2.6
Sub-Saharan Africa	481.8	748.0	317.4	462.6	685	681	41.2	41.3	56.6	56.3	2.2	2.4
High income	3,723.0	4,545.8	4,426.7	5,609.3	4,841	5,498	84.2	83.4	2.8	3.2	13.0	13.2
Euro area	471.3	450.5	1,052.7	1,244.4	3,562	3,961	80.2	77.5	3.2	4.3	16.4	17.5

a. Includes Montenegro.

About the data

In developing countries growth in energy use is closely related to growth in the modern sectors—industry, motorized transport, and urban areas—but energy use also reflects climatic, geographic, and economic factors (such as the relative price of energy). Energy use has been growing rapidly in low- and middle-income countries, but high-income countries still use more than five times as much energy on a per capita basis.

Energy data are compiled by the International Energy Agency (IEA). IEA data for countries that are not members of the Organisation for Economic Co-operation and Development (OECD) are based on national energy data adjusted to conform to annual questionnaires completed by OECD member governments.

Total energy use refers to the use of primary energy before transformation to other end-use fuels (such as electricity and refined petroleum products). It includes energy from combustible renewables and waste—solid biomass and animal products, gas and liquid from biomass, and industrial and municipal waste. Biomass is any plant matter used directly as fuel or converted into fuel, heat, or electricity. (The data series published in *World Development Indicators* 1998 and earlier editions did not include energy from combustible renewables and waste.) Data for combustible renewables and waste are often based on small surveys or other incomplete information and thus give only a broad impression of developments and are not strictly comparable across countries. The IEA reports include country notes that explain some of these differences (see *Data sources*). All forms of

energy—primary energy and primary electricity—are converted into oil equivalents. A notional thermal efficiency of 33 percent is assumed to convert nuclear electricity into oil equivalents and 100 percent efficiency to convert hydroelectric power.

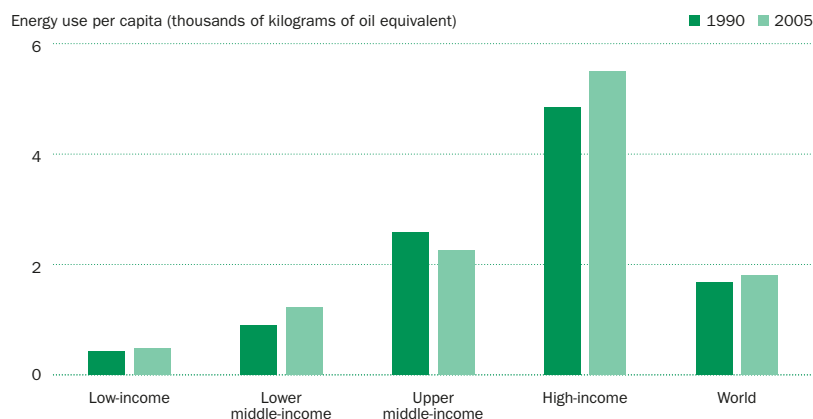
The IEA makes these estimates in consultation with national statistical offices, oil companies, electric utilities, and national energy experts. The IEA occasionally revises its time series to reflect political changes, and energy statistics undergo continual changes in coverage or methodology as more detailed energy accounts become available. Breaks in series are therefore unavoidable.

Definitions

- **Total energy production** refers to forms of primary energy—petroleum (crude oil, natural gas liquids, and oil from nonconventional sources), natural gas, solid fuels (coal, lignite, and other derived fuels), and combustible renewables and waste—and primary electricity, all converted into oil equivalents (see *About the data*).
- **Energy use** refers to the use of primary energy before transformation to other end-use fuels, which is equal to indigenous production plus imports and stock changes, minus exports and fuels supplied to ships and aircraft engaged in international transport (see *About the data*).
- **Fossil fuel** comprises coal, oil, petroleum, and natural gas products.
- **Combustible renewables and waste** comprise solid biomass, liquid biomass, biogas, industrial waste, and municipal waste.
- **Clean energy** is noncarbohydrate energy that does not produce carbon dioxide when generated. It includes hydropower and nuclear, geothermal, and solar power, among others.

A person in a high-income economy uses an average of more than 11 times as much energy as a person in a low-income economy

3.7a



Source: Table 3.7.

Data sources

Data on energy production and use are from IEA electronic files and are published in IEA's annual publications, *Energy Statistics and Balances of Non-OECD Countries*, *Energy Statistics of OECD Countries*, and *Energy Balances of OECD Countries*.



	Net energy imports ^a		Energy use	GDP per unit of energy use		Carbon dioxide emissions							
	% of energy use		average annual % growth	2005 PPP \$ per kilogram of oil equivalent		Total million metric tons		From solid fuel consumption % of total		Per capita metric tons		kilograms per 2005 PPP \$ of GDP	
	1990	2005	1990–2005	1990	2005	1990	2004	1990	2004	1990	2004	1990	2004
Afghanistan	..	..	..	..	..	2.6	0.7	10.7	13.2	..	..	..	0.0
Albania	8	51	2.0	4.3	7.2	7.3	3.7	38.2	3.0	2.2	1.2	0.6	0.2
Algeria	−338	−404	2.4	5.6	5.7	77.0	193.8	3.9	1.0	3.0	6.0	0.6	1.0
Angola	−356	−614	3.1	5.4	6.1	4.6	7.9	0.0	0.0	0.4	0.5	0.1	0.2
Argentina	−5	−27	1.9	5.3	6.6	109.7	141.7	2.8	1.2	3.4	3.7	0.5	0.4
Armenia	98	66	−5.8	1.3	4.9	4.2	3.6	10.2	0.0	1.2	1.2	0.4	0.3
Australia	−80	−122	2.2	4.8	5.7	278.4	326.5	52.4	50.3	16.3	16.2	0.7	0.5
Austria	68	71	2.0	8.1	8.2	57.6	69.8	28.3	21.0	7.5	8.5	0.3	0.3
Azerbaijan	18	−97	−4.0	1.3	2.8	53.7	31.3	0.1	0.0	7.5	3.8	1.5	1.0
Bangladesh	16	20	4.5	6.1	6.8	15.4	37.1	6.9	3.6	0.1	0.2	0.2	0.2
Belarus	92	86	−2.8	1.6	3.1	107.8	64.8	8.3	3.4	10.6	6.6	1.6	0.9
Belgium	73	75	1.2	5.1	5.9	100.6	100.6	40.8	22.9	10.1	9.7	0.4	0.3
Benin	−6	35	2.8	3.2	4.0	0.7	2.4	0.0	0.0	0.1	0.3	0.1	0.2
Bolivia	−77	−161	4.0	7.3	6.4	5.5	7.0	0.0	0.0	0.8	0.8	0.3	0.2
Bosnia and Herzegovina	35	33	0.9	..	4.7	6.9	15.6	52.1	70.7	1.6	4.0	..	0.7
Botswana	28	45	2.7	7.3	11.6	2.2	4.3	100.0	57.3	1.6	2.4	0.2	0.2
Brazil	27	10	3.2	8.1	7.6	209.5	331.5	20.4	18.2	1.4	1.8	0.2	0.2
Bulgaria	67	47	−1.8	2.3	3.6	75.3	42.5	46.8	63.8	8.6	5.5	1.1	0.6
Burkina Faso	..	..	..	..	..	1.0	1.1	0.0	0.0	0.1	0.1	0.2	0.1
Burundi	..	..	..	..	..	0.2	0.2	7.5	3.3	0.0	0.0	0.1	0.1
Cambodia	..	..	..	..	..	0.5	0.5	0.0	0.0	0.0	0.0	..	0.0
Cameroon	−140	−71	2.4	5.1	5.1	1.6	3.8	0.2	0.0	0.1	0.2	0.1	0.1
Canada	−31	−48	1.7	3.6	4.2	415.7	638.8	22.0	15.6	15.0	20.0	0.6	0.6
Central African Republic	..	..	..	..	..	0.2	0.3	0.0	0.0	0.1	0.1	0.1	0.1
Chad	..	..	..	..	..	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Chile	46	69	5.2	6.2	6.7	35.6	62.4	30.3	23.6	2.7	3.9	0.4	0.3
China	−3	4	3.9	1.5	3.1	2,398.2	5,005.7	80.5	71.9	2.1	3.9	1.9	1.0
Hong Kong, China	100	100	3.2	12.0	13.5	26.2	37.4	69.2	53.2	4.6	5.5	0.2	0.2
Colombia	−95	−178	0.4	7.0	9.2	58.0	53.6	23.9	13.7	1.7	1.2	0.3	0.2
Congo, Dem. Rep.	−1	−2	2.4	1.9	0.9	4.0	2.1	19.3	45.1	0.1	0.0	0.2	0.1
Congo, Rep.	−753	−1,041	0.1	7.8	9.8	1.2	3.5	0.0	0.0	0.5	1.0	0.1	0.3
Costa Rica	49	52	4.6	9.1	9.9	2.9	6.4	0.0	2.3	0.9	1.5	0.2	0.2
Côte d'Ivoire	23	−5	3.6	5.4	3.8	5.4	5.2	0.0	0.0	0.4	0.3	0.2	0.2
Croatia	43	57	1.2	6.0	6.6	24.6	23.5	10.0	13.2	5.1	5.3	0.5	0.4
Cuba	61	46	−1.5	..	..	32.0	25.8	1.2	0.1	3.0	2.3	..	..
Czech Republic	18	27	−0.1	3.4	4.6	161.7	116.9	77.6	66.7	15.6	11.5	1.0	0.6
Denmark	44	−60	0.3	7.4	9.3	49.7	52.9	47.2	37.1	9.7	9.8	0.4	0.3
Dominican Republic	75	79	4.6	5.6	6.7	9.6	19.6	0.3	10.5	1.3	2.1	0.4	0.4
Ecuador	−169	−174	3.6	9.2	8.4	16.7	29.2	0.0	0.0	1.6	2.3	0.3	0.4
Egypt, Arab Rep.	−72	−24	4.6	5.7	5.4	75.4	158.1	4.5	2.1	1.4	2.2	0.4	0.5
El Salvador	32	45	3.9	8.2	7.8	2.6	6.2	0.0	0.0	0.5	0.9	0.1	0.2
Eritrea	..	..	..	..	..	..	0.8	..	0.0	..	0.2	..	0.2
Estonia	47	27	−3.1	1.7	4.3	28.3	18.9	76.9	75.1	18.1	14.0	1.8	0.9
Ethiopia	7	8	2.6	1.7	2.0	3.0	8.0	0.0	0.0	0.1	0.1	0.1	0.2
Finland	59	53	1.8	4.0	4.6	51.2	65.7	39.6	44.9	10.3	12.6	0.4	0.4
France	51	50	1.2	6.2	6.7	363.7	373.4	21.7	15.1	6.4	6.2	0.3	0.2
Gabon	−1,077	−604	2.1	11.2	10.4	6.0	1.4	0.0	0.0	6.5	1.1	0.4	0.1
Gambia, The	..	..	..	..	..	0.2	0.3	0.0	0.0	0.2	0.2	0.2	0.2
Georgia	85	60	−9.2	2.4	4.9	17.3	3.9	6.4	0.7	3.2	0.9	0.6	0.3
Germany	48	61	0.0	5.5	7.3	980.3	808.0	48.6	41.4	12.3	9.8	0.5	0.3
Ghana	18	29	3.6	2.5	2.9	3.8	7.2	0.2	0.0	0.2	0.3	0.3	0.3
Greece	59	67	2.5	9.4	10.5	72.4	96.6	43.8	39.8	7.1	8.7	0.3	0.3
Guatemala	24	32	4.2	8.2	7.8	5.1	12.2	0.0	10.0	0.6	1.0	0.1	0.2
Guinea	..	..	..	..	..	1.0	1.3	0.0	0.0	0.2	0.2	0.2	0.1
Guinea-Bissau	..	..	..	..	..	0.2	0.3	0.0	0.0	0.2	0.2	0.3	0.4
Haiti	21	23	3.3	8.1	4.4	1.0	1.8	3.3	0.0	0.1	0.2	0.1	0.2

Energy dependency and efficiency and carbon dioxide emissions

3.8

ENVIRONMENT

	Net energy imports ^a		Energy use	GDP per unit of energy use		Carbon dioxide emissions							
	% of energy use		average annual % growth	2005 PPP \$ per kilogram of oil equivalent		Total million metric tons		From solid fuel consumption % of total		Per capita metric tons		kilograms per 2005 PPP \$ of GDP	
	1990	2005	1990–2005	1990	2005	1990	2004	1990	2004	1990	2004	1990	2004
Honduras	30	54	3.0	5.7	5.8	2.6	7.6	0.0	6.1	0.5	1.1	0.2	0.4
Hungary	50	63	0.0	4.5	6.2	60.1	57.1	31.2	22.3	5.8	5.7	0.5	0.3
India	9	22	3.5	3.2	4.5	681.5	1,341.8	69.9	69.6	0.8	1.2	0.7	0.6
Indonesia	−65	−47	3.6	3.6	3.9	213.8	377.9	3.7	10.0	1.2	1.7	0.6	0.6
Iran, Islamic Rep.	−161	−87	5.5	5.0	4.0	218.2	433.2	2.1	1.0	4.0	6.4	0.6	0.7
Iraq	−451	−212	3.3	..	..	48.5	81.6	0.0	0.0	2.6	..	..	..
Ireland	67	89	3.3	5.9	10.3	30.6	42.3	43.0	22.6	8.7	10.4	0.5	0.3
Israel	96	89	3.6	6.8	8.0	33.1	71.2	29.7	48.5	7.1	10.5	0.4	0.5
Italy	83	85	1.6	9.1	8.8	389.6	449.5	13.1	14.5	6.9	7.7	0.3	0.3
Jamaica	84	87	2.3	4.9	5.0	8.0	10.6	1.7	1.7	3.3	4.0	0.6	0.6
Japan	83	81	1.2	7.2	7.3	1,070.4	1,256.8	28.5	38.0	8.7	9.8	0.3	0.3
Jordan	95	96	4.0	3.0	3.3	10.2	16.5	0.0	0.0	3.2	3.1	1.0	0.8
Kazakhstan	−23	−132	−3.8	1.6	2.5	288.1	200.1	56.9	54.4	17.6	13.3	2.5	1.7
Kenya	18	19	2.2	2.7	2.8	5.8	10.6	6.9	2.7	0.2	0.3	0.2	0.2
Korea, Dem. Rep.	13	5	−2.8	..	..	244.6	79.0	91.2	92.1	12.1	3.4	..	..
Korea, Rep.	76	80	5.6	4.9	4.8	241.1	465.2	38.7	43.8	5.6	9.7	0.5	0.5
Kuwait	−495	−420	8.3	3.0	3.9	43.4	99.3	0.0	0.0	20.4	40.4	0.6	1.0
Kyrgyz Republic	67	48	−5.6	1.5	3.2	12.6	5.7	31.4	37.1	2.8	1.1	1.1	0.6
Lao PDR	..	..	..	..	..	0.2	1.3	1.6	60.2	0.1	0.2	0.1	0.1
Latvia	85	51	−3.0	3.5	6.4	14.5	7.1	10.6	2.7	5.4	3.1	0.5	0.3
Lebanon	94	96	5.4	6.7	6.9	9.1	16.2	0.0	3.3	3.1	4.1	0.6	0.4
Lesotho	..	..	..	..	..	..	..	..	..	..	..	..	..
Liberia	..	..	..	..	..	0.5	0.5	0.0	0.0	0.2	0.1	0.4	0.5
Libya	−534	−399	2.8	..	3.4	37.8	59.9	0.0	0.0	8.7	10.3	..	1.0
Lithuania	70	54	−3.1	2.9	5.6	24.3	13.3	8.5	5.9	6.6	3.9	0.5	0.3
Macedonia, FYR	46	47	−0.4	5.7	5.5	15.5	10.4	67.7	77.6	8.1	5.1	1.0	0.7
Madagascar	..	..	..	..	..	0.9	2.7	3.5	0.9	0.1	0.2	0.1	0.2
Malawi	..	..	..	..	..	0.6	1.0	7.9	14.4	0.1	0.1	0.1	0.1
Malaysia	−116	−53	6.0	5.2	4.9	55.3	177.4	9.8	19.8	3.1	7.0	0.5	0.6
Mali	..	..	..	..	..	0.4	0.6	0.0	0.0	0.1	0.1	0.1	0.1
Mauritania	..	..	..	..	..	2.6	2.6	0.6	0.7	1.4	0.9	0.9	0.5
Mauritius	..	..	..	..	..	1.5	3.2	13.5	24.0	1.4	2.6	0.2	0.3
Mexico	−57	−47	2.0	6.1	6.6	413.1	437.6	2.2	4.5	5.0	4.3	0.5	0.4
Moldova	99	98	−6.7	1.7	2.4	23.8	7.7	19.2	4.1	5.4	2.0	1.4	1.0
Mongolia	..	..	..	..	..	10.0	8.5	73.2	79.5	4.7	3.4	2.0	1.4
Morocco	89	93	4.2	9.9	7.8	23.5	41.1	19.9	35.3	1.0	1.4	0.4	0.4
Mozambique	5	−15	2.8	0.8	1.4	1.0	2.2	15.4	2.9	0.1	0.1	0.2	0.2
Myanmar	0	−50	2.0	1.3	2.7	4.3	9.8	6.4	3.9	0.1	0.2	0.3	0.3
Namibia	67	76	5.1	8.1	6.7	0.0	2.5	0.0	0.4	0.0	1.2	0.0	0.3
Nepal	5	11	3.2	2.3	2.8	0.6	3.0	5.2	26.3	0.0	0.1	0.0	0.1
Netherlands	9	24	1.2	5.8	6.9	141.0	141.9	28.7	22.2	9.4	8.7	0.4	0.3
New Zealand	13	28	1.6	4.7	6.0	22.6	31.5	14.6	14.5	6.6	7.7	0.3	0.3
Nicaragua	29	41	3.1	4.2	4.3	2.6	4.0	0.0	0.0	0.6	0.7	0.3	0.3
Niger	..	..	..	..	..	1.0	1.2	43.7	39.0	0.1	0.1	0.2	0.2
Nigeria	−112	−123	2.3	1.7	2.1	45.3	113.9	0.3	0.0	0.5	0.8	0.4	0.6
Norway	−459	−627	2.0	6.4	6.8	33.2	87.5	9.9	4.0	7.8	19.1	0.2	0.4
Oman	−740	−327	7.0	5.7	3.7	10.3	30.9	0.0	0.0	5.6	12.5	0.4	0.6
Pakistan	21	20	3.7	4.2	4.5	68.0	125.6	12.5	13.5	0.6	0.8	0.4	0.4
Panama	59	72	3.8	9.1	10.5	3.1	5.7	2.9	0.1	1.3	1.8	0.2	0.2
Papua New Guinea	..	..	..	..	..	2.4	2.4	0.2	0.1	0.6	0.4	0.4	0.2
Paraguay	−48	−66	1.7	5.4	5.7	2.3	4.2	0.0	0.0	0.5	0.7	0.1	0.2
Peru	−6	22	2.1	9.8	12.7	21.0	31.5	2.6	9.0	1.0	1.2	0.2	0.2
Philippines	48	46	4.0	5.7	5.6	43.9	80.4	13.0	28.7	0.7	1.0	0.3	0.3
Poland	1	15	−0.8	3.1	5.6	347.5	307.0	82.9	71.0	9.1	8.0	1.1	0.6
Portugal	81	87	3.2	8.6	7.7	42.3	58.9	26.0	22.0	4.3	5.6	0.3	0.3
Puerto Rico	..	..	..	..	..	11.8	2.1	..	..	3.3	0.5	..	..



3.8

Energy dependency and efficiency and carbon dioxide emissions

	Net energy imports ^a		Energy use	GDP per unit of energy use		Carbon dioxide emissions							
	% of energy use		average annual % growth	2005 PPP \$ per kilogram of oil equivalent		Total million metric tons		From solid fuel consumption % of total		Per capita metric tons		kilograms per 2005 PPP \$ of GDP	
	1990	2005	1990–2005	1990	2005	1990	2004	1990	2004	1990	2004	1990	2004
Romania	35	27	−2.6	2.9	5.3	155.0	90.3	30.9	35.1	6.7	4.2	0.9	0.5
Russian Federation	−46	−83	−1.8	2.1	2.6	2,261.7	1,523.6	24.9	22.2	15.3	10.6	1.2	1.0
Rwanda	..	..	..	..	..	0.5	0.6	0.0	0.0	0.1	0.1	0.1	0.1
Saudi Arabia	−505	−311	4.7	5.1	3.5	254.7	308.1	0.0	0.0	15.6	13.7	0.8	0.7
Senegal	39	58	2.4	4.8	6.0	3.1	5.0	0.0	0.0	0.4	0.4	0.3	0.3
Serbia ^b	38	29	−0.5	..	..	130.4	53.3	54.7	68.7	12.4	6.6	..	..
Sierra Leone	..	..	..	..	..	0.3	1.0	0.0	0.0	0.1	0.2	0.1	0.3
Singapore	100	100	3.6	5.3	6.0	45.1	52.2	0.2	0.0	14.8	12.3	0.6	0.3
Slovak Republic	75	65	−0.2	3.1	4.5	51.4	36.3	49.0	43.4	9.7	6.7	0.8	0.4
Slovenia	48	53	2.3	5.7	6.2	18.0	16.2	42.9	41.3	9.0	8.1	0.6	0.4
Somalia	..	..	..	..	..	0.0	..	0.0	..	0.0	..	..	..
South Africa	−26	−24	2.1	3.0	3.1	331.7	436.6	79.9	82.2	9.4	9.4	1.2	1.2
Spain	62	79	3.4	8.4	8.1	212.1	330.2	35.6	25.2	5.5	7.7	0.3	0.3
Sri Lanka	24	44	3.8	6.0	7.2	3.8	11.5	0.1	2.2	0.2	0.6	0.1	0.2
Sudan	18	−69	3.8	2.5	3.4	5.4	10.4	0.0	0.0	0.2	0.3	0.2	0.2
Swaziland	..	..	..	..	..	0.4	1.0	100.0	100.0	0.6	0.9	0.1	0.2
Sweden	37	33	0.6	4.5	5.5	49.4	53.0	21.3	20.9	5.8	5.9	0.2	0.2
Switzerland	61	60	0.7	8.9	9.6	42.7	40.4	3.3	1.3	6.4	5.5	0.2	0.2
Syrian Arab Republic	−91	−63	2.9	3.2	4.2	35.9	68.4	0.0	0.0	2.8	3.7	1.0	0.9
Tajikistan	64	56	−3.3	2.9	2.8	23.4	5.0	3.5	5.7	4.4	0.8	1.4	0.6
Tanzania	8	6	4.9	2.0	1.8	2.3	4.3	0.5	4.0	0.1	0.1	0.1	0.1
Thailand	40	46	5.2	5.1	4.4	95.7	267.8	14.2	21.6	1.8	4.3	0.4	0.6
Timor-Leste	..	..	..	..	..	..	0.2	..	0.0	..	0.2	..	0.1
Togo	17	20	2.3	2.3	2.3	0.8	2.3	0.0	0.0	0.2	0.4	0.2	0.5
Trinidad and Tobago	−109	−147	5.7	1.6	1.6	16.9	32.5	0.0	0.0	13.8	24.7	1.7	1.7
Tunisia	−11	21	3.3	5.8	7.6	13.3	22.9	2.0	0.0	1.6	2.3	0.4	0.4
Turkey	51	72	3.4	6.0	6.6	146.1	225.9	42.1	38.6	2.6	3.2	0.5	0.4
Turkmenistan	−281	−274	0.8	..	..	32.0	41.7	2.5	0.0	8.7	8.7	..	..
Uganda	..	..	..	..	..	0.8	1.8	0.0	0.0	0.0	0.1	0.1	0.1
Ukraine	47	43	−3.7	1.7	1.8	684.0	329.7	45.9	38.0	13.2	6.9	1.6	1.3
United Arab Emirates	−385	−258	4.8	2.7	2.9	54.7	149.1	0.0	0.0	30.8	37.8	0.9	1.2
United Kingdom	2	13	0.6	6.2	8.1	579.2	586.7	41.5	25.8	10.1	9.8	0.4	0.3
United States	14	30	1.4	4.1	5.3	4,816.9	6,044.0	37.1	35.7	19.3	20.6	0.6	0.5
Uruguay	49	65	1.1	9.7	10.6	3.9	5.5	0.1	0.1	1.3	1.7	0.2	0.2
Uzbekistan	17	−20	0.7	0.9	1.1	129.2	137.8	6.0	2.0	6.3	5.3	3.1	2.8
Venezuela, RB	−239	−236	1.6	4.3	4.3	117.3	172.5	1.0	0.0	5.9	6.6	0.6	0.7
Vietnam	−2	−36	5.2	2.5	3.5	21.4	98.6	51.5	40.1	0.3	1.2	0.4	0.6
West Bank and Gaza	..	..	..	..	..	..	..	..	..	..	..	..	..
Yemen, Rep.	−266	−203	6.3	8.6	6.9	9.6	21.1	0.0	0.0	0.8	1.0	0.4	0.5
Zambia	10	9	1.7	1.8	1.9	2.4	2.3	34.0	14.9	0.3	0.2	0.2	0.2
Zimbabwe	9	9	−0.1	0.3	0.2	16.6	10.5	87.5	80.8	1.6	0.8	6.0	4.3
World	−2 ^c w	−2 ^c w	1.7 w	4.1 w	5.0 w	22,695.9 ^d t	28,974.3 ^d t	38.5 ^d w	35.9 ^d w	4.3 ^d w	4.5 ^d w	0.6 ^d w	0.5 ^d w
Low income	−2	−3	2.9	2.8	3.8	1,337.9	2,082.9	63.1	58.5	0.8	0.9	0.6	0.5
Middle income	−25	−27	1.6	3.0	4.0	9,187.1	11,936.3	42.2	46.0	3.6	4.0	0.9	0.7
Lower middle income	−17	−14	2.9	2.5	3.6	4,388.4	7,508.5	55.1	55.5	2.3	3.4	1.1	0.8
Upper middle income	−33	−48	0.1	3.4	4.6	4,798.7	4,427.8	33.1	31.1	6.9	5.6	0.8	0.6
Low & middle income	−21	−23	1.8	2.9	4.0	10,525.0	14,019.1	44.6	47.7	2.4	2.6	0.8	0.7
East Asia & Pacific	−7	0	3.9	2.0	3.3	3,091.4	6,111.6	71.6	63.6	1.9	3.3	1.3	0.9
Europe & Central Asia	−8	−34	−1.8	2.3	3.3	4,566.4	3,187.7	35.5	31.9	10.3	7.1	1.2	0.8
Latin America & Carib.	−33	−38	2.4	6.7	7.0	1,066.0	1,381.8	7.9	8.3	2.4	2.5	0.4	0.3
Middle East & N. Africa	−210	−126	4.4	5.4	4.7	569.0	1,143.9	3.9	3.0	2.5	3.9	0.6	0.7
South Asia	11	22	3.5	3.4	4.6	772.2	1,520.8	63.0	62.8	0.7	1.0	0.6	0.5
Sub-Saharan Africa	−52	−62	2.4	2.5	2.7	460.0	673.2	88.4	79.2	0.9	0.9	0.6	0.6
High income	16	19	1.6	5.2	6.0	10,929.8	13,382.1	34.7	32.7	11.9	13.2	0.5	0.4
Euro area	55	64	1.2	6.6	7.5	2,469.2	2,564.5	33.8	27.5	8.4	8.2	0.4	0.3

a. Negative values indicate that a country is a net exporter. b. Includes Montenegro. c. Deviation from zero is due to statistical errors and changes in stock. d. Includes emissions not allocated to specific countries.

About the data

Because commercial energy is widely traded, its production and use need to be distinguished. Net energy imports show the extent to which an economy's use exceeds its production. High-income countries are net energy importers; middle-income countries are their main suppliers.

The ratio of gross domestic product (GDP) to energy use indicates energy efficiency. To produce comparable and consistent estimates of real GDP across countries relative to physical inputs to GDP—that is, units of energy use—GDP is converted to 2005 constant international dollars using purchasing power parity (PPP) rates. Differences in this ratio over time and across countries reflect structural changes in the economy, changes in sectoral energy efficiency, and differences in fuel mixes.

Carbon dioxide emissions, largely byproducts of energy production and use (see table 3.7), account for the largest share of greenhouse gases, which are associated with global warming. Anthropogenic carbon dioxide emissions result primarily from fossil fuel combustion and cement manufacturing. In

combustion different fossil fuels release different amounts of carbon dioxide for the same level of energy use: oil releases about 50 percent more carbon dioxide than natural gas, and coal releases about twice as much. Cement manufacturing releases about half a metric ton of carbon dioxide for each metric ton of cement produced.

The U.S. Department of Energy's Carbon Dioxide Information Analysis Center (CDIAC) calculates annual anthropogenic emissions from data on fossil fuel consumption (from the United Nations Statistics Division's World Energy Data Set) and world cement manufacturing (from the U.S. Bureau of Mines's Cement Manufacturing Data Set). Carbon dioxide emissions are often calculated and reported as elemental carbon. For the table these values were converted to actual carbon dioxide mass by multiplying them by 3.664 (the ratio of the mass of carbon to that of carbon dioxide). Although estimates of global carbon dioxide emissions are probably accurate within 10 percent (as calculated from global average fuel chemistry and use), country estimates may

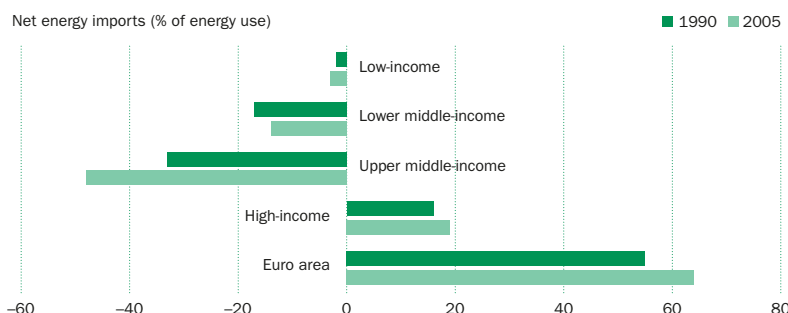
have larger error bounds. Trends estimated from a consistent time series tend to be more accurate than individual values. Each year the CDIAC recalculates the entire time series since 1949, incorporating recent findings and corrections to its database. Estimates exclude fuels supplied to ships and aircraft in international transport because of the difficulty of apportioning these fuels among the benefiting countries.

Definitions

- **Net energy imports** are estimated as energy use less production, both measured in oil equivalents.
- **Energy use** refers to the use of primary energy before transformation to other end-use fuel, which is equal to indigenous production plus imports and stock changes minus exports and fuel supplied to ships and aircraft engaged in international transport (see *About the data* for table 3.7).
- **GDP per unit of energy use** is the ratio of gross domestic product (GDP) per kilogram of oil equivalent of energy use, with GDP converted to 2005 constant international dollars using purchasing power parity (PPP) rates. An international dollar has the same purchasing power over GDP that a U.S. dollar has in the United States.
- **Carbon dioxide emissions** are emissions from the burning of fossil fuels and the manufacture of cement and include carbon dioxide produced during consumption of solid, liquid, and gas fuels and gas flaring.
- **Carbon dioxide emissions from solid fuel consumption** refer mainly to emissions from use of coal as an energy source.

High-income economies depend on imported energy . . .

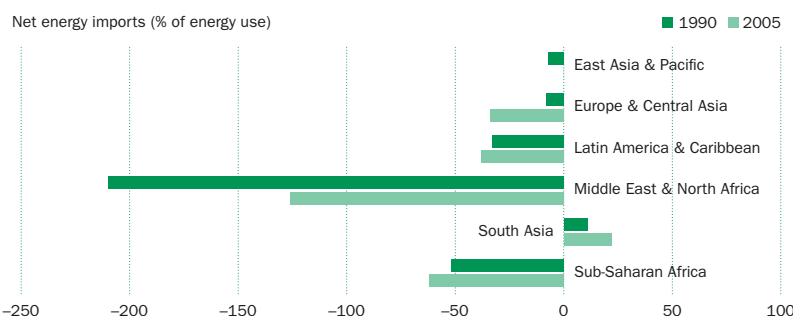
3.8a



Note: Negative values indicate that the income group is a net energy exporter.
Source: Table 3.8.

. . . mostly from middle-income countries in the Middle East and North Africa and Latin America and the Caribbean

3.8b



Note: Negative values indicate that the region is a net energy exporter.
Source: Table 3.8.

Data sources

Data on energy use are from the electronic files of the International Energy Agency. Data on carbon dioxide emissions are from the CDIAC, Environmental Sciences Division, Oak Ridge National Laboratory, in Tennessee, United States.



3.9

Trends in greenhouse gas emissions

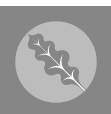
	Carbon dioxide emissions		Methane emissions				Nitrous oxide emissions				Other greenhouse gas emissions	
	average annual % growth		Total thousand metric tons of carbon dioxide equivalent		Industrial % of total	Agricultural % of total	Total thousand metric tons of carbon dioxide equivalent		Industrial % of total	Agricultural % of total	thousand metric tons of carbon dioxide equivalent	
	1970-90	1990-2004	1990	2005	2005	2005	1990	2005	2005	2005	1990	2005
Afghanistan	3.2	-11.0	..	..	..	..	..	..	..	..	..	..
Albania	3.5	-2.0	2,230	2,170	11.5	70.0	2,340	1,390	0.0	97.1	0	50
Algeria	7.3	8.8	18,570	24,310	66.3	15.3	8,780	10,330	7.2	89.1	230	110
Angola	1.5	4.1	13,630	37,020	11.6	39.1	5,110	28,350	0.0	35.9	0	0
Argentina	1.3	1.4	82,110	94,340	13.0	63.9	65,060	83,410	0.2	97.7	1,880	930
Armenia	2.6	-0.5	3,090	2,300	25.2	50.9	910	450	0.0	93.3	0	10
Australia	3.1	1.2	104,050	116,840	24.6	61.5	106,090	114,500	1.3	94.9	2,620	4,580
Austria	-0.1	1.4	8,210	7,210	14.6	50.1	5,740	4,620	9.1	85.3	1,210	3,310
Azerbaijan	2.6	-4.5	14,510	11,550	45.2	45.4	4,060	4,040	0.0	93.6	180	50
Bangladesh	7.8	6.9	81,620	92,530	11.6	69.2	22,420	37,100	0.0	91.9	0	0
Belarus	2.6	-3.8	19,230	16,620	43.0	38.8	15,270	10,360	32.3	65.6	0	440
Belgium	-1.9	-0.4	10,230	7,610	17.0	59.7	11,250	9,650	12.0	65.4	130	9,380
Benin	4.3	7.9	2,730	4,840	8.9	47.5	2,120	4,660	0.0	68.0	0	0
Bolivia	1.9	2.6	15,550	27,120	2.8	34.5	14,310	28,300	0.0	43.3	0	0
Bosnia and Herzegovina	3.4	12.5	2,000	2,850	51.9	32.6	1,140	1,020	0.0	82.4	460	850
Botswana	21.1	4.3	130	4,480	17.9	71.9	0	2,460	0.0	96.3	0	0
Brazil	3.9	3.6	285,650	421,820	3.0	67.1	227,790	300,300	3.2	74.4	5,290	7,760
Bulgaria	1.7	-3.4	9,560	6,140	31.9	32.7	13,250	5,880	29.9	64.5	0	650
Burkina Faso	8.7	1.3	..	..	..	..	..	..	..	..	..	..
Burundi	7.4	1.2	..	..	..	..	..	..	..	..	..	..
Cambodia	7.2	1.1	..	14,890	5.4	71.5	..	3,820	0.0	74.1	0	0
Cameroon	9.3	5.0	10,500	15,110	17.9	56.0	8,290	14,540	0.0	85.0	810	890
Canada	0.7	3.6	83,000	103,830	46.6	22.2	50,700	51,390	4.5	86.7	12,810	11,010
Central African Republic	1.9	2.0	..	..	..	..	..	..	..	..	..	..
Chad	-0.5	2.7	..	..	..	..	..	..	..	..	..	..
Chile	0.2	4.8	14,190	19,560	12.1	29.9	8,170	12,590	6.9	88.7	0	10
China	5.7	4.0	895,350	995,760	34.2	50.0	455,150	566,680	3.0	92.7	8,640	119,720
Hong Kong, China	6.9	2.5	1,180	1,090	40.4	0.9	210	200	0.0	5.0	0	330
Colombia	3.7	-0.8	49,180	61,690	15.7	55.1	21,140	24,530	0.9	78.0	190	330
Congo, Dem. Rep.	1.5	-6.1	2,670	5,750	49.6	11.8	820	2,250	0.0	15.6	0	0
Congo, Rep.	2.9	8.8	27,720	50,320	7.7	26.3	19,390	38,680	0.0	23.2	0	0
Costa Rica	2.8	5.0	3,720	2,450	1.6	58.0	3,440	2,850	0.0	98.9	0	0
Côte d'Ivoire	5.3	0.5	5,410	15,320	11.2	20.6	2,460	12,350	0.0	25.0	0	0
Croatia	3.4	1.8	3,950	3,690	44.2	29.8	3,390	3,590	22.3	63.8	670	720
Cuba	3.0	-1.8	9,890	9,490	6.4	62.4	13,650	8,330	8.0	87.4	0	110
Czech Republic	0.6	-2.0	22,250	14,930	58.7	17.2	10,740	6,570	16.4	75.0	20	3,530
Denmark	-0.5	-1.0	5,650	4,920	16.3	67.7	10,000	7,380	7.7	78.6	260	1,460
Dominican Republic	4.6	6.1	5,280	5,960	4.0	62.1	4,140	2,850	0.0	96.1	0	0
Ecuador	8.8	2.8	12,170	12,890	16.3	57.4	8,840	8,500	0.0	97.6	0	0
Egypt, Arab Rep.	7.3	5.6	23,250	32,960	31.2	44.2	16,980	27,810	11.5	85.6	2,250	1,820
El Salvador	1.7	5.8	2,740	3,200	12.5	48.1	2,050	2,250	0.0	95.1	0	0
Eritrea	..	12.3	2,090	2,410	7.5	77.6	1,340	2,350	0.0	99.1	0	0
Estonia	2.6	-3.3	2,610	1,230	43.1	35.0	1,630	610	0.0	83.6	0	60
Ethiopia	3.5	8.1	39,110	47,740	10.0	77.2	50,730	63,130	0.0	98.6	0	0
Finland	0.7	1.5	7,400	5,470	10.2	30.3	..	..	27.0	59.5	220	1,030
France	-1.6	0.1	56,710	43,520	10.7	71.1	88,450	78,090	12.1	77.3	10,740	27,010
Gabon	4.5	-9.0	3,120	2,040	79.9	4.4	1,850	420	0.0	57.1	0	0
Gambia, The	7.0	3.3	..	..	..	..	..	..	..	..	..	..
Georgia	2.6	-10.2	5,790	4,330	29.6	51.7	3,390	3,390	17.4	49.3	0	10
Germany	-0.2	-1.0	109,870	58,100	45.7	39.2	77,470	69,470	13.3	74.2	11,230	41,980
Ghana	1.7	5.3	5,310	8,630	10.7	49.6	4,540	10,520	0.0	88.6	190	170
Greece	4.8	2.5	6,390	7,410	9.7	39.1	13,060	13,090	3.3	91.3	790	1,620
Guatemala	2.6	6.7	5,920	8,990	11.3	42.7	4,780	7,980	0.0	70.8	0	0
Guinea	1.4	2.1	..	..	..	..	..	..	..	..	..	..
Guinea-Bissau	5.4	2.0	..	..	..	..	..	..	..	..	..	..
Haiti	5.3	7.0	2,870	3,740	6.4	61.2	2,470	4,290	0.0	98.4	0	0

Trends in greenhouse gas emissions

3.9

ENVIRONMENT

	Carbon dioxide emissions		Methane emissions				Nitrous oxide emissions				Other greenhouse gas emissions	
	average annual % growth		Total thousand metric tons of carbon dioxide equivalent		Industrial % of total	Agricultural % of total	Total thousand metric tons of carbon dioxide equivalent		Industrial % of total	Agricultural % of total	thousand metric tons of carbon dioxide equivalent	
	1970-90	1990-2004	1990	2005	2005	2005	1990	2005	2005	2005	1990	2005
Honduras	3.0	7.7	5,020	5,380	5.8	71.9	3,550	3,860	0.0	97.9	0	0
Hungary	0.1	-0.4	14,220	11,050	52.6	18.3	11,950	8,760	20.7	76.0	760	1,540
India	6.6	4.8	625,420	712,330	14.7	64.8	225,250	300,680	0.5	93.0	8,010	9,510
Indonesia	8.0	3.8	180,250	224,330	36.2	41.2	60,220	69,910	0.3	72.6	1,380	900
Iran, Islamic Rep.	2.6	5.0	54,730	95,060	64.7	21.8	48,620	66,140	0.9	97.6	2,130	1,560
Iraq	3.5	3.7	11,120	10,980	48.7	14.7	6,570	3,990	0.0	93.0	390	470
Ireland	2.0	2.8	11,560	3,660	24.3	32.0	12,840	12,320	0.2	92.6	110	2,050
Israel	3.2	5.6	1,010	1,170	9.4	36.8	1,900	1,820	0.0	83.5	840	1,140
Italy	1.0	1.0	42,310	36,670	19.1	37.7	35,560	37,200	23.7	70.5	4,770	27,710
Jamaica	-1.0	2.3	1,220	1,160	3.4	47.4	1,220	1,020	0.0	96.1	0	0
Japan	1.0	1.1	57,690	53,480	30.0	13.4	31,970	23,590	8.4	49.3	26,560	70,570
Jordan	11.3	3.5	1,080	1,610	13.0	24.2	1,160	1,240	0.0	93.5	0	10
Kazakhstan	2.6	-3.8	55,300	28,270	49.1	37.9	23,600	5,530	0.0	90.2	0	0
Kenya	1.6	4.9	19,410	20,310	18.0	65.0	21,830	19,060	0.0	96.4	0	0
Korea, Dem. Rep.	5.1	-11.2	9,800	10,650	29.0	36.4	9,190	23,160	0.0	97.5	300	860
Korea, Rep.	7.8	4.4	27,430	31,280	18.5	31.1	9,480	22,020	56.6	36.1	5,400	8,700
Kuwait	2.7	12.2	6,800	11,200	93.9	1.5	250	540	0.0	81.5	250	390
Kyrgyz Republic	2.6	-6.3	4,680	3,520	10.5	72.2	4,240	3,260	0.0	98.8	0	60
Lao PDR	-4.2	15.8	..	..	..	..	..	..	..	..	..	..
Latvia	2.6	-6.1	4,320	2,290	40.6	29.3	2,690	1,390	0.0	88.5	0	110
Lebanon	2.4	4.5	730	980	12.2	18.4	740	1,020	0.0	93.1	0	0
Lesotho	..	..	..	..	..	..	..	..	..	..	..	..
Liberia	-5.4	3.2	..	..	..	..	..	..	..	..	..	..
Libya	4.4	4.0	8,750	8,540	77.6	8.9	2,860	2,050	0.0	91.7	100	290
Lithuania	2.6	-4.7	7,740	3,650	44.1	38.1	4,160	2,860	0.0	90.2	0	150
Macedonia, FYR	3.4	-0.8	..	..	..	..	..	..	..	..	..	..
Madagascar	-0.2	8.6	..	..	..	..	..	..	..	..	..	..
Malawi	0.6	4.4	..	..	..	..	..	..	..	..	..	..
Malaysia	6.4	6.9	21,300	25,510	57.2	22.3	11,600	9,920	3.9	64.3	960	530
Mali	2.9	2.2	..	..	..	..	..	..	..	..	..	..
Mauritania	9.6	-1.1	..	..	..	..	..	..	..	..	..	..
Mauritius	3.4	6.3	..	..	..	..	..	..	..	..	..	..
Mexico	7.1	0.3	95,840	120,100	22.2	39.6	70,240	75,500	1.2	90.1	1,930	3,160
Moldova	2.6	-9.1	4,780	2,590	43.6	30.9	3,270	970	0.0	94.8	0	360
Mongolia	7.4	-2.1	7,380	4,840	2.9	83.9	10,000	22,850	0.0	99.6	0	0
Morocco	5.9	3.7	9,070	13,240	2.6	41.6	14,380	15,510	0.0	75.2	0	0
Mozambique	-6.8	4.2	9,430	11,680	16.9	64.3	2,950	9,930	0.0	99.7	0	0
Myanmar	1.2	6.2	40,170	60,840	6.8	70.0	14,390	25,900	0.0	66.8	0	10
Namibia	..	57.6	4,320	4,260	4.7	89.9	4,240	4,620	0.0	99.1	0	0
Nepal	6.9	10.3	33,810	36,040	10.4	80.5	5,700	7,100	0.0	88.5	0	0
Netherlands	-0.4	0.2	19,320	15,180	23.6	49.2	19,320	16,800	33.8	51.5	5,950	5,300
New Zealand	1.9	3.1	27,370	27,490	10.4	82.3	33,920	27,960	0.1	99.4	400	820
Nicaragua	1.4	4.7	4,690	6,350	4.7	80.2	3,750	3,210	0.0	96.9	0	0
Niger	9.4	1.1	..	..	..	..	..	..	..	..	..	..
Nigeria	2.7	6.8	59,690	78,290	45.5	33.7	28,050	39,030	0.0	87.1	120	80
Norway	2.4	7.4	7,620	12,080	61.8	14.3	5,290	4,680	37.8	53.0	4,980	1,770
Oman	11.2	8.6	2,020	4,260	76.1	12.9	870	1,140	0.0	96.5	0	0
Pakistan	6.6	4.0	82,830	110,300	14.1	66.3	55,400	80,040	0.8	96.4	700	620
Panama	0.3	4.9	2,970	3,040	4.3	72.4	2,520	2,070	0.0	95.7	0	0
Papua New Guinea	4.7	0.0	..	..	..	..	..	..	..	..	..	..
Paraguay	6.4	4.3	11,690	17,750	1.7	70.9	9,980	12,870	0.0	81.8	0	0
Peru	0.9	2.7	17,260	21,510	6.4	48.1	14,300	18,720	0.0	89.4	0	80
Philippines	1.6	4.6	38,830	44,860	8.0	66.7	17,990	18,940	0.1	95.6	100	350
Poland	1.6	-1.2	90,010	60,060	67.0	18.4	31,570	26,110	22.3	72.5	460	1,270
Portugal	5.0	2.8	7,450	7,140	8.0	52.9	6,920	7,000	9.9	80.7	130	1,050
Puerto Rico	0.7	-4.1	..	..	..	..	..	..	..	..	..	..



	Carbon dioxide emissions		Methane emissions				Nitrous oxide emissions				Other greenhouse gas emissions	
	average annual % growth		Total thousand metric tons of carbon dioxide equivalent		Industrial % of total	Agricultural % of total	Total thousand metric tons of carbon dioxide equivalent		Industrial % of total	Agricultural % of total	thousand metric tons of carbon dioxide equivalent	
	1970-90	1990-2004	1990	2005	2005	2005	1990	2005	2005	2005	1990	2005
Romania	2.4	-3.7	42,300	23,260	52.4	30.1	24,700	11,790	25.9	69.6	1,500	2,220
Russian Federation	2.6	-2.7	631,450	501,380	77.3	7.9	129,210	42,650	8.0	76.2	19,380	56,600
Rwanda	14.2	1.6	..	..	..	..	..	..	..	..	..	..
Saudi Arabia	8.9	-1.1	39,710	63,500	91.8	1.9	8,230	7,720	0.0	92.1	2,260	1,530
Senegal	4.4	2.4	5,550	6,340	4.7	75.9	6,220	10,250	0.0	99.0	0	10
Serbia ^a	3.4	-3.1	12,860	6,720	16.4	59.2	9,070	4,700	11.1	81.5	340	840
Sierra Leone	-0.7	5.0	..	..	..	..	..	..	..	..	..	..
Singapore	3.6	1.0	740	1,260	27.0	4.8	180	7,970	95.7	0.8	400	1,300
Slovak Republic	0.6	-1.8	7,450	5,290	54.3	19.5	4,650	2,760	32.2	58.0	10	710
Slovenia	3.4	1.5	1,740	1,630	20.9	47.9	1,070	1,100	0.0	88.2	580	210
Somalia	2.5	..	..	..	..	..	..	..	..	..	..	..
South Africa	4.6	1.8	52,260	59,200	54.3	23.8	26,460	29,250	7.3	82.7	1,450	2,600
Spain	2.2	3.3	31,640	38,010	11.3	44.1	35,290	48,520	3.5	85.7	4,440	15,050
Sri Lanka	1.0	8.5	10,280	10,280	12.3	61.8	2,410	3,130	0.0	89.1	0	0
Sudan	-1.3	5.9	39,760	67,310	21.5	73.3	39,400	59,750	0.0	96.2	0	0
Swaziland	1.0	11.5	..	..	..	..	..	..	..	..	..	..
Sweden	-2.9	0.1	7,670	6,460	6.5	41.5	6,330	6,070	8.4	76.8	990	1,620
Switzerland	-0.1	-0.2	4,790	4,150	8.7	68.0	3,170	2,840	8.1	78.2	760	3,310
Syrian Arab Republic	9.7	2.6	5,810	7,960	33.8	34.7	7,860	9,430	2.8	94.9	0	0
Tajikistan	2.6	-11.1	3,690	3,270	10.1	68.5	3,110	1,590	0.0	99.4	80	120
Tanzania	0.0	3.4	26,860	39,460	20.3	63.5	23,300	31,690	0.0	84.3	0	0
Thailand	7.6	6.3	68,930	78,840	9.4	76.1	21,330	27,990	0.7	87.9	1,580	940
Timor-Leste	..	..	..	..	..	..	..	..	..	..	..	..
Togo	4.7	8.3	1,790	2,840	14.8	48.6	1,990	5,470	0.0	88.8	0	0
Trinidad and Tobago	4.5	4.7	2,510	3,820	78.0	1.0	340	360	0.0	91.7	0	0
Tunisia	7.0	3.3	3,740	4,390	32.1	34.2	4,260	7,230	4.1	94.2	0	30
Turkey	5.8	3.5	27,050	23,140	15.3	59.5	44,270	47,950	9.0	88.0	2,840	1,480
Turkmenistan	2.6	3.0	33,230	23,060	81.8	15.2	4,150	3,200	20.0	78.8	0	250
Uganda	-3.5	7.1	..	..	..	..	..	..	..	..	..	..
Ukraine	2.6	-5.6	146,380	75,640	68.9	15.7	69,380	23,270	41.6	54.2	60	1,390
United Arab Emirates	4.6	9.3	19,110	34,250	96.8	1.7	930	2,730	0.0	90.5	220	480
United Kingdom	-0.6	-0.2	67,750	39,400	35.7	50.7	68,470	65,480	37.1	52.2	5,880	14,030
United States	0.3	1.9	857,660	810,280	56.4	18.4	412,740	456,210	5.5	74.7	91,230	108,420
Uruguay	-2.7	1.1	14,110	17,700	0.6	90.3	15,170	15,630	0.0	99.6	0	20
Uzbekistan	2.6	0.9	41,610	51,480	70.1	23.2	14,330	14,660	0.3	98.3	0	760
Venezuela, RB	3.7	1.8	41,520	65,730	42.0	33.6	21,700	26,460	0.1	77.8	1,330	2,300
Vietnam	-0.3	11.9	52,990	75,080	17.8	66.8	13,920	37,470	0.0	94.9	0	10
West Bank and Gaza	..	..	..	..	..	..	..	..	..	..	..	..
Yemen, Rep.	10.0	5.1	4,620	9,040	44.5	27.7	5,110	7,080	0.0	98.9	0	10
Zambia	-2.5	-1.6	9,820	16,770	5.7	68.6	4,800	11,410	3.7	65.1	0	0
Zimbabwe	3.3	-3.1	10,850	10,400	24.8	60.4	8,970	10,160	0.0	97.1	0	20
World	1.8 w	1.6 w	6,174,140 s	6,607,490 s	34.8 w	43.1 w	3,323,000 s	3,787,800 s	82.6 w	47.9 w	265,210 s	601,890 s
Low income	4.9	2.8	1,231,970	1,526,640	18.1	62.6	585,050	861,010	91.5	63.3	9,400	12,240
Middle income	3.6	1.4	3,270,800	3,491,860	36.1	41.9	1,660,270	1,809,370	82.8	48.4	56,960	213,780
Lower middle income	4.6	3.1	1,749,030	1,973,890	32.8	46.1	908,360	1,085,030	84.0	46.1	18,400	130,730
Upper middle income	2.9	-0.6	1,521,770	1,517,970	40.4	36.5	751,910	724,340	81.1	51.8	38,560	83,050
Low & middle income	3.8	1.6	4,502,770	5,018,500	30.6	48.2	2,245,320	2,670,380	85.6	53.2	66,360	226,020
East Asia & Pacific	5.7	3.6	..	..	30.5	51.9	..	..	90.0	52.3	..	..
Europe & Central Asia	2.5	-2.6	1,174,570	867,600	68.8	16.2	419,030	226,870	77.2	30.6	26,400	69,800
Latin America & Carib.	4.1	1.7	683,590	929,970	10.7	57.9	518,270	645,520	80.8	59.0	10,620	14,700
Middle East & N. Africa	4.7	5.3	143,490	213,330	52.5	25.7	118,190	152,970	92.0	28.7	5,100	4,300
South Asia	6.6	4.8	833,960	961,480	14.1	66.0	311,180	428,050	93.4	65.7	8,710	10,130
Sub-Saharan Africa	3.9	2.6	..	..	24.4	49.4	..	..	78.5	54.4	..	..
High income	0.6	1.5	1,671,370	1,588,990	47.8	27.1	1,077,680	1,117,420	75.3	35.3	198,850	375,870
Euro area	0.0	0.4	313,430	232,220	22.2	47.6	313,640	303,960	76.4	49.3	40,300	135,750

a. Includes Montenegro.

About the data

Greenhouse gases—which include carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride—contribute to climate change.

Carbon dioxide emissions, largely a by-product of energy production and use (see table 3.7), account for the largest share of greenhouse gases. Anthropogenic carbon dioxide emissions result primarily from fossil fuel combustion and cement manufacturing. Burning oil releases more carbon dioxide than burning natural gas, and burning coal releases even more for the same level of energy use. Cement manufacturing releases about half a metric ton of carbon dioxide for each metric ton of cement produced.

Methane emissions result largely from agricultural activities, industrial production landfills and wastewater treatment, and other sources such as tropical forest and other vegetation fires. The emissions are usually expressed in carbon dioxide equivalents using the global warming potential, which allows the effective contributions of different gases to be compared. A kilogram of methane is 21 times as effective

at trapping heat in the earth's atmosphere as a kilogram of carbon dioxide within 100 years.

Nitrous oxide emissions are mainly from fossil fuel combustion, fertilizers, rainforest fires, and animal waste. Nitrous oxide is a powerful greenhouse gas, with an estimated atmospheric lifetime of 114 years, compared with 12 years for methane. The per kilogram global warming potential of nitrous oxide is nearly 310 times that of carbon dioxide within 100 years.

Other greenhouse gases covered under the Kyoto Protocol are hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. Although emissions of these artificial gases are small, they are more powerful greenhouse gases than carbon dioxide, with much higher atmospheric lifetime and high global warming potential.

The Carbon Dioxide Information Analysis Center (CDIAC), sponsored by the U.S. Department of Energy, calculates annual anthropogenic emissions of carbon dioxide from fossil fuel consumption data (from the United Nations Statistics Division's World

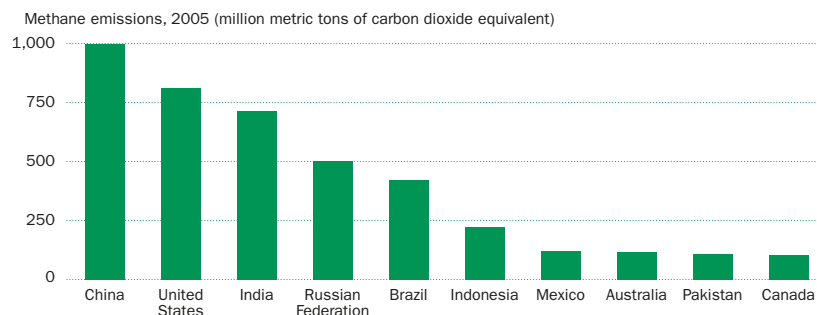
Energy Data Set) and data on world cement manufacturing data (from the U.S. Bureau of Mines's Cement Manufacturing Data Set). Carbon dioxide emissions are often calculated and reported as elemental carbon. For the table these values were converted to actual carbon dioxide mass by multiplying by 3.664 (the ratio of the mass of carbon to that of carbon dioxide). Although estimates of global carbon dioxide emissions are probably accurate within 10 percent, country estimates may have larger error bounds. Trends estimated from a consistent time series tend to be more accurate than individual values. Each year the CDIAC recalculates the entire time series, incorporating recent findings and corrections to the database. Estimates exclude fuels supplied to ships and aircraft in international transport because of the difficulty of apportioning these fuels among benefiting countries.

Definitions

- **Carbon dioxide emissions** are emissions from the burning of fossil fuels and the manufacture of cement and include carbon dioxide produced during consumption of solid, liquid, and gas fuels and gas flaring.
- **Methane emissions** are emissions from human activities such as agriculture and from industrial methane production.
- **Industrial methane emissions** are emissions from the handling, transmission, and combustion of fossil fuels and biofuels.
- **Agricultural methane emissions** are emissions from animals, animal waste, rice production, agricultural waste burning (nonenergy, on-site), and savannah burning.
- **Nitrous oxide emissions** are emissions from agricultural biomass burning, industrial activities, and livestock management.
- **Industrial nitrous oxide emissions** are emissions produced during the manufacturing of adipic acid and nitric acid.
- **Agricultural nitrous oxide emissions** are emissions produced through fertilizer use (synthetic and animal manure), animal waste management, agricultural waste burning (nonenergy, on-site), and savannah burning.
- **Other greenhouse gas emissions** are by-product emissions of hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride.

The 10 largest contributors to methane emissions account for about 62 percent of emissions

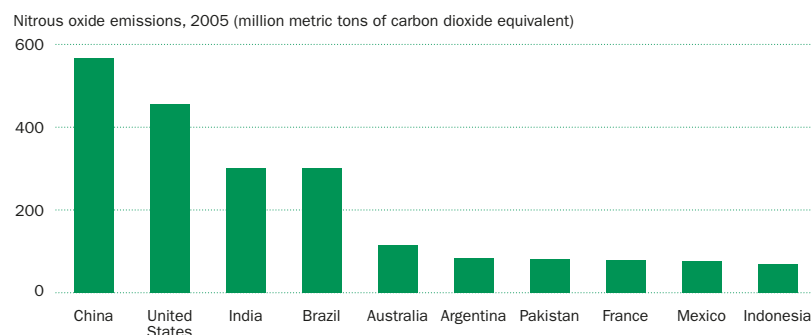
3.9a



Source: Table 3.9.

The 10 largest contributors to nitrous oxide emissions account for about 56 percent of emissions

3.9b



Source: Table 3.9.

Data sources

Data on carbon dioxide emissions are from the CDIAC, Environmental Sciences Division, Oak Ridge National Laboratory, Tennessee, United States. Data on methane, nitrous oxide, and other greenhouse gases emissions are compiled by the International Energy Agency.



	Electricity production		Sources of electricity ^a									
	billion kilowatt hours		% of total									
	1990	2005	Coal		Gas		Oil		Hydropower		Nuclear power	
	1990	2005	1990	2005	1990	2005	1990	2005	1990	2005	1990	2005
Afghanistan	..	..	..	..	..	..	..	..	..	..	..	..
Albania	3.2	5.4	0.0	0.0	0.0	0.0	10.9	1.3	89.1	98.7	0.0	0.0
Algeria	16.1	33.9	0.0	0.0	93.7	96.2	5.4	2.2	0.8	1.6	0.0	0.0
Angola	0.8	2.7	0.0	0.0	0.0	0.0	13.8	34.2	86.2	65.8	0.0	0.0
Argentina	51.0	105.8	1.3	2.1	39.0	52.3	9.7	5.4	35.6	32.4	14.3	6.5
Armenia	10.4	6.3	0.0	0.0	16.4	28.9	68.6	0.0	15.0	28.1	0.0	43.0
Australia	154.3	250.9	77.1	80.1	10.6	11.7	2.7	0.8	9.2	6.3	0.0	0.0
Austria	49.3	63.0	14.2	13.5	15.7	20.7	3.8	2.6	63.9	57.0	0.0	0.0
Azerbaijan	23.2	21.2	0.0	0.0	0.0	58.1	97.0	27.7	3.0	14.2	0.0	0.0
Bangladesh	7.7	22.6	0.0	0.0	84.3	87.6	4.3	6.7	11.4	5.7	0.0	0.0
Belarus	29.5	31.0	0.0	0.0	44.0	91.4	55.9	8.4	0.1	0.1	0.0	0.0
Belgium	70.3	85.7	28.2	12.2	7.7	26.7	1.9	2.0	0.4	0.3	60.8	55.5
Benin	0.0	0.1	0.0	0.0	0.0	0.0	100.0	99.1	0.0	0.9	0.0	0.0
Bolivia	2.1	5.2	0.0	0.0	37.6	32.3	5.3	16.7	55.3	47.8	0.0	0.0
Bosnia and Herzegovina	14.6	12.7	71.8	56.0	0.0	0.0	7.3	1.1	20.9	42.9	0.0	0.0
Botswana	0.9	1.0	88.1	99.4	0.0	0.0	11.9	0.6	0.0	0.0	0.0	0.0
Brazil	222.8	403.0	2.0	2.5	0.0	4.7	2.2	2.9	92.8	83.7	1.0	2.4
Bulgaria	42.1	44.0	50.3	42.4	7.6	3.9	2.9	1.4	4.5	9.9	34.8	42.4
Burkina Faso	..	..	..	..	..	..	..	..	..	..	..	..
Burundi	..	..	..	..	..	..	..	..	..	..	..	..
Cambodia	..	0.9	..	..	..	..	..	41.0	..	1.9	..	..
Cameroon	2.7	4.1	0.0	0.0	0.0	0.0	1.5	5.6	98.5	94.4	0.0	0.0
Canada	481.9	628.1	17.1	16.9	2.0	5.8	3.4	3.1	61.6	57.9	15.1	14.7
Central African Republic	..	..	..	..	..	..	..	..	..	..	..	..
Chad	..	..	..	..	..	..	..	..	..	..	..	..
Chile	18.4	49.9	34.3	16.7	1.3	29.9	7.6	3.4	55.3	48.1	0.0	0.0
China	621.2	2,497.4	71.3	79.0	0.4	0.5	7.9	2.4	20.4	15.9	0.0	2.1
Hong Kong, China	28.9	38.5	98.3	62.6	0.0	36.8	1.7	0.6	0.0	0.0	0.0	0.0
Colombia	36.4	51.6	10.1	8.2	12.4	13.3	1.0	0.2	75.6	77.2	0.0	0.0
Congo, Dem. Rep.	5.7	7.4	0.0	0.0	0.0	0.0	0.4	0.3	99.6	99.7	0.0	0.0
Congo, Rep.	0.5	0.4	0.0	0.0	0.0	0.0	0.6	0.3	99.4	99.7	0.0	0.0
Costa Rica	3.5	8.3	0.0	0.0	0.0	0.0	2.5	3.3	97.5	79.6	0.0	0.0
Côte d'Ivoire	2.0	5.6	0.0	0.0	0.0	74.1	33.3	0.1	66.7	25.8	0.0	0.0
Croatia	9.2	12.4	6.8	18.8	20.2	14.7	31.6	15.0	41.3	51.3	0.0	0.0
Cuba	15.0	15.3	0.0	0.0	0.2	0.0	91.5	97.5	0.6	0.6	0.0	0.0
Czech Republic	62.3	81.9	76.4	60.8	0.6	4.8	0.9	0.4	1.9	2.9	20.2	30.2
Denmark	26.0	36.3	90.7	42.6	2.7	24.3	3.4	3.8	0.1	0.1	0.0	0.0
Dominican Republic	3.7	12.9	1.2	10.0	0.0	0.3	88.6	74.6	9.4	14.7	0.0	0.0
Ecuador	6.3	13.4	0.0	0.0	0.0	7.7	21.5	41.0	78.5	51.4	0.0	0.0
Egypt, Arab Rep.	42.3	108.7	0.0	0.0	39.6	74.3	36.9	13.6	23.5	11.6	0.0	0.0
El Salvador	2.2	4.8	0.0	0.0	0.0	0.0	6.9	42.6	73.5	35.0	0.0	0.0
Eritrea	..	..	..	..	..	..	..	..	..	..	..	..
Estonia	17.2	10.2	86.8	91.2	4.8	7.4	8.4	0.3	0.0	0.2	0.0	0.0
Ethiopia	1.2	2.9	0.0	0.0	0.0	0.0	11.6	0.7	88.4	99.3	0.0	0.0
Finland	54.4	70.6	33.0	16.5	8.6	15.9	3.1	0.7	20.0	19.5	35.3	33.0
France	417.2	570.6	8.5	5.4	0.7	4.0	2.1	1.3	12.9	9.1	75.3	79.1
Gabon	1.0	1.6	0.0	0.0	16.4	15.9	11.2	31.7	72.1	51.9	0.0	0.0
Gambia, The	..	..	..	..	..	..	..	..	..	..	..	..
Georgia	13.7	7.3	0.0	0.0	15.6	13.3	29.2	0.9	55.2	85.8	0.0	0.0
Germany	547.7	613.2	58.7	49.8	7.4	11.3	1.9	1.7	3.2	3.2	27.8	26.6
Ghana	5.7	6.8	0.0	0.0	0.0	0.0	0.0	21.5	100.0	78.5	0.0	0.0
Greece	34.8	59.4	72.4	59.8	0.3	13.7	22.3	15.5	5.1	8.4	0.0	0.0
Guatemala	2.3	7.6	0.0	13.9	0.0	0.0	9.0	31.4	76.0	42.8	0.0	0.0
Guinea	..	..	..	..	..	..	..	..	..	..	..	..
Guinea-Bissau	..	..	..	..	..	..	..	..	..	..	..	..
Haiti	0.6	0.6	0.0	0.0	0.0	0.0	20.6	52.3	76.5	47.7	0.0	0.0

Sources of electricity

	Electricity production		Sources of electricity ^a									
	billion kilowatt hours		% of total									
	1990	2005	Coal		Gas		Oil		Hydropower		Nuclear power	
			1990	2005	1990	2005	1990	2005	1990	2005	1990	2005
Honduras	2.3	5.6	0.0	0.0	0.0	0.0	1.7	66.4	98.3	32.3	0.0	0.0
Hungary	28.4	35.8	30.5	20.0	15.7	34.6	4.8	1.3	0.6	0.6	48.3	38.7
India	289.4	699.0	66.2	68.7	3.4	8.9	3.5	4.5	24.8	14.3	2.1	2.5
Indonesia	33.3	127.4	31.5	40.7	2.3	13.8	42.7	31.9	20.2	8.4	0.0	0.0
Iran, Islamic Rep.	59.1	180.4	0.0	0.0	52.5	73.0	37.3	18.0	10.3	8.9	0.0	0.0
Iraq	24.0	34.0	0.0	0.0	0.0	0.0	89.2	98.5	10.8	1.5	0.0	0.0
Ireland	14.2	25.6	57.4	34.5	27.7	45.2	10.0	13.0	4.9	2.5	0.0	0.0
Israel	20.9	49.8	50.1	71.1	0.0	11.4	49.9	17.5	0.0	0.1	0.0	0.0
Italy	213.1	294.4	16.8	16.8	18.6	50.7	48.2	16.0	14.8	11.4	0.0	0.0
Jamaica	2.5	7.4	0.0	0.0	0.0	0.0	92.4	96.6	3.6	2.0	0.0	0.0
Japan	836.7	1,094.2	14.0	28.3	19.9	21.1	18.2	9.5	10.7	7.1	24.2	27.9
Jordan	3.6	9.7	0.0	0.0	11.9	57.3	87.8	42.1	0.3	0.6	0.0	0.0
Kazakhstan	87.4	67.9	71.1	70.3	10.5	10.7	10.0	7.4	8.4	11.6	0.0	0.0
Kenya	3.0	6.0	0.0	0.0	0.0	0.0	7.6	29.5	81.6	50.4	0.0	0.0
Korea, Dem. Rep.	27.7	22.9	40.1	39.0	0.0	0.0	3.6	3.6	56.3	57.3	0.0	0.0
Korea, Rep.	105.4	387.9	16.8	38.4	9.1	16.0	17.9	6.3	6.0	0.9	50.2	37.8
Kuwait	18.5	43.7	0.0	0.0	45.7	17.9	54.3	82.1	0.0	0.0	0.0	0.0
Kyrgyz Republic	15.7	16.4	13.1	3.6	23.5	9.5	0.0	0.0	63.5	86.9	0.0	0.0
Lao PDR	..	..	..	..	..	..	..	..	..	..	..	..
Latvia	6.6	4.9	0.9	0.0	26.1	30.3	5.4	0.1	67.6	67.8	0.0	0.0
Lebanon	1.5	10.1	0.0	0.0	0.0	0.0	66.7	89.7	33.3	10.3	0.0	0.0
Lesotho	..	..	..	..	..	..	..	..	..	..	..	..
Liberia	..	..	..	..	..	..	..	..	..	..	..	..
Libya	10.2	22.5	0.0	0.0	0.0	28.2	100.0	71.8	0.0	0.0	0.0	0.0
Lithuania	28.4	14.4	0.0	0.0	23.8	20.9	14.6	2.8	1.5	3.1	60.0	71.7
Macedonia, FYR	5.8	6.9	89.7	78.3	0.0	0.0	1.8	0.2	8.5	21.5	0.0	0.0
Madagascar	..	..	..	..	..	..	..	..	..	..	..	..
Malawi	..	..	..	..	..	..	..	..	..	..	..	..
Malaysia	23.0	87.3	12.3	26.5	22.0	64.0	48.4	2.9	17.3	6.6	0.0	0.0
Mali	..	..	..	..	..	..	..	..	..	..	..	..
Mauritania	..	..	..	..	..	..	..	..	..	..	..	..
Mauritius	..	..	..	..	..	..	..	..	..	..	..	..
Mexico	124.1	234.9	6.3	14.0	11.6	36.1	56.7	29.3	18.9	11.8	2.4	4.6
Moldova	15.5	3.9	32.3	0.0	39.5	98.1	26.6	0.2	1.7	1.6	0.0	0.0
Mongolia	..	..	..	..	..	..	..	..	..	..	..	..
Morocco	9.6	22.6	23.0	69.2	0.0	0.0	64.4	23.6	12.7	6.3	0.0	0.0
Mozambique	0.5	13.3	13.9	0.0	0.0	0.1	23.6	0.1	62.6	99.8	0.0	0.0
Myanmar	2.5	6.0	1.6	0.0	39.3	39.8	10.9	10.3	48.1	49.8	0.0	0.0
Namibia	0.0	1.7	1.5	0.4	0.0	0.0	3.3	2.6	95.2	97.0	0.0	0.0
Nepal	0.9	2.4	0.0	0.0	0.0	0.0	0.1	0.2	99.9	99.8	0.0	0.0
Netherlands	71.9	100.2	38.3	26.9	50.9	57.7	4.3	2.3	0.1	0.1	4.9	4.0
New Zealand	32.3	43.0	1.9	13.5	17.6	22.0	0.0	0.0	72.3	54.6	0.0	0.0
Nicaragua	1.4	2.9	0.0	0.0	0.0	0.0	39.8	69.8	28.8	15.1	0.0	0.0
Niger	..	..	..	..	..	..	..	..	..	..	..	..
Nigeria	13.5	23.5	0.1	0.0	53.7	53.6	13.7	12.7	32.6	33.8	0.0	0.0
Norway	121.6	137.3	0.1	0.1	0.0	0.3	0.0	0.0	99.6	98.9	0.0	0.0
Oman	4.5	12.6	0.0	0.0	81.6	82.0	18.4	18.0	0.0	0.0	0.0	0.0
Pakistan	37.7	93.8	0.1	0.1	33.6	44.0	20.6	20.3	44.9	32.9	0.8	2.6
Panama	2.7	5.8	0.0	0.0	0.0	0.0	14.7	35.7	83.2	63.9	0.0	0.0
Papua New Guinea	..	..	..	..	..	..	..	..	..	..	..	..
Paraguay	27.2	51.2	0.0	0.0	0.0	0.0	0.0	0.0	99.9	100.0	0.0	0.0
Peru	13.8	25.5	0.0	3.2	1.7	9.7	21.5	8.2	75.8	78.3	0.0	0.0
Philippines	25.2	56.5	7.7	27.0	0.0	29.8	46.7	10.9	24.0	14.8	0.0	0.0
Poland	134.4	155.4	97.5	93.4	0.1	2.3	1.2	1.5	1.1	1.4	0.0	0.0
Portugal	28.4	46.2	32.1	33.0	0.0	29.5	33.1	19.0	32.3	10.2	0.0	0.0
Puerto Rico	..	..	..	..	..	..	..	..	..	..	..	..



	Electricity production		Sources of electricity ^a									
	billion kilowatt hours		% of total									
	1990	2005	Coal		Gas		Oil		Hydropower		Nuclear power	
	1990	2005	1990	2005	1990	2005	1990	2005	1990	2005	1990	2005
Romania	64.3	59.4	28.8	37.3	35.1	16.2	18.4	3.2	17.7	34.0	0.0	9.3
Russian Federation	1,082.2	951.2	14.5	17.4	47.3	46.2	11.9	2.2	15.3	18.2	10.9	15.7
Rwanda	..	..	..	..	..	..	..	..	..	..	..	..
Saudi Arabia	69.2	176.1	0.0	0.0	48.1	49.1	51.9	50.9	0.0	0.0	0.0	0.0
Senegal	0.9	2.5	0.0	0.0	2.4	2.4	97.6	79.4	0.0	10.5	0.0	0.0
Serbia ^b	43.2	35.4	79.8	69.9	1.6	1.5	1.2	0.8	22.3	27.9	0.0	0.0
Sierra Leone	..	..	..	..	..	..	..	..	..	..	..	..
Singapore	15.7	38.2	0.0	0.0	0.0	74.4	100.0	25.6	0.0	0.0	0.0	0.0
Slovak Republic	25.5	31.4	31.9	19.1	7.1	7.0	6.4	2.4	7.4	14.8	47.2	56.5
Slovenia	12.0	15.1	31.9	34.9	0.0	2.2	4.8	0.3	24.7	22.9	38.7	38.9
Somalia	..	..	..	..	..	..	..	..	..	..	..	..
South Africa	165.4	242.9	94.3	94.1	0.0	0.0	0.0	0.0	0.6	0.9	5.1	4.6
Spain	151.2	290.6	40.1	27.8	1.0	27.2	5.7	8.4	16.8	6.7	35.9	19.8
Sri Lanka	3.2	8.8	0.0	0.0	0.0	0.0	0.2	60.6	99.8	39.4	0.0	0.0
Sudan	1.5	4.1	0.0	0.0	0.0	0.0	36.8	70.0	63.2	30.0	0.0	0.0
Swaziland	..	..	..	..	..	..	..	..	..	..	..	..
Sweden	146.0	158.4	1.1	1.2	0.3	0.4	0.9	0.9	49.7	46.0	46.7	45.7
Switzerland	55.0	57.8	0.1	0.0	0.6	1.5	0.7	0.3	54.2	54.1	43.0	40.4
Syrian Arab Republic	11.6	34.9	0.0	0.0	20.5	37.1	56.0	53.0	23.5	9.9	0.0	0.0
Tajikistan	18.1	17.1	0.0	0.0	9.1	2.3	0.0	0.0	90.9	97.7	0.0	0.0
Tanzania	1.6	3.0	0.0	3.3	0.0	0.0	4.9	38.2	95.1	58.6	0.0	0.0
Thailand	44.2	132.2	25.0	15.1	40.2	71.4	23.5	6.6	11.3	4.4	0.0	0.0
Timor-Leste	..	..	..	..	..	..	..	..	..	..	..	..
Togo	0.2	0.2	0.0	0.0	0.0	0.0	39.9	60.4	60.1	39.6	0.0	0.0
Trinidad and Tobago	3.6	7.1	0.0	0.0	99.0	99.5	0.1	0.2	0.0	0.0	0.0	0.0
Tunisia	5.8	13.7	0.0	0.0	63.7	90.4	35.5	8.2	0.8	1.1	0.0	0.0
Turkey	57.5	162.0	35.1	26.7	17.7	45.3	6.9	3.4	40.2	24.4	0.0	0.0
Turkmenistan	14.6	12.8	0.0	0.0	95.2	100.0	0.0	0.0	4.8	0.0	0.0	0.0
Uganda	..	..	..	..	..	..	..	..	..	..	..	..
Ukraine	298.6	185.9	38.2	26.7	16.8	18.7	16.1	0.3	3.5	6.7	25.5	47.7
United Arab Emirates	17.1	60.7	0.0	0.0	96.3	97.9	3.7	2.1	0.0	0.0	0.0	0.0
United Kingdom	317.8	397.6	65.0	34.3	1.6	38.5	10.9	1.4	1.6	1.2	20.7	20.5
United States	3,202.8	4,268.4	53.1	50.5	11.9	18.3	4.1	3.3	8.5	6.4	19.1	19.0
Uruguay	7.4	7.7	0.0	0.0	0.0	0.0	5.1	12.5	94.2	87.0	0.0	0.0
Uzbekistan	56.3	47.7	7.4	4.7	76.4	68.8	4.4	13.6	11.8	12.8	0.0	0.0
Venezuela, RB	59.3	101.5	0.0	0.0	26.2	15.6	11.5	10.5	62.3	73.9	0.0	0.0
Vietnam	8.7	53.5	23.1	16.7	0.1	38.5	15.0	4.6	61.8	40.1	0.0	0.0
West Bank and Gaza	..	..	..	..	..	..	..	..	..	..	..	..
Yemen, Rep.	1.7	4.7	0.0	0.0	0.0	0.0	100.0	100.0	0.0	0.0	0.0	0.0
Zambia	8.0	8.9	0.5	0.2	0.0	0.0	0.3	0.4	99.2	99.4	0.0	0.0
Zimbabwe	9.4	10.3	53.3	43.0	0.0	0.0	0.0	0.2	46.7	56.8	0.0	0.0
World	11,735.9 s	18,155.6 s	37.5 w	40.3 w	14.6 w	19.8 w	10.4 w	6.2 w	18.1 w	16.0 w	17.2 w	15.2 w
Low income	520.1	1,082.4	41.5	46.7	16.5	18.3	5.7	7.4	35.0	24.8	1.2	1.8
Middle income	3,709.5	6,599.4	32.7	44.1	22.0	20.3	15.4	7.1	22.0	21.5	7.4	6.0
Lower middle income	1,447.7	3,765.8	41.9	56.9	12.6	13.9	20.2	7.8	19.3	16.8	5.3	3.8
Upper middle income	2,261.8	2,833.5	26.8	27.0	28.0	28.9	12.3	6.1	23.7	27.8	8.7	9.0
Low & middle income	4,229.7	7,681.8	33.8	44.4	21.3	20.0	14.2	7.1	23.6	22.0	6.6	5.5
East Asia & Pacific	785.8	2,984.2	61.4	70.4	3.5	7.4	12.6	4.1	21.7	15.6	0.0	1.8
Europe & Central Asia	2,085.5	1,913.2	27.3	27.3	34.0	35.8	13.1	2.9	13.6	17.5	12.1	16.0
Latin America & Carib.	605.1	1,120.8	3.8	5.4	9.2	18.0	18.9	13.6	63.9	57.6	2.1	2.5
Middle East & N. Africa	190.0	487.9	1.2	3.2	38.4	60.0	48.2	29.3	12.2	7.4	0.0	0.0
South Asia	338.9	826.7	56.6	58.1	8.6	14.9	5.4	6.9	27.6	16.7	1.9	2.4
Sub-Saharan Africa	224.4	349.0	72.1	67.1	3.3	4.9	2.2	4.1	18.4	20.1	3.8	3.2
High income	7,506.2	10,473.9	39.5	37.3	10.8	19.6	8.2	5.6	15.1	11.5	23.1	22.4
Euro area	1,665.0	2,238.0	34.4	26.3	8.6	20.7	9.5	5.2	11.1	8.4	35.5	33.6

a. Shares may not sum to 100 percent because some sources of generated electricity (such as wind, solar, and geothermal) are not shown. b. Includes Montenegro.

About the data

Use of energy is important in improving people's standard of living. But electricity generation also can damage the environment. Whether such damage occurs depends largely on how electricity is generated. For example, burning coal releases twice as much carbon dioxide—a major contributor to global warming—as does burning an equivalent amount of natural gas (see *About the data* for table 3.8). Nuclear energy does not generate carbon dioxide emissions, but it produces other dangerous waste products. The table provides information on electricity production by source.

The International Energy Agency (IEA) compiles data on energy inputs used to generate electricity. IEA data for countries that are not members of the Organisation for Economic Co-operation and Development (OECD) are based on national energy data adjusted to conform to annual questionnaires completed by OECD member governments. In addition, estimates are sometimes made to complete major aggregates from which key data are missing, and

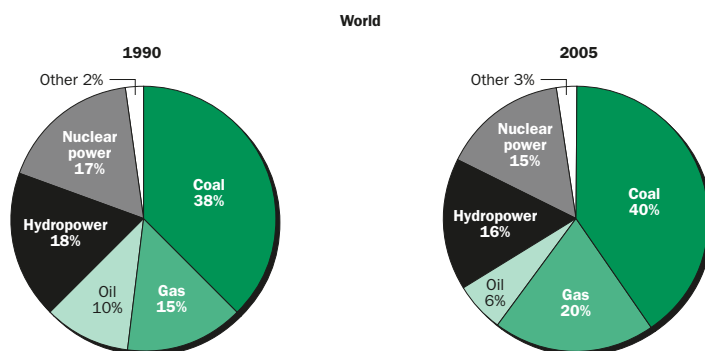
adjustments are made to compensate for differences in definitions. The IEA makes these estimates in consultation with national statistical offices, oil companies, electric utilities, and national energy experts. It occasionally revises its time series to reflect political changes. Since 1990, for example, the IEA has constructed energy statistics for countries of the former Soviet Union. In addition, energy statistics for other countries have undergone continuous changes in coverage or methodology in recent years as more detailed energy accounts have become available. Breaks in series are therefore unavoidable.

Definitions

- **Electricity production** is measured at the terminals of all alternator sets in a station. In addition to hydropower, coal, oil, gas, and nuclear power generation, it covers generation by geothermal, solar, wind, and tide and wave energy as well as that from combustible renewables and waste. Production includes the output of electric plants designed to produce electricity only, as well as that of combined heat and power plants.
- **Sources of electricity** are the inputs used to generate electricity: coal, gas, oil, hydropower, and nuclear power.
- **Coal** is all coal and brown coal, both primary (including hard coal and lignite-brown coal) and derived fuels (including patent fuel, coke oven coke, gas coke, coke oven gas, and blast furnace gas). Peat is also included in this category.
- **Gas** is natural gas but not natural gas liquids.
- **Oil** is crude oil and petroleum products.
- **Hydropower** is electricity produced by hydroelectric power plants.
- **Nuclear power** is electricity produced by nuclear power plants.

Sources of electricity generation have shifted since 1990 . . .

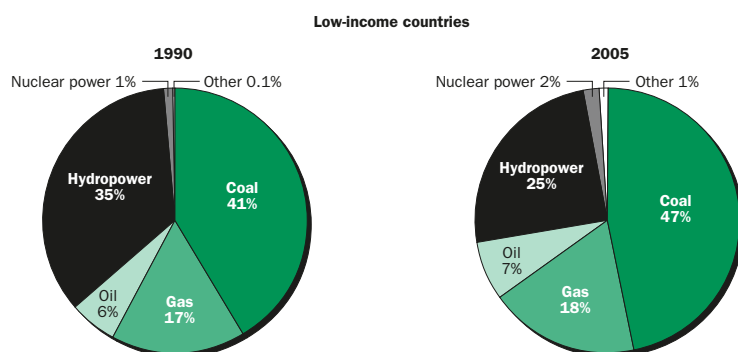
3.10a



Source: Table 3.10.

. . . with low-income countries relying more on coal

3.10b



Source: Table 3.10.

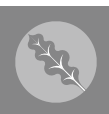
Data sources

Data on electricity production are from the IEA's electronic files and its annual publications *Energy Statistics and Balances of Non-OECD Countries*, *Energy Statistics of OECD Countries*, and *Energy Balances of OECD Countries*.



	Urban population					Population in urban agglomerations of more than 1 million		Population in largest city		Access to improved sanitation facilities			
	millions		% of total population		average annual % growth 1990–2006	% of total population		% of urban population		% of urban population		% of rural population	
	1990	2006	1990	2006		1990	2005	1990	2005	1990	2004	1990	2004
Afghanistan	..	..	..	..	..	..	..	..	..	..	..	..	..
Albania	1.2	1.5	36	46	1.3	..	..	..	..	99	99	..	84
Algeria	13.2	21.3	52	64	3.0	8	10	14	15	99	99	77	82
Angola	3.9	8.9	37	54	5.2	15	17	40	32	61	56	18	16
Argentina	28.3	35.3	87	90	1.4	39	39	37	36	86	92	45	83
Armenia	2.4	1.9	68	64	-1.4	33	37	49	57	96	96	..	61
Australia	14.6	18.3	85	88	1.4	60	60	25	24	100	100	100	100
Austria	5.1	5.5	66	66	0.5	27	27	41	42	100	100	100	100
Azerbaijan	3.8	4.4	54	52	0.8	24	22	45	43	..	73	..	36
Bangladesh	22.4	39.8	20	26	3.6	8	12	29	32	55	51	12	35
Belarus	6.8	7.1	66	73	0.3	16	18	24	25	..	93	..	61
Belgium	9.6	10.2	96	97	0.4	10	10	10	10	..	..	..	..
Benin	1.8	3.5	35	41	4.3	..	..	..	..	32	59	2	11
Bolivia	3.7	6.0	56	65	3.1	25	31	29	26	49	60	14	22
Bosnia and Herzegovina	1.7	1.8	39	46	0.5	..	..	..	..	99	99	..	92
Botswana	0.6	1.1	42	58	4.0	..	..	..	..	61	57	21	25
Brazil	111.8	160.3	75	85	2.2	34	37	13	12	82	83	37	37
Bulgaria	5.8	5.4	66	70	-0.4	14	14	21	20	100	100	96	96
Burkina Faso	1.2	2.7	14	19	4.9	..	..	49	36	32	42	3	6
Burundi	0.4	0.8	6	10	5.3	..	..	..	..	42	47	44	35
Cambodia	1.2	2.9	13	20	5.4	6	10	49	50	..	53	..	8
Cameroon	5.0	10.1	41	55	4.4	14	18	19	18	59	58	40	43
Canada	21.3	26.2	77	80	1.3	40	44	18	21	100	100	99	99
Central African Republic	1.1	1.6	37	38	2.4	..	..	..	..	34	47	17	12
Chad	1.3	2.7	21	26	4.7	..	..	38	35	28	24	2	4
Chile	11.0	14.4	83	88	1.7	35	35	42	40	91	95	52	62
China	311.0	541.8	27	41	3.5	13	18	3	3	64	69	7	28
Hong Kong, China	5.7	6.9	100	100	1.2	100	100	100	100	..	..	..	..
Colombia	24.0	33.3	69	73	2.0	30	36	20	24	95	96	52	54
Congo, Dem. Rep.	10.5	19.8	28	33	3.9	15	16	35	32	53	42	1	25
Congo, Rep.	1.3	2.2	54	61	3.3	29	32	53	54	..	28	..	25
Costa Rica	1.6	2.7	51	62	3.5	24	28	47	46	..	89	97	97
Côte d'Ivoire	5.1	8.6	40	45	3.3	16	19	41	43	37	46	10	29
Croatia	2.6	2.5	54	57	-0.1	..	..	..	..	100	100	100	100
Cuba	7.8	8.5	73	75	0.5	20	19	27	26	99	99	95	95
Czech Republic	7.8	7.5	75	74	-0.2	12	11	16	16	99	99	97	97
Denmark	4.4	4.7	85	86	0.4	26	20	31	23	..	..	..	..
Dominican Republic	4.0	6.5	55	68	3.0	21	21	38	32	60	81	43	73
Ecuador	5.7	8.4	55	63	2.4	26	30	28	29	77	94	45	82
Egypt, Arab Rep.	24.0	31.9	44	43	1.8	22	20	38	36	70	86	42	58
El Salvador	2.5	4.1	49	60	3.0	19	23	39	38	70	77	33	39
Eritrea	0.5	0.9	16	20	3.9	..	..	..	..	44	32	0	3
Estonia	1.1	0.9	71	69	-1.2	..	..	..	..	97	97	96	96
Ethiopia	6.4	12.6	13	16	4.2	3	4	28	24	13	44	2	7
Finland	3.1	3.2	61	61	0.3	17	21	28	34	100	100	100	100
France	42.0	47.1	74	77	0.7	23	22	22	21	..	..	..	..
Gabon	0.6	1.1	69	84	3.5	..	..	..	..	..	37	..	30
Gambia, The	0.4	0.9	38	55	5.7	..	..	..	..	..	72	..	46
Georgia	3.0	2.3	55	52	-1.6	22	23	41	45	99	96	94	91
Germany	58.3	62.0	73	75	0.4	8	8	6	5	100	100	100	100
Ghana	5.7	11.2	37	49	4.2	12	16	21	18	23	27	10	11
Greece	6.0	6.6	59	59	0.6	30	29	51	49	..	..	..	..
Guatemala	3.7	6.2	41	48	3.3	..	..	22	16	73	90	47	82
Guinea	1.7	3.1	28	33	3.7	15	16	53	48	27	31	10	11
Guinea-Bissau	0.3	0.5	28	30	3.4	..	..	..	..	..	57	..	23
Haiti	2.1	3.7	30	39	3.6	16	23	54	59	25	57	23	14

	Urban population					Population in urban agglomerations of more than 1 million		Population in largest city		Access to improved sanitation facilities			
	millions		% of total population		average annual % growth	% of total population		% of urban population		% of urban population		% of rural population	
	1990	2006	1990	2006	1990–2006	1990	2005	1990	2005	1990	2004	1990	2004
Honduras	2.0	3.3	40	47	3.2	..	..	29	29	77	87	31	54
Hungary	6.8	6.7	66	67	–0.1	19	17	29	25	100	100	..	85
India	216.6	321.6	26	29	2.5	10	12	6	6	45	59	3	22
Indonesia	54.5	109.8	31	49	4.4	9	12	14	12	65	73	37	40
Iran, Islamic Rep.	30.6	47.3	56	67	2.7	23	23	21	16	86	..	78	..
Iraq	12.9	..	70	..	..	26	..	32	..	95	..	48	..
Ireland	2.0	2.6	57	61	1.6	26	25	46	41	..	..	..	..
Israel	4.2	6.5	90	92	2.7	43	44	48	47	100	100	..	..
Italy	37.8	39.9	67	68	0.3	19	17	9	8	..	..	..	..
Jamaica	1.2	1.4	49	53	1.2	..	..	..	..	86	91	64	69
Japan	78.0	84.3	63	66	0.5	46	48	42	42	100	100	100	100
Jordan	2.3	4.6	72	83	4.3	27	24	37	29	97	94	82	87
Kazakhstan	9.2	8.8	56	58	–0.3	7	8	12	13	87	87	52	52
Kenya	4.3	7.7	18	21	3.7	6	8	32	38	48	46	37	41
Korea, Dem. Rep.	11.8	14.7	58	62	1.4	15	19	21	23	..	58	..	60
Korea, Rep.	31.6	39.2	74	81	1.3	51	51	33	25	..	..	..	..
Kuwait	2.1	2.6	98	98	1.3	65	71	67	73	..	..	..	..
Kyrgyz Republic	1.7	1.9	38	36	0.7	..	..	38	43	75	75	51	51
Lao PDR	0.6	1.2	15	21	4.1	..	..	..	..	..	67	..	20
Latvia	1.9	1.6	69	68	–1.1	..	..	..	..	..	82	..	71
Lebanon	2.5	3.5	83	87	2.2	43	44	52	51	100	100	..	87
Lesotho	0.3	0.4	17	19	2.0	..	..	..	..	61	61	32	32
Liberia	1.0	2.1	45	59	4.9	..	..	55	47	59	49	24	7
Libya	3.4	5.1	79	85	2.5	48	54	44	42	97	97	96	96
Lithuania	2.5	2.3	68	67	–0.6	..	..	..	..	..	..	..	..
Macedonia, FYR	1.1	1.4	58	70	1.6	..	..	..	..	..	..	..	..
Madagascar	2.8	5.2	24	27	3.8	8	9	33	32	27	48	10	26
Malawi	1.1	2.4	12	18	4.9	..	..	..	..	64	62	45	61
Malaysia	9.0	17.8	50	68	4.3	6	5	12	8	95	95	..	93
Mali	1.8	3.7	23	31	4.6	10	12	42	39	50	59	32	39
Mauritania	0.8	1.2	40	41	2.9	..	..	..	..	42	49	22	8
Mauritius	0.5	0.5	44	42	0.9	..	..	..	..	95	95	..	94
Mexico	60.3	79.5	73	76	1.7	32	35	25	25	75	91	13	41
Moldova	2.1	1.8	47	47	–0.8	..	..	..	..	..	86	..	52
Mongolia	1.2	1.5	57	57	1.3	..	..	48	60	..	75	..	37
Morocco	11.7	18.1	48	59	2.7	16	16	23	18	87	88	27	52
Mozambique	2.9	7.4	21	35	5.9	6	6	27	19	49	53	12	19
Myanmar	10.0	15.1	25	31	2.6	7	9	29	28	48	88	16	72
Namibia	0.4	0.7	28	36	3.9	..	..	..	..	70	50	8	13
Nepal	1.7	4.5	9	16	6.1	..	..	23	19	48	62	7	30
Netherlands	10.3	13.2	69	81	1.6	14	14	10	9	100	100	100	100
New Zealand	2.9	3.6	85	86	1.3	25	28	30	32	..	..	88	..
Nicaragua	2.2	3.3	53	59	2.5	18	21	33	36	64	56	24	34
Niger	1.2	2.3	15	17	4.1	..	..	36	38	35	43	2	4
Nigeria	33.1	70.9	35	49	4.8	11	13	14	16	51	53	33	36
Norway	3.1	3.6	72	78	1.0	..	..	22	22	..	..	..	..
Oman	1.2	1.8	65	72	2.6	..	..	..	..	97	97	61	..
Pakistan	33.0	56.2	31	35	3.3	16	18	22	21	82	92	17	41
Panama	1.3	2.4	54	72	3.7	35	38	65	53	89	89	51	51
Papua New Guinea	0.5	0.8	13	14	2.7	..	..	..	..	67	67	41	41
Paraguay	2.1	3.6	49	59	3.4	22	31	45	54	72	94	45	61
Peru	15.0	20.1	69	73	1.8	27	26	39	36	69	74	15	32
Philippines	29.9	54.7	49	63	3.8	14	14	27	20	66	80	48	59
Poland	23.4	23.7	61	62	0.1	4	4	7	7	..	..	..	..
Portugal	4.7	6.2	48	58	1.6	37	39	54	45	..	..	..	..
Puerto Rico	2.6	3.8	72	98	2.6	44	67	60	68	..	..	..	..



	Urban population					Population in urban agglomerations of more than 1 million		Population in largest city		Access to improved sanitation facilities			
	millions		% of total population		average annual % growth 1990–2006	% of total population		% of urban population		% of urban population		% of rural population	
	1990	2006	1990	2006		1990	2005	1990	2005	1990	2004	1990	2004
Romania	12.6	11.6	54	54	−0.5	8	9	14	17	..	89	..	..
Russian Federation	108.8	103.9	73	73	−0.3	18	19	8	10	93	93	70	70
Rwanda	0.4	1.9	5	20	9.9	..	..	56	44	49	56	36	38
Saudi Arabia	12.5	19.2	77	81	2.7	30	36	19	22	100	100	..	..
Senegal	3.1	5.1	39	42	3.1	18	18	45	44	53	79	19	34
Serbia ^a	5.4	4.2	51	52	..	11	14	22	26	97	97	77	77
Sierra Leone	1.2	2.4	30	41	4.1	..	..	43	35	..	53	..	30
Singapore	3.0	4.5	100	100	2.4	99	100	99	100	100	100	..	..
Slovak Republic	3.0	3.0	57	56	0.1	..	..	..	..	100	100	98	98
Slovenia	1.0	1.0	50	51	0.1	..	..	..	..	..	..	..	..
Somalia	2.0	3.0	30	36	2.6	14	16	47	46	..	48	..	14
South Africa	18.3	28.3	52	60	2.7	25	30	10	12	85	79	53	46
Spain	29.3	33.9	75	77	0.9	22	24	15	17	100	100	100	100
Sri Lanka	2.9	3.0	17	15	0.2	..	..	..	..	89	98	64	89
Sudan	6.9	15.7	27	42	5.1	9	12	34	30	53	50	26	24
Swaziland	0.2	0.3	23	24	2.8	..	..	..	..	..	59	..	44
Sweden	7.1	7.7	83	84	0.5	17	19	21	22	100	100	100	100
Switzerland	4.6	5.7	68	76	1.3	14	15	20	20	100	100	100	100
Syrian Arab Republic	6.2	9.9	49	51	2.9	26	25	25	26	97	99	50	81
Tajikistan	1.7	1.6	32	25	−0.1	..	..	..	..	..	70	..	45
Tanzania	4.8	9.7	19	25	4.4	5	7	27	29	52	53	45	43
Thailand	16.0	20.7	29	33	1.6	11	10	37	32	95	98	74	99
Timor-Leste	0.2	0.3	21	27	3.6	..	..	..	..	..	66	..	33
Togo	1.2	2.6	30	41	4.9	16	21	52	53	71	71	24	15
Trinidad and Tobago	0.1	0.2	9	13	2.9	..	..	..	..	100	100	100	100
Tunisia	4.9	6.7	60	66	2.0	..	..	..	..	95	96	47	65
Turkey	33.2	49.4	59	68	2.5	22	26	20	20	96	96	70	72
Turkmenistan	1.7	2.3	45	47	2.0	..	..	..	..	..	77	..	50
Uganda	2.0	3.8	11	13	4.1	4	5	38	36	54	54	41	41
Ukraine	34.7	31.8	67	68	−0.5	12	13	7	8	98	98	..	93
United Arab Emirates	1.4	3.3	79	77	5.3	27	32	34	42	98	98	95	95
United Kingdom	51.1	54.4	89	90	0.4	26	26	15	16	..	..	..	..
United States	188.0	242.8	75	81	1.6	41	43	9	8	100	100	100	100
Uruguay	2.8	3.1	89	92	0.6	41	38	46	42	100	100	99	99
Uzbekistan	8.2	9.8	40	37	1.1	10	8	25	23	69	78	39	61
Venezuela, RB	16.6	25.3	84	94	2.6	34	37	17	12	..	71	..	48
Vietnam	13.4	22.6	20	27	3.3	13	13	30	23	58	92	30	50
West Bank and Gaza	1.3	2.7	68	72	4.4	..	..	..	..	..	78	..	61
Yemen, Rep.	2.6	6.0	21	28	5.3	5	9	25	31	82	86	19	28
Zambia	3.2	4.1	39	35	1.6	9	11	24	31	63	59	31	52
Zimbabwe	3.0	4.8	29	36	2.9	10	12	34	32	69	63	42	47
World	2,250.7 s	3,197.7 s	43 w	49 w	2.2 w	18 w	20 w	17 w	16 w	77 w	79 w	23 w	38 w
Low income	444.5	735.8	25	30	3.1	10	12	17	18	50	60	12	28
Middle income	1,146.2	1,679.3	44	55	2.4	..	..	15	14	78	81	24	41
Lower middle income	666.2	1,077.3	35	47	3.0	14	18	14	12	73	76	20	39
Upper middle income	480.0	602.1	69	75	1.4	..	..	17	17	87	89	53	60
Low & middle income	1,590.7	2,415.1	37	44	2.6	14	17	16	15	70	74	18	34
East Asia & Pacific	459.9	804.8	29	42	3.5	..	..	9	8	65	72	15	36
Europe & Central Asia	279.7	288.6	63	64	0.2	15	17	13	15	94	93	..	70
Latin America & Carib.	310.3	432.2	71	78	2.1	32	34	24	22	81	86	35	49
Middle East & N. Africa	117.2	178.6	52	57	2.6	20	20	27	25	87	92	52	58
South Asia	279.1	431.4	25	29	2.7	10	12	10	11	50	63	6	27
Sub-Saharan Africa	144.5	279.6	28	36	4.1	..	..	26	25	52	53	24	28
High income	660.0	782.6	74	78	1.1	..	..	20	19	100	100	..	..
Euro area	210.2	232.7	71	73	0.6	18	18	15	15	..	..	..	..

a. Includes Montenegro.

About the data

There is no consistent and universally accepted standard for distinguishing urban from rural areas, in part because of the wide variety of situations across countries. Most countries use an urban classification related to the size or characteristics of settlements. Some define urban areas based on the presence of certain infrastructure and services. And other countries designate urban areas based on administrative arrangements.

The population of a city or metropolitan area depends on the boundaries chosen. For example, in 1990 Beijing, China, contained 2.3 million people in 87 square kilometers of "inner city" and 5.4 million in 158 square kilometers of "core city." The population of "inner city and inner suburban districts" was 6.3 million and that of "inner city, inner and outer suburban districts, and inner and outer counties" was 10.8 million. (Most countries use the last definition.) For further discussion of urban-rural issues see box 3.1a in *About the data* for table 3.1.

Estimates of the world's urban population would change significantly if China, India, and a few other

populous nations were to change their definition of urban centers. According to China's State Statistical Bureau, by the end of 1996 urban residents accounted for about 43 percent of China's population, more than double the 20 percent considered urban in 1994. In addition to the continuous migration of people from rural to urban areas, one of the main reasons for this shift was the rapid growth in the hundreds of towns reclassified as cities in recent years. Because the estimates in the table are based on national definitions of what constitutes a city or metropolitan area, cross-country comparisons should be made with caution. To estimate urban populations, UN ratios of urban to total population were applied to the World Bank's estimates of total population (see table 2.1).

The table shows access to improved sanitation facilities for both urban and rural populations to allow comparison of access. Definitions of access and urban areas vary, however, so comparisons between countries can be misleading.

Definitions

- **Urban population** is the midyear population of areas defined as urban in each country and reported to the United Nations (see *About the data*).
- **Population in urban agglomerations of more than 1 million** is the percentage of a country's population living in metropolitan areas that in 2005 had a population of more than 1 million.
- **Population in largest city** is the percentage of a country's urban population living in that country's largest metropolitan area.
- **Access to improved sanitation facilities** is the percentage of the urban or rural population with access to at least adequate excreta disposal facilities (private or shared but not public) that can effectively prevent human, animal, and insect contact with excreta. Improved facilities range from simple but protected pit latrines to flush toilets with a sewerage connection. To be effective, facilities must be correctly constructed and properly maintained.

Developing economies had the largest increase in urban population between 1990 and 2006

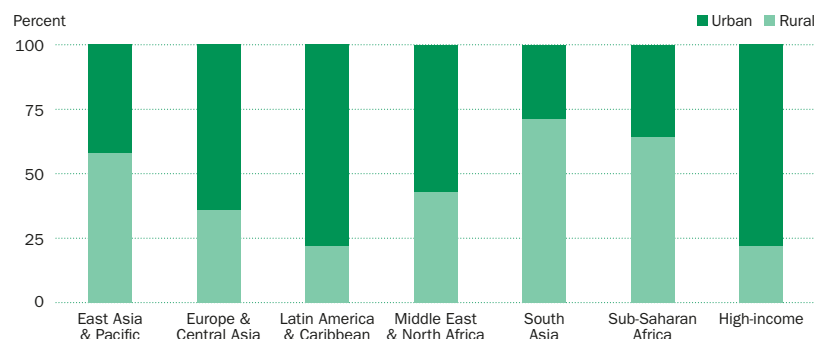
3.11a



Source: Table 3.11.

Latin America and the Caribbean had the same share of urban population as high-income economies in 2006

3.11b



Source: Table 3.11.

Data sources

Data on urban population and the population in urban agglomerations and in the largest city are from the United Nations Population Division's *World Urbanization Prospects: The 2005 Revision*. Data on total population are World Bank estimates. Data on access to sanitation are from the World Health Organization and United Nations Children's Fund's *Meeting the MDG Drinking Water and Sanitation Target*.



	Census year	Household size		Overcrowding		Durable dwelling units		Home ownership		Multiunit dwellings		Vacancy rate	
		number of people		Households living in overcrowded dwellings ^a		Buildings with durable structure		Privately owned dwellings		% of total		Unoccupied dwellings	
		National	Urban	National	Urban	National	Urban	National	Urban	National	Urban	National	Urban
Afghanistan		..	..	..	..	..	..	..	..	..	..	..	..
Albania	2001	4.2	3.9	..	..	..	..	65 ^b	30 ^b	..	..	12	13
Algeria	1998	4.9	..	..	..	..	..	67	..	..	..	19	..
Angola		..	..	..	..	..	..	..	..	..	..	..	..
Argentina	2001	3.6	..	19	..	97	..	..	..	4	..	16 ^b	..
Armenia	2001	4.1	4.0	4	6	93	93	95	90	1	1	..	..
Australia	2001	3.8	..	1	..	..	..	..	..	..	..	..	..
Austria	1991	2.6	..	2	..	..	..	..	..	50	..	13	..
Azerbaijan	1999	4.7	4.4	..	..	..	..	74	62	4	5	..	..
Bangladesh	2001	4.8	4.8	..	..	21 ^b	42 ^b	88 ^b	61 ^b	..	..	..	..
Belarus	1999	..	..	..	..	..	..	..	..	..	..	..	..
Belgium	2001	2.6	..	0 ^b	..	..	..	67	..	32 ^b	..	..	..
Benin	1992	5.9	..	..	..	26	..	59	..	..	..	..	..
Bolivia	2001	4.2	4.3	40	..	43	58	70	59	3 ^b	5 ^b	6	4
Bosnia and Herzegovina		..	..	..	..	..	..	..	..	..	..	..	..
Botswana	2001	4.2	3.9	27	47	88	90 ^b	61	47	1	..	..	..
Brazil	2000	3.8	3.7	..	..	..	..	74	75	..	..	..	..
Bulgaria	2001	2.7	2.7	..	..	79	89	98	98	..	..	23	17
Burkina Faso	1996	6.2	5.8	30	53	..	..	..	..	..	..	..	..
Burundi	1990	4.7	..	..	..	..	..	..	..	..	..	..	..
Cambodia	1998	5.2	..	..	..	..	..	..	..	..	..	..	..
Cameroon	1987	5.2	5.1	67	77	77	..	73	48	27	42	..	..
Canada	2001	2.6	..	..	..	..	..	64	..	32	..	8	..
Central African Republic	2003	5.2	5.8	32	36 ^b	78	92	85	74	..	..	..	..
Chad	1993	5.1	5.1	..	..	..	..	..	..	..	..	..	..
Chile	2002	3.4	3.5	..	..	91	92	66	65	13	15	11	10
China	2000	3.4	3.2	..	..	82	..	88	74	..	..	1	..
Hong Kong, China		..	..	..	..	..	..	..	..	..	..	..	..
Colombia	1993	4.8	..	27 ^b	..	83 ^b	..	68 ^b	..	13	..	10 ^b	..
Congo Dem Rep	1984	5.4	..	55	..	..	..	..	..	..	..	..	..
Congo Rep	1984	10.5	..	..	..	..	..	76	..	..	..	..	..
Costa Rica	2000	4.0	..	22	..	88	..	72	..	2	3	9	6
Côte d'Ivoire	1998	5.4	..	..	..	..	..	..	..	..	..	..	..
Croatia	2001	3.0	..	..	..	..	..	..	..	..	..	12	..
Cuba	1981	4.2	4.2	..	..	..	..	..	..	15	21	0	0
Czech Republic	2001	2.4	..	..	..	..	..	52	..	49	..	12	..
Denmark	2001	2.2	..	..	..	..	..	..	..	..	..	..	..
Dominican Republic	2002	3.9	..	..	..	97	..	..	..	8	..	11	..
Ecuador	2001	3.5	3.7	30	..	81	88	68 ^b	58 ^b	9	14	12	7
Egypt	1996	4.7	..	..	..	..	..	..	..	75	..	..	..
El Salvador	1992	..	..	63	..	67	83	70	68	3	6	11	11
Eritrea		..	..	..	..	..	..	..	..	..	..	..	..
Estonia	2000	2.4	2.3	3	..	..	..	..	..	72	..	13	..
Ethiopia	1994	4.8	4.7	..	..	..	23	..	54	..	..	..	..
Finland	2000	2.2	..	..	..	..	..	64	..	44	..	..	..
France	1999	2.5	..	..	..	..	..	55	..	..	..	7	..
Gabon	2003	5.2	..	..	..	..	..	..	..	..	..	..	..
Gambia	1993	8.9	..	..	..	18	..	68	..	..	..	..	..
Georgia	2002	3.5	3.5	..	..	..	..	..	..	..	..	..	..
Germany	2001	2.3	..	..	..	..	..	43	..	..	..	7	..
Ghana	2000	5.1	5.1	..	..	45	..	57	..	53	..	5	..
Greece	2001	3.0	..	1	..	..	..	..	..	..	..	..	..
Guatemala	2002	4.4	4.7	..	..	67	80	81	74	2	4	13	11
Guinea		..	..	..	..	..	..	..	..	..	..	..	..
Guinea-Bissau		..	..	..	..	..	..	..	..	..	..	..	..
Haiti	1982	4.2	..	26	..	..	..	92	68	..	..	9	19

Urban housing conditions

	Census year	Household size		Overcrowding		Durable dwelling units		Home ownership		Multiunit dwellings		Vacancy rate	
		number of people		Households living in overcrowded dwellings ^a		Buildings with durable structure		Privately owned dwellings		% of total		Unoccupied dwellings	
		National	Urban	National	Urban	National	Urban	National	Urban	National	Urban	National	Urban
Honduras	2001	4.4	..	..	..	69	85	..	..	..	..	14	..
Hungary	1990	2.7	..	..	..	..	..	..	..	..	..	4	..
India	2001	5.3	5.3	77	71	83	81	87	67	..	..	6	9
Indonesia	2000	4.0	..	..	..	..	..	..	..	..	..	..	..
Iran, Islamic Rep.	1996	4.8	4.6	33 ^b	26 ^b	72	76	73	67	..	..	..	..
Iraq	1997	7.7	7.2	..	..	88	96	70	66	4	5	13	15
Ireland	2002	3.0	..	..	..	..	..	..	..	8 ^b	..	..	..
Israel	1995	3.5	..	..	..	..	..	..	..	..	..	..	..
Italy	2001	2.8	..	..	..	..	..	..	..	..	..	21	..
Jamaica	2001	3.5	..	..	..	98 ^b	..	58 ^b	..	2 ^b	..	..	..
Japan	2000	2.7	..	..	..	..	..	61	..	37	..	..	..
Jordan	1994	6.2	6.0	1	..	97	97	69	64	57	67	..	..
Kazakhstan	..	..	..	..	..	..	..	..	..	..	..	..	..
Kenya	1999	4.6	3.4	..	..	35	72	72	25	..	..	39	17
Korea, Dem Rep	2000	3.8	..	23	..	..	..	50	..	15	..	..	..
Korea, Rep.	1993	4.4	..	..	..	..	..	..	..	..	..	..	..
Kuwait	1995	6.4	..	..	..	..	..	..	..	9 ^b	..	11	..
Kyrgyz Republic	1999	4.4	3.6	..	..	..	..	..	..	..	..	..	..
Laos	1995	6.1	6.1	..	..	49	77	96	86	..	..	..	..
Latvia	2000	3.0	2.6	4	..	88	..	58	..	74	..	0	..
Lebanon	..	..	..	..	..	..	..	..	..	..	..	..	..
Lesotho	2001	5.0	..	10 ^b	..	..	..	84	..	0	..	..	..
Liberia	1974	4.8	..	31	..	20	..	1	..	..	..	..	..
Libya	..	6.4	..	..	..	..	..	..	..	..	..	7	..
Lithuania	2001	2.6	..	7	..	..	..	..	..	..	..	..	..
Macedonia, FYR	2002	3.6	3.6 ^b	8 ^b	..	95 ^b	95 ^b	48 ^b	..	..	..	7 ^b	3 ^b
Madagascar	1993	4.9	4.8	64	57	..	..	81	59	..	..	..	..
Malawi	1998	4.4	4.4	30	..	48	84	86	47	..	..	..	..
Malaysia	2000	4.5	4.4	..	..	..	..	..	..	10 ^b	16 ^b	..	..
Mali	1998	5.6	..	..	..	..	..	..	..	..	..	..	..
Mauritania	1988	..	..	..	..	..	..	..	..	..	..	..	..
Mauritius	2000	3.9	3.8	6	7	91	94	87	81	..	..	7	6
Mexico	2000	4.4	..	27 ^b	..	87	..	78	..	6	..	..	..
Moldova	2003	..	..	..	..	..	..	..	..	..	..	..	..
Mongolia	2000	4.4	4.5	..	..	..	..	..	..	48	56	..	..
Morocco	1982	5.9	5.3	..	..	..	..	..	..	..	..	..	..
Mozambique	1997	4.4	4.9	37	28	7	20	92	83	1	1	0	..
Myanmar	..	..	..	..	..	..	..	..	..	..	..	..	..
Namibia	2001	5.3	..	..	..	..	..	..	..	..	..	..	..
Nepal	2001	5.4	4.9	..	..	..	..	88	..	..	..	0	..
Netherlands	..	..	..	..	..	..	..	..	..	..	..	..	..
New Zealand	2001	2.8	..	1 ^b	..	..	..	65	..	17	..	10	..
Nicaragua	1995	5.3	..	..	..	79	87	84	86	0	0	8	..
Niger	2001	6.4	6.0	..	..	..	..	77	40	..	..	..	..
Nigeria	1991	5.0	4.7	..	..	..	..	..	..	..	..	..	..
Norway	1980	2.7	..	1	..	..	..	67	..	38	..	..	..
Oman	2003	7.1	..	..	..	..	..	..	..	..	..	..	..
Pakistan	1998	6.8	6.8	..	..	58	86	81	..	..	..	..	..
Panama	2000	4.1	..	28 ^b	..	88	98 ^b	80	66 ^b	10 ^b	10 ^b	14	..
Papua New Guinea	1990	4.5 ^b	6.5	..	..	..	..	..	44	..	8	..	..
Paraguay	2002	4.6	4.5	38 ^b	.. ^b	95 ^b	98 ^b	79	75	1 ^b	2 ^b	6 ^b	6 ^b
Peru	1993	..	..	..	..	49	64	..	..	..	..	7	3
Philippines	1990	5.3	5.3	..	..	62	..	83	76	6	11	4	4
Poland	1988	3.2	..	..	..	..	..	..	..	..	..	1	..
Portugal	2001	2.8	..	..	..	..	..	76	..	86	..	..	..
Puerto Rico	1990	3.3	..	..	..	..	..	72	..	..	..	11	..



	Census year	Household size		Overcrowding		Durable dwelling units		Home ownership		Multiunit dwellings		Vacancy rate	
		number of people		Households living in overcrowded dwellings ^a		Buildings with durable structure		Privately owned dwellings		% of total		Unoccupied dwellings	
		National	Urban	National	Urban	National	Urban	National	Urban	National	Urban	National	Urban
Romania	1992	3.1	3.1	..	..	58	..	87	77	39	71	6	4
Russia	2002	2.8	2.7	7	5	..	..	..	..	73	86	..	..
Rwanda	1991	4.7	..	..	..	79	78	92	73	19	25	..	..
Saudi Arabia	2004	5.5	..	..	..	92 ^b	..	43	..	..	..	..	..
Senegal	..	..	..	..	..	..	..	..	..	..	..	..	..
Serbia	2001	2.9	2.2	..	..	..	..	..	..	..	..	..	..
Sierra Leone	1985	6.8	..	..	..	34	..	68	..	..	..	..	..
Singapore	2000	4.4	..	..	..	..	..	..	..	..	..	..	..
Slovak Republic	..	..	..	..	..	..	..	..	..	..	..	..	..
Slovenia	1991	3.1	..	..	..	..	..	69	..	37	..	9	..
Somalia	1975	..	..	..	..	..	..	..	..	..	..	..	..
South Africa	2001	4.0	..	..	..	..	..	..	..	7	..	..	..
Spain	1991	3.3	..	0	..	..	..	78	..	..	..	..	..
Sri Lanka	2001	3.8	..	..	..	93 ^b	92 ^b	70 ^b	58 ^b	1	14 ^b	13	1 ^b
Sudan	1993	5.8	6.0	..	..	..	..	86 ^b	58 ^b	0 ^b	1 ^b	..	..
Swaziland	1997	5.4	3.7	..	..	..	..	..	..	..	..	..	..
Sweden	1990	2.0	..	..	..	..	..	..	..	54	..	1	..
Switzerland	1990	2.4	2.1	..	..	..	..	31	24	28	32	11	7
Syrian Arab Republic	1981	6.3	6.0	..	..	..	..	..	..	..	..	..	..
Tajikistan	2000	..	..	..	..	..	..	..	..	..	..	..	..
Tanzania	2002	4.9	4.5 ^b	33 ^b	7 ^b	..	..	82 ^b	43 ^b	..	..	..	..
Thailand	2000	3.8	..	..	..	93	93	81	62	3	..	3	..
Timor-Leste	..	..	..	..	..	..	..	..	..	..	..	..	..
Togo	..	..	..	..	..	..	..	..	..	..	..	..	..
Trinidad and Tobago	2000	3.7	..	9 ^b	..	98 ^b	..	74 ^b	..	17 ^b	..	..	..
Tunisia	1994	8.0	..	..	..	99	..	71	89 ^b	6	10 ^b	15	12 ^b
Turkey	1990	5.0	..	..	..	..	..	70	..	..	..	..	..
Turkmenistan	..	..	..	..	..	..	..	..	..	..	..	..	..
Uganda	1991	4.9	4.0 ^b	..	..	21 ^b	..	80 ^b	24 ^b	0 ^b	2 ^b	..	..
Ukraine	2003	..	..	..	..	..	..	..	..	..	..	..	..
United Arab Emirates	..	..	..	..	..	..	..	..	..	..	..	..	..
United Kingdom	2001	..	2.4	..	..	..	..	..	69	..	19	..	..
United States	2000	2.7	..	..	..	..	..	66	..	..	..	9	7
Uruguay	1996	3.3	3.4 ^b	22 ^b	..	..	..	57 ^b	57 ^b	..	..	13 ^b	13 ^b
Uzbekistan	..	..	..	..	..	..	..	..	..	..	..	..	..
Venezuela, RB	2001	4.4	..	..	..	..	..	78	..	14	..	16	..
Vietnam	1999	4.6	4.5	..	..	77	89	95	86	..	..	..	..
West Bank and Gaza	1997	7.1	..	..	..	..	..	78	..	45	..	..	..
Yemen	1994	6.7	6.8	54 ^b	6 ^b	..	..	88 ^b	68 ^b	3 ^b	11 ^b	..	..
Zambia	2000	5.3	5.9	..	..	..	..	94	30	..	..	..	..
Zimbabwe	1992	4.8	4.2	..	..	..	..	94	30	6	..	..	..

a. More than two people per room. b. Data are from a previous census.

About the data

Urbanization can yield important social benefits, improving access to public services and the job market. It also leads to significant demands for services. Inadequate living quarters and demand for housing and shelter are major concerns for policymakers.

The unmet demand for affordable housing, along with urban poverty, has led to the emergence of slums in many poor countries. Improving the shelter situation requires a better understanding of the mechanisms governing housing markets and the processes governing housing availability. That requires good data and adequate policy-oriented analysis so that housing policy can be formulated in a global comparative perspective and drawn from lessons learned in other countries. Housing policies and outcomes affect such broad socioeconomic conditions as the infant mortality rate, performance in school, household saving, productivity levels, capital formation, and government budget deficits. A good understanding of housing conditions thus requires an extensive set of indicators within a reasonable framework.

There is a strong demand for quantitative indicators that can measure housing conditions on a regular basis to monitor progress. However, data deficiencies and lack of rigorous quantitative analysis hamper informed decisionmaking on desirable policies to improve housing conditions. The data in the table are from housing and population censuses, collected using similar definitions. The table will incorporate household survey data in future editions. The table focuses attention on urban areas, where housing conditions are typically most severe. Not all the compiled indicators are presented in the table because of space limitations.

Definitions

- **Census year** is the year in which the underlying data were collected.
- **Household size** is the average number of people within a household, calculated by dividing total population by the number of households in the country and in urban areas.
- **Overcrowding** refers to the number of households living in dwellings with two or more people per room as a percentage of total households in the country and in urban areas.
- **Durable dwelling units** are the number of housing units in structures made of durable building materials (concrete, stone, cement, brick, asbestos, zinc, and stucco) expected to maintain their stability for 20 years or longer under local conditions with normal maintenance and repair, taking into account location and environmental hazards such as floods, mudslides, and earthquakes, as a percentage of total dwellings.
- **Home ownership** refers to the number of privately owned dwellings as a percentage of total dwellings. When the number of private dwellings is not available from the census data, the share of households that own their housing unit is used. Privately owned and owner-occupied units are included, depending on the definition used in the census data. State- and community-owned units and rented, squatted, and rent-free units are excluded.
- **Multiunit dwellings** are the number of multiunit dwellings, such as apartments, flats, condominiums, barracks, boardinghouses, orphanages, retirement houses, hostels, hotels, and collective dwellings, as a percentage of total dwellings.
- **Vacancy rate** is the percentage of completed dwelling units that are currently unoccupied. It includes all vacant units, whether on the market or not (such as second homes).

Selected housing indicators for smaller economies

3.12a

	Census year	Household size number of people	Overcrowding Households living in overcrowded dwellings ^a % of total	Durable dwelling units Buildings with durable structure % of total	Home ownership Privately owned dwellings % of total	Multiunit dwellings % of total	Vacancy rate Unoccupied dwellings % of total
Antigua and Barbuda	2001	3.0	..	99 ^b	65 ^b	3 ^b	22
Bahamas	1990	3.8	12	99	55	13	14
Bahrain	2001	5.9	..	94 ^b	51	28	6
Barbados	1990	3.5	3	100	76	9	9
Belize	2000	4.6	..	93	63	4	..
Cape Verde	1990	5.1	28	78	72	2	..
Cayman Islands	1999	3.1	..	100	53	38	19
Equatorial Guinea	1993	7.5	14	56 ^b	75	14	..
Fiji	1996	5.4	..	60	65	7	..
Guam	2000	4.0	2 ^b	93	48	29	19
Isle of Man	2001	2.4	0	..	68	16	..
Maldives	2000	6.6	..	93	..	1	15
Marshall Islands	1999	7.8	..	95	72	12	8
Netherlands Antilles	2001	2.9	24 ^b	99	60	16	12
New Caledonia	1989	4.1	..	77	53	9	13
Northern Mariana Islands	1995	4.9	9 ^b	99	33	27	17
Palau	2000	5.7	8	76	79	11	3
Seychelles	1997	4.2	15 ^b	97	78	..	0
Solomon Islands	1999	6.3	51	23	85	1	..
St. Vincent & Grenadines	1991	3.9	..	98	71	7	..
Turks and Caicos	1990	3.3	4	96	66	11	..
Virgin Islands (UK)	1991	3.0	2	99	40	46	..
Western Samoa	1991	7.3	..	42	90	47	30

a. More than two people per room. b. Data are from a previous census.
Source: National population and housing censuses.

Data sources

Data on urban housing conditions are from national population and housing censuses.



	Motor vehicles				Passenger cars		Road density	Fuel prices		Particulate matter concentration	
	per 1,000 people		per kilometer of road		per 1,000 people		km. of road per 100 sq. km. of land area	\$ per liter		Urban-population-weighted PM10 micrograms per cubic meter	
	1990	2005	1990	2005	1990	2005		Gasoline	Diesel	1990	2005
Afghanistan	..	..	3	9	..	..	5	0.68	0.65	79	44
Albania	11	85	3	15	2	61	66	1.44	1.29	92	50
Algeria	55	91	15	27	26	58	5	0.32	0.19	115	71
Angola	19	..	3	..	..	8	4	0.50	0.36	142	80
Argentina	181	..	27	..	134	146	8	0.62	0.48	105	76
Armenia	5	..	2	..	1	..	27	0.96	0.77	456	68
Australia	530	671	11	17	450	542	11	0.93	0.94	22	15
Austria	421	599	30	36	387	503	162	1.32	1.26	38	34
Azerbaijan	52	61	7	10	36	57	72	0.46	0.41	169	59
Bangladesh	1	1	0	1	0	0	184	0.79	0.45	231	140
Belarus	61	..	13	21	59	181	46	0.79	0.55	23	7
Belgium	423	529	30	37	385	468	498	1.63	1.34	31	23
Benin	3	..	2	..	2	13	17	0.81	0.81	75	41
Bolivia	41	49	6	7	..	15	6	0.54	0.47	120	97
Bosnia and Herzegovina	114	..	24	..	101	..	43	1.34	1.24	36	19
Botswana	18	113	3	8	10	47	4	0.78	0.74	95	68
Brazil	88	170	8	18	84	136	21	1.26	0.84	40	26
Bulgaria	163	360	39	63	146	314	40	1.05	1.08	111	60
Burkina Faso	4	7	3	7	2	5	34	1.15	1.12	149	94
Burundi	..	..	3	..	..	1	48	1.20	1.22	56	30
Cambodia	..	36	0	37	..	25	22	1.01	0.78	116	62
Cameroon	10	11	3	3	6	11	11	1.14	1.07	116	65
Canada	..	582	20	13	468	561	15	0.84	0.78	25	19
Central African Republic	1	..	0	..	1	1	4	1.37	1.27	61	49
Chad	2	..	0	..	1	..	3	1.31	1.20	215	123
Chile	81	135	13	26	52	88	11	1.09	0.86	88	53
China	5	24	4	16	1	15	21	0.69	0.61	114	75
Hong Kong, China	66	72	253	254	42	53	188	1.69	1.06	..	..
Colombia	39	59	13	16	21	35	15	0.98	0.57	39	23
Congo, Dem. Rep.	..	..	9	..	17	..	7	0.94	1.00	73	50
Congo, Rep.	18	..	3	..	..	8	5	0.96	0.67	132	91
Costa Rica	87	198	7	24	55	146	69	0.98	0.67	45	37
Côte d'Ivoire	24	..	6	..	..	7	25	1.20	1.06	94	48
Croatia	..	349	34	55	185	312	51	1.34	1.22	50	31
Cuba	37	..	16	..	18	..	55	1.10	0.91	44	17
Czech Republic	246	394	46	31	228	363	165	1.30	1.29	68	22
Denmark	368	437	27	33	320	354	170	1.58	1.45	30	19
Dominican Republic	75	115	48	..	21	78	26	1.03	0.75	44	23
Ecuador	35	55	8	17	31	32	16	0.47	0.39	38	26
Egypt, Arab Rep.	29	..	33	..	21	27	9	0.30	0.12	222	128
El Salvador	33	..	14	..	17	24	48	0.82	0.80	46	35
Eritrea	1	..	1	..	1	..	4	1.90	0.81	121	61
Estonia	211	477	22	11	154	367	135	1.23	1.22	45	14
Ethiopia	1	2	2	4	1	1	4	0.93	0.62	112	74
Finland	441	531	29	35	386	460	26	1.55	1.26	24	18
France	494	596	32	38	405	494	173	1.48	1.33	18	14
Gabon	32	..	4	..	19	..	4	0.64	0.39	10	7
Gambia, The	..	7	..	3	..	5	37	1.08	1.01	142	95
Georgia	..	71	..	16	..	56	29	0.86	0.89	208	51
Germany	405	585	53	208	386	550	..	1.55	1.38	27	19
Ghana	8	21	4	9	5	5	25	0.86	0.84	39	34
Greece	248	497	22	47	171	388	91	1.16	1.19	64	36
Guatemala	21	68	16	53	11	53	13	0.78	0.64	63	62
Guinea	4	14	1	4	2	8	18	0.79	0.82	107	77
Guinea-Bissau	..	..	..	..	..	..	12	0.00	0.00	118	80
Haiti	8	..	14	..	5	..	15	0.88	0.60	70	39

Traffic and congestion

	Motor vehicles				Passenger cars		Road density	Fuel prices		Particulate matter concentration	
	per 1,000 people		per kilometer of road		per 1,000 people		km. of road per 100 sq. km. of land area	\$ per liter		Urban-population-weighted PM10 micrograms per cubic meter	
	1990	2005	1990	2005	1990	2005		Gasoline	Diesel	1990	2005
	1990	2005	1990	2005	1990	2005	2005	2006	2006	1990	2005
Honduras	22	67	10	31	5	52	12	0.89	0.73	45	46
Hungary	212	316	21	20	188	274	178	1.30	1.31	36	18
India	4	12	2	3	2	8	114	1.01	0.75	112	68
Indonesia	16	109	10	62	7	..	21	0.57	0.44	138	96
Iran, Islamic Rep.	34	..	14	..	..	24	11	0.09	0.03	86	55
Iraq	14	..	6	..	1	..	10	0.03	0.01	146	126
Ireland	270	447	10	20	227	382	140	1.34	1.35	26	17
Israel	210	293	74	115	174	239	81	1.47	1.27	71	31
Italy	529	667	99	81	476	595	165	1.56	1.49	42	28
Jamaica	52	..	7	..	43	135	199	0.82	0.75	58	38
Japan	469	586	52	63	283	441	323	1.09	0.90	43	31
Jordan	60	115	26	83	44	78	9	0.86	0.45	110	52
Kazakhstan	76	116	8	17	50	93	3	0.70	0.45	43	19
Kenya	12	18	5	10	..	9	11	1.12	0.98	66	38
Korea, Dem. Rep.	..	..	..	..	..	..	26	0.71	0.79	181	73
Korea, Rep.	79	319	60	151	48	230	104	1.65	1.33	51	37
Kuwait	..	422	..	181	..	349	32	0.22	0.21	82	101
Kyrgyz Republic	..	39	..	10	..	39	10	0.64	0.54	76	24
Lao PDR	9	57	3	10	6	..	14	0.86	0.73	73	47
Latvia	135	377	6	12	106	323	112	1.20	1.15	38	15
Lebanon	321	..	183	..	300	403	68	0.74	0.62	43	40
Lesotho	11	..	4	..	3	..	20	0.89	0.88	85	42
Liberia	14	..	4	..	..	6	11	0.79	0.85	60	45
Libya	165	257	10	..	96	232	5	0.13	0.13	106	94
Lithuania	160	467	12	20	133	426	127	1.08	1.09	53	19
Macedonia, FYR	132	163	30	25	121	150	52	1.23	1.09	46	20
Madagascar	6	..	2	..	4	..	9	1.15	1.00	77	35
Malawi	4	..	4	..	2	..	16	1.17	1.12	75	34
Malaysia	124	272	26	72	101	225	30	0.53	0.40	37	25
Mali	3	..	2	..	2	..	2	1.22	1.04	271	171
Mauritania	10	..	3	..	7	..	1	0.97	0.84	145	104
Mauritius	59	130	35	79	44	96	99	0.74	0.56	23	17
Mexico	119	208	41	90	82	137	18	0.74	0.52	69	40
Moldova	53	94	17	31	48	70	39	0.45	0.31	98	38
Mongolia	21	43	1	2	6	28	3	0.88	0.87	65	64
Morocco	37	59	15	29	28	46	13	1.22	0.87	32	22
Mozambique	4	..	2	..	3	..	4	1.15	1.06	110	28
Myanmar	2	5	3	..	1	4	4	0.66	0.75	116	63
Namibia	71	85	1	4	39	42	5	0.87	0.87	74	42
Nepal	..	..	..	..	..	3	12	0.94	0.73	67	36
Netherlands	405	486	58	62	368	429	372	1.70	1.32	46	35
New Zealand	524	720	19	32	436	607	35	0.98	0.70	16	15
Nicaragua	19	46	5	13	10	18	15	0.67	0.58	49	30
Niger	6	5	..	4	5	4	1	1.14	1.11	217	149
Nigeria	30	..	21	..	12	17	21	0.51	0.66	176	62
Norway	458	546	22	27	380	439	31	1.80	1.66	24	20
Oman	130	..	9	..	83	156	11	0.31	0.39	148	132
Pakistan	6	14	4	8	4	10	34	1.01	0.64	212	120
Panama	75	103	18	27	60	73	16	0.70	0.60	58	35
Papua New Guinea	27	..	6	..	..	5	4	0.94	0.64	34	24
Paraguay	27	85	4	15	16	50	7	0.97	0.77	106	84
Peru	..	47	43	16	..	30	6	1.22	0.86	98	61
Philippines	10	34	4	14	7	9	67	0.76	0.67	55	26
Poland	168	386	18	35	138	323	138	1.30	1.30	59	37
Portugal	222	507	34	67	162	471	86	1.56	1.10	52	28
Puerto Rico	295	..	79	..	242	..	289	0.65	0.78	27	21



	Motor vehicles				Passenger cars		Road density km. of road per 100 sq. km. of land area	Fuel prices		Particulate matter concentration	
	per 1,000 people		per kilometer of road		per 1,000 people			\$ per liter		Urban-population-weighted PM10 micrograms per cubic meter	
	1990	2005	1990	2005	1990	2005		Gasoline	Diesel	1990	2005
Romania	72	185	11	20	56	149	86	1.26	1.24	36	14
Russian Federation	87	174	14	48	65	161	3	0.77	0.66	41	19
Rwanda	2	3	1	..	1	1	57	1.11	1.08	49	28
Saudi Arabia	165	..	19	..	98	415	8	0.16	0.07	161	120
Senegal	11	14	6	9	8	10	7	1.31	1.09	95	95
Serbia ^a	137	199	31	102	133	181	44	1.48	1.31	30	14
Sierra Leone	..	4	..	2	..	2	16	0.98	0.98	91	57
Singapore	130	137	142	183	89	101	469	0.92	0.63	106	40
Slovak Republic	194	256	57	32	163	222	89	1.35	1.43	41	16
Slovenia	306	523	42	27	289	471	191	1.23	1.21	40	31
Somalia	2	..	1	..	1	..	4	0.74	0.67	78	32
South Africa	139	143	26	16	97	98	30	0.85	0.84	34	22
Spain	360	550	43	35	309	445	133	1.15	1.10	42	34
Sri Lanka	21	42	4	9	7	13	151	0.88	0.55	95	94
Sudan	9	..	22	..	8	..	1	0.72	0.49	326	173
Swaziland	66	84	18	25	35	40	21	0.80	0.85	60	31
Sweden	464	513	29	11	426	460	104	1.46	1.44	15	12
Switzerland	491	563	46	59	449	520	178	1.27	1.36	37	25
Syrian Arab Republic	26	36	10	7	10	12	52	0.60	0.13	159	79
Tajikistan	3	..	1	..	0	19	20	0.80	0.74	104	52
Tanzania	5	..	2	..	1	1	9	1.04	0.99	57	24
Thailand	46	..	36	..	14	54	11	0.70	0.65	88	77
Timor-Leste	..	..	..	..	..	..	..	..	..	..	..
Togo	24	..	11	..	..	10	14	1.03	1.01	56	36
Trinidad and Tobago	117	..	19	..	98	..	162	0.43	0.24	142	107
Tunisia	48	95	19	49	23	83	12	0.83	0.57	71	32
Turkey	50	117	8	20	34	80	55	1.88	1.62	75	43
Turkmenistan	..	..	..	..	..	..	5	0.02	0.01	177	56
Uganda	2	5	..	4	1	2	36	1.17	1.01	27	12
Ukraine	63	128	20	36	63	118	29	0.81	0.87	72	23
United Arab Emirates	121	..	52	..	97	228	5	0.37	0.53	264	135
United Kingdom	400	517	64	80	341	457	160	1.63	1.73	25	16
United States	756 ^b	814 ^b	30	31	536 ^b	461 ^{b,c}	71	0.63	0.69	30	22
Uruguay	138	176	45	..	122	151	44	1.23	0.94	237	161
Uzbekistan	..	..	..	..	..	..	19	0.85	0.54	84	61
Venezuela, RB	93	..	25	..	73	94	11	0.03	0.02	22	11
Vietnam	..	8	..	..	..	..	72	0.67	0.53	124	61
West Bank and Gaza	..	36	..	26	..	29	83	1.29	0.98	..	..
Yemen, Rep.	34	..	8	..	14	19	14	0.30	0.28	141	82
Zambia	14	..	3	..	8	..	12	1.31	1.22	95	44
Zimbabwe	32	..	4	..	29	45	25	0.61	0.65	35	27
World	117 w	148 w	..	..	91 w	118 w	23 w	0.97 m	0.84 m	80 w	53 w
Low income	5	9	..	..	3	8	21	0.98	0.84	130	74
Middle income	36	66	..	..	22	50	13	0.86	0.74	85	56
Lower middle income	14	31	..	..	8	21	16	0.85	0.70	107	69
Upper middle income	111	174	..	..	87	140	12	0.92	0.79	54	33
Low & middle income	24	39	..	..	15	39	15	0.89	0.79	98	61
East Asia & Pacific	9	24	..	..	4	14	22	0.53	0.40	112	73
Europe & Central Asia	93	167	..	..	75	152	9	1.14	1.09	62	29
Latin America & Carib.	100	155	..	..	71	115	18	0.82	0.67	59	37
Middle East & N. Africa	37	..	..	..	25	34	7	0.46	0.34	124	77
South Asia	4	12	..	..	2	8	110	0.91	0.65	132	81
Sub-Saharan Africa	21	..	..	..	14	..	7	1.03	0.98	115	60
High income	496	600	..	..	388	467	55	1.33	1.24	37	27
Euro area	428	604	..	..	379	418 ^d	139	1.52	1.29	33	24

a. Includes Montenegro. b. Data are from the U.S. Federal Highway Administration. c. Excludes personal passenger vans, passenger minivans, and utility-type vehicles, which are all treated as trucks. d. Data are from the European Commission and the European Road Federation.

About the data

Traffic congestion in urban areas constrains economic productivity, damages people's health, and degrades the quality of life. The particulate air pollution emitted by motor vehicles—the dust and soot in exhaust—is far more damaging to human health than once believed. (For information on particulate matter and other air pollutants, see table 3.14.)

In recent years ownership of passenger cars has increased, and the expansion of economic activity has led to the transport by road of more goods and services over greater distances (see table 5.9). These developments have increased demand for roads and vehicles, adding to urban congestion, air pollution, health hazards, and traffic accidents and injuries. Congestion, the most visible cost of expanding vehicle ownership, is reflected in the indicators in the table. Other relevant indicators—such as average vehicle speed in major cities and the cost of traffic congestion, which takes a heavy toll on economic productivity—are not included because data are incomplete or difficult to compare.

The data in the table—except those on fuel prices and particulate matter—are compiled by the International Road Federation (IRF) through questionnaires sent to national organizations. The IRF uses a hierarchy of sources to gather as much information as possible. Primary sources are national road associations. Where an association lacks data or does not respond, other agencies are contacted, including road directorates, ministries of transport or public works, and central statistical offices. As a result, data are of uneven quality. The coverage of each indicator may differ across countries because of different definitions. Comparability is also limited when time series data are reported. The IRF is taking steps to improve the quality of the data in its 2006 *World Road Statistics*.

Because this effort covers data for 1999–2005 only, data in the table for 1990 and 2005 may not be comparable. Another reason is coverage. For example, for the United States the 2005 estimate for passenger cars from the U.S. Federal Highway Administration excludes personal passenger vans, passenger minivans, and utility-type vehicles, which are all treated as trucks. Moreover, the data do not cover vehicle quality or age. Road density is a rough indicator of accessibility and does not capture the width, type, or condition of roads. Thus comparisons over time and across countries should be made with caution.

Data on fuel prices are compiled by the German Agency for Technical Cooperation (GTZ), from its global network of regional offices and representatives, and other sources, including the Allgemeiner Deutscher Automobile Club (for Europe) and a project of the Latin American Energy Organization for Latin America. Local prices are converted to U.S. dollars using the exchange rate in the *Financial Times* international monetary table on the survey date. When multiple exchange rates exist, the market, parallel, or black market rate is used.

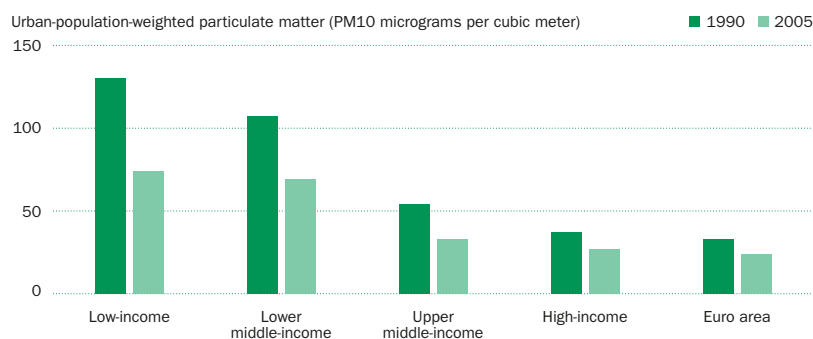
Considerable uncertainty surrounds estimates of particulate matter concentrations, and caution should be used in interpreting them. They allow for cross-country comparisons of the relative risk of particulate matter pollution facing urban residents. Major sources of urban outdoor particulate matter pollution are traffic and industrial emissions, but nonanthropogenic sources such as dust storms may also be a substantial contributor for some cities. Country technology and pollution controls are important determinants of particulate matter. Data on particulate matter for selected cities are in table 3.14. Estimates of economic damages from death and illness due to particulate matter pollution are in table 3.16.

Definitions

• **Motor vehicles** include cars, buses, and freight vehicles but not two-wheelers. Population figures refer to the midyear population in the year for which data are available. Roads refer to motorways, highways, main or national roads, and secondary or regional roads. A motorway is a road designed and built for motor traffic that separates the traffic flowing in opposite directions. • **Passenger cars** are road motor vehicles, other than two-wheelers, intended for the carriage of passengers and designed to seat no more than nine people (including the driver). • **Road density** is the ratio of the length of the country's total road network to the country's land area. The road network includes all roads in the country—motorways, highways, main or national roads, secondary or regional roads, and other urban and rural roads. • **Fuel prices** are the pump prices of the most widely sold grade of gasoline and of diesel fuel. Prices are converted from the local currency to U.S. dollars (see *About the data*). • **Particulate matter concentration** is fine suspended particulates of less than 10 microns in diameter (PM10) that are capable of penetrating deep into the respiratory tract and causing significant health damage. Data are urban-population-weighted PM10 levels in residential areas of cities with more than 100,000 residents. The estimates represent the average annual exposure level of the average urban resident to outdoor particulate matter.

Particulate matter concentration has fallen in all income groups, and the higher the income, the lower the concentration

3.13a



Source: Table 3.13.

Data sources

Data on vehicles and road density are from the IRF's electronic files and its annual *World Road Statistics*, except where footnoted. Data on fuel prices are from the GTZ's electronic files. Data on particulate matter concentrations are from Kiran Dev Pandey, David Wheeler, Bart Ostro, Uwe Deichmann, Kirk Hamilton, and Katie Bolt's "Ambient Particulate Matter Concentrations in Residential and Pollution Hotspot Areas of World Cities: New Estimates Based on the Global Model of Ambient Particulates (GMAPS)" (2006).



	City	City population	Particulate matter concentration	Sulfur dioxide	Nitrogen dioxide
		thousands	Urban-population-weighted PM10 micrograms per cubic meter	micrograms per cubic meter	micrograms per cubic meter
		2005	2004	2001 ^a	2001 ^a
Argentina	Córdoba	1,423	58	..	97
Australia	Melbourne	3,626	12	..	30
	Perth	1,474	12	5	19
	Sydney	4,331	20	28	81
Austria	Vienna	2,260	41	14	42
Belgium	Brussels	1,012	28	20	48
Brazil	Rio de Janeiro	11,469	35	129	..
	São Paulo	18,333	40	43	83
Bulgaria	Sofia	1,093	61	39	122
Canada	Montréal	3,640	19	10	42
	Toronto	5,312	22	17	43
	Vancouver	2,188	13	14	37
Chile	Santiago	5,683	61	29	81
China	Anshan	1,611	82	115	88
	Beijing	10,717	89	90	122
	Changchun	3,046	74	21	64
	Chengdu	4,065	86	77	74
	Chongqing	6,363	123	340	70
	Dalian	3,073	50	61	100
	Guangzhou	8,425	63	57	136
	Guiyang	3,447	70	424	53
	Harbin	3,695	77	23	30
	Jinan	2,743	94	132	45
	Kunming	2,837	70	19	33
	Lanzhou	2,411	91	102	104
	Liupanshui	1,149	59	102	..
	Nanchang	2,188	78	69	29
	Pingxiang	905	67	75	..
	Qingdao	2,817	68	190	64
	Shanghai	14,503	73	53	73
	Shenyang	4,720	101	99	73
	Taiyuan	2,794	88	211	55
	Tianjin	7,040	125	82	50
	Wulumqi	2,025	57	60	70
	Wuhan	7,093	79	40	43
	Zhengzhou	2,590	97	63	95
	Zibo	2,982	74	198	43
Colombia	Bogotá	7,747	31	..	..
Croatia	Zagreb	908 ^b	33	31	..
Cuba	Havana	2,189	21	1	5
Czech Republic	Prague	1,171	23	14	33
Denmark	Copenhagen	1,088	21	7	54
Ecuador	Guayaquil	2,387	23	15	..
	Quito	1,514	30	22	..
Egypt, Arab Rep.	Cairo	11,128	169	69	..
Finland	Helsinki	1,091	21	4	35
France	Paris	9,820	11	14	57
Germany	Berlin	3,389	22	18	26
	Frankfurt	668 ^b	19	11	45
	Munich	1,263	20	8	53
Ghana	Accra	1,981	33	..	..
Greece	Athens	3,230	43	34	64
Hungary	Budapest	1,693	19	39	51
Iceland	Reykjavik	164 ^b	18	5	42
India	Ahmadabad	5,120	83	30	21
	Bengaluru	6,462	45	..	..

About the data

Indoor and outdoor air pollution place a major burden on world health. More than half the world's people rely on dung, wood, crop waste, or coal to meet basic energy needs. Cooking and heating with these fuels on open fires or stoves without chimneys lead to indoor air pollution, which is responsible for 1.6 million deaths a year—one every 20 seconds. In many urban areas air pollution exposure is the main environmental threat to health. Long-term exposure to high levels of soot and small particles contributes to a range of health effects, including respiratory diseases, lung cancer, and heart disease. Particulate pollution, alone or with sulfur dioxide, creates an enormous burden of ill health.

Sulfur dioxide and nitrogen dioxide emissions lead to deposition of acid rain and other acidic compounds over long distances, which can lead to the leaching of trace minerals and nutrients critical to trees and plants. Sulfur dioxide emissions can damage human health, particularly that of the young and old. Nitrogen dioxide is emitted by bacteria, motor vehicles, industrial activities, nitrogen fertilizers, fuel and biomass combustion, and aerobic decomposition of organic matter in soils and oceans.

Where coal is the primary fuel for power plants without effective dust controls, steel mills, industrial boilers, and domestic heating, high levels of urban air pollution are common—especially particulates and sulfur dioxide. Elsewhere the worst emissions are from petroleum product combustion.

Sulfur dioxide and nitrogen dioxide concentration data are based on average observed concentrations at urban monitoring sites, which not all cities have.

The data on particulate matter are estimated average annual concentrations in residential areas away from air pollution “hotspots,” such as industrial districts and transport corridors. The data are from the World Bank's Development Research Group and Environment Department estimates of annual ambient concentrations of particulate matter in cities with populations exceeding 100,000 (Pandey and others 2006b). A country's technology and pollution controls are important determinants of particulate matter concentrations.

Pollutant concentrations are sensitive to local conditions, and even monitoring sites in the same city may register different levels. Thus these data should be considered only a general indication of air quality, and comparisons should be made with caution. Current World Health Organization (WHO) air quality guidelines are annual mean concentrations of 20 micrograms per cubic meter for particulate matter less than 10 microns in diameter and 40 micrograms for nitrogen dioxide and daily mean concentrations of 20 micrograms per cubic meter for sulfur dioxide.

	City	City population	Particulate matter concentration	Sulfur dioxide	Nitrogen dioxide
		thousands 2005	Urban-population-weighted PM10 micrograms per cubic meter 2004	micrograms per cubic meter 2001 ^a	micrograms per cubic meter 2001 ^a
India	Chennai	6,916	37	15	17
	Delhi	15,048	150	24	41
	Hyderabad	6,115	41	12	17
	Kanpur	3,018	109	15	14
	Kolkata	14,277	128	49	34
	Lucknow	2,566	109	26	25
	Mumbai	18,196	63	33	39
	Nagpur	2,350	56	6	13
	Pune	4,409	47	..	..
Indonesia	Jakarta	13,215	104	..	..
Iran, Islamic Rep.	Tehran	7,314	58	209	..
Ireland	Dublin	1,037	19	20	..
Italy	Milan	2,953	30	31	248
	Rome	3,348	29	..	..
	Turin	1,660	44	..	..
Japan	Osaka-Kobe	11,268	35	19	63
	Tokyo	35,197	40	18	68
	Yokohama	3,366 ^b	31	100	13
Kenya	Nairobi	2,773	43	..	..
Korea, Rep.	Pusan	3,554	44	60	51
	Seoul	9,645	41	44	60
	Taegu	2,511	50	81	62
Malaysia	Kuala Lumpur	1,405	29	24	..
Mexico	Mexico City	19,411	51	74	130
Netherlands	Amsterdam	1,147	34	10	58
New Zealand	Auckland	1,148	14	3	20
Norway	Oslo	802	14	8	43
Philippines	Manila	10,686	39	33	..
Poland	Katowice	2,914 ^b	39	83	79
	Łódź	776	39	21	43
	Warsaw	1,680	43	16	32
Portugal	Lisbon	2,761	23	8	52
Romania	Bucharest	1,934	18	10	71
Russian Federation	Moscow	10,654	21	109	..
	Omsk	1,132	22	20	34
Singapore	Singapore	4,326	44	20	30
Slovak Republic	Bratislava	456 ^b	15	21	27
South Africa	Cape Town	3,083	16	21	72
	Durban	2,631	32	31	..
	Johannesburg	3,254	33	19	31
Spain	Barcelona	4,795	35	11	43
	Madrid	5,608	30	24	66
Sweden	Stockholm	1,708	11	3	20
Switzerland	Zurich	1,144	23	11	39
Thailand	Bangkok	6,593	79	11	23
Turkey	Ankara	3,573	46	55	46
	Istanbul	9,712	55	120	..
Ukraine	Kiev	2,672	35	14	51
United Kingdom	Birmingham	2,280	25	9	45
	London	8,505	21	25	77
	Manchester	2,228	15	26	49
United States	Chicago	8,814	25	14	57
	Los Angeles	12,298	34	9	74
	New York-Newark	18,718	21	26	79
Venezuela, RB	Caracas	2,913	10	33	57

a. Data are for the most recent year available. b. Data are for 2000.

Definitions

• **City population** is the number of residents of the city or metropolitan area as defined by national authorities and reported to the United Nations. • **Particulate matter concentration** is fine suspended particulates of less than 10 microns in diameter (PM10) that are capable of penetrating deep into the respiratory tract and causing significant health damage. Data are urban-population-weighted PM10 levels in residential areas of cities with more than 100,000 residents. The estimates represent the average annual exposure level of the average urban resident to outdoor particulate matter. • **Sulfur dioxide** is an air pollutant produced when fossil fuels containing sulfur are burned. • **Nitrogen dioxide** is a poisonous, pungent gas formed when nitric oxide combines with hydrocarbons and sunlight, producing a photochemical reaction. These conditions occur in both natural and anthropogenic activities.

Data sources

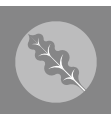
Data on city population are from the United Nations Population Division. Data on particulate matter concentrations are from Kiran D. Pandey, David Wheeler, Bart Ostro, Uwe Deichman, Kirk Hamilton, and Kathrine Bolt's "Ambient Particulate Matter Concentration in Residential and Pollution Hotspot Areas of World Cities: New Estimates Based on the Global Model of Ambient Particulates (GMAPS)" (2006). Data on sulfur dioxide and nitrogen dioxide concentrations are from the WHO's Healthy Cities Air Management Information System and the World Resources Institute.



	Environ- mental strategies or action plans	Biodiversity assessments, strategies, or action plans	Participation in treaties ^a								
			Climate change ^b	Ozone layer	CFC control	Law of the Sea ^c	Biological diversity ^b	Kyoto Protocol	CITES	CCD	Stockholm Convention
			1992	1985	1987	1982	1992	1997	1973	1994	2004
Afghanistan			2002	2004 ^f	2004 ^f		2002		1985 ^f	1995 ^f	
Albania	1993		1995	1999 ^f	1999 ^f	2003 ^f	1994 ^f	2005 ^f	2003 ^f	2000 ^f	2004
Algeria	2001		1994	1992 ^f	1992 ^f	1996	1995	2005 ^f	1983 ^f	1996	2006
Angola			2000	2000 ^f	2000 ^f	1994	1998	2007		1997	2006
Argentina	1992		1994	1990	1990	1995	1994	2001	1981	1997	2005
Armenia			1994	1999 ^f	1999 ^f	2002 ^f	1993 ^d	2003 ^f		1997	2003
Australia	1992	1994	1994	1987 ^f	1989	1994	1993	2007 ^d	1976	2000	2004
Austria			1994	1987	1989	1995	1994	2002	1982 ^f	1997 ^f	2002
Azerbaijan	1998		1995	1996 ^f	1996 ^f		2000 ^e	2000 ^f	1998 ^f	1998 ^f	2004 ^f
Bangladesh	1991	1990	1994	1990 ^f	1990 ^f	2001	1994	2001 ^f	1981	1996	2007
Belarus			2000	1986 ^d	1988 ^d	2006 ^f	1993	2005 ^d	1995 ^f	2001 ^f	2004 ^f
Belgium			1996	1988	1988	1998	1996	2002	1983	1997 ^f	2006
Benin	1993		1994	1993 ^f	1993 ^f	1997	1994	2002 ^f	1984 ^f	1996	2004
Bolivia	1994	1988	1995	1994 ^f	1994 ^f	1995	1994	1999	1979	1996	2003
Bosnia and Herzegovina			2000	1992 ^g	1992 ^g	1994 ^g	2002 ^f	2007	2002	2002 ^f	
Botswana	1990	1991	1994	1991 ^f	1991 ^f	1994	1995	2003 ^f	1977 ^f	1996	2002 ^f
Brazil		1988	1994	1990 ^f	1990 ^f	1994	1994	2002	1975	1997	2004
Bulgaria		1994	1995	1990 ^f	1990 ^f	1996	1996	2002	1991 ^f	2001 ^f	2004
Burkina Faso	1993		1994	1989	1989	2005	1993	2005 ^f	1989 ^f	1996	2004
Burundi	1994	1989	1997	1997 ^f	1997 ^f		1997	2001 ^f	1988 ^f	1997	2005
Cambodia	1999		1996	2001 ^f	2001 ^f		1995 ^f	2002 ^f	1997	1997	2006
Cameroon		1989	1995	1989 ^f	1989 ^f	1994	1994	2002 ^f	1981 ^f	1997	
Canada	1990	1994	1994	1986	1988	2003	1992	2002	1975	1995	2001
Central African Republic			1995	1993 ^f	1993 ^f		1995		1980 ^f	1996	
Chad	1990		1994	1989 ^f	1994		1994		1989 ^f	1996	2004
Chile		1993	1995	1990	1990	1997	1994	2002	1975	1997	2005
China	1994	1994	1994	1989 ^f	1991 ^f	1996	1993	2002 ^e	1981 ^f	1997	2004
Hong Kong, China											
Colombia	1998	1988	1995	1990 ^f	1993 ^f		1994	2001 ^f	1981	1999	
Congo, Dem. Rep.		1990	1995	1994 ^f	1994 ^f	1995	1996	2005 ^f	1976 ^f	1997	2005 ^f
Congo, Rep.		1990	1997	1994 ^f	1994 ^f		1994	2007	1983 ^f	1999	2007
Costa Rica	1990	1992	1994	1991 ^f	1991 ^f	1994	1994	2002	1975	1998	2007
Côte d'Ivoire	1994	1991	1995	1993 ^f	1993 ^f	1994	1994	2007	1994 ^f	1997	2004
Croatia	2001	2000	1996	1991 ^d	1991 ^d	1994 ^g	1996	2007 ^d	2000 ^f	2000 ^d	2007
Cuba			1994	1992 ^f	1992 ^f	1994	1994	2002	1990 ^f	1997	
Czech Republic	1994		1994	1993 ^d	1993 ^d	1996	1993 ^e	2001 ^e	993 ^g	2000 ^f	2002
Denmark	1994		1994	1988	1988	2004	1993	2002	1977	1995 ^f	2003
Dominican Republic		1995	1999	1993 ^f	1993 ^f		1996	2002 ^f	1986 ^f	1997 ^f	2007
Ecuador	1993	1995	1994	1990 ^f	1990 ^f		1993	2000	1975	1995	2004
Egypt, Arab Rep.	1992	1988	1995	1988	1988	1994	1994	2005 ^f	1978	1995	2003
El Salvador	1994	1988	1996	1992	1992		1994	1998	1987 ^f	1997 ^f	
Eritrea	1995		1995	2005 ^f	2005 ^f		1996 ^f	2005 ^f	1994 ^f	1996	2005 ^f
Estonia	1998		1994	1996 ^f	1996 ^f	2005 ^f	1994	2002	1992 ^f		
Ethiopia	1994	1991	1994	1994 ^f	1994 ^f		1994	2005 ^f	1989 ^f	1997	2003
Finland	1995		1994	1986	1988	1996	1994 ^d	2002	1976 ^f	1995 ^d	2002 ^d
France	1990		1994	1987 ^e	1988 ^e	1996	1994	2002 ^e	978	1997	2004 ^e
Gabon		1990	1998	1994 ^f	1994 ^f	1998	1997	2006 ^d	1989 ^f	1996 ^f	2007
Gambia, The	1992	1989	1994	1990 ^f	1990 ^f	1994	1994	2001 ^f	1977 ^f	1996	2006
Georgia	1998		1994	1996 ^f	1996 ^f	1996 ^f	1994 ^f	1999 ^f	1996 ^f	1999	2006
Germany			1994	1988	1988	1994 ^f	1993	2002	1976	1996	2002
Ghana	1992	1988	1995	1989 ^f	1989	1994	1994	2003 ^f	1975	1996	2003
Greece			1994	1988	1988	1995	1994	2002	1992 ^f	1997	2006
Guatemala	1994	1988	1996	1987 ^f	1989 ^f	1997	1995	1999	1979	1998 ^f	
Guinea	1994	1988	1994	1992 ^f	1992 ^f	1994	1993	2000 ^f	1981 ^f	1997	
Guinea-Bissau	1993	1991	1996	2002 ^f	2002 ^f	1994	1995	2005 ^d	1990 ^f	1995	
Haiti	1999		1996	2000 ^f	2000 ^f	1996	1996	2005 ^f		1996	

Government commitment

	Environ- mental strategies or action plans	Biodiversity assessments, strategies, or action plans	Participation in treaties ^a								
			Climate change ^b	Ozone layer	CFC control	Law of the Sea ^c	Biological diversity ^b	Kyoto Protocol	CITES	CCD	Stockholm Convention
			1992	1985	1987	1982	1992	1997	1973	1994	2004
Honduras	1993		1996	1993 ^f	1993 ^f	1994	1995	2000	1985 ^f	1997	2005
Hungary	1995		1994	1988 ^f	1989 ^f	2002	1994	2002 ^f	1985 ^f	1999 ^f	
India	1993	1994	1994	1991 ^f	1992 ^f	1995	1994	2002 ^f	1976	1996	2006
Indonesia	1993	1993	1994	1992 ^f	1992	1994	1994	2004	1978 ^f	1998	
Iran, Islamic Rep.			1996	1990 ^f	1990 ^f		1996	2005 ^f	1976	1997	2006
Iraq						1994					
Ireland			1994	1988 ^f	1988	1996	1996	2002	2002	1997	
Israel			1996	1992 ^f	1992		1995	2004	1979	1996	
Italy			1994	1988	1988	1995	1994	2002	1979	1997	
Jamaica	1994		1995	1993 ^f	1993 ^f	1994	1995	1999 ^f	1997 ^f	1997 ^f	2007
Japan			1994	1988 ^f	1988	1996	1993 ^d	2002 ^d	1980	1998 ^d	2002 ^f
Jordan	1991		1994	1989 ^f	1989 ^f	1995 ^f	1993	2003 ^f	1978 ^f	1996	2004
Kazakhstan			1995	1998 ^f	1998 ^f		1994		2000 ^f	1997	
Kenya	1994	1992	1994	1988 ^f	1988	1994	1994	2005 ^f	1978	1997	2004
Korea, Dem. Rep.			1995	1995 ^f	1995 ^f		1994 ^e	2005 ^f		2003 ^f	2002 ^f
Korea, Rep.			1994	1992	1992	1996	1994	2002	1993 ^f	1999	2007
Kuwait			1995	1992 ^f	1992 ^f	1994	2002	2005 ^f	2002	1997	2006
Kyrgyz Republic	1995		2000	2000 ^f	2000 ^f		1996 ^e	2003 ^f		1997 ^f	2006
Lao PDR	1995		1995	1998 ^f	1998 ^f	1998	1996 ^e	2003 ^f	2004 ^f	1996 ^d	2006
Latvia			1995	1995 ^f	1995 ^f	2004 ^f	1995	2002	1997 ^f	2002 ^f	2004
Lebanon			1995	1993 ^f	1993 ^f	1995	1994	2006		1996	2003
Lesotho	1989		1995	1994 ^f	1994 ^f		1995	2000 ^f	2003	1995	2002
Liberia			2003	1996 ^f	1996 ^f		2000	2002 ^f	2005 ^f	1998 ^f	2002 ^f
Libya			1999	1990 ^f	1990 ^f		2001	2006	2003 ^f	1996	2005 ^f
Lithuania			1995	1995 ^f	1995 ^f	2003 ^f	1996	2003	2001 ^f	2003 ^f	2006
Macedonia, FYR			1998	1994 ^g	1994 ^g	1994 ^g	1997 ^f	2004 ^f	2000 ^f	2002 ^f	2004
Madagascar	1988	1991	1999	1996 ^f	1996 ^f	2001	1996	2003 ^f	1975	1997	
Malawi	1994		1994	1991 ^f	1991 ^f		1994	2001 ^f	1982 ^f	1996	
Malaysia	1991	1988	1994	1989 ^f	1989 ^f	1996	1994	2002	1977 ^f	1997	
Mali		1989	1995	1994 ^f	1994 ^f	1994	1995	2002	1994 ^f	1995	2003
Mauritania	1988		1994	1994 ^f	1994 ^f	1996	1996	2005 ^f	1998 ^f	1996	2005
Mauritius	1990		1994	1992 ^f	1992 ^f	1994	1992	2001 ^f	1975	1996	2004
Mexico		1988	1994	1987	1988	1994	1993	2000	1991 ^f	1995	2003
Moldova	2002		1995	1996 ^f	1996 ^f	2007	1995	2003 ^f	2001 ^f	1999 ^f	2004
Mongolia	1995		1994	1996 ^f	1996 ^f	1996	1993	1999 ^f	1996 ^f	1996	2004
Morocco		1988	1996	1995	1995		1995	2002 ^f	1975	1996	2004
Mozambique	1994		1995	1994 ^f	1994 ^f	1997	1995	2005 ^f	1981 ^f	1997	2005
Myanmar		1989	1995	1993 ^f	1993 ^f	1996	1995	2003 ^f	1997 ^f	1997 ^f	2004 ^f
Namibia	1992		1995	1993 ^f	1993 ^f	1994	1997	2003 ^f	1990 ^f	1997	2005 ^f
Nepal	1993		1994	1994 ^f	1994 ^f	1998	1993	2005 ^f	1975 ^f	1996	2007
Netherlands	1994		1994	1988 ^f	1988 ^d	1996	1994 ^d	2002 ^f	1984	1995 ^d	2002 ^d
New Zealand	1994		1994	1987	1988	1996	1993	2002	1989 ^f	2000 ^f	2004
Nicaragua	1994		1996	1993 ^f	1993 ^f	2000	1995	1999	1977 ^f	1998	
Niger		1991	1995	1992 ^f	1992 ^f		1995	2004	1975	1996	2006
Nigeria	1990	1992	1994	1988 ^f	1988 ^f	1994	1994	2004 ^f	1974	1997	2004
Norway		1994	1994	1986	1988	1996	1993	2002	1976	1996	2002
Oman			1995	1999 ^f	1999 ^f	1994	1995	2005 ^f		1996 ^f	2005
Pakistan	1994	1991	1994	1992 ^f	1992 ^f	1997	1994	2005 ^f	1976 ^f	1997	
Panama	1990		1995	1989 ^f	1989	1996	1995	1999	1978	1996	2003
Papua New Guinea	1992	1993	1994	1992 ^f	1992 ^f	1997	1993	2002	1975 ^f	2000 ^f	2003
Paraguay			1994	1992 ^f	1992 ^f	1994	1994	1999	1976	1997	2004
Peru		1988	1994	1989	1993 ^f		1993	2002	1975	1995	2005
Philippines	1989	1989	1994	1991 ^f	1991	1994	1993	2003	1981	2000	2004
Poland	1993	1991	1994	1990 ^f	1990 ^f	1998	1996	2002	1989	2001 ^f	
Portugal	1995		1994	1988 ^f	1988	1997	1993	2002 ^e	1980	1996	2004 ^d
Puerto Rico											



	Environ- mental strategies or action plans	Biodiversity assessments, strategies, or action plans	Participation in treaties ^a								
			Climate change ^b	Ozone layer	CFC control	Law of the Sea ^c	Biological diversity ^b	Kyoto Protocol	CITES	CCD	Stockholm Convention
			1992	1985	1987	1982	1992	1997	1973	1994	2004
Romania	1995		1994	1993 ^f	1993 ^f	1996	1994	2001	1994 ^f	1998 ^f	2004
Russian Federation	1999	1994	1995	1986 ^d	1988 ^d	1997	1995	2004	1992	2003 ^f	
Rwanda	1991		1998	2001 ^f	2001 ^f		1996	2004 ^f	1980 ^f	1998	2002 ^f
Saudi Arabia			1995	1993 ^f	1993 ^f	1996	2001 ^e	2005 ^f	1996 ^f	1997 ^f	
Senegal	1984	1991	1995	1993 ^f	1993	1994	1994	2001 ^f	1977 ^f	1995	2003
Serbia			2001	2001 ^g	2001 ^g	2001 ^g	2002		2002		2002
Sierra Leone	1994		1995	2001 ^f	2001 ^f	1994	1994 ^e	2006 ^f	1994 ^f	1997	2003 ^f
Singapore	1993	1995	1997	1989 ^f	1989 ^f	1994	1995	2006 ^f	1986 ^f	1999 ^f	2005
Slovak Republic			1994	1993 ^g	1993 ^g	1996	1994 ^e	2002	1993	2001 ^f	2002
Slovenia	1994		1996	1992 ^g	1992 ^g	1995 ^g	1996	2002	2000 ^f	2001 ^f	2004
Somalia				2001 ^f	2001 ^f	1994			1985 ^f	2002 ^f	
South Africa	1993		1997	1990 ^f	1990 ^f	1997	1995	2002 ^f	1975	1997	2002
Spain			1994	1988 ^f	1988	1997	1995	2002	1986 ^f	1996	2004
Sri Lanka	1994	1991	1994	1989 ^f	1989 ^f	1994	1994	2002 ^f	1979 ^f	1998 ^f	
Sudan			1994	1993 ^f	1993 ^f	1994	1995	2004 ^f	1982	1995	2006
Swaziland			1997	1992 ^f	1992 ^f		1994		1997 ^f	1996	2006
Sweden			1994	1986	1988	1996	1993	2002	1974	1995	2002
Switzerland			1994	1987	1988		1994	2006 ^f	1974	1996	2003
Syrian Arab Republic	1999		1996	1989 ^f	1989 ^f		1996	2006 ^f	2003 ^f	1997	2005
Tajikistan			1998	1996 ^f	1998 ^f		1997 ^e			1997 ^f	2007
Tanzania	1994	1988	1996	1993 ^f	1993 ^f	1994	1996	2002 ^f	1979	1997	2004
Thailand			1995	1989 ^f	1989		2004	2002	1983	2001 ^f	2005
Timor-Leste											
Togo	1991		1995	1991 ^f	1991	1994	1995 ^d	2004 ^f	1978	1995 ^d	2004
Trinidad and Tobago			1994	1989 ^f	1989 ^f	1994	1996	1999	1984 ^f	2000 ^f	2002 ^f
Tunisia	1994	1988	1994	1989 ^f	1989 ^f	1994	1993	2003 ^f	1974	1995	2004
Turkey	1998		2004	1991 ^f	1991 ^f		1997		1996 ^f	1998	
Turkmenistan			1995	1993 ^f	1993 ^f		1996 ^e	1999		1996	
Uganda	1994	1988	1994	1988 ^f	1988	1994	1993	2002 ^f	1991 ^f	1997	2004 ^f
Ukraine	1999		1997	1986 ^d	1988 ^d	1999	1995	2004	1999 ^f	2002 ^f	
United Arab Emirates			1996	1989 ^f	1989 ^f		2000	2005 ^f	1990 ^f	1998 ^f	2002
United Kingdom	1995	1994	1994	1987	1988	1997 ^f	1994	2002	1976	1996	2005
United States	1995	1995	1994	1986	1988				1974	2000	
Uruguay			1994	1989 ^f	1991 ^f	1994	1993	2001	1975	1999 ^f	2004
Uzbekistan			1994	1993 ^f	1993 ^f		1995 ^e	1999	1997 ^f	1995	
Venezuela			1995	1988 ^f	1989		1994		1977	1998 ^f	2005
Vietnam		1993	1995	1994 ^f	1994 ^f	2006 ^f	1994	2002	1994 ^f	1998 ^f	2002
West Bank and Gaza											
Yemen, Rep.	1996	1992	1996	1996 ^f	1996 ^f	1994	1996	2004 ^f	1997 ^f	1997 ^f	2004
Zambia	1994		1994	1990 ^f	1990 ^f	1994	1993	2006 ^f	1980 ^f	1996	2006
Zimbabwe	1987		1994	1992 ^f	1992 ^f	1994	1994		1981 ^f	1997	

a. Ratification of the treaty. b. Year the treaty entered into force in the country. c. Convention became effective November 16, 1994. d. Acceptance. e. Approval. f. Accession. g. Succession.

About the data

National environmental strategies and participation in international treaties on environmental issues provide some evidence of government commitment to sound environmental management. But the signing of these treaties does not always imply ratification, nor does it guarantee that governments will comply with treaty obligations.

In many countries efforts to halt environmental degradation have failed, primarily because governments have neglected to make this issue a priority, a reflection of competing claims on scarce resources. To address this problem, many countries are preparing national environmental strategies—some focusing narrowly on environmental issues, and others integrating environmental, economic, and social concerns. Among such initiatives are conservation strategies and environmental action plans. Some countries have also prepared country environmental profiles and biodiversity strategies and profiles.

National conservation strategies—promoted by the World Conservation Union (IUCN)—provide a comprehensive, cross-sectoral analysis of conservation and resource management issues to help integrate environmental concerns with the development process. Such strategies discuss current and future needs, institutional capabilities, prevailing technical conditions, and the status of natural resources in a country.

National environmental action plans, supported by the World Bank and other development agencies, describe a country's main environmental concerns, identify the principal causes of environmental problems, and formulate policies and actions to deal with them. These plans are a continuing process in which governments develop comprehensive environmental policies, recommend specific actions, and outline the investment strategies, legislation, and institutional arrangements required to implement them.

Biodiversity profiles—prepared by the World Conservation Monitoring Centre and the IUCN—provide basic background on species diversity, protected areas, major ecosystems and habitat types, and legislative and administrative support. In an effort to establish a scientific baseline for measuring progress in biodiversity conservation, the United Nations Environment Programme (UNEP) coordinates global biodiversity assessments.

To address global issues, many governments have also signed international treaties and agreements launched in the wake of the 1972 United Nations Conference on the Human Environment in Stockholm and the 1992 United Nations Conference on

Environment and Development (the Earth Summit) in Rio de Janeiro, which produced Agenda 21—an array of actions to address environmental challenges:

- The Framework Convention on Climate Change aims to stabilize atmospheric concentrations of greenhouse gases at levels that will prevent human activities from interfering dangerously with the global climate.
- The Vienna Convention for the Protection of the Ozone Layer aims to protect human health and the environment by promoting research on the effects of changes in the ozone layer and on alternative substances (such as substitutes for chlorofluorocarbon) and technologies, monitoring the ozone layer, and taking measures to control the activities that produce adverse effects.
- The Montreal Protocol for Chlorofluorocarbon Control requires that countries help protect the earth from excessive ultraviolet radiation by cutting chlorofluorocarbon consumption by 20 percent over their 1986 level by 1994 and by 50 percent over their 1986 level by 1999, with allowances for increases in consumption by developing countries.
- The United Nations Convention on the Law of the Sea, which became effective in November 1994, establishes a comprehensive legal regime for seas and oceans, establishes rules for environmental standards and enforcement provisions, and develops international rules and national legislation to prevent and control marine pollution.
- The Convention on Biological Diversity promotes conservation of biodiversity through scientific and technological cooperation among countries, access to financial and genetic resources, and transfer of ecologically sound technologies.

But 10 years after the Earth Summit in Rio de Janeiro the World Summit on Sustainable Development in Johannesburg recognized that many of the proposed actions had yet to materialize. To help developing countries comply with their obligations under these agreements, the Global Environment Facility (GEF) was created to focus on global improvement in biodiversity, climate change, international waters, and ozone layer depletion. The UNEP, United Nations Development Programme, and World Bank manage the GEF according to the policies of its governing body of country representatives. The World Bank is responsible for the GEF Trust Fund and chairs the GEF.

Definitions

• **Environmental strategies or action plans** provide a comprehensive analysis of conservation and resource management issues that integrate environmental concerns with development. They include national conservation strategies, environmental action plans, environmental management strategies, and sustainable development strategies. The date is the year a country adopted a strategy or action plan. • **Biodiversity assessments, strategies, or action plans** include biodiversity profiles (see *About the data*). • **Participation in treaties** covers nine international treaties (see *About the data*). • **Climate change** refers to the Framework Convention on Climate Change (signed in 1992). • **Ozone layer** refers to the Vienna Convention for the Protection of the Ozone Layer (signed in 1985). • **CFC control** refers to the Protocol on Substances That Deplete the Ozone Layer (the Montreal Protocol for Chlorofluorocarbon Control) (signed in 1987). • **Law of the Sea** refers to the United Nations Convention on the Law of the Sea (signed in 1982). • **Biological diversity** refers to the Convention on Biological Diversity (signed at the Earth Summit in 1992). • **Kyoto Protocol** refers to the protocol on climate change adopted at the third conference of the parties to the United Nations Framework Convention on Climate Change in December 1997. • **CITES** is the Convention on International Trade in Endangered Species of Wild Fauna and Flora, an agreement among governments to ensure that the survival of wild animals and plants is not threatened by uncontrolled exploitation. Adopted in 1973, it entered into force in 1975. • **CCD** is the United Nations Convention to Combat Desertification, an international convention addressing the problems of land degradation in the world's drylands. Adopted in 1994, it entered into force in 1996. • **Stockholm Convention** is an international legally binding instrument to protect human health and the environment from persistent organic pollutants. Adopted in 2001, it entered into force in 2004.

Data sources

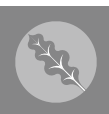
Data on environmental strategies and participation in international environmental treaties are from the Secretariat of the United Nations Framework Convention on Climate Change, the Ozone Secretariat of the UNEP, the World Resources Institute, the UNEP, the Center for International Earth Science Information Network, and the United Nations Treaty Series.



	Gross savings	Consumption of fixed capital	Net national savings	Education expenditure	Energy depletion	Mineral depletion	Net forest depletion	Carbon dioxide damage	Particulate emission damage	Adjusted net savings
	% of GNI	% of GNI	% of GNI	% of GNI	% of GNI	% of GNI	% of GNI	% of GNI	% of GNI	% of GNI
	2006	2006	2006	2006	2006	2006	2006	2006	2006	2006
Afghanistan	..	7.7	..	..	0.0	..	0.9	0.1	0.9	..
Albania	16.7	10.5	6.1	2.8	2.0	0.0	0.0	0.2	0.2	6.5
Algeria	..	11.8	..	4.5	58.1	0.1	0.1	1.3	0.3	..
Angola	42.2	12.2	30.0	3.0	68.8	0.0	0.0	0.2	1.6	-37.6
Argentina	27.1	12.0	15.1	4.0	12.8	1.0	0.0	0.5	1.6	3.2
Armenia	29.3	10.2	19.2	3.0	0.0	2.2	0.0	0.6	1.8	17.6
Australia	21.9 ^a	15.1	6.8	4.7	3.6	5.1	0.0	0.4	0.1	2.4
Austria	25.8	14.2	11.6	5.3	0.3	0.0	0.0	0.2	0.3	16.1
Azerbaijan	57.0	12.1	44.9	2.8	83.8	0.0	0.0	2.4	1.1	-39.7
Bangladesh	31.6	8.1	23.6	1.9	5.6	0.0	0.7	0.4	0.5	18.3
Belarus	26.4	11.2	15.2	5.7	2.1	0.0	0.0	1.6	..	17.2 ^b
Belgium	23.9	15.4	8.5	5.9	0.0	0.0	0.0	0.2	0.2	14.1
Benin	..	8.5	..	3.6	0.0	0.0	0.9	0.3	0.4	..
Bolivia	26.9	9.8	17.1	6.3	40.6	4.9	0.0	0.7	1.4	-24.2
Bosnia and Herzegovina	6.0	10.4	-4.4	..	0.3	0.0	..	1.3	0.1	..
Botswana	55.8	12.5	43.3	8.6	0.3	7.0	0.0	0.3	..	44.2 ^{b,c}
Brazil	17.8	12.0	5.8	4.3	3.7	2.3	0.0	0.2	0.3	3.5
Bulgaria	15.5	11.9	3.6	4.2	0.9	2.0	0.0	1.2	1.6	2.1
Burkina Faso	..	8.1	..	4.5	0.0	0.0	0.9	0.1	1.4	..
Burundi	2.0	6.4	-4.4	5.1	0.0	0.8	10.5	0.2	0.1	-10.9
Cambodia	18.1	8.7	9.5	1.8	0.0	0.0	0.3	0.1	0.4	10.5
Cameroon	17.5	9.4	8.1	1.6	14.9	0.1	0.0	0.2	0.8	-6.2
Canada	23.7 ^a	14.6	9.1	5.2	7.4	1.1	0.0	0.3	0.1	5.4
Central African Republic	..	7.8	..	1.6	0.0	0.0	0.0	0.1	0.4	..
Chad	29.5	10.9	18.6	1.3	65.4	0.0	0.0	0.0	1.1	-46.6
Chile	27.6	14.2	13.4	3.7	0.6	27.5	0.0	0.4	0.6	-12.1
China	53.8	10.2	43.6	1.8	5.8	0.7	0.0	1.3	1.5	36.1
Hong Kong, China	31.9	13.9	18.1	3.4	0.0	0.0	0.0	0.2	..	21.3 ^b
Colombia	20.9	11.4	9.5	5.0	9.7	1.7	0.0	0.3	0.1	2.5
Congo, Dem. Rep.	9.3	6.8	2.5	0.9	4.8	4.2	0.0	0.2	0.6	-6.3
Congo, Rep.	..	..	..	2.6	..	..	..	..	1.0	..
Costa Rica	19.4	6.2	13.2	4.0	0.0	0.0	0.2	0.2	0.3	16.5
Côte d'Ivoire	15.1	9.6	5.6	4.7	12.5	0.0	0.0	0.3	0.4	-3.0
Croatia	24.7	12.9	11.8	4.5	2.1	0.0	0.2	0.4	0.5	13.0
Cuba	..	..	..	7.1	..	..	..	..	0.1	..
Czech Republic	25.4	13.7	11.7	4.2	0.3	0.0	0.1	0.7	0.1	14.7
Denmark	25.0	15.0	10.0	8.1	3.4	0.0	0.0	0.1	0.1	14.4
Dominican Republic	20.7	11.6	9.1	1.9	0.0	3.4	0.0	0.6	0.1	6.9
Ecuador	28.1	11.4	16.7	1.4	28.8	0.4	0.0	0.5	0.1	-11.8
Egypt, Arab Rep.	22.1	9.8	12.3	4.4	24.4	0.2	0.2	1.1	1.0	-10.2
El Salvador	11.9	11.0	0.9	2.8	0.0	0.0	0.5	0.3	0.3	2.7
Eritrea	8.7	7.2	1.5	4.0	0.0	0.0	1.1	0.4	0.4	3.5
Estonia	25.7	12.9	12.8	5.1	37.6	0.0	0.0	1.1	0.0	-20.9
Ethiopia	9.4	6.9	2.5	4.0	0.0	0.6	6.8	0.5	0.3	-1.7
Finland	26.5	15.8	10.8	6.0	0.0	0.2	0.0	0.2	0.1	16.3
France	18.8	12.5	6.3	5.3	0.0	0.0	0.0	0.1	0.0	11.4
Gabon	52.4	15.3	37.1	3.3	60.8	0.0	0.0	0.2	..	-20.6 ^b
Gambia, The	10.3	7.8	2.5	2.0	0.0	0.0	0.6	0.5	0.8	2.7
Georgia	7.7	10.4	-2.7	2.8	0.4	0.0	0.0	0.5	1.4	-2.2
Germany	22.9	14.7	8.2	4.5	0.3	0.0	0.0	0.2	0.1	12.1
Ghana	27.4	8.5	18.9	4.7	0.0	7.7	1.6	0.5	0.1	13.8
Greece	16.4	6.9	9.5	3.4	0.2	0.2	0.0	0.3	0.7	11.6
Guatemala	14.5	10.8	3.7	1.6	1.1	0.0	0.7	0.2	0.4	2.9
Guinea	8.6	7.9	0.7	2.0	0.0	9.5	2.1	0.3	0.4	-9.7
Guinea-Bissau	23.5	7.1	16.4	2.3	0.0	0.0	0.0	0.7	1.0	17.0
Haiti	..	9.6	..	1.5	0.0	0.0	0.8	0.3	0.4	..

Toward a broader measure of savings

	Gross savings	Consumption of fixed capital	Net national savings	Education expenditure	Energy depletion	Mineral depletion	Net forest depletion	Carbon dioxide damage	Particulate emission damage	Adjusted net savings
	% of GNI	% of GNI	% of GNI	% of GNI	% of GNI	% of GNI	% of GNI	% of GNI	% of GNI	% of GNI
	2006	2006	2006	2006	2006	2006	2006	2006	2006	2006
Honduras	32.3	10.0	22.3	3.5	0.0	2.4	0.0	0.5	0.4	22.5
Hungary	20.3	13.6	6.6	5.5	1.3	0.0	0.0	0.4	0.1	10.3
India	33.7	9.0	24.7	3.9	4.3	1.2	0.5	1.3	0.7	20.6
Indonesia	27.6	10.4	17.2	0.9	11.4	3.1	0.0	0.7	1.2	1.7
Iran, Islamic Rep.	40.7	11.0	29.7	4.4	54.2	0.5	0.0	1.3	0.8	-22.7
Iraq	..	..	..	..	..	..	..	..	..	..
Ireland	37.7 ^a	10.7	27.0	5.3	3.4	0.4	0.0	0.2	0.0	28.2
Israel	..	16.7	..	6.7	0.3	0.0	0.0	0.4	0.4	..
Italy	19.3	13.4	5.9	4.5	0.3	0.0	0.0	0.2	0.2	9.7
Jamaica	..	7.6	..	4.5	0.0	3.5	0.0	0.8	0.2	..
Japan	27.3 ^a	13.9	13.4	3.1	0.0	0.0	0.0	0.2	0.5	15.8
Jordan	13.8	10.2	3.6	5.6	0.4	0.0	0.0	1.0	0.7	7.1
Kazakhstan	34.5	13.1	21.3	4.4	52.4	4.2	0.0	2.1	0.3	-33.2
Kenya	10.1	9.6	0.5	6.3	0.0	0.1	1.0	0.4	0.1	5.2
Korea, Dem. Rep.	..	..	..	..	..	..	..	..	..	..
Korea, Rep.	30.5	13.3	17.1	4.0	0.1	0.0	0.0	0.4	0.6	20.0
Kuwait	..	..	..	4.2	..	..	0.0	..	1.4	..
Kyrgyz Republic	4.5	8.5	-4.0	4.4	1.1	0.0	0.0	1.3	0.3	-2.3
Lao PDR	21.8	9.7	12.1	1.1	0.0	0.0	0.0	0.4	0.8	12.1
Latvia	17.5	18.2	-0.7	5.6	0.0	0.0	0.7	0.3	0.0	3.8
Lebanon	-4.5	11.9	-16.4	2.5	0.0	0.0	0.0	0.6	0.9	-15.4
Lesotho	21.8	7.1	14.7	9.3	0.0	0.0	1.4	0.0	0.2	22.4
Liberia	..	8.7	..	..	0.0	0.1	6.0	0.6	0.5	..
Libya	..	12.2	..	..	81.3	0.0	0.0	0.8	..	..
Lithuania	14.5	13.0	1.5	5.1	0.3	0.0	0.1	0.4	0.2	5.6
Macedonia, FYR	22.1	10.8	11.3	4.9	0.0	0.0	0.2	1.4	0.1	14.5
Madagascar	16.3	7.6	8.7	2.7	0.0	0.0	0.0	0.3	0.2	10.9
Malawi	15.7	7.3	8.4	4.9	0.0	0.0	0.6	0.2	0.2	12.2
Malaysia	32.7	12.1	20.6	5.8	22.1	0.0	0.0	0.8	0.1	3.3
Mali	13.8	8.8	5.0	3.6	0.0	0.0	0.0	0.1	1.6	7.0
Mauritania	27.5	8.7	18.8	2.4	0.0	24.2	0.4	0.8	2.8	-7.0
Mauritius	18.9	11.5	7.4	3.8	0.0	0.0	0.0	0.4	..	10.8 ^b
Mexico	22.2	12.4	9.8	5.3	10.6	0.6	0.0	0.4	0.4	3.1
Moldova	20.3	8.1	12.2	3.6	0.1	0.0	0.0	1.7	0.7	13.3
Mongolia	45.3	7.9	37.3	5.1	2.8	26.4	0.0	2.5	1.1	9.7
Morocco	35.0	10.5	24.5	6.5	0.2	0.8	0.0	0.5	0.1	29.4
Mozambique	3.5	8.5	-5.1	3.7	11.5	0.0	0.5	0.2	0.2	-13.8
Myanmar	..	..	..	0.8	..	..	..	..	0.6	..
Namibia	42.7	11.0	31.6	7.3	0.0	5.2	0.0	0.3	0.1	33.4
Nepal	28.0	7.6	20.4	2.6	0.0	0.0	2.1	0.3	0.1	20.5
Netherlands	28.7	14.5	14.2	5.2	2.5	0.0	0.0	0.2	0.6	16.0
New Zealand	21.2 ^a	13.7	7.5	7.0	1.5	0.3	0.0	0.3	0.0	12.4
Nicaragua	13.6	9.5	4.1	3.0	0.0	1.1	0.0	0.6	0.1	5.3
Niger	..	7.4	..	2.3	0.0	0.0	2.6	0.3	0.9	..
Nigeria	38.8	10.2	28.5	0.9	57.7	0.0	0.2	0.4	0.7	-29.6
Norway	38.8 ^a	13.3	25.4	7.0	23.0	0.0	0.0	0.1	0.1	9.2
Oman	..	..	..	3.7	..	..	0.0	..	1.4	..
Pakistan	23.1	8.4	14.7	1.8	7.2	0.0	0.4	0.8	1.5	6.8
Panama	18.6	12.3	6.3	4.4	0.0	0.0	0.0	0.3	0.2	10.2
Papua New Guinea	..	10.2	..	..	23.8	48.5	0.0	0.4	0.0	..
Paraguay	7.3	9.9	-2.6	4.1	0.0	0.0	0.0	0.3	0.7	0.5
Peru	25.1	12.0	13.1	2.5	3.2	14.8	0.0	0.3	0.7	-3.4
Philippines	30.5	8.4	22.1	2.4	0.7	1.2	0.1	0.5	0.3	21.7
Poland	18.8	12.8	6.0	5.4	1.3	1.1	0.0	0.8	0.4	7.8
Portugal	12.7	17.4	-4.7	5.7	0.0	0.2	0.0	0.2	0.4	0.1
Puerto Rico	..	..	..	..	..	..	..	..	..	..



	Gross savings	Consumption of fixed capital	Net national savings	Education expenditure	Energy depletion	Mineral depletion	Net forest depletion	Carbon dioxide damage	Particulate emission damage	Adjusted net savings
	% of GNI	% of GNI	% of GNI	% of GNI	% of GNI	% of GNI	% of GNI	% of GNI	% of GNI	% of GNI
	2006	2006	2006	2006	2006	2006	2006	2006	2006	2006
Romania	13.0	12.0	0.9	3.3	4.5	0.2	0.0	0.7	0.0	-1.2
Russian Federation	30.7	7.0	23.7	3.5	37.5	1.9	0.0	1.4	0.3	-13.8
Rwanda	13.9	7.4	6.4	3.5	0.0	0.0	2.3	0.2	0.1	7.3
Saudi Arabia	..	..	..	7.2	..	..	0.0	..	1.4	..
Senegal	18.8	9.0	9.8	4.6	0.0	0.1	0.0	0.4	1.1	12.6
Serbia ^d	9.0	..	..	..	2.2	0.1	..	1.5	..	..
Sierra Leone	9.7	7.5	2.2	4.5	0.0	0.0	1.7	0.5	1.1	3.5 ^c
Singapore	47.8 ^a	15.0	32.8	2.5	0.0	0.0	0.0	0.4	0.8	34.0
Slovak Republic	21.2	21.9	-0.8	4.1	0.1	0.0	0.4	0.6	0.0	2.2
Slovenia	26.3	13.5	12.8	5.6	5.1	0.0	0.2	0.3	0.2	12.5
Somalia	..	..	..	..	..	..	..	..	..	..
South Africa	14.2	11.9	2.3	5.3	3.5	3.1	0.1	1.1	0.1	-0.3
Spain	22.4	14.5	7.9	3.9	0.0	0.0	0.0	0.2	0.4	11.2
Sri Lanka	24.9	9.7	15.1	2.6	0.0	0.0	0.3	0.3	0.4	16.7
Sudan	15.5	10.0	5.4	0.9	21.6	0.2	0.0	0.2	0.4	-16.2
Swaziland	18.6	10.4	8.2	6.2	0.0	0.0	0.0	0.3	0.1	14.1
Sweden	24.8	12.1	12.7	7.3	0.0	0.5	0.0	0.1	0.0	19.4
Switzerland	..	13.5	..	5.1	0.0	0.0	0.0	0.1	0.2	..
Syrian Arab Republic	17.6	10.3	7.3	2.6	31.7	0.0	0.0	1.2	0.9	-24.0
Tajikistan	12.2	8.3	3.9	3.2	0.6	0.0	0.0	1.6	0.4	4.5
Tanzania	11.4	7.8	3.6	2.4	0.3	4.7	0.0	0.2	0.1	0.6
Thailand	32.1	11.2	20.9	4.7	5.8	0.0	0.2	1.0	0.4	18.1
Timor-Leste	104.5	3.3	101.3	..	..	..	..	..	..	..
Togo	..	7.8	..	2.5	0.0	0.3	2.8	0.6	0.2	..
Trinidad and Tobago	..	12.1	..	4.0	71.7	0.0	0.0	1.6	0.2	..
Tunisia	26.9	11.4	15.5	6.7	7.4	0.4	0.1	0.6	0.3	13.4
Turkey	16.6	11.7	4.9	3.5	0.4	0.1	0.0	0.5	1.2	6.2
Turkmenistan	..	11.0	..	..	..	0.0	..	2.9	1.0	..
Uganda	14.7	7.7	7.0	4.0	0.0	0.0	4.5	0.2	..	6.3 ^b
Ukraine	23.2	10.6	12.6	4.4	9.7	0.0	0.0	2.8	0.5	4.1
United Arab Emirates	..	..	..	..	..	..	..	..	..	..
United Kingdom	14.2	10.2	4.0	5.3	2.2	0.0	0.0	0.2	0.0	6.9
United States	14.1 ^a	12.2	1.9	4.8	1.8	0.1	0.0	0.3	0.3	4.1
Uruguay	14.3	12.1	2.3	2.6	0.0	0.0	0.2	0.2	1.9	2.6
Uzbekistan	36.0	8.7	27.4	9.4	..	0.0	0.0	6.3	0.9	..
Venezuela, RB	39.8	12.0	27.8	4.4	39.8	1.1	0.0	0.7	0.0	-9.5
Vietnam	37.7	9.0	28.7	2.8	17.9	0.1	0.4	1.1	0.6	11.6
West Bank and Gaza	10.0	9.1	1.0	..	0.0	0.0	..	..	..	..
Yemen, Rep.	..	9.8	..	..	42.8	0.0	0.0	0.7	0.9	..
Zambia	25.3	10.1	15.3	2.2	0.1	31.0	0.0	0.2	0.7	-14.4
Zimbabwe	..	..	..	6.9	..	..	..	..	0.1	..
World	21.8 w	12.4 w	9.3 w	4.4 w	4.1 w	0.5 w	0.0 w	0.4 w	0.4 w	8.3 w
Low income	30.5	9.0	21.5	3.4	9.4	1.3	0.6	1.0	0.7	11.9
Middle income	30.5	10.9	19.6	3.5	12.8	1.6	0.0	0.9	0.8	7.0
Lower middle income	41.4	10.4	31.0	2.5	11.1	1.1	0.0	1.2	1.1	18.9
Upper middle income	22.3	11.4	10.9	4.4	14.4	2.0	0.0	0.7	0.4	-2.2
Low & middle income	30.5	10.7	19.8	3.5	12.3	1.5	0.1	0.9	0.8	7.6
East Asia & Pacific	47.2	10.3	36.9	2.1	7.1	0.9	0.0	1.2	1.3	28.5
Europe & Central Asia	22.6	10.3	12.3	4.1	18.4	1.1	0.0	1.1	0.5	-4.9
Latin America & Carib.	22.4	12.1	10.4	4.4	9.1	3.0	0.0	0.4	0.4	1.8
Middle East & N. Africa	..	10.9	..	4.6	40.0	0.3	0.1	1.1	0.6	..
South Asia	32.1	8.9	23.2	3.5	4.5	0.9	0.5	1.1	0.8	18.8
Sub-Saharan Africa	19.4	10.7	8.7	3.8	18.7	2.3	0.4	0.6	0.4	-10.0
High income	19.9	13.0	6.9	4.7	1.5	0.2	0.0	0.3	0.3	9.3
Euro area	21.8	13.8	8.0	4.8	0.4	0.0	0.0	0.2	0.2	12.0

a. World Bank staff estimates. b. Excludes particulate emissions damage. c. Likely to be overestimated because mineral depletion excludes diamonds. d. Includes Montenegro.

About the data

Adjusted net savings measure the change in value of a specified set of assets, excluding capital gains. If a country's net savings are positive and the accounting includes a sufficiently broad range of assets, economic theory suggests that the present value of social welfare is increasing. Conversely, persistently negative adjusted net savings indicate that an economy is on an unsustainable path.

The table provides a test to check the extent to which today's rents from a number of natural resources and changes in human capital are balanced by net savings, that is, this generation's bequest to future generations.

Adjusted net savings are derived from standard national accounting measures of gross savings by making four adjustments. First, estimates of capital consumption of produced assets are deducted to obtain net savings. Second, current public expenditures on education are added to net savings (in standard national accounting these expenditures are treated as consumption). Third, estimates of the depletion of a variety of natural resources are deducted to reflect the decline in asset values associated with their extraction and harvest. And fourth, deductions are made for damages from carbon dioxide and particulate emissions.

The exercise treats public education expenditures as an addition to savings effort. However, because of the wide variability in the effectiveness of government education expenditures, these figures cannot be construed as the value of investments in human capital. Current expenditure of \$1 on education does not necessarily yield \$1 of human capital. The calculation should also consider private education expenditure, but data are not available for a large number of countries.

While extensive, the accounting of natural resource depletion and pollution costs still has some gaps. Key estimates missing on the resource side include the value of fossil water extracted from aquifers, net depletion of fish stocks, and depletion and degradation of soils. Important pollutants affecting human health and economic assets are excluded because no internationally comparable data are widely available on damage from ground-level ozone or sulfur oxides.

Estimates of resource depletion are based on the calculation of unit resource rents. An economic rent represents an excess return to a given factor of production—in this case the returns from resource extraction or harvest are higher than the normal rate of return on capital. Natural resources give rise to

rents because they are not produced; in contrast, for produced goods and services competitive forces will expand supply until economic profits are driven to zero. For each type of resource and each country, unit resource rents are derived by taking the difference between world prices and the average unit extraction or harvest costs (including a "normal" return on capital). Unit rents are then multiplied by the physical quantity extracted or harvested in order to arrive at a depletion figure. This figure is one of a range of possible depletion estimates, depending on the assumptions made about future quantities, prices, and costs, and there is reason to believe that it is at the high end of the range. World prices are used in order to reflect the social opportunity cost of depleting minerals and energy.

A positive net depletion figure for forest resources implies that the harvest rate exceeds the rate of natural growth; this is not the same as deforestation, which represents a change in land use (see *Definitions* for table 3.4). In principle, there should be an addition to savings in countries where growth exceeds harvest, but empirical estimates suggest that most of this net growth is in forested areas that cannot currently be exploited economically. Because the depletion estimates reflect only timber values, they ignore all the external and nontimber benefits associated with standing forests.

Pollution damage from emissions of carbon dioxide is calculated as the marginal social cost per unit multiplied by the increase in the stock of carbon dioxide. The unit damage figure represents the present value of global damage to economic assets and to human welfare over the time the unit of pollution remains in the atmosphere.

Pollution damage from particulate emissions is estimated by valuing the human health effects from exposure to particulate matter pollution in urban areas. The estimates are calculated as willingness to pay to avoid illness and death from cardiopulmonary disease and lung cancer in adults and acute respiratory infections in children that is attributable to particulate emissions.

For a detailed note on methodology, see www.worldbank.org/data.

Definitions

- **Gross savings** are the difference between gross national income and public and private consumption, plus net current transfers.
- **Consumption of fixed capital** is the replacement value of capital used up in production.
- **Net national savings** are gross savings minus consumption of fixed capital.
- **Education expenditure** is public current operating expenditures in education, including wages and salaries and excluding capital investments in buildings and equipment.
- **Energy depletion** is unit resource rents times the physical quantities of extracted coal, crude oil, and natural gas.
- **Mineral depletion** is unit resource rents times the physical quantities of extracted tin, gold, lead, zinc, iron, copper, nickel, silver, bauxite, and phosphate.
- **Net forest depletion** is unit resource rents times the excess of roundwood harvest over natural growth.
- **Carbon dioxide damage** is estimated at \$20 per ton of carbon (in 1995 U.S. dollars) times tons of carbon emitted.
- **Particulate emission damage** is the willingness to pay to avoid illness and death attributable to particulate emissions.
- **Adjusted net savings** are net savings plus education expenditure minus energy depletion, mineral depletion, net forest depletion, and carbon dioxide and particulate emissions damage.

Data sources

Data on gross savings are from World Bank national accounts data files, described in the *Economy* section. Data on consumption of fixed capital are from the United Nations Statistics Division's *National Accounts Statistics: Main Aggregates and Detailed Tables*, 1997, extrapolated to 2006. Data on education expenditure are from the United Nations Statistics Division's *Statistical Yearbook 1997* and from the United Nations Educational, Scientific, and Cultural Organization Institute for Statistics' online database. The data sources and methods used to estimate resource depletion are described in Kunte and others' "Estimating National Wealth" (1998). The unit damage figure for carbon dioxide emissions is from Frankhauser's "Fractales, tissus urbains et réseaux de transport" (1994). The estimates of particulate emissions damage are from Pandey and others' "The Human Costs of Air Pollution: New Estimates for Developing Countries" (2006). The conceptual underpinnings of the savings measure appear in Hamilton and Clemens' "Genuine Savings Rates in Developing Countries" (1999).

ECONOMY

4



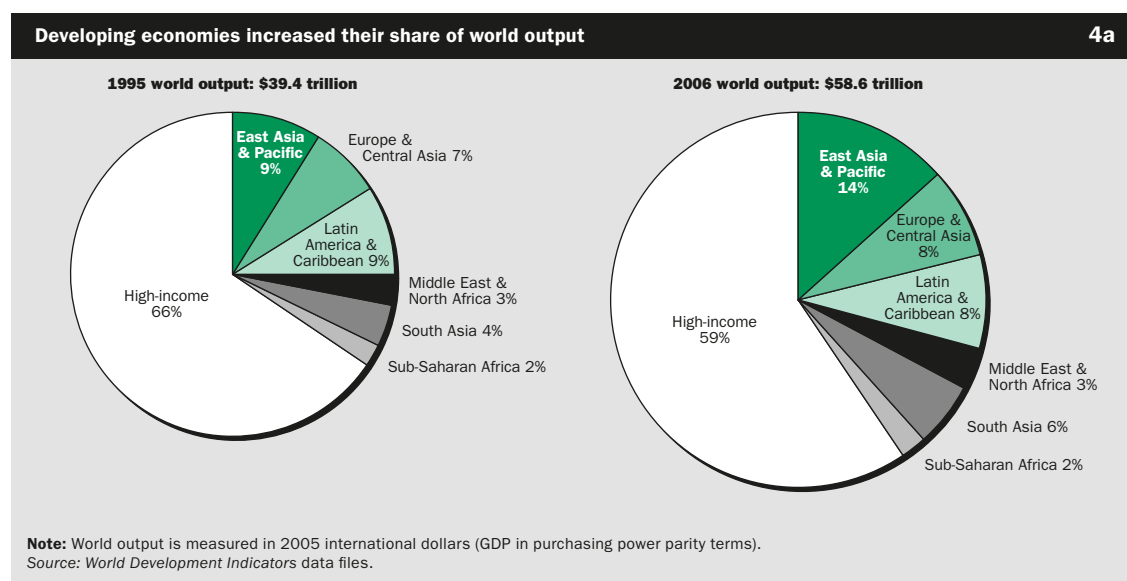
A

portrait of the global economy

The world's output grew 4.8 percent in 2006, half a percentage point faster than in 2005, to reach nearly \$59 trillion. That was an increase of almost 50 percent since 1995, measured in purchasing power parity and 2005 prices (figure 4a). Low- and middle-income economies—whose share of global output increased from 34 percent to 41 percent—grew faster on average than high-income economies. Setting the pace were East Asia and Pacific, whose developing economies more than doubled their output and increased their share of global output from 9 percent to 14 percent, and South Asia, whose share increased from 4 percent to 6 percent. Dominating the growth in these two regions were China and India. Growing less rapidly, Europe and Central Asia gained a percentage point, Sub-Saharan Africa and the Middle East and North Africa saw their shares stay the same, while Latin America and the Caribbean saw its share of global output decline from 9 percent to 8 percent.

The statistics in this section measure the size and structure of the world's economies and how they are managed. The national accounts record the sources of economic growth. The balance of payments tracks the flow of goods and services between countries. The fiscal and monetary accounts, interest rates, and exchange rates reflect the domestic and international forces acting on the economy and the responses of politicians and policymakers.

Viewed over time, macroeconomic statistics show the health of an economy and the quality of macroeconomic management. Viewed across countries, they reveal the many varied patterns of development. Together they inform citizens, businesses, and governments of the results of their efforts and guide them in their future choices.



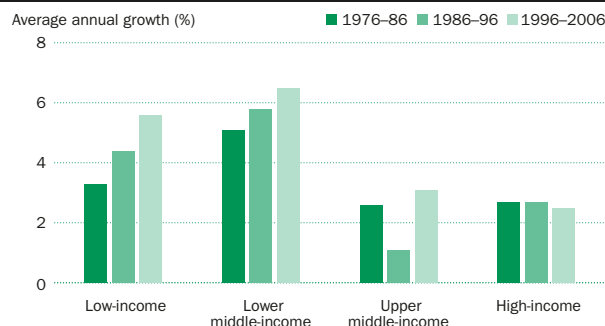
Long-term trends

Developing economies are expected to continue growing faster than high-income economies thanks to labor surpluses, higher returns to physical capital, and ready access to technology already developed and amortized in high-income economies. With adequate investment in physical and human capital, developing economies should close the gap with richer economies in the long run.

Average growth of low- and lower middle-income economies has been rising, surpassing that of upper middle-income and high-income economies in the last three decades (figure 4b). Since 2000 annual GDP growth in low-income economies has averaged 6.5 percent, compared with 5.6 percent in middle-income economies and 2.3 percent in high-income economies. A few large countries drive these averages: China, India, and the Russian Federation, which have performed exceptionally well and carry large weights in the aggregates. Growth remains uneven across regions (figure 4c) and economies. In the last decade 20, mostly small, economies graduated from the World Bank's low- and middle-income economies classification. Some of the most successful economies are now classified as high-income. But poverty traps, exclusion from global markets, internal conflicts, resource constraints, poor policies, and market failures have limited growth and poverty reduction in low-income economies, especially in Africa.

Low- and lower middle-income economies have had the strongest growth

4b



Source: World Development Indicators data files.

Patterns of regional growth vary widely

4c



Source: World Development Indicators data files.

Better policies to achieve macroeconomic stability

Developing economies are running lower fiscal and external deficits, accumulating larger reserves, and pursuing more prudent monetary and fiscal policies. These policies mean less vulnerability and volatility and increased investor confidence. Since the high inflation and the debt crises of the 1970s and 1980s—and the rapid inflation in Europe and Central Asia after the Soviet Union's collapse—better fiscal, monetary, and exchange rate policies have reduced inflation in most developing countries. These shocks also revealed the importance of reliable, publicly available data for monitoring governments and private agents. The number of countries with double-digit inflation dropped from 61 in the 1990s to 27 in 2000–06, and inflation averaged less than 9 percent in all developing regions in 2006 (table 4d). But higher prices for oil and other commodities pushed inflation back up in three regions in 2006.

Better macroeconomic management has also lowered real interest rates in many developing economies, encouraging investment and faster growth. For the poorest and most indebted, Heavily Indebted Poor Country and Multilateral Debt Relief Initiatives led by the World Bank and International Monetary Fund have reduced debt burdens. Reforms under these programs have improved Sub-Saharan Africa's growth prospects.

Inflation is now less than 9 percent in all developing regions

4d

Region	1975	1985	1995	2000	2005	2006
East Asia & Pacific	..	3	8	3	6	5
Europe & Central Asia	..	..	56	13	7	8
Latin America & Caribbean	15	16	12	7	6	7
Middle East & North Africa	5	4	8	7	6	7
South Asia	24	7	9	4	6	6
Sub-Saharan Africa	11	10	10	6	8	7

Source: World Development Indicators data files.

Real interest rates have fallen in many developing economies

4e

Economy	1985	1990	1995	2000	2005	2006
Argentina	..	..	14	10	-2	-4
Algeria	..	..	-8	-12	-7	-1
Brazil	..	..	..	48	45	45
China	-2	3	-1	4	1	2
India	9	5	6	8	6	5
Indonesia	..	12	8	-2	-1	2
Nigeria	6	17	-23	-12	-6	8
Russian Federation	..	..	72	-10	-7	-5
South Africa	4	5	7	5	6	4
Ukraine	..	..	-57	15	-7	1

Source: World Development Indicators and International Monetary Fund data files.

The contribution of trade

Globalization has elevated the importance of trade for developing economies. The rapid industrialization of many large developing economies has increased demand for primary commodities. The prices of oil, metals, and minerals have increased rapidly since 2002, allowing commodity producers to invest and produce more (figure 4f).

As a result, many primary commodity-exporting economies have experienced strong GDP growth, while oil- and metal-importing economies have seen price increases (figure 4g).

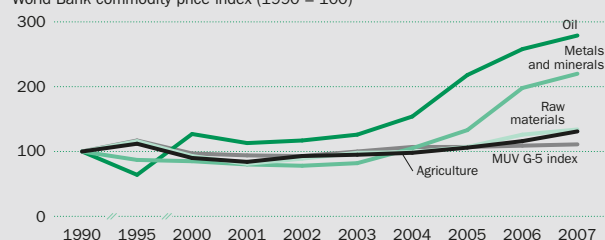
Such changes in the terms of trade affect the real growth of GDP. When export prices rise faster than import prices, the terms of trade improve, an economy's capacity to import rises, and the real value of its output increases.

One commonly used measure of the terms of trade effect is the difference between the value of exports deflated by the import price index and the value of exports in constant prices. Adding the terms of trade adjustment to GDP in constant prices yields real gross domestic income (GDI).

Oil, metal, and mineral prices have increased since 1990

4f

World Bank commodity price index (1990 = 100)

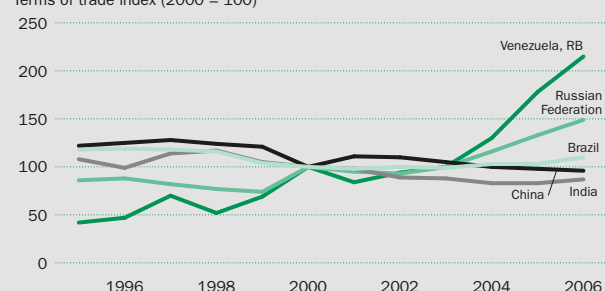


Note: The MUV G-5 index, or the manufacturers unit value index, a proxy for the price of developing country imports of manufactures, is a weighted average of the export prices of the Group of Five economies (France, Germany, Japan, United Kingdom, and United States).
Source: World Development Indicators data files.

Oil-exporting economies have experienced gains

4g

Terms of trade index (2000 = 100)



Source: World Development Indicators data files.

For some countries the terms of trade effect can be quite large. The terms of trade adjustment accounted for 33 percent of Zambia's GDI between 2000 and 2006 (table 4h). Real growth rates, taking account of the terms of trade effect, may differ substantially from constant price growth rates. Tajikistan's GDP increased 9.1 percent a year from 2000 to 2006, but the real growth of GDI was only 0.6 percent. This represented a terms-of-trade loss of 8.5 percent, the largest of any economy over the period.

Most oil-exporting economies have seen rising terms of trade in recent years. Some metal-exporting economies, such as Chile and Zambia, have also experienced favorable terms of trade thanks to recent increases in copper prices. But some oil-importing economies have weathered the worsening terms of trade by rapidly expanding manufactured goods exports (China) or services (India). Of 147 economies with data, 65 experienced a loss in income due to the terms of trade effect (6 greater than 2 percent), 68 economies gained (18 more than 2 percent), and 14 economies had no appreciable terms of trade effect.

Terms of trade, gross domestic product, and gross domestic income growth for selected economies

4h

Economy	Terms of trade		Gross domestic product		Gross domestic income		Terms of trade gain or loss	
	2000 = 100	average annual % growth	2000–06	average annual % growth	2000–06	average annual % growth	%	% of GDI
Oil-exporting economies								
Azerbaijan	214	14.2	15.6	23.5	7.9	13.5		
Equatorial Guinea	168	9.3	19.4	30.1	10.7	16.1		
Iran, Islamic Rep.	172	11.1	5.6	8.7	3.1	7.6		
Russian Federation	149	7.8	6.4	10.7	4.4	6.9		
Venezuela, RB	215	15.8	3.4	8.9	5.4	18.5		
Metal- and primary commodity-exporting economies								
Burkina Faso	96	–1.5	6.2	6.0	–0.2	–0.8		
Chile	174	10.2	4.3	8.6	4.3	5.5		
Côte d'Ivoire	82	–3.0	0.1	–2.3	–2.3	–17.7		
Tajikistan	42	–11.7	9.1	0.6	–8.5	1.7		
Zambia	142	4.7	5.0	15.7	10.8	32.8		
Oil-importing economies								
China	87	–2.7	9.8	8.5	–1.3	–2.9		
Costa Rica	87	–2.4	4.8	3.4	–1.4	–2.5		
Brazil	110	1.5	3.0	3.2	0.2	–3.5		
India	87	–2.8	7.4	6.9	–0.5	0.3		
South Africa	113	2.0	4.1	4.7	0.6	1.7		

Source: World Development Indicators data files.



4.3

Recent economic performance of selected developing countries

	Gross domestic product		Exports of goods and services		Imports of goods and services		GDP deflator		Current account balance		Gross international reserves	
	average annual % growth		average annual % growth		average annual % growth		% growth		% of GDP		\$ millions	months of import coverage
	2006	2007 ^a	2006	2007 ^a	2006	2007 ^a	2006	2007 ^a	2006	2007 ^a	2007	2007 ^a
Algeria	3.0	3.0	..	-0.1	..	38.8	9.1	7.8	..	23.6	110,600	41.3
Angola	18.6	23.4	..	..	..	..	14.7	0.2	23.7	6.4	..	..
Argentina	8.5	8.5	7.4	..	15.2	..	13.5	12.8	3.8	2.6	44,779	12.0
Armenia	13.3	13.7	-4.3	2.0	6.7	25.0	4.6	3.9	-1.8	-5.0	1,657	5.1
Azerbaijan	34.5	25.0	29.3	37.4	12.3	19.8	5.3	7.7	18.7	30.1	4,273	5.8
Bangladesh	6.6	6.5	25.8	27.0	18.2	23.6	5.2	5.6	1.9	1.4	5,077	3.3
Belarus	9.9	8.1	9.9	8.2	9.9	6.1	10.8	11.1	-4.1	-6.6	4,182	1.7
Bolivia	4.6	4.2	9.6	-3.2	4.2	2.7	12.2	14.0	11.8	9.1	4,636	11.8
Bosnia and Herzegovina	6.0	6.0	13.7	12.6	-6.9	14.2	6.5	2.5	-10.1	12.1	5,621	17.3
Botswana	2.1	4.3	8.0	12.6	-4.4	16.5	13.5	8.4	18.3	20.4	9,907	24.4
Brazil	3.7	5.3	4.6	6.3	18.1	20.0	4.3	4.4	1.3	0.3	179,433	13.4
Bulgaria	6.1	6.0	9.0	6.0	15.2	11.0	8.1	8.0	-15.9	-20.2	15,876	6.0
Cameroon	3.8	2.7	1.9	7.7	10.4	39.9	3.7	1.8	..	-1.4	1,896	16.9
Chile	4.0	5.2	4.2	8.1	9.4	15.1	11.7	5.5	3.6	3.8	..	..
China	10.7	11.4	23.3	21.2	14.3	16.5	3.6	5.2	9.4	11.0	8,249	17.8
Colombia	6.8	6.6	7.8	15.2	20.8	27.3	5.4	5.1	-2.0	-3.9	20,955	5.6
Congo, Dem. Rep.	4.9	6.5	2.5	9.9	5.7	9.2	13.1	17.0	0.0	-7.8	522	1.5
Congo, Rep.	6.4	3.7	..	..	..	..	15.2	-16.4	..	..	2,362	5.8
Costa Rica	8.2	6.8	9.9	14.2	8.9	11.8	10.1	9.0	-5.0	-5.9	4,114	3.6
Côte d'Ivoire	0.9	1.7	-1.6	-0.4	2.4	2.6	5.6	1.7	3.0	2.3	..	..
Croatia	4.8	5.8	6.9	6.9	7.3	7.4	3.4	3.2	-7.5	-8.2	12,210	4.7
Dominican Republic	10.7	8.0	5.8	7.6	12.6	6.7	7.6	7.0	-2.5	-2.0	2,946	1.8
Ecuador	3.9	2.2	8.6	2.6	9.2	6.5	7.2	4.7	3.6	3.3	3,521	3.5
Egypt, Arab Rep.	6.8	7.1	21.3	23.3	21.8	28.8	7.4	10.5	2.5	2.1	28,589	7.3
El Salvador	4.2	4.2	8.1	7.8	8.4	9.6	4.9	4.1	-4.6	5.9	2,158	3.0
Gabon	1.2	5.6	-9.7	4.2	8.6	118.3	7.9	1.1	..	13.2	1,689	5.2
Ghana	6.2	6.3	10.3	10.0	8.9	14.0	14.6	13.0	-8.1	-13.6	2,500	2.7
Guatemala	4.5	5.7	6.5	12.5	5.2	7.5	6.3	5.4	-4.5	-5.1	4,320	4.0
Honduras	6.0	6.0	4.8	7.9	13.5	15.6	5.1	9.4	-2.1	-10.0	2,733	3.1
Hungary	3.9	1.7	18.9	15.5	14.5	13.2	3.7	6.4	-6.6	-4.9	24,121	2.9
India	9.2	8.7	8.6	6.4	11.4	6.4	5.9	4.5	-1.0	-1.4	295,000	12.0
Indonesia	5.5	6.3	9.2	8.4	7.6	7.4	13.6	10.5	2.7	2.5	56,920	5.7
Iran, Islamic Rep.	4.6	6.2	36.7	3.3	38.9	-6.5	11.0	21.4	..	11.1	78,112	14.2
Jamaica	2.5	1.4	..	..	..	..	6.3	6.6	-11.7	-17.0	1,878	3.8
Jordan	5.7	6.5	6.7	4.1	-0.2	0.0	5.8	4.4	-13.5	-13.8	7,585	6.0
Kazakhstan	10.7	8.7	6.9	9.3	12.1	9.6	21.6	18.6	-2.2	-7.3	17,392	4.9
Kenya	6.1	5.5	0.7	12.5	18.1	9.6	7.1	-0.6	-2.3	-13.3	3,015	3.7
Latvia	11.9	11.9	5.3	9.5	17.5	22.1	11.1	12.3	-22.5	-24.8	5,758	4.6
Lebanon	0.0	1.0	8.5	13.2	-4.9	15.7	5.6	3.4	-5.9	-15.0	14,649	15.4
Lesotho	7.2	4.9	7.9	6.6	1.8	19.7	4.2	6.2	4.5	1.7	829	6.3

	Gross domestic product		Exports of goods and services		Imports of goods and services		GDP deflator		Current account balance		Gross international reserves	
	average annual % growth		average annual % growth		average annual % growth		% growth		% of GDP		\$ millions	months of import coverage
	2006	2007 ^a	2006	2007 ^a	2006	2007 ^a	2006	2007 ^a	2006	2007 ^a	2007	2007 ^a
Lithuania	7.7	8.7	12.2	8.6	13.8	16.0	6.6	6.1	-10.8	-14.0	7,721	3.8
Macedonia, FYR	3.0	5.1	12.9	16.5	12.0	12.1	2.7	4.2	-0.4	-2.3	2,239	5.3
Malawi	7.4	7.4	-11.8	15.8	-13.1	5.7	18.5	7.6	..	-16.3	215	2.5
Malaysia	5.9	5.7	7.4	6.0	8.6	5.0	4.1	2.6	16.9	15.9	92,791	6.5
Mauritius	3.5	4.9	8.0	6.2	9.0	5.6	4.1	5.0	-9.6	-7.4	1,273	3.0
Mexico	4.8	3.2	11.1	5.1	12.2	7.7	4.4	2.0	-0.2	-0.8	77,990	3.3
Moldova	4.0	5.0	3.0	28.0	16.7	32.0	12.6	10.9	-11.5	-9.7	1,334	3.0
Morocco	8.0	2.0	10.5	3.5	6.7	11.0	1.9	2.0	2.8	1.0	24,760	8.3
Montenegro	16.2	7.5	..	15.2	..	38.1	2.6	2.4	..	-45.9	515	2.0
Nicaragua	3.7	3.8	10.5	8.9	6.1	8.1	10.6	12.5	-16.1	-15.8	930	2.5
Nigeria	5.2	6.3	..	..	..	..	7.9	4.8	..	0.9	51,000	11.0
Pakistan	6.9	6.4	9.9	0.4	18.7	1.3	9.3	7.8	-5.4	-4.9	14,287	4.4
Panama	8.1	9.5	11.1	8.6	10.0	10.5	2.1	3.7	-3.2	-6.2	1,628	1.2
Papua New Guinea	2.6	6.2	..	18.8	..	19.2	9.7	2.4	..	4.3	2,109	4.7
Paraguay	4.3	6.4	14.2	..	33.3	..	10.8	8.6	-2.3	5.1	2,462	4.2
Peru	7.7	8.5	1.1	6.0	11.8	19.0	7.3	0.6	2.8	1.0	27,720	17.0
Philippines	5.4	6.5	11.2	5.4	1.9	2.5	5.2	3.3	5.0	4.6	30,249	5.3
Poland	6.1	6.5	14.5	11.7	15.8	12.3	1.0	1.4	-3.3	-5.1	61,236	3.8
Romania	7.7	6.1	10.3	8.0	8.6	18.6	10.1	6.8	-10.5	-14.6	39,423	6.5
Russian Federation	6.7	8.1	7.2	7.4	21.7	-30.4	16.1	12.8	9.6	6.0	476,391	20.3
Senegal	2.3	5.0	-8.6	3.6	1.0	3.0	2.9	5.9	..	-8.1	1,686	4.1
Serbia	5.7	7.5	5.7	33.2	2.8	32.5	15.6	8.9	..	-16.1	14,218	8.0
Seychelles	5.3	5.3	17.8	-8.8	11.9	16.9	2.2	7.3	-21.2	-38.7	41	0.4
Slovak Republic	8.3	10.3	20.7	16.6	17.8	12.6	2.7	3.6	..	-4.0	22,148	4.3
South Africa	5.0	4.8	5.5	7.0	18.4	7.6	6.9	8.1	-6.5	-6.7	28,613	3.3
Sri Lanka	7.4	6.5	4.8	5.9	8.3	5.8	10.3	11.5	-4.9	-4.2	3,238	2.8
Sudan	11.8	10.5	0.4	15.5	8.2	-4.1	7.0	3.8	-12.6	-11.8	1,000	1.0
Swaziland	2.1	2.3	6.0	10.0	5.5	15.0	5.7	8.3	3.7	-0.7	637	3.4
Syrian Arab Republic	5.1	3.9	-10.0	2.5	-4.5	8.4	9.1	3.8	2.8	2.5	2,689	2.1
Thailand	5.0	4.3	8.6	6.5	1.6	3.2	5.0	3.0	1.1	2.2	92,574	6.5
Tunisia	5.2	5.7	3.9	4.2	1.4	5.3	3.0	1.8	-2.1	-1.4	7,348	4.5
Turkey	6.1	5.0	8.5	11.2	7.1	10.7	11.5	7.0	-8.1	-7.7	74,692	5.9
Uganda	5.4	6.2	4.0	15.6	7.0	12.8	7.3	8.9	-2.5	-6.8	2,160	6.0
Ukraine	7.1	7.3	-4.9	3.3	6.5	15.2	13.7	21.4	-1.5	-3.2	32,500	5.6
Uruguay	7.0	7.3	7.6	19.0	16.0	16.0	6.8	9.5	-2.3	-1.7	4,121	7.4
Uzbekistan	7.3	9.5	2.0	17.6	1.2	10.0	21.5	23.9	..	21.1	6,500	14.9
Venezuela, RB	10.3	8.4	-4.2	-5.3	31.4	31.9	16.9	23.4	14.9	11.1	33,477	5.7
Vietnam	8.2	8.5	22.7	21.1	21.5	34.0	7.3	8.2	..	-9.0	21,565	4.3
Zambia	6.2	5.7	21.0	10.8	14.3	20.0	12.2	10.1	8.8	-4.0	1,080	3.6

a. Data are preliminary estimates.

Source: World Development Indicators data files.



	Gross domestic product		Agriculture		Industry		Manufacturing		Services	
	average annual % growth		average annual % growth		average annual % growth		average annual % growth		average annual % growth	
	1990–2000	2000–06	1990–2000	2000–06	1990–2000	2000–06	1990–2000	2000–06	1990–2000	2000–06
Afghanistan	..	10.7	..	0.4	..	21.1	..	13.8	..	21.9
Albania	3.5	5.3	4.3	1.4	–0.5	2.9	..	–0.2	6.9	7.6
Algeria	1.9	5.0	3.6	7.3	1.8	4.4	–2.1	2.4	1.8	5.2
Angola ^a	1.6	11.5	–1.4	13.8	4.4	12.2	–0.3	17.1	–2.2	6.7
Argentina	4.3	3.6	3.5	3.0	3.8	5.3	2.7	5.0	4.5	2.4
Armenia	–1.9	12.5	0.5	7.8	–7.8	16.4	–4.3	7.7	6.4	13.4
Australia	4.0	3.2	3.7	1.7	2.8	2.7	2.1	1.1	4.4	3.6
Austria	2.4	1.7	1.6	0.0	2.7	2.2	2.7	1.3	2.3	1.6
Azerbaijan	–6.3	15.6	–2.1	5.9	–0.8	20.1	–12.0	8.8	–2.3	12.2
Bangladesh	4.8	5.6	2.9	2.8	7.3	7.7	7.2	7.3	4.5	5.8
Belarus	–1.7	8.1	–4.0	6.5	–1.8	11.5	–0.7	11.6	–0.4	6.1
Belgium	2.1	1.7	2.7	1.0	1.8	0.8	3.1	0.4	1.9	2.0
Benin ^a	4.8	3.8	5.8	4.6	4.1	3.8	5.8	2.7	4.2	3.2
Bolivia	4.0	3.3	2.9	3.7	4.1	3.7	3.8	3.7	4.3	2.3
Bosnia and Herzegovina	..	5.1	..	4.6	..	6.6	..	7.3	..	3.6
Botswana	6.0	5.1	–1.2	–1.6	5.8	4.8	4.4	2.1	7.8	5.4
Brazil	2.7	3.0	3.6	4.2	2.4	2.9	2.0	3.0	3.8	3.1
Bulgaria	–1.8	5.5	3.0	–1.1	–5.0	5.1	..	6.0	–5.2	5.9
Burkina Faso	5.5	6.2	5.9	6.2	5.9	7.3	5.9	6.3	3.9	5.5
Burundi	–2.9	2.5	–1.9	–1.5	–4.3	–6.2	–8.7	..	–2.8	10.4
Cambodia	7.0	9.5	3.7	5.2	14.3	14.6	18.6	14.2	7.5	10.0
Cameroon	1.7	3.6	5.5	3.8	–0.9	2.6	1.4	5.0	0.2	7.3
Canada	3.1	2.6	1.1	1.7	3.2	1.3	4.5	–0.1	3.0	3.0
Central African Republic	2.0	–0.7	3.8	0.3	0.7	–0.4	–0.2	–0.1	0.2	–2.6
Chad	2.2	14.1	4.9	3.4	0.6	41.7	..	..	0.8	8.5
Chile	6.6	4.3	2.2	6.2	5.6	3.7	4.4	4.0	6.9	4.3
China ^a	10.6	9.8	4.1	4.2	13.7	11.2	12.9	11.1	10.2	10.1
Hong Kong, China	4.1	4.8	..	–1.1	..	–3.0	..	–4.2	..	4.1
Colombia	2.8	3.9	–2.6	1.6	1.5	5.5	–2.5	4.9	4.5	3.1
Congo, Dem. Rep.	–4.9	4.7	1.4	0.8	–8.0	9.3	–8.7	5.7	–12.3	6.2
Congo, Rep. ^a	1.0	4.4	0.7	..	1.7	..	–2.4	..	–0.7	..
Costa Rica	5.3	4.8	4.1	3.0	6.2	5.2	6.8	5.2	4.7	5.3
Côte d'Ivoire ^a	3.2	0.1	3.5	1.1	6.3	–1.3	5.5	–3.0	2.0	0.1
Croatia	0.6	4.8	–2.1	1.1	–1.1	5.9	–3.5	5.5	1.3	4.6
Cuba ^a	4.2	3.4	..	..	..	..	..	..	..	..
Czech Republic	1.1	4.2	0.0	2.9	0.2	5.8	4.3	7.1	1.2	3.5
Denmark	2.7	1.6	4.6	2.8	2.5	0.6	2.5	–0.4	2.7	1.5
Dominican Republic ^a	6.0	3.9	3.9	3.8	7.0	1.0	4.9	1.7	6.0	5.6
Ecuador ^a	1.9	5.3	–1.7	4.8	2.6	6.1	1.5	5.2	2.4	4.8
Egypt, Arab Rep.	4.4	4.0	3.1	3.3	5.1	3.6	6.4	3.5	4.1	4.6
El Salvador	4.8	2.5	1.2	2.2	5.1	2.2	5.2	2.2	4.0	2.7
Eritrea	5.7	2.7	1.5	2.0	15.0	4.1	10.6	6.6	5.7	3.5
Estonia	0.2	8.6	–3.4	–0.1	–3.3	9.4	5.9	10.5	3.1	8.7
Ethiopia	4.0	5.7	2.4	5.0	4.5	7.0	4.0	4.4	5.5	5.7
Finland	2.6	2.9	–1.1	–0.2	4.1	4.2	6.4	4.0	2.5	1.8
France	1.9	1.7	2.0	–0.3	1.0	1.3	..	1.1	2.2	1.8
Gabon ^a	2.3	1.7	2.0	0.8	1.6	1.3	3.0	3.5	3.1	2.1
Gambia, The	3.0	3.9	3.3	2.5	1.0	5.9	0.9	4.2	3.7	5.4
Georgia	–7.1	7.8	–11.0	1.9	–8.1	13.0	..	7.7	–0.3	8.3
Germany	1.8	0.8	0.1	1.0	–0.1	1.0	0.2	1.2	2.9	1.0
Ghana ^a	4.3	5.3	3.4	3.6	2.7	7.5	–4.5	..	5.6	6.1
Greece	2.2	4.4	0.5	–3.1	1.0	2.9	..	1.2	2.6	4.8
Guatemala ^a	4.2	2.7	2.8	2.6	4.3	2.0	2.8	1.8	4.7	3.1
Guinea	4.4	2.9	4.3	4.0	4.9	3.4	4.0	2.2	3.6	1.8
Guinea-Bissau	1.2	0.4	3.9	4.4	–3.1	3.7	–2.0	3.7	–0.6	0.6
Haiti	–1.5	–0.3	..	..	..	..	..	..	..	..

Growth of output

4.1

ECONOMY

	Gross domestic product		Agriculture		Industry		Manufacturing		Services	
	average annual % growth		average annual % growth		average annual % growth		average annual % growth		average annual % growth	
	1990–2000	2000–06	1990–2000	2000–06	1990–2000	2000–06	1990–2000	2000–06	1990–2000	2000–06
Honduras	3.2	4.0	2.2	3.7	3.6	4.0	4.0	4.3	3.8	4.7
Hungary	1.5	4.3	–2.4	8.2	3.6	3.7	7.9	7.0	1.3	4.1
India	5.9	7.4	3.2	2.7	6.1	8.0	6.7	7.7	7.7	8.9
Indonesia ^a	4.2	4.9	2.0	3.1	5.2	4.0	6.7	5.1	4.0	6.5
Iran, Islamic Rep.	3.1	5.6	3.2	5.5	2.6	6.7	5.1	9.3	3.8	5.1
Iraq	..	–11.4	..	–3.6	..	–17.0	..	–12.8	..	5.9
Ireland	7.5	5.1	0.8	–1.8	12.7	4.9	..	..	8.1	5.6
Israel	5.4	2.6	..	..	..	..	..	..	..	..
Italy	1.5	0.7	2.1	–0.4	0.8	–0.3	1.4	–1.2	1.7	1.1
Jamaica	1.8	1.8	–0.3	–1.3	–1.0	1.8	–2.2	–0.2	2.3	1.8
Japan	1.1	1.5	–1.3	–1.9	–0.3	0.9	..	1.9	2.0	1.6
Jordan	5.0	6.1	–3.0	9.4	5.2	8.8	5.6	10.8	5.0	5.5
Kazakhstan	–4.1	10.1	–8.0	4.7	0.6	11.4	2.7	8.8	0.3	10.8
Kenya	2.2	3.9	1.9	3.2	1.2	4.6	1.3	3.8	3.2	3.5
Korea, Dem. Rep.	..	..	..	..	..	..	..	..	..	..
Korea, Rep.	5.8	4.6	1.6	0.1	6.0	6.4	7.3	7.3	5.6	3.7
Kuwait ^a	4.9	7.3	1.0	15.1	0.3	1.9	–0.1	2.5	3.5	10.2
Kyrgyz Republic	–4.1	3.8	1.5	2.3	–10.3	–0.7	–7.5	–1.9	–4.9	7.7
Lao PDR	6.5	6.4	4.8	2.6	11.1	12.9	11.7	10.2	6.6	6.8
Latvia	–1.5	8.6	–5.2	3.2	–8.3	8.4	–7.3	7.1	2.7	9.0
Lebanon	6.1	3.7	1.8	0.8	–1.3	4.2	–5.1	3.8	3.7	2.9
Lesotho	3.9	3.4	2.4	–2.7	5.0	5.2	6.6	3.2	4.4	3.9
Liberia ^a	4.1	–4.7	..	..	..	..	..	..	..	..
Libya	..	3.2	..	..	..	..	..	..	..	..
Lithuania	–2.7	8.0	–0.3	3.3	3.3	10.2	7.0	10.1	5.4	6.6
Macedonia, FYR	–0.8	2.2	0.2	0.8	–2.3	1.4	–5.3	0.6	0.5	2.3
Madagascar	2.0	2.7	1.9	1.9	2.4	1.6	2.0	1.6	2.3	2.7
Malawi	3.7	2.4	8.6	–0.8	2.0	3.9	0.5	1.5	1.6	3.6
Malaysia ^a	7.0	5.0	0.3	3.6	8.6	4.9	9.5	5.7	7.3	5.3
Mali	4.1	5.7	2.6	5.0	6.4	4.8	–1.4	5.3	3.0	6.3
Mauritania	2.9	5.0	–0.2	–0.4	3.4	4.0	5.8	–2.5	4.9	7.2
Mauritius	5.2	4.0	–0.5	1.1	5.5	1.4	5.3	0.2	6.4	5.9
Mexico	3.1	2.3	1.5	1.9	3.8	1.3	4.3	0.8	2.9	2.8
Moldova	–9.6	6.8	–11.2	1.8	–13.6	1.2	–7.1	5.8	0.7	10.1
Mongolia	1.0	7.1	2.5	2.7	–2.5	7.9	–9.7	7.5	0.7	8.6
Morocco ^a	2.4	5.1	–0.4	8.7	3.2	4.1	2.6	3.4	3.1	4.7
Mozambique	5.7	8.2	4.9	7.9	12.8	9.6	10.2	12.4	2.8	7.8
Myanmar ^a	6.9	9.2	5.7	..	10.5	..	7.9	..	7.2	..
Namibia	4.0	4.8	3.8	1.5	2.4	6.0	2.6	3.4	4.5	5.4
Nepal	4.9	3.3	2.4	3.6	7.2	2.4	8.9	0.6	6.4	3.4
Netherlands	3.2	1.3	1.8	1.5	1.7	0.1	2.6	0.1	3.6	1.8
New Zealand	3.2	3.3	2.9	0.3	2.4	3.2	2.2	2.6	3.5	4.0
Nicaragua	3.7	3.3	4.7	3.0	5.5	4.2	5.3	5.2	5.0	3.4
Niger ^a	2.4	3.9	3.0	6.4	2.0	3.1	2.6	3.9	1.9	3.7
Nigeria	2.5	6.0	3.4	5.8	1.0	5.5	1.1	8.8	3.3	6.5
Norway	3.9	2.3	2.6	4.4	3.8	0.8	1.5	2.8	3.9	2.7
Oman ^a	4.5	4.2	5.0	2.2	3.9	–0.5	6.0	9.3	5.0	7.5
Pakistan	3.8	5.5	4.4	2.5	4.1	7.9	3.8	10.0	4.4	6.1
Panama	4.7	5.0	3.1	4.4	6.0	2.7	2.7	–0.4	4.5	5.6
Papua New Guinea	4.3	1.9	4.0	2.2	5.6	–3.6	5.5	–1.1	1.5	1.4
Paraguay ^a	2.2	2.9	3.3	4.9	0.6	1.8	1.4	1.4	2.5	2.5
Peru	4.7	4.9	5.5	3.5	5.4	5.8	3.8	5.4	4.0	4.5
Philippines ^a	3.3	4.9	1.7	3.8	3.5	3.5	3.0	4.5	4.0	6.3
Poland	4.7	3.7	0.5	3.4	7.1	4.3	9.9	7.0	5.1	3.2
Portugal	2.8	0.7	–0.3	–0.9	3.1	–0.8	3.6	0.0	2.4	1.4
Puerto Rico ^a	4.2	..	..	..	..	..	..	..	..	..



	Gross domestic product		Agriculture		Industry		Manufacturing		Services	
	average annual % growth		average annual % growth		average annual % growth		average annual % growth		average annual % growth	
	1990–2000	2000–06	1990–2000	2000–06	1990–2000	2000–06	1990–2000	2000–06	1990–2000	2000–06
Romania	–0.6	6.0	–1.9	8.1	–1.2	5.6	..	..	0.9	5.4
Russian Federation	–4.7	6.4	–4.9	3.9	–7.1	6.0	..	..	–1.7	6.6
Rwanda ^a	–0.3	5.0	2.6	3.6	–3.7	6.2	–6.0	3.0	–1.2	6.2
Saudi Arabia ^a	2.1	4.4	1.6	1.5	2.2	4.9	5.6	6.0	2.2	4.2
Senegal	3.0	4.5	2.4	1.6	3.8	3.9	3.1	1.7	3.0	5.5
Serbia	..	5.3	..	..	..	..	..	..	..	..
Sierra Leone	–5.1	12.3	–13.0	..	–4.5	..	6.1	..	–2.9	..
Singapore	7.6	5.0	–2.4	1.8	7.8	4.6	7.0	6.5	7.8	5.3
Slovak Republic ^a	2.1	5.1	0.4	10.0	3.8	9.6	9.3	10.7	5.3	2.1
Slovenia	2.7	3.7	0.0	0.0	1.3	4.0	1.1	4.4	3.4	2.0
Somalia	..	..	..	..	..	..	..	..	..	..
South Africa	2.1	4.1	1.0	–0.2	1.1	3.1	1.6	2.9	2.7	4.8
Spain	2.7	3.3	3.1	–1.7	2.3	2.6	..	0.7	2.7	3.5
Sri Lanka	5.3	4.8	1.8	1.2	6.9	4.4	8.1	3.5	5.7	6.3
Sudan	5.6	7.0	7.4	1.7	8.6	14.2	8.9	8.8	1.9	6.2
Swaziland	3.3	2.4	1.2	0.7	3.7	1.9	2.8	1.9	3.6	2.8
Sweden	2.1	2.7	–1.1	2.0	4.2	4.3	8.6	4.4	1.9	2.1
Switzerland	1.0	1.3	–2.0	–1.7	0.4	1.1	1.2	0.8	1.2	0.9
Syrian Arab Republic	5.1	4.2	6.0	3.8	9.2	2.2	..	16.1	1.5	7.3
Tajikistan	–10.4	9.1	–6.9	9.4	–10.8	11.2	–10.0	9.8	–12.6	7.4
Tanzania ^b	2.9	6.5	3.2	4.9	3.1	9.6	2.7	8.0	2.7	6.2
Thailand ^a	4.2	5.4	1.0	2.4	5.7	6.8	6.9	7.0	3.7	4.6
Timor-Leste	..	–0.7	..	4.3	..	–5.3	..	–0.2	..	–1.8
Togo ^a	3.5	2.6	4.0	2.8	1.8	8.1	1.8	7.5	3.9	–0.7
Trinidad and Tobago	3.2	9.5	2.7	–5.6	3.2	13.3	4.9	9.5	3.2	5.7
Tunisia ^a	4.7	4.6	2.3	3.4	4.6	3.2	5.5	3.1	5.3	5.6
Turkey	3.8	5.6	1.3	1.6	4.6	6.4	4.7	6.7	3.9	5.2
Turkmenistan	–4.8	..	–5.7	..	–3.4	..	..	..	–5.4	..
Uganda	7.1	5.6	3.7	4.3	12.2	7.5	14.1	5.6	8.2	7.6
Ukraine	–9.3	7.8	–5.6	3.2	–12.6	6.3	–11.2	11.4	–8.1	7.3
United Arab Emirates	4.8	8.2	13.2	2.9	3.0	5.6	11.9	8.5	7.2	9.3
United Kingdom	2.7	2.5	–0.3	0.6	1.5	0.1	1.3	–0.4	3.2	3.4
United States	3.5	2.6	3.7	2.5	3.7	1.5	..	2.2	3.4	2.7
Uruguay	3.4	2.3	2.8	6.3	1.1	2.5	–0.1	4.2	3.7	1.2
Uzbekistan	–0.2	5.7	0.5	6.9	–3.4	4.3	0.7	1.8	0.4	5.7
Venezuela, RB	1.6	3.4	1.2	3.0	1.2	1.6	4.5	2.5	–0.1	4.9
Vietnam ^a	7.9	7.6	4.3	3.9	11.9	10.3	11.2	11.7	7.5	7.2
West Bank and Gaza ^a	7.3	0.2	..	..	..	..	..	..	..	..
Yemen, Rep.	6.0	3.9	5.6	0.3	8.2	–0.1	5.7	3.0	5.0	8.1
Zambia	0.5	5.0	4.2	2.1	–4.2	9.2	0.8	5.4	2.5	5.9
Zimbabwe	2.1	–5.7	4.3	–8.5	0.4	–10.0	0.4	–12.0	2.9	–10.0
World	2.9 w	3.0 w	2.0 w	2.5 w	2.4 w	2.6 w	.. w	2.9 w	3.1 w	2.8 w
Low income	4.7	6.5	3.3	3.1	4.9	7.6	5.9	7.7	5.8	7.6
Middle income	3.8	5.6	2.0	3.7	4.6	6.6	6.3	6.9	4.0	5.4
Lower middle income	6.2	7.6	2.7	4.0	8.0	8.7	8.6	9.4	6.0	7.7
Upper middle income	2.2	3.9	0.8	3.3	1.6	3.9	3.8	3.8	3.0	3.8
Low & middle income	3.9	5.7	2.4	3.6	4.6	6.7	6.2	6.9	4.2	5.7
East Asia & Pacific	8.5	8.6	3.4	3.9	11.0	9.7	10.9	9.8	8.1	8.8
Europe & Central Asia	–0.9	5.8	–1.8	3.6	–2.9	6.2	..	..	0.9	5.4
Latin America & Carib.	3.2	3.1	2.1	3.2	3.1	2.9	2.9	2.8	3.6	3.1
Middle East & N. Africa	3.8	4.2	2.9	4.7	4.1	2.5	3.8	5.7	3.5	5.0
South Asia	5.5	7.0	3.3	2.7	6.0	7.9	6.4	7.8	6.9	8.2
Sub-Saharan Africa	2.5	4.7	3.3	3.5	1.7	5.4	2.1	3.4	2.5	4.7
High income	2.7	2.3	1.4	0.5	1.9	1.4	..	1.8	2.9	2.4
Euro area	2.1	1.5	1.6	–0.4	1.0	1.2	2.2	0.6	2.5	1.7

a. Components are at producer prices. b. Covers mainland Tanzania only.

About the data

An economy's growth is measured by the change in the volume of its output or in the real incomes of its residents. The 1993 United Nations System of National Accounts (1993 SNA) offers three plausible indicators for calculating growth: the volume of gross domestic product (GDP), real gross domestic income, and real gross national income. The volume of GDP is the sum of value added, measured at constant prices, by households, government, and industries operating in the economy.

Each industry's contribution to growth in the economy's output is measured by growth in the industry's value added. In principle, value added in constant prices can be estimated by measuring the quantity of goods and services produced in a period, valuing them at an agreed set of base year prices, and subtracting the cost of intermediate inputs, also in constant prices. This double-deflation method, recommended by the 1993 SNA and its predecessors, requires detailed information on the structure of prices of inputs and outputs.

In many industries, however, value added is extrapolated from the base year using single volume indexes of outputs or, less commonly, inputs. Particularly in the services industries, including most of government, value added in constant prices is often imputed from labor inputs, such as real wages or number of employees. In the absence of well defined measures of output, measuring the growth of services remains difficult.

Moreover, technical progress can lead to improvements in production processes and in the quality of goods and services that, if not properly accounted for, can distort measures of value added and thus of growth. When inputs are used to estimate output, as for nonmarket services, unmeasured technical progress leads to underestimates of the volume of output. Similarly, unmeasured improvements in quality lead to underestimates of the value of output and value added. The result can be underestimates of growth and productivity improvement and overestimates of inflation.

Informal economic activities pose a particular measurement problem, especially in developing countries, where much economic activity is unrecorded. A complete picture of the economy requires estimating household outputs produced for home use, sales in informal markets, barter exchanges, and illicit or deliberately unreported activities. The consistency and completeness of such estimates depend on the skill and methods of the compiling statisticians.

Rebasing national accounts

When countries rebase their national accounts, they update the weights assigned to various components to better reflect current patterns of production or uses of output. The new base year should represent normal operation of the economy—it should be a year without major shocks or distortions. Some developing countries have not rebased their national accounts for many years. Using an old base year can be misleading because implicit price and volume weights become progressively less relevant and useful.

To obtain comparable series of constant price data, the World Bank rescales GDP and value added by industrial origin to a common reference year. This year's *World Development Indicators* continues to use 2000 as the reference year. Because rescaling changes the implicit weights used in forming regional and income group aggregates, aggregate growth rates in this year's edition are not comparable with those from earlier editions with different base years.

Rescaling may result in a discrepancy between the rescaled GDP and the sum of the rescaled components. Because allocating the discrepancy would cause distortions in the growth rates, the discrepancy is left unallocated. As a result, the weighted average of the growth rates of the components generally will not equal the GDP growth rate.

Computing growth rates

Growth rates of GDP and its components are calculated using the least squares method and constant price data in the local currency. Constant price U.S. dollar series are used to calculate regional and income group growth rates. Local currency series are converted to constant U.S. dollars using an exchange rate in the common reference year. The growth rates in the table are average annual compound growth rates. Methods of computing growth rates and the alternative conversion factor are described in *Statistical methods*.

Changes in the System of National Accounts

World Development Indicators adopted the terminology of the 1993 SNA in 2001. Although many countries continue to compile their national accounts according to the SNA version 3 (referred to as the 1968 SNA), more and more are adopting the 1993 SNA. Some low-income countries still use concepts from the even older 1953 SNA guidelines, including valuations such as factor cost, in describing major economic aggregates. Countries that use the 1993 SNA are identified in *Primary data documentation*.

Definitions

• **Gross domestic product (GDP)** at purchaser prices is the sum of gross value added by all resident producers in the economy plus any product taxes (less subsidies) not included in the valuation of output. It is calculated without deducting for depreciation of fabricated capital assets or for depletion and degradation of natural resources. Value added is the net output of an industry after adding up all outputs and subtracting intermediate inputs. The industrial origin of value added is determined by the International Standard Industrial Classification (ISIC) revision 3. • **Agriculture** corresponds to ISIC divisions 1–5 and includes forestry and fishing. • **Industry** corresponds to ISIC divisions 10–45, which cover mining, manufacturing (also reported separately), construction, electricity, water, and gas. • **Manufacturing** corresponds to industries belonging to ISIC divisions 15–37. • **Services** correspond to ISIC divisions 50–99. This sector is derived as a residual (from GDP less agriculture and industry) and may not properly reflect the sum of services output, including banking and financial services. For some countries it includes product taxes (minus subsidies) and may also include statistical discrepancies.

Data sources

Data on national accounts for most developing countries are collected from national statistical organizations and central banks by visiting and resident World Bank missions. Data for high-income economies come from Organisation for Economic Co-operation and Development (OECD) data files (see *Annual National Accounts for OECD Member Countries: Data from 1970 Onwards*). The World Bank rescales constant price data to a common reference year. The complete national accounts time series is available on the *World Development Indicators 2008 CD-ROM*. The United Nations Statistics Division publishes detailed national accounts for UN member countries in *National Accounts Statistics: Main Aggregates and Detailed Tables* and publishes updates in the *Monthly Bulletin of Statistics*.



4.2

Structure of output

	Gross domestic product		Agriculture		Industry		Manufacturing		Services	
	\$ millions		% of GDP		% of GDP		% of GDP		% of GDP	
	1995	2006	1995	2006	1995	2006	1995	2006	1995	2006
Afghanistan	..	8,399	..	36	..	24	..	15	..	39
Albania	2,424	9,098	56	23	22	22	14	..	22	56
Algeria	41,764	114,727	10	8	50	61	11	6	39	30
Angola ^a	5,040	45,163	7	9	66	70	4	4	26	21
Argentina	258,032	214,241	6	8	28	36	18	22	66	56
Armenia	1,468	6,387	42	20	32	44	25	17	26	37
Australia	384,095	780,531	4	3	28	28	15	11	68	69
Austria	239,560	322,001	3	2	30	31	19	19	67	67
Azerbaijan	3,052	19,851	27	7	34	70	13	6	39	22
Bangladesh	37,940	61,897	26	20	25	28	15	17	49	52
Belarus	13,973	36,945	17	9	37	42	31	33	46	49
Belgium	284,321	394,033	2	1	28	24	20	17	70	75
Benin ^a	2,009	4,775	34	32	15	13	9	8	51	54
Bolivia	6,715	11,162	17	14	33	34	19	15	50	52
Bosnia and Herzegovina	1,867	12,255	21	10	26	25	11	12	54	65
Botswana	4,774	10,598	4	2	51	53	5	4	45	45
Brazil	768,951	1,067,472	6	5	28	31	19	18	67	64
Bulgaria	13,107	31,483	14	9	35	31	24	19	50	60
Burkina Faso	2,380	6,173	35	33	21	22	15	14	44	45
Burundi	1,000	903	48	35	19	20	9	9	33	45
Cambodia	3,441	7,258	48	30	14	26	9	19	38	44
Cameroon	8,733	18,323	24	20	31	33	22	18	45	47
Canada	590,517	1,271,593	3	..	31	..	18	..	66	..
Central African Republic	1,122	1,494	46	56	21	15	10	8	33	29
Chad	1,446	6,541	36	21	14	55	11	5	51	25
Chile	71,349	145,843	9	4	35	48	18	14	55	48
China ^a	728,011	2,644,681	20	12	47	48	34	33	33	40
Hong Kong, China	144,230	189,799	0	0	15	9	8	3	85	91
Colombia	92,503	153,405	15	12	32	36	16	17	53	52
Congo, Dem. Rep.	5,643	8,543	57	46	17	28	9	6	26	27
Congo, Rep. ^a	2,116	7,385	10	4	45	73	8	5	45	22
Costa Rica	11,722	22,229	14	9	30	29	22	22	57	62
Côte d'Ivoire ^a	11,000	17,551	25	23	21	26	15	18	55	51
Croatia	18,808	42,925	11	7	34	32	24	21	55	61
Cuba ^a	..	..	6	..	45	..	38	..	49	..
Czech Republic	55,257	143,018	5	3	38	39	24	27	57	58
Denmark	181,984	275,366	3	2	25	26	17	14	71	72
Dominican Republic ^a	12,585	31,846	13	12	33	26	18	14	55	62
Ecuador ^a	20,206	41,402	17	7	25	35	14	9	58	59
Egypt, Arab Rep.	60,159	107,484	17	14	32	38	17	17	51	48
El Salvador	9,500	18,654	14	11	30	29	23	22	56	60
Eritrea	578	1,085	21	17	17	23	9	9	62	60
Estonia	4,331	16,410	8	3	29	29	18	17	63	68
Ethiopia	7,606	13,315	57	47	10	13	5	5	33	39
Finland	130,605	210,652	4	3	33	32	25	23	63	65
France	1,569,983	2,248,091	3	2	25	21	..	12	72	77
Gabon ^a	4,959	9,546	8	5	52	61	5	4	40	34
Gambia, The	382	511	30	33	13	13	6	5	57	54
Georgia	2,694	7,744	52	13	16	25	17	13	32	62
Germany	2,522,792	2,896,876	1	1	32	30	23	23	67	69
Ghana ^a	6,457	12,906	39	37	24	25	9	8	37	37
Greece	151,184	308,449	8	3	21	21	..	10	71	76
Guatemala ^a	14,657	35,325	24	22	20	19	14	12	56	59
Guinea	3,694	3,317	19	13	29	37	4	4	52	50
Guinea-Bissau	254	304	55	62	12	11	8	7	33	27
Haiti	2,908	4,975	25	..	32	..	20	..	44	..

Structure of output

4.2

ECONOMY

	Gross domestic product		Agriculture		Industry		Manufacturing		Services	
	\$ millions		% of GDP		% of GDP		% of GDP		% of GDP	
	1995	2006	1995	2006	1995	2006	1995	2006	1995	2006
Honduras	3,911	9,235	22	14	31	31	18	20	48	55
Hungary	44,656	112,920	7	4	32	30	24	23	61	66
India	356,299	911,813	26	18	28	28	18	16	46	55
Indonesia ^a	202,132	364,790	17	13	42	47	24	28	41	40
Iran, Islamic Rep.	90,829	217,898	18	10	34	45	12	12	47	45
Iraq	10,114	..	9	..	75	..	1	..	16	..
Ireland	67,105	220,137	7	2	38	36	30	25	55	62
Israel	93,992	140,457	..	..	..	..	..	..	..	..
Italy	1,126,042	1,850,961	3	2	30	27	22	18	66	71
Jamaica	5,813	10,023	9	6	37	33	16	13	54	61
Japan	5,247,610	4,368,435	2	2	34	30	23	21	64	69
Jordan	6,727	14,101	4	3	29	30	15	19	67	67
Kazakhstan	20,374	81,003	13	6	32	42	15	12	55	52
Kenya	9,046	22,779	31	27	16	19	10	11	53	54
Korea, Dem. Rep.	..	..	..	..	..	..	..	..	..	..
Korea, Rep.	517,118	888,024	6	3	42	40	28	28	52	57
Kuwait ^a	27,192	80,781	0	..	55	..	4	..	45	..
Kyrgyz Republic	1,661	2,818	44	33	20	20	9	13	37	47
Lao PDR	1,764	3,437	56	42	19	32	14	21	25	26
Latvia	5,236	20,116	9	4	30	21	21	12	61	75
Lebanon	11,719	22,722	7	7	27	24	15	11	66	70
Lesotho	931	1,494	18	16	39	43	16	18	43	40
Liberia ^a	135	631	82	66	5	16	3	12	13	18
Libya	25,541	50,320	..	..	..	..	..	..	..	..
Lithuania	7,621	29,766	11	5	32	35	20	18	56	59
Macedonia, FYR	4,449	6,217	13	13	30	29	23	19	57	58
Madagascar	3,160	5,499	27	28	9	15	8	13	64	57
Malawi	1,397	3,164	30	34	20	20	16	14	50	46
Malaysia ^a	88,832	150,672	13	9	41	50	26	30	46	41
Mali	2,466	5,866	50	37	19	24	8	3	32	39
Mauritania	1,415	2,663	37	13	25	48	8	5	37	39
Mauritius	3,820	6,347	10	6	32	27	23	19	58	68
Mexico	286,698	839,182	6	4	28	27	21	18	66	69
Moldova	1,753	3,356	33	18	32	15	26	14	35	67
Mongolia	1,227	3,132	41	22	29	42	12	4	30	36
Morocco	32,986	65,401	15	16	34	28	19	16	51	57
Mozambique	2,247	6,833	37	28	15	26	8	16	48	46
Myanmar ^a	..	..	60	..	10	..	7	..	30	..
Namibia	3,503	6,566	12	11	28	31	13	14	60	58
Nepal	4,401	8,938	42	34	23	16	10	8	36	49
Netherlands	418,969	662,296	3	2	27	25	17	14	69	73
New Zealand	61,281	104,519	7	..	27	..	19	..	66	..
Nicaragua	3,191	5,301	23	20	27	30	19	18	49	51
Niger ^a	1,881	3,663	40	..	17	..	6	..	43	..
Nigeria	28,109	115,338	32	23	47	57	5	..	22	20
Norway	148,920	334,942	3	2	34	45	13	9	63	54
Oman ^a	13,803	30,835	3	2	46	55	5	8	51	43
Pakistan	60,636	126,836	26	19	24	27	16	19	50	53
Panama	7,906	17,097	8	8	18	19	9	8	74	73
Papua New Guinea	4,601	5,654	32	42	36	39	10	6	31	19
Paraguay ^a	8,066	9,275	21	21	23	18	16	12	56	61
Peru	53,674	92,416	9	7	31	38	17	17	60	55
Philippines ^a	74,120	117,562	22	14	32	32	23	23	46	54
Poland	139,095	338,733	8	5	35	32	21	19	57	64
Portugal	112,960	194,726	6	3	28	25	19	..	66	72
Puerto Rico ^a	42,647	..	1	..	44	..	42	..	55	..



4.2

Structure of output

	Gross domestic product		Agriculture		Industry		Manufacturing		Services	
	\$ millions		% of GDP		% of GDP		% of GDP		% of GDP	
	1995	2006	1995	2006	1995	2006	1995	2006	1995	2006
Romania	35,477	121,609	21	11	43	38	29	26	36	52
Russian Federation	395,529	986,940	7	5	37	39	..	19	56	56
Rwanda ^a	1,293	2,494	44	41	16	21	10	8	40	38
Saudi Arabia ^a	142,458	349,138	6	3	49	65	10	9	45	32
Senegal	4,879	9,186	21	16	24	23	17	14	55	61
Serbia	19,681	31,989	..	13	..	26	..	..	..	62
Sierra Leone	871	1,450	43	46	39	25	9	..	18	29
Singapore	84,291	132,158	0	0	35	35	27	29	65	65
Slovak Republic ^a	19,715	55,049	5	4	34	32	24	20	61	65
Slovenia	20,288	37,303	4	2	35	35	26	25	61	63
Somalia	..	..	..	..	..	..	..	..	..	..
South Africa	151,113	255,155	4	3	35	31	21	18	61	66
Spain	596,751	1,224,676	5	3	29	30	..	15	66	67
Sri Lanka	13,030	26,964	23	16	27	27	16	14	50	56
Sudan	7,288	37,442	44	32	15	29	9	6	41	39
Swaziland	1,364	2,648	15	11	44	46	36	37	40	43
Sweden	250,640	383,799	3	1	30	29	22	20	67	70
Switzerland	314,799	380,412	2	1	31	28	21	20	66	70
Syrian Arab Republic	11,397	33,407	32	18	20	32	15	7	48	49
Tajikistan	1,232	2,811	38	25	39	27	28	19	22	48
Tanzania ^b	5,255	12,784	47	45	14	17	7	7	38	37
Thailand ^a	167,896	206,338	10	11	41	45	30	35	50	45
Timor-Leste	..	356	..	32	..	13	..	3	..	55
Togo ^a	1,309	2,206	38	44	22	24	10	10	40	32
Trinidad and Tobago	5,329	18,136	2	1	47	62	9	6	51	38
Tunisia ^a	18,031	30,298	11	11	29	28	19	17	59	60
Turkey	169,708	402,710	16	10	27	27	23	22	56	63
Turkmenistan	2,482	10,496	17	20	63	40	40	22	20	40
Uganda	5,756	9,419	49	32	14	18	7	9	36	49
Ukraine	48,214	106,469	15	9	43	35	35	21	42	57
United Arab Emirates	42,807	129,702	3	2	52	56	10	14	45	42
United Kingdom	1,135,785	2,376,984	2	1	32	24	22	14	66	75
United States	7,342,300	13,163,870	2	1	26	23	19	14	72	76
Uruguay	18,348	19,308	9	9	29	32	20	23	62	58
Uzbekistan	13,350	17,178	32	26	28	27	12	11	40	46
Venezuela, RB	74,889	181,862	6	4	41	55	15	18	53	40
Vietnam ^a	20,736	60,999	27	20	29	42	15	21	44	38
West Bank and Gaza ^a	3,220	4,059	..	..	..	..	..	..	..	..
Yemen, Rep.	4,236	19,057	20	..	32	..	14	..	48	..
Zambia	3,478	10,734	18	22	36	33	11	11	46	45
Zimbabwe	7,111	3,418	15	19	29	24	22	14	56	57
World	29,613,549 t	48,461,854 t	4 w	3 w	31 w	28 w	20 w	18 w	65 w	69 w
Low income	665,159	1,618,703	29	20	27	28	16	16	44	52
Middle income	4,510,786	10,059,157	12	8	36	37	23	20	52	54
Lower middle income	1,814,273	4,735,728	18	12	41	44	27	27	41	45
Upper middle income	2,695,409	5,324,615	7	6	31	32	20	19	61	62
Low & middle income	5,177,822	11,678,579	14	10	34	36	22	19	51	54
East Asia & Pacific	1,313,304	3,616,708	19	12	44	47	31	32	37	41
Europe & Central Asia	987,511	2,499,359	12	7	34	33	23	20	54	60
Latin America & Carib.	1,751,110	2,964,189	7	6	29	31	19	18	64	62
Middle East & N. Africa	329,469	734,423	15	12	35	40	14	13	50	48
South Asia	476,196	1,146,716	26	18	27	28	17	17	46	54
Sub-Saharan Africa	320,739	712,731	19	15	32	30	15	14	49	55
High income	24,431,143	36,794,507	2	2	30	26	20	17	68	72
Euro area	7,273,737	10,636,418	3	2	29	27	22	18	68	72

a. Components are at producer prices. b. Covers mainland Tanzania only.

Structure of output

4.2

About the data

An economy's gross domestic product (GDP) represents the sum of value added by all producers in the economy. Value added is the value of the gross output of producers less the value of intermediate goods and services consumed in production, before taking account of the consumption of fixed capital in the production process. The United Nations System of National Accounts calls for estimates of value added to be valued at either basic prices (excluding net taxes on products) or producer prices (including net taxes on products paid by producers but excluding sales or value added taxes). Both valuations exclude transport charges that are invoiced separately by producers. Total GDP shown in the table and elsewhere in this volume is measured at purchaser prices. Value added by industry is normally measured at basic prices. When value added is measured at producer prices, this is noted in *Primary data documentation*.

While GDP estimates based on the production approach are generally more reliable than estimates compiled from the income or expenditure side, different countries use different definitions, methods, and reporting standards. World Bank staff review the quality of national accounts data and sometimes make adjustments to improve consistency with international guidelines. Nevertheless, significant discrepancies remain between international standards and actual practice. Many statistical offices, especially those in developing countries, face severe limitations in the resources, time, training, and budgets required to produce reliable and comprehensive series of national accounts statistics.

Data problems in measuring output

Among the difficulties faced by compilers of national accounts is the extent of unreported economic activity in the informal or secondary economy. In developing countries a large share of agricultural output is either not exchanged (because it is consumed within the household) or not exchanged for money.

Agricultural production often must be estimated indirectly, using a combination of methods involving estimates of inputs, yields, and area under cultivation. This approach sometimes leads to crude approximations that can differ from the true values over time and across crops for reasons other than climate conditions or farming techniques. Similarly, agricultural inputs that cannot easily be allocated to specific outputs are frequently "netted out" using equally crude and ad hoc approximations. For further discussion of the measurement of agricultural production, see *About the data* for table 3.3.

Ideally, industrial output should be measured through regular censuses and surveys of firms. But in most developing countries such surveys are infrequent, so earlier survey results must be extrapolated using an appropriate indicator. The choice of sampling unit, which may be the enterprise (where responses may be based on financial records) or the establishment (where production units may be recorded separately), also affects the quality of the data. Moreover, much industrial production is organized in unincorporated or owner-operated ventures that are not captured by surveys aimed at the formal sector. Even in large industries, where regular surveys are more likely, evasion of excise and other taxes and nondisclosure of income lower the estimates of value added. Such problems become more acute as countries move from state control of industry to private enterprise, because new firms enter business and growing numbers of established firms fail to report. In accordance with the System of National Accounts, output should include all such unreported activity as well as the value of illegal activities and other unrecorded, informal, or small-scale operations. Data on these activities need to be collected using techniques other than conventional surveys of firms.

In industries dominated by large organizations and enterprises, such as public utilities, data on output, employment, and wages are usually readily available and reasonably reliable. But in the services industry the many self-employed workers and one-person businesses are sometimes difficult to locate, and they have little incentive to respond to surveys, let alone to report their full earnings. Compounding these problems are the many forms of economic activity that go unrecorded, including the work that women and children do for little or no pay. For further discussion of the problems of using national accounts data, see Srinivasan (1994) and Heston (1994).

Dollar conversion

To produce national accounts aggregates that are measured in the same standard monetary units, the value of output must be converted to a single common currency. The World Bank conventionally uses the U.S. dollar and applies the average official exchange rate reported by the International Monetary Fund for the year shown. An alternative conversion factor is applied if the official exchange rate is judged to diverge by an exceptionally large margin from the rate effectively applied to transactions in foreign currencies and traded products.

Definitions

• **Gross domestic product (GDP)** at purchaser prices is the sum of gross value added by all resident producers in the economy plus any product taxes (less subsidies) not included in the valuation of output. It is calculated without deducting for depreciation of fabricated assets or for depletion and degradation of natural resources. Value added is the net output of an industry after adding up all outputs and subtracting intermediate inputs. The industrial origin of value added is determined by the International Standard Industrial Classification (ISIC) revision 3. • **Agriculture** corresponds to ISIC divisions 1–5 and includes forestry and fishing. • **Industry** corresponds to ISIC divisions 10–45, which cover mining, manufacturing (also reported separately), construction, electricity, water, and gas. • **Manufacturing** corresponds to ISIC divisions 15–37. • **Services** correspond to ISIC divisions 50–99. This sector is derived as a residual (from GDP less agriculture and industry) and may not properly reflect the sum of services output, including banking and financial services. For some countries it includes product taxes (minus subsidies) and may also include statistical discrepancies.

Data sources

Data on national accounts for most developing countries are collected from national statistical organizations and central banks by visiting and resident World Bank missions. Data for high-income economies come from Organisation for Economic Co-operation and Development (OECD) data files (see *Annual National Accounts for OECD Member Countries: Data from 1970 Onwards*). The complete national accounts time series is available on the *World Development Indicators 2008* CD-ROM. The United Nations Statistics Division publishes detailed national accounts for UN member countries in *National Accounts Statistics: Main Aggregates and Detailed Tables* and publishes updates in the *Monthly Bulletin of Statistics*.



4.3

Structure of manufacturing

	Manufacturing value added		Food, beverages, and tobacco		Textiles and clothing ^a		Machinery and transport equipment ^a		Chemicals ^a		Other manufacturing ^b	
	\$ millions 1995	2006	% of total 1995	2004	% of total 1995	2004	% of total 1995	2004	% of total 1995	2004	% of total 1995	2004
Afghanistan		1,053	..	..	..	..	..	..	..	..	..	..
Albania	405	..	..	17	..	27	..	4	..	5	..	48
Algeria	4,366	5,404	..	..	..	..	..	..	..	..	..	..
Angola	202	1,922	..	..	..	..	..	..	..	..	..	..
Argentina	44,502	44,048	30	31	7	6	10	8	15	16	38	39
Armenia	356	985	..	..	..	..	..	..	..	..	..	..
Australia	51,314	74,569	20	19	6	4	11	17	8	7	55	53
Austria	41,681	52,934	11	10	6	3	27	31	2	2	54	54
Azerbaijan	352	1,055	..	..	..	..	..	..	..	..	..	..
Bangladesh	5,586	10,262	28	..	44	..	4	..	11	..	13	..
Belarus	3,909	10,382	..	..	..	..	..	..	..	..	..	..
Belgium	51,721	56,400	13	..	6	..	22	..	8	..	51	..
Benin	174	322	..	..	..	..	..	..	..	..	..	..
Bolivia	1,123	1,286	36	..	5	..	1	..	3	..	55	..
Bosnia and Herzegovina	213	1,176	..	..	..	..	..	..	..	..	..	..
Botswana	242	352	44	20	9	4	6	..	4	..	36	76
Brazil	124,976	169,164	21	18	8	6	23	22	13	12	35	43
Bulgaria	2,015	4,764	..	..	..	..	..	..	..	..	..	..
Burkina Faso	336	775	..	..	..	..	..	..	..	..	..	..
Burundi	83	64	..	..	..	..	..	..	..	..	..	..
Cambodia	315	1,349	..	..	..	..	..	..	..	..	..	..
Cameroon	1,758	3,084	..	..	..	..	..	..	..	..	..	..
Canada	100,393	..	13	13	4	4	23	25	10	8	50	50
Central African Republic	108	106	..	..	..	..	..	..	..	..	..	..
Chad	159	342	..	..	..	..	..	..	..	..	..	..
Chile	10,594	18,654	..	..	..	..	..	..	..	..	..	..
China	244,997	751,172	..	..	..	..	..	..	..	..	..	..
Hong Kong, China	10,524	5,856	..	..	..	..	..	..	..	..	..	..
Colombia	13,506	23,047	..	..	..	..	..	..	..	..	..	..
Congo, Dem. Rep.	510	526	..	..	..	..	..	..	..	..	..	..
Congo, Rep.	172	360	..	..	..	..	..	..	..	..	..	..
Costa Rica	2,339	4,344	..	..	..	..	..	..	..	..	..	..
Côte d'Ivoire	1,655	3,205	..	..	..	..	..	..	..	..	..	..
Croatia	3,666	7,400	..	..	..	..	..	..	..	..	..	..
Cuba	..	..	..	..	..	..	..	..	..	..	..	..
Czech Republic	12,124	34,965	..	..	..	..	..	..	..	..	..	..
Denmark	26,924	31,100	20	14	2	2	25	21	1	2	52	60
Dominican Republic	2,286	4,444	..	..	..	..	..	..	..	..	..	..
Ecuador	2,830	3,725	26	32	7	3	4	3	4	3	59	58
Egypt, Arab Rep.	9,829	16,737	19	20	13	10	12	10	18	22	38	38
El Salvador	2,026	3,845	..	..	..	..	..	..	..	..	..	..
Eritrea	47	86	..	..	..	..	..	..	..	..	..	..
Estonia	684	2,410	..	..	..	..	..	..	..	..	..	..
Ethiopia	344	647	..	..	..	..	..	..	..	..	..	..
Finland	28,814	39,106	10	7	3	2	27	37	4	3	57	51
France	..	248,295	13	14	5	2	28	30	12	12	42	41
Gabon	224	391	..	..	..	..	..	..	..	..	..	..
Gambia, The	20	22	65	..	8	..	1	..	9	..	17	..
Georgia	523	862	..	..	..	..	..	..	..	..	..	..
Germany	516,542	584,442	..	9	..	2	..	42	..	10	..	37
Ghana	602	1,093	..	32	..	6	..	1	..	12	..	49
Greece	..	24,626	25	..	15	..	13	..	10	..	38	..
Guatemala	2,069	4,405	..	..	..	..	..	..	..	..	..	..
Guinea	142	116	..	..	..	..	..	..	..	..	..	..
Guinea-Bissau	19	22	..	..	..	..	..	..	..	..	..	..
Haiti	558	..	..	..	..	..	..	..	..	..	..	..

Structure of manufacturing

4.3

ECONOMY

	Manufacturing value added		Food, beverages, and tobacco		Textiles and clothing ^a		Machinery and transport equipment ^a		Chemicals ^a		Other manufacturing ^b	
	\$ millions		% of total		% of total		% of total		% of total		% of total	
	1995	2006	1995	2004	1995	2004	1995	2004	1995	2004	1995	2004
Honduras	607	1,638	..	..	..	..	..	..	..	..	..	..
Hungary	8,839	22,028	19	16	3	5	10	34	13	10	55	35
India	57,917	134,725	..	10	..	10	..	20	..	17	..	43
Indonesia	48,781	102,323	..	23	..	13	..	18	..	9	..	36
Iran, Islamic Rep.	10,918	25,354	15	10	12	5	18	28	15	13	40	44
Iraq	67	..	..	..	..	..	..	..	..	..	..	..
Ireland	18,096	43,393	..	..	..	..	..	..	..	..	..	..
Israel	..	..	..	..	..	..	..	..	..	..	..	..
Italy	225,513	299,459	9	9	14	11	27	26	8	8	41	46
Jamaica	865	1,163	..	..	..	..	..	..	..	..	..	..
Japan	1,077,348	954,411	11	12	4	3	37	39	10	11	39	35
Jordan	866	2,393	30	24	7	12	5	5	15	16	44	42
Kazakhstan	2,976	9,423	..	..	..	..	..	..	..	..	..	..
Kenya	757	2,316	..	30	..	5	..	5	..	6	..	53
Korea, Dem. Rep.	..	..	..	..	..	..	..	..	..	..	..	..
Korea, Rep.	128,839	219,771	8	8	10	7	39	46	8	9	34	30
Kuwait	1,032	..	..	..	..	..	..	..	..	..	..	..
Kyrgyz Republic	142	318	..	..	..	..	..	..	..	..	..	..
Lao PDR	245	711	..	..	..	..	..	..	..	..	..	..
Latvia	965	2,101	..	..	..	..	..	..	..	..	..	..
Lebanon	1,577	2,217	..	..	..	..	..	..	..	..	..	..
Lesotho	129	237	..	..	..	..	..	..	..	..	..	..
Liberia	4	66	..	..	..	..	..	..	..	..	..	..
Libya	..	..	..	..	..	..	..	..	..	..	..	..
Lithuania	1,351	4,733	..	21	..	12	..	14	..	4	..	49
Macedonia, FYR	873	980	35	..	17	..	9	..	8	..	31	..
Madagascar	233	672	..	42	..	27	..	1	..	2	..	29
Malawi	195	384	..	..	..	..	..	..	..	..	..	..
Malaysia	23,432	44,884	..	8	..	3	..	39	..	10	..	40
Mali	174	167	..	..	..	..	..	..	..	..	..	..
Mauritania	107	84	..	..	..	..	..	..	..	..	..	..
Mauritius	765	1,060	25	24	52	51	2	2	..	..	21	24
Mexico	54,546	135,863	26	..	4	..	22	..	15	..	33	..
Moldova	400	404	..	..	..	..	..	..	..	..	..	..
Mongolia	143	109	23	..	62	..	1	..	1	..	12	..
Morocco	6,056	9,610	..	32	..	18	..	9	..	14	..	28
Mozambique	166	960	..	..	..	..	..	..	..	..	..	..
Myanmar	..	..	..	..	..	..	..	..	..	..	..	..
Namibia	403	826	..	..	..	..	..	..	..	..	..	..
Nepal	393	661	35	45	34	19	2	2	6	10	23	23
Netherlands	65,999	78,537	18	19	3	2	15	14	16	9	48	56
New Zealand	10,517	..	29	..	..	..	..	..	..	..	71	..
Nicaragua	533	859	..	..	..	..	..	..	..	..	..	..
Niger	120	..	..	..	..	..	..	..	..	..	..	..
Nigeria	1,495	..	..	..	..	..	..	..	..	..	..	..
Norway	17,018	28,060	17	..	2	..	24	..	9	..	48	..
Oman	643	2,045	..	..	..	..	..	..	..	..	..	..
Pakistan	8,864	23,178	..	..	..	..	..	..	..	..	..	..
Panama	694	1,204	54	..	7	..	..	..	7	..	32	..
Papua New Guinea	388	249	..	..	..	..	..	..	..	..	..	..
Paraguay	1,280	1,094	..	..	..	..	..	..	..	..	..	..
Peru	8,105	13,743	28	..	9	..	7	..	9	..	48	..
Philippines	17,043	26,916	29	23	6	5	7	13	2	2	57	56
Poland	25,891	56,009	..	..	..	..	..	..	..	..	..	..
Portugal	18,383	..	13	14	22	18	18	17	6	5	41	46
Puerto Rico	17,867	..	..	..	..	..	..	..	..	..	..	..



4.3

Structure of manufacturing

	Manufacturing value added		Food, beverages, and tobacco		Textiles and clothing ^a		Machinery and transport equipment ^a		Chemicals ^a		Other manufacturing ^b	
	\$ millions		% of total		% of total		% of total		% of total		% of total	
	1995	2006	1995	2004	1995	2004	1995	2004	1995	2004	1995	2004
Romania	9,387	26,495	28	13	13	18	19	21	7	5	33	43
Russian Federation	..	163,520	..	16	..	2	..	9	..	2	..	71
Rwanda	132	212	..	..	..	..	..	..	..	..	..	..
Saudi Arabia	13,714	33,087	..	..	..	..	..	..	..	..	..	..
Senegal	730	1,104	..	41	..	3	..	2	..	29	..	26
Serbia	..	..	..	..	..	..	..	..	..	..	..	..
Sierra Leone	75	..	..	..	..	..	..	..	..	..	..	..
Singapore	20,799	36,496	4	4	1	1	60	50	9	24	26	20
Slovak Republic	4,704	10,923	11	9	7	6	14	22	9	3	59	60
Slovenia	4,556	8,005	..	..	..	..	..	..	..	..	..	..
Somalia	..	..	..	..	..	..	..	..	..	..	..	..
South Africa	29,274	41,198	15	17	8	4	19	16	10	7	47	56
Spain	..	156,192	16	15	7	6	23	22	10	9	43	48
Sri Lanka	1,836	3,329	..	..	..	..	..	..	..	..	..	..
Sudan	799	2,173	..	..	..	..	..	..	..	..	..	..
Swaziland	398	596	..	..	..	..	..	..	..	..	..	..
Sweden	48,628	60,294	7	8	1	1	33	30	3	3	56	58
Switzerland	63,668	66,928	..	..	..	..	..	..	..	..	..	..
Syrian Arab Republic	1,574	2,687	..	..	..	..	..	..	..	..	..	..
Tajikistan	331	471	..	..	..	..	..	..	..	..	..	..
Tanzania ^c	349	819	..	..	..	..	..	..	..	..	..	..
Thailand	50,194	72,318	21	..	9	..	29	..	6	..	35	..
Timor-Leste	..	9	..	..	..	..	..	..	..	..	..	..
Togo	130	214	..	..	..	..	..	..	..	..	..	..
Trinidad and Tobago	439	1,029	..	25	..	1	..	1	..	22	..	52
Tunisia	3,419	5,279	..	..	..	..	..	..	..	..	..	..
Turkey	38,296	84,983	15	..	17	..	16	..	10	..	42	..
Turkmenistan	948	1,399	..	..	..	..	..	..	..	..	..	..
Uganda	359	786	..	..	..	..	..	..	..	..	..	..
Ukraine	14,922	19,068	..	..	..	..	..	..	..	..	..	..
United Arab Emirates	4,452	18,770	..	..	..	..	..	..	..	..	..	..
United Kingdom	219,282	269,610	13	14	5	4	28	27	11	11	43	44
United States	1,289,100	1,662,800	12	..	4	..	33	..	12	..	38	..
Uruguay	3,614	4,484	..	40	..	12	..	4	..	11	..	33
Uzbekistan	1,376	1,675	..	..	..	..	..	..	..	..	..	..
Venezuela, RB	10,668	18,507	..	..	..	..	..	..	..	..	..	..
Vietnam	3,109	12,963	..	..	..	..	..	..	..	..	..	..
West Bank and Gaza	..	..	..	..	..	..	..	..	..	..	..	..
Yemen, Rep.	599	..	..	48	..	7	..	0	..	1	..	43
Zambia	344	1,112	..	..	..	..	..	..	..	..	..	..
Zimbabwe	1,370	324	30	..	7	..	29	..	6	..	29	..
World	5,489,148 t	7,440,831 t										
Low income	93,977	216,271										
Middle income	935,581	1,874,533										
Lower middle income	462,950	1,076,557										
Upper middle income	481,141	909,966										
Low & middle income	1,029,570	2,062,844										
East Asia & Pacific	390,751	973,648										
Europe & Central Asia	..	..								
Latin America & Carib.	290,974	467,711										
Middle East & N. Africa	40,026	77,125										
South Asia	75,044	173,275										
Sub-Saharan Africa	45,485	73,246										
High income	4,480,402	5,382,611										
Euro area	1,340,064	1,609,628										

a. When data are shown as not available, they are included in other manufacturing. b. Includes unallocated data. c. Covers mainland Tanzania only.

Structure of manufacturing

4.3

About the data

The data on the distribution of manufacturing value added by industry are provided by the United Nations Industrial Development Organization (UNIDO). UNIDO obtains the data from a variety of national and international sources, including the United Nations Statistics Division, the World Bank, the Organisation for Economic Co-operation and Development, and the International Monetary Fund. To improve comparability over time and across countries, UNIDO supplements these data with information from industrial censuses, statistics from national and international organizations, unpublished data that it collects in the field, and estimates by the UNIDO Secretariat. Nevertheless, coverage may be incomplete, particularly for the informal sector. When direct information on inputs and outputs is not available, estimates may be used, which may result in errors in industry totals. Moreover, countries use different reference periods (calendar or fiscal year) and valuation methods (basic or producer prices) to estimate value added. (See also *About the data* for table 4.2.)

The data on manufacturing value added in U.S. dollars are from the World Bank's national accounts files and may differ from those UNIDO uses to calculate shares of value added by industry, in part because of differences in exchange rates. Thus value added in a particular industry estimated by applying the shares to total manufacturing value added will not match those from UNIDO sources. Classification of manufacturing industries in the table accords with the United Nations International Standard Industrial Classification (ISIC) revision 3 for the first time. Previous editions of *World Development Indicators* used revision 2, first published in 1948. Revision 3 was completed in 1989, and many countries now use it. But revision 2 is still widely used for compiling cross-country data. UNIDO has converted these data to

accord with revision 3. Concordances matching ISIC categories to national classification systems and to related systems such as the Standard International Trade Classification are available.

In establishing classifications systems compilers must define both the types of activities to be described and the units whose activities are to be reported. There are many possibilities, and the choices affect how the statistics can be interpreted and how useful they are in analyzing economic behavior. The ISIC emphasizes commonalities in the production process and is explicitly not intended to measure outputs (for which there is a newly developed Central Product Classification). Nevertheless, the ISIC views an activity as defined by "a process resulting in a homogeneous set of products" (UN 1990 [ISIC, series M, no. 4, rev. 3], p. 9).

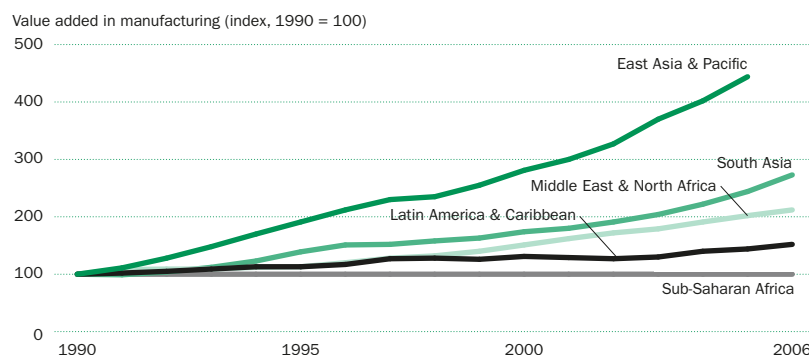
Firms typically use multiple processes to produce a product. For example, an automobile manufacturer engages in forging, welding, and painting as well as advertising, accounting, and other service activities. Collecting data at such a detailed level is not practical, nor is it useful to record production data at the highest level of a large, multiplant, multiproduct firm. The ISIC has therefore adopted as the definition of an establishment "an enterprise or part of an enterprise which independently engages in one, or predominantly one, kind of economic activity at or from one location . . . for which data are available . . ." (UN 1990, p. 25). By design, this definition matches the reporting unit required for the production accounts of the United Nations System of National Accounts. The ISIC system is described in the United Nations' International Standard Industrial Classification of All Economic Activities, Third Revision (1990). The discussion of the ISIC draws on Jacob Ryten's "Fifty Years of ISIC: Historical Origins and Future Perspectives" (1998).

Definitions

• **Manufacturing value added** is the sum of gross output less the value of intermediate inputs used in production for industries classified in ISIC major division 3. • **Food, beverages, and tobacco** correspond to ISIC division 15 and 16. • **Textiles and clothing** correspond to ISIC division 17 to 19. • **Machinery and transport equipment** correspond to ISIC 29, 30, 32, 34, and 35. • **Chemicals** correspond to ISIC division 24. • **Other manufacturing**, a residual, covers wood and related products (ISIC division 20), paper and related products (ISIC division 21 and 22), petroleum and related products (ISIC division 23), basic metals and mineral products (ISIC divisions 27), fabricated metal products and professional goods (ISIC division 28), and other industries (ISIC divisions 25, 26, 31, 33, 36, and 37).

Manufacturing continues to show strong growth in East Asia

4.3a



Manufacturing continues to be the dominant sector in East Asia and Pacific, growing an average of about 10 percent a year between 1990 and 2006.

Source: World Development Indicators data files.

Data sources

Data on manufacturing value added are from the World Bank's national accounts files. Data used to calculate shares of industry value added are provided to the World Bank in electronic files by UNIDO. The most recent published source is UNIDO's *International Yearbook of Industrial Statistics* 2007.



4.4

Structure of merchandise exports

	Merchandise exports		Food		Agricultural raw materials		Fuels		Ores and metals		Manufactures	
	\$ millions		% of total		% of total		% of total		% of total		% of total	
	1995	2006	1995	2006	1995	2006	1995	2006	1995	2006	1995	2006
Afghanistan	156	430	..	..	..	..	..	..	..	..	..	..
Albania	202	793	11	8	9	13	3	14	12	38	65	27
Algeria	10,258	54,613	1	0	0	0	95	98	1	1	4	1
Angola	3,642	35,000	..	..	..	..	..	..	..	..	..	..
Argentina	20,967	46,569	50	45	4	1	10	15	2	5	34	32
Armenia	271	1,004	11	12	5	3	1	2	26	25	54	56
Australia	53,111	123,269	22	15	8	3	19	25	18	25	30	23
Austria	57,738	140,397	4	6	3	2	1	5	3	3	88	80
Azerbaijan	635	6,372	4	5	8	1	66	85	1	1	20	8
Bangladesh	3,501	11,802	10	6	3	1	0	0	0	0	85	92
Belarus	4,803	19,739	..	7	..	2	..	38	..	0	..	50
Belgium	178,265 ^a	369,166	..	8	..	1	..	8	..	4	..	77
Benin	420	560	14	26	75	64	5	..	0	1	6	9
Bolivia	1,100	3,863	21	15	10	2	15	52	35	24	19	7
Bosnia and Herzegovina	152	3,312	..	5	..	8	..	8	..	17	..	62
Botswana	2,142	4,670	..	..	..	..	..	..	..	..	..	..
Brazil	46,506	137,470	29	25	5	4	1	8	10	11	54	51
Bulgaria	5,355	15,064	18	9	3	2	7	13	10	20	60	53
Burkina Faso	276	440	25	16	69	72	0	3	0	1	6	8
Burundi	105	59	91	87	4	4	0	0	1	2	3	6
Cambodia	855	3,800	..	1	..	2	..	0	..	0	..	97
Cameroon	1,651	3,573	27	12	28	16	29	62	8	5	8	3
Canada	192,197	389,538	8	7	9	4	9	20	7	7	63	56
Central African Republic	171	120	4	1	20	41	1	0	30	17	45	36
Chad	243	3,750	..	..	..	..	..	..	..	..	..	..
Chile	16,024	58,116	24	15	12	5	0	2	48	64	13	11
China [†]	148,780	968,936	8	3	2	0	4	2	2	2	84	92
Hong Kong, China ^b	173,871	322,669	3	3	0	1	0	2	1	4	94	91
Colombia	10,056	24,388	31	16	5	5	28	40	1	2	35	37
Congo, Dem. Rep.	1,563	2,300	..	..	..	..	..	..	..	..	..	..
Congo, Rep.	1,172	6,400	1	..	8	..	88	..	0	..	3	..
Costa Rica	3,453	8,216	63	30	5	3	1	1	1	2	25	65
Côte d'Ivoire	3,806	8,420	63	35	20	8	10	37	0	0	7	15
Croatia	4,633	10,376	11	11	5	3	9	15	2	4	74	66
Cuba	1,600	2,678	..	30	..	0	..	1	..	48	..	22
Czech Republic	21,335	95,077	6	3	4	1	4	3	3	2	82	89
Denmark	50,906	92,752	24	18	3	3	3	10	1	2	60	65
Dominican Republic	3,780	6,440	19	..	0	..	0	..	0	..	78	..
Ecuador	4,307	12,658	53	27	3	4	36	59	0	1	8	10
Egypt, Arab Rep.	3,450	13,702	10	7	6	2	37	56	6	2	40	21
El Salvador	1,652	3,513	57	36	1	1	0	3	3	4	39	55
Eritrea	86	10	..	..	..	..	..	..	..	..	..	..
Estonia	1,840	9,469	16	7	10	5	6	16	3	3	65	64
Ethiopia	422	1,014	73	..	13	..	3	..	0	..	11	..
Finland	40,490	77,032	2	2	8	6	2	5	3	5	83	81
France	301,162	490,368	14	10	1	1	2	4	3	3	79	79
Gabon	2,713	5,600	0	1	13	7	83	86	2	3	2	4
Gambia, The	16	10	60	81	1	4	0	..	1	1	36	14
Georgia	151	993	29	25	3	2	19	3	8	22	41	48
Germany	523,461	1,111,969	5	4	1	1	1	2	3	3	87	83
Ghana	1,724	3,703	58	61	15	4	5	1	9	3	13	31
Greece	11,054	20,898	30	20	4	2	7	13	7	10	50	52
Guatemala	2,155	6,025	65	50	4	5	2	9	0	1	28	35
Guinea	702	970	8	..	1	..	0	..	67	..	24	..
Guinea-Bissau	24	75	89	..	11	..	..	..	..	..	0	..
Haiti	110	507	37	..	0	..	0	..	0	..	62	..
[†] Data for Taiwan, China	113,047	223,766	3	1	2	1	1	5	1	2	93	90

Structure of merchandise exports

	Merchandise exports		Food		Agricultural raw materials		Fuels		Ores and metals		Manufactures	
	\$ millions		% of total		% of total		% of total		% of total		% of total	
	1995	2006	1995	2006	1995	2006	1995	2006	1995	2006	1995	2006
Honduras	1,220	1,929	87	64	3	3	0	3	0	9	9	21
Hungary	12,865	74,478	21	6	2	0	3	2	5	2	68	84
India	30,630	120,254	19	9	1	2	2	11	3	7	74	70
Indonesia	45,417	103,487	11	12	7	6	25	27	6	10	51	45
Iran, Islamic Rep.	18,360	73,700	4	4	1	0	86	83	1	2	9	10
Iraq	496	29,597	..	..	..	..	..	..	..	..	..	..
Ireland	44,705	111,066	19	10	1	0	0	1	1	1	72	85
Israel	19,046	46,449	5	2	2	1	0	0	1	1	89	82
Italy	233,766	410,572	7	6	1	1	1	4	1	2	89	85
Jamaica	1,427	1,980	22	17	0	0	1	14	6	11	71	58
Japan	443,116	649,931	0	0	1	1	1	1	1	2	95	91
Jordan	1,769	5,175	25	15	2	0	0	1	24	13	49	71
Kazakhstan	5,250	40,470	10	3	3	1	25	69	24	15	38	13
Kenya	1,878	3,437	56	52	7	16	6	1	3	6	28	26
Korea, Dem. Rep.	959	1,980	..	..	..	..	..	..	..	..	..	..
Korea, Rep.	125,058	325,465	2	1	1	1	2	6	1	3	93	89
Kuwait	12,785	55,673	0	..	0	..	95	..	0	..	5	..
Kyrgyz Republic	409	796	23	19	13	10	11	18	13	6	40	46
Lao PDR	311	874	..	..	..	..	..	..	..	..	..	..
Latvia	1,305	6,153	14	12	23	14	2	5	1	4	58	60
Lebanon	816	2,814	20	16	2	1	0	0	8	12	70	70
Lesotho	160	694	..	..	..	..	..	..	..	..	..	..
Liberia	820	181	..	..	..	..	..	..	..	..	..	..
Libya	8,975	39,500	0	..	0	..	95	..	0	..	5	..
Lithuania	2,705	14,113	18	14	8	3	11	24	5	2	58	58
Macedonia, FYR	1,204	2,401	18	16	5	1	0	9	18	4	58	69
Madagascar	507	953	69	35	6	4	1	6	7	4	14	41
Malawi	405	540	90	83	2	3	0	0	0	0	7	13
Malaysia	73,914	160,676	10	7	6	3	7	14	1	1	75	74
Mali	441	1,350	23	14	75	74	0	1	0	0	2	10
Mauritania	499	1,290	57	25	0	0	1	..	42	69	0	0
Mauritius	1,538	2,173	29	29	1	1	0	0	0	1	70	69
Mexico	79,542	250,441	8	5	1	0	10	16	3	2	78	76
Moldova	745	1,052	72	63	2	1	1	0	3	5	23	31
Mongolia	473	1,543	2	2	28	13	0	6	60	66	10	13
Morocco	6,881	12,707	31	19	3	2	2	2	12	9	51	68
Mozambique	168	2,398	66	16	16	3	2	15	2	60	13	5
Myanmar	860	4,250	..	..	..	..	..	..	..	..	..	..
Namibia	1,409	2,648	..	26	..	1	..	0	..	26	..	47
Nepal	345	760	8	..	1	..	0	..	0	..	84	..
Netherlands	203,171	462,410	20	13	4	3	7	13	3	4	63	66
New Zealand	13,645	22,432	45	52	19	11	2	2	5	5	29	27
Nicaragua	466	1,027	75	86	3	2	1	1	1	2	21	9
Niger	288	540	17	24	1	4	0	2	80	54	1	14
Nigeria	12,342	52,000	2	..	2	..	96	..	0	..	1	..
Norway	41,992	121,505	8	5	2	0	47	68	9	7	27	16
Oman	6,068	21,585	5	2	0	0	79	95	2	1	14	3
Pakistan	8,029	16,930	12	12	4	1	1	5	0	1	83	81
Panama	625	1,048	75	84	0	1	3	1	1	4	20	10
Papua New Guinea	2,654	4,122	13	..	20	..	38	..	25	..	4	..
Paraguay	919	1,906	44	76	36	7	0	0	0	1	19	16
Peru	5,575	23,431	31	18	3	2	5	10	46	57	15	14
Philippines	17,502	47,037	13	5	1	1	2	2	4	4	42	87
Poland	22,895	110,303	10	9	3	1	8	4	7	5	71	79
Portugal	22,783	43,323	7	8	5	2	3	5	2	4	83	74
Puerto Rico	..	..	..	..	..	..	..	..	..	..	..	..



4.4

Structure of merchandise exports

	Merchandise exports		Food		Agricultural raw materials		Fuels		Ores and metals		Manufactures	
	\$ millions		% of total		% of total		% of total		% of total		% of total	
	1995	2006	1995	2006	1995	2006	1995	2006	1995	2006	1995	2006
Romania	7,910	32,336	7	3	3	2	8	10	3	5	78	79
Russian Federation	81,095	304,520	2	2	3	3	43	63	10	8	26	17
Rwanda	54	138	57	..	16	..	0	..	12	..	14	..
Saudi Arabia	50,040	209,483	1	1	0	0	88	91	1	0	10	8
Senegal	993	1,550	9	44	7	5	22	0	12	7	48	44
Serbia	..	6,428	..	..	..	..	..	..	..	..	..	..
Sierra Leone	42	216	..	..	..	..	..	..	..	..	..	..
Singapore ^b	118,268	271,772	4	2	1	0	7	13	2	1	84	80
Slovak Republic	8,580	41,721	6	4	4	1	4	5	4	3	82	85
Slovenia	8,316	23,257	4	3	2	1	1	3	3	5	90	87
Somalia	..	..	..	..	..	..	..	..	..	..	..	..
South Africa	27,853 ^c	58,412	8 ^c	7	4 ^c	2	9 ^c	9	8 ^c	29	44 ^c	53
Spain	97,849	205,455	15	14	2	1	2	4	2	3	78	76
Sri Lanka	3,798	6,886	21	22	4	2	0	0	1	4	73	70
Sudan	555	5,657	44	7	47	5	0	87	0	0	6	0
Swaziland	866	2,060	..	17	..	8	..	1	..	0	..	74
Sweden	80,440	147,377	2	4	6	4	2	5	3	4	79	78
Switzerland	81,641	147,457	3	3	1	0	0	3	3	4	94	91
Syrian Arab Republic	3,563	8,750	12	17	7	2	63	40	1	1	17	32
Tajikistan	750	1,399	..	..	..	..	..	..	..	..	..	..
Tanzania	682	1,690	65	53	23	11	0	0	0	17	10	18
Thailand	56,439	130,790	19	11	5	5	1	5	1	2	73	76
Timor-Leste	..	..	..	..	..	..	..	..	..	..	..	..
Togo	378	617	19	21	42	9	0	1	32	10	7	58
Trinidad and Tobago	2,455	14,147	8	2	0	0	48	76	0	0	43	21
Tunisia	5,475	11,513	10	10	1	1	8	13	2	1	79	75
Turkey	21,637	85,479	20	7	1	0	1	0	3	1	74	42
Turkmenistan	1,880	5,260	1	..	13	..	77	..	1	..	8	..
Uganda	460	1,004	90	62	5	9	0	5	1	2	4	21
Ukraine	13,128	38,368	19	12	1	1	4	6	7	6	68	73
United Arab Emirates	28,364	139,353	8	..	0	..	9	..	55	..	28	..
United Kingdom	237,953	448,291	8	5	1	1	6	10	3	3	81	77
United States	584,743	1,038,278	11	7	4	2	2	4	3	4	77	79
Uruguay	2,106	3,953	44	56	15	8	1	4	1	1	39	32
Uzbekistan	3,430	5,617	..	..	..	..	..	..	..	..	..	..
Venezuela, RB	18,457	65,210	3	0	0	0	77	93	6	2	14	5
Vietnam	5,449	39,605	30	20	3	3	18	26	0	1	44	50
West Bank and Gaza	..	..	..	..	..	..	..	..	..	..	..	..
Yemen, Rep.	1,945	7,285	3	4	1	0	95	94	1	0	1	1
Zambia	1,040	3,689	3	6	1	3	3	1	87	85	7	6
Zimbabwe	2,118	1,950	43	30	7	8	1	0	12	23	37	38
World	5,172,060 t	12,084,582 t	9 w	6 w	3 w	2 w	7 w	11 w	3 w	4 w	76 w	73 w
Low income	94,379	323,066	18	17	5	4	26	15	4	5	47	59
Middle income	880,315	3,312,091	14	8	3	2	12	21	5	6	63	60
Lower middle income	390,379	1,689,637	13	8	3	2	12	16	3	4	65	69
Upper middle income	490,027	1,621,751	15	9	4	2	12	25	6	7	62	53
Low & middle income	974,709	3,635,152	15	9	3	2	12	21	5	6	63	60
East Asia & Pacific	355,216	1,468,949	11	6	4	2	6	8	2	3	74	80
Europe & Central Asia	205,007	834,785	10	5	3	2	22	32	7	6	51	46
Latin America & Carib.	223,378	663,606	20	15	3	2	15	21	7	9	55	53
Middle East & N. Africa	68,070	280,990	6	5	1	0	73	76	2	2	17	15
South Asia	46,647	157,637	17	11	2	2	1	9	3	6	76	72
Sub-Saharan Africa	76,692	231,263	18	..	7	..	37	..	8	..	28	..
High income	4,196,970	8,451,209	8	6	2	2	6	8	3	4	79	77
Euro area	1,733,625	3,492,756	11	8	2	1	2	5	2	3	81	79

Note: Components may not sum to 100 percent because of unclassified trade. Exports of gold are excluded.

a. Includes Luxembourg. b. Includes re-exports. c. Refers to the South African Customs Union (Botswana, Lesotho, Namibia, South Africa, and Swaziland).

Structure of merchandise exports

About the data

Data on merchandise trade are from customs reports of goods moving into or out of an economy or from reports of financial transactions related to merchandise trade recorded in the balance of payments. Because of differences in timing and definitions, estimates of trade flows from customs reports may differ from those based on the balance of payments. Moreover, several international agencies process trade data, each correcting unreported or misreported data, leading to other differences.

The most detailed source of data on international trade in goods is the Commodity Trade (Comtrade) database maintained by the United Nations Statistics Division. In addition, the International Monetary Fund (IMF) collects customs-based data on exports and imports of goods. The value of exports is recorded as the cost of the goods delivered to the frontier of the exporting country for shipment—the free on board (f.o.b.) value. Many countries report trade data in U.S. dollars. When countries report in local currency, the United Nations Statistics Division applies the average official exchange rate for the period shown.

Countries may report trade according to the general or special system of trade (see *Primary data documentation*). Under the general system exports comprise outward-moving goods that are (a) goods wholly or partly produced in the country; (b) foreign goods, neither transformed nor declared for domestic consumption in the country, that move outward from customs storage; and (c) goods previously included as imports for domestic consumption but subsequently exported without transformation. Under the special system exports comprise categories a and c. In some compilations categories b and

c are classified as re-exports. Because of differences in reporting practices, data on exports may not be fully comparable across economies.

The data on total exports of goods (merchandise) are from the World Trade Organization (WTO), which uses two main sources: national statistical offices and the IMF's *International Financial Statistics*. It supplements these with the Comtrade database and publications or databases of regional organizations, specialized agencies, economic groups, and private sources (such as Eurostat, the Food and Agriculture Organization, and country reports of the Economist Intelligence Unit). Country websites and direct contact through email have improved collection of up-to-date statistics for many countries, reducing the proportion of estimated figures. The WTO database now covers most of the major traders in Africa, Asia, and Latin America, which together with high-income countries account for nearly 95 percent of world trade. The availability of reliable figures for countries in Europe and Central Asia has also improved.

The shares of exports by major commodity group are from Comtrade. The values of total exports reported here have not been fully reconciled with the estimates of exports of goods and services from the national accounts or from the balance of payments.

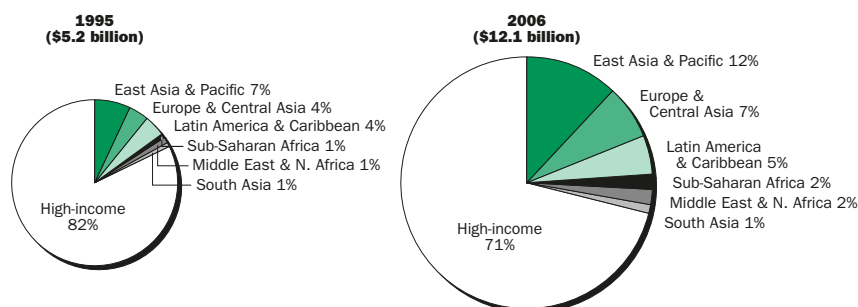
The classification of commodity groups is based on the Standard International Trade Classification (SITC) revision 1. Most countries now use later revisions of the SITC or the Harmonized System. Concordance tables are used to convert data reported in one system to another. This may introduce some classification errors, but conversions from later to earlier systems are generally reliable.

Definitions

• **Merchandise exports** are the f.o.b. value of goods provided to the rest of the world, valued in U.S. dollars. • **Food** corresponds to the commodities in SITC sections 0 (food and live animals), 1 (beverages and tobacco), and 4 (animal and vegetable oils and fats) and SITC division 22 (oil seeds, oil nuts, and oil kernels). • **Agricultural raw materials** correspond to SITC section 2 (crude materials except fuels) excluding divisions 22, 27 (crude fertilizers and minerals excluding coal, petroleum, and precious stones), and 28 (metalliferous ores and scrap). • **Fuels** correspond to SITC section 3 (mineral fuels). • **Ores and metals** correspond to the commodities in SITC divisions 27, 28, and 68 (nonferrous metals). • **Manufactures** correspond to the commodities in SITC sections 5 (chemicals), 6 (basic manufactures), 7 (machinery and transport equipment), and 8 (miscellaneous manufactured goods), excluding division 68.

Developing economies' share of world merchandise exports continues to expand

4.4a



Developing economies' share of world merchandise exports increased 11 percentage points from 1995 to 2006. East Asia and Pacific was the biggest gainer, capturing an additional 5 percentage points. Except South Asia, every other region increased its share in world trade.

Source: World Development Indicators data files and World Trade Organization.

Data sources

Data on merchandise exports are from the WTO. Data on shares of exports by major commodity group are from Comtrade. The WTO publishes data on world trade in its *Annual Report*. The IMF publishes estimates of total exports of goods in its *International Financial Statistics* and *Direction of Trade Statistics*, as does the United Nations Statistics Division in its *Monthly Bulletin of Statistics*. And the United Nations Conference on Trade and Development publishes data on the structure of exports in its *Handbook of International Trade and Development Statistics*. Tariff line records of exports are compiled in the United Nations Statistics Division's Comtrade database.



	Merchandise imports		Food		Agricultural raw materials		Fuels		Ores and metals		Manufactures	
	\$ millions		% of total		% of total		% of total		% of total		% of total	
	1995	2006	1995	2006	1995	2006	1995	2006	1995	2006	1995	2006
Afghanistan	387	2,960	..	..	..	..	..	..	..	..	..	..
Albania	714	3,058	34	20	1	1	2	12	1	3	61	64
Algeria	10,100	21,456	29	19	3	2	1	1	2	2	65	76
Angola	1,468	11,600	..	..	..	..	..	..	..	..	..	..
Argentina	20,122	34,158	5	3	2	1	4	5	2	3	86	87
Armenia	674	2,194	31	16	0	1	27	17	0	2	39	60
Australia	61,283	139,252	5	5	2	1	5	14	1	1	86	79
Austria	66,237	140,258	6	6	3	2	4	14	4	5	82	73
Azerbaijan	668	5,268	39	10	1	1	4	12	2	2	53	74
Bangladesh	6,694	16,086	17	16	3	8	8	8	2	2	69	65
Belarus	5,564	22,323	..	9	..	2	..	33	..	4	..	48
Belgium	164,934 ^a	353,720	..	7	..	1	..	13	..	5	..	72
Benin	746	990	27	30	3	4	9	20	1	1	59	44
Bolivia	1,424	2,819	10	9	2	1	5	10	3	1	82	79
Bosnia and Herzegovina	1,082	7,305	..	17	..	1	..	15	..	3	..	63
Botswana	1,911	3,160	..	..	..	..	..	..	..	..	..	..
Brazil	54,137	95,886	11	4	3	2	12	19	3	5	71	70
Bulgaria	5,660	23,136	8	5	3	1	34	5	4	9	48	62
Burkina Faso	455	1,450	21	12	2	1	14	24	1	1	62	62
Burundi	234	431	21	6	2	1	11	8	1	1	64	82
Cambodia	1,187	4,900	..	8	..	2	..	10	..	0	..	79
Cameroon	1,199	2,990	17	18	3	2	3	31	2	1	76	48
Canada	168,426	357,652	6	6	2	1	4	9	3	3	83	79
Central African Republic	175	240	16	17	10	27	9	17	2	2	64	37
Chad	365	1,250	24	..	1	..	18	..	1	..	56	..
Chile	15,900	38,409	7	7	2	1	9	24	2	3	79	65
China [†]	132,084	791,461	7	3	5	4	4	12	4	9	79	71
Hong Kong, China	196,072	335,754	5	3	2	1	2	3	2	3	88	91
Colombia	13,853	26,046	9	9	3	2	3	3	2	3	78	82
Congo, Dem. Rep.	871	2,800	..	..	..	..	..	..	..	..	..	..
Congo, Rep.	670	1,700	21	..	1	..	20	..	1	..	58	..
Costa Rica	4,036	11,520	10	6	1	1	9	12	2	2	78	78
Côte d'Ivoire	2,931	5,310	21	17	1	1	19	32	1	1	57	43
Croatia	7,510	21,488	12	8	2	1	12	16	3	3	67	72
Cuba	2,825	9,410	..	22	..	1	..	23	..	1	..	53
Czech Republic	25,085	93,217	7	5	3	1	8	9	4	4	77	79
Denmark	45,939	86,273	12	11	3	2	3	6	2	2	73	77
Dominican Republic	5,170	11,190	..	..	..	..	..	..	..	..	..	..
Ecuador	4,152	12,049	8	7	3	1	6	17	2	1	82	74
Egypt, Arab Rep.	11,760	20,595	28	19	7	4	1	16	3	3	61	43
El Salvador	3,329	7,628	15	13	2	2	9	18	2	1	72	66
Eritrea	454	540	..	..	..	..	..	..	..	..	..	..
Estonia	2,546	13,277	14	7	3	3	11	16	1	1	71	67
Ethiopia	1,145	4,594	14	..	2	..	11	..	1	..	72	..
Finland	29,470	68,873	6	5	4	2	9	15	6	9	74	66
France	289,391	534,894	11	7	3	1	7	15	4	3	76	73
Gabon	882	1,728	19	17	1	0	4	4	1	1	75	77
Gambia, The	182	255	36	31	1	2	14	17	0	1	46	49
Georgia	392	3,678	36	16	0	0	39	19	0	1	24	61
Germany	463,872	908,630	10	6	3	1	6	12	4	5	73	66
Ghana	1,906	5,497	8	13	1	1	6	14	0	1	77	70
Greece	25,898	63,185	16	11	2	1	7	19	3	4	71	65
Guatemala	3,292	11,920	12	10	2	1	12	20	1	1	73	68
Guinea	819	930	31	..	1	..	19	..	1	..	47	..
Guinea-Bissau	133	110	44	..	0	..	16	..	0	..	40	..
Haiti	653	1,705	..	..	..	..	..	..	..	..	..	..
[†] Data for Taiwan, China	103,558	203,017	6	3	4	1	7	18	6	8	75	68

Structure of merchandise imports

4.5

ECONOMY

	Merchandise imports		Food		Agricultural raw materials		Fuels		Ores and metals		Manufactures	
	\$ millions		% of total		% of total		% of total		% of total		% of total	
	1995	2006	1995	2006	1995	2006	1995	2006	1995	2006	1995	2006
Honduras	1,642	5,418	13	16	1	1	12	20	1	1	74	62
Hungary	15,465	76,963	6	4	3	1	12	7	4	3	75	75
India	34,707	174,845	4	3	4	2	24	36	7	5	54	52
Indonesia	40,630	80,333	9	9	6	3	8	32	4	4	73	53
Iran, Islamic Rep.	13,882	51,100	21	2	2	1	2	4	3	0	71	16
Iraq	665	27,935	..	..	..	..	..	..	..	..	..	..
Ireland	32,340	72,806	8	8	1	1	3	8	2	2	76	76
Israel	29,578	49,985	7	6	2	1	6	16	2	2	82	75
Italy	205,990	437,386	12	8	6	3	7	12	5	6	68	64
Jamaica	2,818	5,648	14	14	2	2	13	25	1	1	68	57
Japan	335,882	579,574	16	9	6	2	16	28	7	8	54	52
Jordan	3,697	11,447	21	13	2	1	13	24	3	2	61	57
Kazakhstan	3,807	24,956	10	7	2	1	25	13	5	1	59	78
Kenya	2,991	7,311	10	10	2	2	15	24	2	2	71	61
Korea, Dem. Rep.	1,380	3,010	..	..	..	..	..	..	..	..	..	..
Korea, Rep.	135,119	309,383	6	4	6	2	14	28	6	8	68	58
Kuwait	7,790	15,991	16	..	1	..	1	..	2	..	81	..
Kyrgyz Republic	522	1,718	18	14	3	1	36	29	3	2	40	53
Lao PDR	589	1,060	..	..	..	..	..	..	..	..	..	..
Latvia	1,815	11,510	10	10	2	2	21	13	1	2	66	70
Lebanon	7,278	9,647	21	16	2	1	9	22	2	2	66	58
Lesotho	1,107	1,465	..	..	..	..	..	..	..	..	..	..
Liberia	510	444	..	..	..	..	..	..	..	..	..	..
Libya	5,392	6,950	23	17	1	1	0	1	1	1	75	81
Lithuania	3,650	19,300	13	9	4	2	19	22	4	2	58	64
Macedonia, FYR	1,719	3,763	17	12	3	1	12	20	3	4	64	63
Madagascar	628	1,487	16	15	2	1	14	19	1	1	65	65
Malawi	475	1,209	14	15	1	1	11	11	1	1	73	71
Malaysia	77,691	131,152	5	5	1	1	2	9	3	5	86	78
Mali	772	1,860	20	14	1	1	16	21	1	1	62	64
Mauritania	494	974	24	25	1	1	22	27	0	0	53	47
Mauritius	1,976	3,630	17	17	3	2	7	17	1	1	72	64
Mexico	75,858	268,169	6	6	2	1	2	6	2	3	80	83
Moldova	840	2,693	8	11	3	2	46	24	2	1	42	62
Mongolia	415	1,486	14	12	1	0	19	29	1	0	65	58
Morocco	10,023	23,574	20	9	6	3	14	22	4	3	56	63
Mozambique	704	2,807	22	14	3	1	10	17	1	0	62	48
Myanmar	1,348	2,460	..	..	..	..	..	..	..	..	..	..
Namibia	1,616	2,920	..	16	..	1	..	3	..	1	..	78
Nepal	1,333	2,100	12	..	3	..	12	..	3	..	46	..
Netherlands	185,232	416,445	14	9	2	2	8	17	3	4	72	68
New Zealand	13,957	26,434	7	8	1	1	5	15	3	2	83	74
Nicaragua	975	2,988	18	12	1	0	18	25	1	0	63	61
Niger	374	950	32	34	1	4	13	15	3	1	51	46
Nigeria	8,222	21,809	18	..	1	..	1	..	2	..	77	..
Norway	32,968	64,120	7	7	3	1	3	5	6	7	81	80
Oman	4,379	10,915	20	11	1	1	2	3	2	5	70	79
Pakistan	11,515	29,825	18	10	6	4	16	26	3	3	57	56
Panama	2,510	4,863	11	11	1	0	14	18	1	1	73	69
Papua New Guinea	1,452	2,252	..	..	..	..	..	..	..	..	..	..
Paraguay	3,144	5,879	19	6	0	1	7	13	1	1	74	80
Peru	7,584	15,327	14	10	2	2	9	19	1	1	75	68
Philippines	28,341	51,522	8	7	2	1	9	15	3	2	58	75
Poland	29,050	125,997	10	6	3	2	9	10	3	4	74	74
Portugal	32,610	66,618	14	11	4	1	8	15	2	3	72	64
Puerto Rico	..	..	..	..	..	..	..	..	..	..	..	..



4.5

Structure of merchandise imports

	Merchandise imports		Food		Agricultural raw materials		Fuels		Ores and metals		Manufactures	
	\$ millions		% of total		% of total		% of total		% of total		% of total	
	1995	2006	1995	2006	1995	2006	1995	2006	1995	2006	1995	2006
Romania	10,278	51,106	8	6	2	1	21	14	4	3	63	77
Russian Federation	60,945	163,867	18	14	1	1	3	1	2	2	45	76
Rwanda	236	501	19	..	3	..	12	..	3	..	64	..
Saudi Arabia	28,091	66,307	17	13	1	1	0	0	4	5	76	80
Senegal	1,412	3,434	25	23	2	2	30	26	1	1	42	48
Serbia	..	13,172	..	..	..	..	..	..	..	..	..	..
Sierra Leone	133	389	..	..	..	..	..	..	..	..	..	..
Singapore	124,507	238,652	5	3	1	0	8	19	2	2	83	74
Slovak Republic	8,770	45,870	9	5	3	1	13	14	6	3	70	76
Slovenia	9,492	24,104	8	6	5	2	7	11	4	6	74	74
Somalia	..	..	..	..	..	..	..	..	..	..	..	..
South Africa	30,546 ^b	77,280	7 ^b	4	2 ^b	1	8 ^b	18	2 ^b	2	78 ^b	66
Spain	113,537	316,448	14	8	3	1	8	16	4	4	71	70
Sri Lanka	5,306	10,258	16	12	2	1	6	13	1	3	75	69
Sudan	1,218	8,074	24	13	2	1	14	1	0	1	59	83
Swaziland	1,008	2,200	..	18	..	1	..	12	..	1	..	66
Sweden	65,036	126,738	7	7	2	1	6	12	4	4	80	72
Switzerland	80,152	141,374	6	5	2	1	3	8	3	6	85	80
Syrian Arab Republic	4,709	9,670	17	13	3	3	1	27	1	3	76	52
Tajikistan	810	1,723	..	..	..	..	..	..	..	..	..	..
Tanzania	1,675	4,253	10	12	1	1	1	24	4	1	84	61
Thailand	70,786	128,636	4	4	4	2	7	20	3	5	81	68
Timor-Leste	..	..	..	..	..	..	..	..	..	..	..	..
Togo	594	1,100	18	16	2	1	30	29	1	2	49	53
Trinidad and Tobago	1,714	6,485	16	8	1	1	1	35	6	5	77	52
Tunisia	7,902	14,865	13	8	4	3	7	14	3	3	73	72
Turkey	35,709	138,290	7	2	6	2	13	5	6	5	68	41
Turkmenistan	1,365	4,057	24	..	0	..	3	..	2	..	71	..
Uganda	1,056	2,505	16	14	3	1	2	21	2	1	78	63
Ukraine	15,484	45,035	8	7	2	1	48	28	3	3	38	60
United Arab Emirates	23,778	97,754	15	..	0	..	4	..	6	..	75	..
United Kingdom	267,250	619,385	10	8	2	1	4	9	3	3	80	67
United States	770,852	1,919,427	5	4	2	1	8	18	3	3	79	71
Uruguay	2,867	4,757	10	8	4	3	10	28	1	1	74	60
Uzbekistan	2,750	3,996	..	..	..	..	..	..	..	..	..	..
Venezuela, RB	12,649	33,616	14	8	4	1	1	1	4	1	77	69
Vietnam	8,155	44,410	5	6	2	4	10	15	2	3	76	71
West Bank and Gaza	..	..	..	..	..	..	..	..	..	..	..	..
Yemen, Rep.	1,582	4,935	29	21	2	1	8	22	1	1	59	55
Zambia	700	2,920	10	8	2	1	13	15	2	2	72	74
Zimbabwe	2,660	2,250	6	10	2	2	9	15	2	40	78	32
World	5,228,938 t	12,326,824 t	9 w	6 w	3 w	1 w	7 w	15 w	4 w	4 w	75 w	70 w
Low income	111,167	389,128	11	7	4	2	19	27	5	4	58	58
Middle income	940,577	2,958,062	8	6	3	2	7	12	3	4	76	70
Lower middle income	428,941	1,487,837	9	6	5	3	6	16	4	6	75	66
Upper middle income	511,391	1,466,978	8	6	3	1	7	9	3	4	77	74
Low & middle income	1,051,772	3,347,357	8	6	3	2	8	12	3	4	74	70
East Asia & Pacific	366,057	1,245,694	6	4	4	3	5	15	4	7	78	71
Europe & Central Asia	224,595	841,512	10	7	3	1	14	10	3	3	64	66
Latin America & Carib.	241,125	613,382	8	6	2	1	5	10	2	3	78	77
Middle East & N. Africa	81,546	213,435	22	12	3	2	6	13	2	2	66	50
South Asia	60,322	237,321	8	5	4	2	21	32	6	5	56	55
Sub-Saharan Africa	78,560	201,872	12	10	2	1	10	15	2	3	73	65
High income	4,176,841	8,984,577	9	6	3	1	7	15	4	4	76	70
Euro area	1,635,980	3,440,926	11	8	3	2	7	14	4	5	73	69

Note: Components may not sum to 100 percent because of unclassified trade.

a. Includes Luxembourg. b. Refers to the South African Customs Union (Botswana, Lesotho, Namibia, South Africa, and Swaziland).

Structure of merchandise imports

4.5

About the data

Data on imports of goods are derived from the same sources as data on exports. In principle, world exports and imports should be identical. Similarly, exports from an economy should equal the sum of imports by the rest of the world from that economy. But differences in timing and definitions result in discrepancies in reported values at all levels. For further discussion of indicators of merchandise trade, see *About the data* for tables 4.4 and 6.2.

The value of imports is generally recorded as the cost of the goods when purchased by the importer plus the cost of transport and insurance to the frontier of the importing country—the cost, insurance, and freight (c.i.f.) value, corresponding to the landed cost at the point of entry of foreign goods into the country. A few countries, including Australia, Canada, and the United States, collect import data on a free on board (f.o.b.) basis and adjust them for freight and insurance costs. Many countries collect and report trade data in U.S. dollars. When countries report in local currency, the United Nations Statistics Division applies the average official exchange rate for the period shown.

Countries may report trade according to the general or special system of trade (see *Primary data documentation*). Under the general system imports include goods imported for domestic consumption and imports into bonded warehouses and free trade zones. Under the special system imports comprise goods imported for domestic consumption (including transformation and repair) and withdrawals for

domestic consumption from bonded warehouses and free trade zones. Goods transported through a country en route to another are excluded.

The data on total imports of goods (merchandise) in the table come from the World Trade Organization (WTO). For further discussion of the WTO's sources and methodology, see *About the data* for table 4.4. The shares of imports by major commodity group are from the United Nations Statistics Division's Commodity Trade (Comtrade) database. The values of total imports reported here have not been fully reconciled with the estimates of imports of goods and services from the national accounts (shown in table 4.8) or those from the balance of payments (table 4.15).

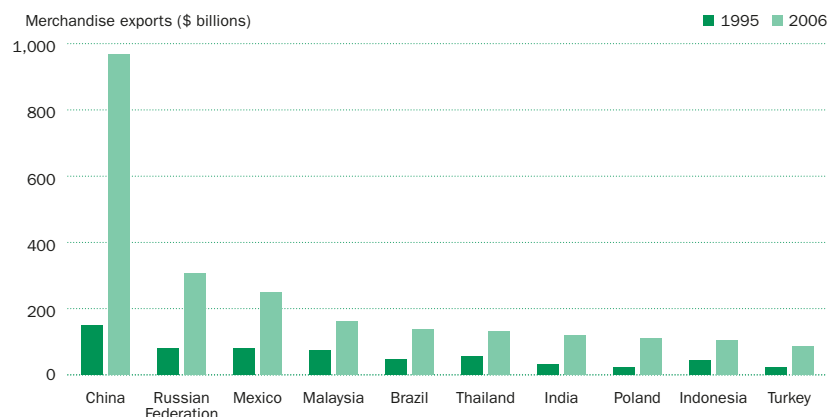
The classification of commodity groups is based on the Standard International Trade Classification (SITC) revision 1. Most countries now use later revisions of the SITC or the Harmonized System. Concordance tables convert data reported in one system to another. The conversion process may introduce some classification errors, but conversions from later to earlier systems are generally reliable.

Definitions

- **Merchandise imports** are the c.i.f. value of goods purchased from the rest of the world valued in U.S. dollars.
- **Food** corresponds to the commodities in SITC sections 0 (food and live animals), 1 (beverages and tobacco), and 4 (animal and vegetable oils and fats) and SITC division 22 (oil seeds, oil nuts, and oil kernels).
- **Agricultural raw materials** correspond to SITC section 2 (crude materials except fuels) excluding divisions 22, 27 (crude fertilizers and minerals excluding coal, petroleum, and precious stones), and 28 (metalliferous ores and scrap).
- **Fuels** correspond to SITC section 3 (mineral fuels).
- **Ores and metals** correspond to the commodities in SITC divisions 27, 28, and 68 (nonferrous metals).
- **Manufactures** correspond to the commodities in SITC sections 5 (chemicals), 6 (basic manufactures), 7 (machinery and transport equipment), and 8 (miscellaneous manufactured goods), excluding division 68.

Top 10 developing country exporters of merchandise goods in 2006

4.5a



China continues to dominate merchandise exports among developing countries. Even when developed countries are included, China ranks as the third leading merchandise exporter.

Source: World Development Indicators data files and World Trade Organization.

Data sources

Data on merchandise imports are from the WTO. Data on shares of imports by major commodity group are from Comtrade. The WTO publishes data on world trade in its *Annual Report*. The International Monetary Fund publishes estimates of total imports of goods in its *International Financial Statistics* and *Direction of Trade Statistics*, as does the United Nations Statistics Division in its *Monthly Bulletin of Statistics*. And the United Nations Conference on Trade and Development publishes data on the structure of imports in its *Handbook of International Trade and Development Statistics*. Tariff line records of imports are compiled in the United Nations Statistics Division's Comtrade database.



	Commercial service exports		Transport		Travel		Insurance and financial services		Computer, information, communications, and other commercial services	
	\$ millions		% of total		% of total		% of total		% of total	
	1995	2006	1995	2006	1995	2006	1995	2006	1995	2006
Afghanistan	..	..	..	..	..	..	..	..	..	..
Albania	94	1,481	19.1	11.0	69.3	68.3	1.4	2.0	10.2	18.7
Algeria	..	..	..	..	..	..	..	..	..	..
Angola	113	1,484	31.8	1.4	..	5.0	9.2	..	59.0	93.6
Argentina	3,676	7,542	27.4	18.9	60.5	43.9	0.2	0.1	11.9	37.2
Armenia	27	475	53.4	21.5	5.2	57.0	..	3.9	41.3	17.6
Australia	16,076	32,439	29.3	19.6	50.6	55.0	5.4	4.0	14.8	21.4
Austria	31,692	45,202	11.8	20.1	42.4	29.4	3.9	6.6	41.9	44.0
Azerbaijan	166	841	45.9	48.4	42.3	13.9	0.1	1.8	11.7	35.9
Bangladesh	469	603	15.0	14.7	5.3	13.3	0.1	5.7	79.6	66.3
Belarus	466	2,276	64.8	68.9	5.0	11.9	0.5	0.2	29.7	19.0
Belgium	33,619 ^a	57,285	29.4 ^a	27.3	17.4 ^a	17.9	14.8 ^a	7.9	38.4 ^a	46.9
Benin	159	179	25.8	18.3	53.2	57.7	6.9	2.3	14.1	21.7
Bolivia	174	419	44.8	26.6	31.5	48.0	9.8	12.2	13.9	13.2
Bosnia and Herzegovina	457	1,112	3.8	8.3	54.1	53.1	2.6	4.2	39.5	34.5
Botswana	236	771	16.2	10.5	68.5	69.7	7.8	2.9	7.5	16.9
Brazil	6,005	17,946	43.3	19.2	16.2	24.1	16.9	5.9	23.6	50.9
Bulgaria	1,431	5,041	34.5	27.3	33.0	51.8	..	1.6	32.5	19.4
Burkina Faso	38	..	17.3	..	47.8	..	..	..	34.8	..
Burundi	4	6	46.2	14.7	32.4	23.5	0.5	0.9	21.0	60.9
Cambodia	103	1,244	30.5	13.4	51.7	77.5	..	1.2	17.7	8.0
Cameroon	242	869	48.3	16.8	14.8	18.2	7.2	5.7	29.7	59.3
Canada	25,425	57,750	20.7	18.5	31.1	25.4	11.4	9.3	36.8	46.8
Central African Republic	..	..	34.1	..	33.9	..	19.6	..	12.5	..
Chad	23	..	4.5	..	49.8	..	1.7	..	43.9	..
Chile	3,249	7,406	36.8	60.3	28.0	16.4	7.4	2.7	27.8	20.5
China	18,430	91,421	18.2	23.0	47.4	37.1	10.1	0.8	24.4	39.1
Hong Kong, China	33,790	72,283	32.5	31.9	16.8	16.2	9.2	10.6	41.5	41.4
Colombia	1,641	3,297	34.4	27.3	40.0	47.0	6.5	1.8	19.1	23.9
Congo, Dem. Rep.	..	..	..	..	..	..	..	..	..	..
Congo, Rep.	61	223	52.2	34.3	22.4	15.1	0.0	..	25.4	50.6
Costa Rica	957	2,916	14.0	9.9	71.2	59.4	-0.2	0.4	14.9	30.4
Côte d'Ivoire	426	680	28.9	26.2	20.9	12.4	12.3	..	37.9	61.4
Croatia	2,223	10,808	31.8	11.5	60.7	73.9	1.3	0.7	6.2	13.9
Cuba	..	..	..	..	..	..	..	..	..	..
Czech Republic	6,638	13,296	22.0	28.1	43.4	37.8	1.1	3.0	33.5	31.1
Denmark	15,171	52,679	44.6	47.1	24.3	15.6	..	..	31.0	37.4
Dominican Republic	1,894	4,153	2.2	3.3	82.9	91.3	..	0.7	14.9	4.7
Ecuador	687	939	46.8	37.5	37.1	52.2	0.0	0.0	16.0	10.3
Egypt, Arab Rep.	8,262	15,834	38.8	34.7	32.5	47.9	1.0	1.2	27.8	16.2
El Salvador	342	1,464	28.3	24.0	25.0	59.5	7.8	2.3	39.0	14.2
Eritrea	49	..	70.4	..	3.1	..	..	..	26.5	..
Estonia	868	3,451	43.0	41.5	41.1	30.0	0.4	2.4	15.5	26.1
Ethiopia	310	890	76.9	65.6	5.3	18.2	1.5	2.3	16.4	13.9
Finland	7,334	15,981	28.1	17.3	22.4	14.9	2.0	0.9	47.5	67.0
France	83,108	117,586	24.6	22.3	33.2	39.5	5.3	1.9	36.9	36.3
Gabon	191	136	46.4	59.8	9.0	7.2	3.3	17.1	41.3	15.9
Gambia, The	38	92	21.7	17.5	73.4	71.9	0.3	0.4	4.7	10.3
Georgia	188	817	48.2	52.2	25.0	38.3	..	4.0	26.9	5.5
Germany	73,576	166,926	27.0	25.0	24.5	19.7	5.0	7.0	43.5	48.3
Ghana	139	1,301	58.7	15.8	7.9	66.2	3.0	0.8	30.3	17.3
Greece	9,528	35,671	3.9	50.4	43.4	40.4	0.3	1.0	52.4	8.2
Guatemala	628	1,292	8.6	9.5	33.9	75.0	4.0	7.7	53.6	7.8
Guinea	17	31	75.3	21.8	5.1	..	1.4	0.4	18.2	77.8
Guinea-Bissau	2	6	18.2	22.9	..	16.6	..	19.5	81.8	41.0
Haiti	98	150	5.1	..	91.9	90.5	0.6	..	2.4	9.5

Structure of service exports

4.6

ECONOMY

	Commercial service exports		Transport		Travel		Insurance and financial services		Computer, information, communications, and other commercial services	
	\$ millions		% of total		% of total		% of total		% of total	
	1995	2006	1995	2006	1995	2006	1995	2006	1995	2006
Honduras	221	709	25.6	8.5	36.3	68.9	2.0	2.3	36.1	20.3
Hungary	5,086	13,191	8.0	18.1	57.6	32.3	3.2	1.3	31.3	48.3
India	6,763	75,057	28.0	10.2	38.2	11.9	2.5	4.2	31.4	73.7
Indonesia	5,342	11,091	..	19.0	97.9	40.1	..	1.9	2.1	39.0
Iran, Islamic Rep.	533	..	25.9	..	12.6	..	8.8	..	52.7	..
Iraq	..	..	..	..	..	..	..	..	..	..
Ireland	4,799	68,660	22.2	4.3	46.1	7.8	..	27.4	31.7	60.5
Israel	7,741	19,229	26.0	19.3	38.7	14.4	0.2	0.1	35.1	66.1
Italy	61,173	97,151	17.7	16.2	47.0	39.4	6.6	3.9	28.8	40.5
Jamaica	1,568	2,613	16.0	17.6	68.2	71.6	1.1	2.1	14.7	8.8
Japan	63,966	115,140	35.2	32.7	5.0	7.4	0.9	6.7	58.8	53.2
Jordan	1,689	2,432	24.8	21.7	39.1	67.5	..	..	36.1	10.8
Kazakhstan	535	2,584	65.7	56.4	22.7	32.4	0.0	1.2	11.6	9.9
Kenya	851	2,011	33.2	50.8	57.1	34.2	2.3	0.4	7.4	14.6
Korea, Dem. Rep.	..	..	..	..	..	..	..	..	..	..
Korea, Rep.	22,133	50,385	41.9	51.3	23.3	10.6	0.4	5.8	34.5	32.3
Kuwait	1,124	6,024	83.6	38.6	10.7	3.4	5.7	1.6	..	56.4
Kyrgyz Republic	39	351	39.6	16.1	11.9	47.5	..	1.0	48.4	35.4
Lao PDR	68	..	22.8	..	76.0	..	0.6	..	0.6	..
Latvia	718	2,613	91.9	54.1	2.8	18.4	2.4	7.3	3.0	20.3
Lebanon	..	11,609	..	4.1	..	43.2	..	2.2	..	50.5
Lesotho	30	51	7.0	1.3	90.9	53.8	1.4	-0.4	0.7	45.3
Liberia	..	..	..	..	..	..	..	..	..	..
Libya	20	385	62.7	33.2	12.0	49.4	..	14.3	25.3	3.1
Lithuania	482	3,583	59.6	54.3	16.0	29.0	0.9	0.5	23.5	16.2
Macedonia, FYR	151	581	32.0	32.0	13.6	22.2	3.6	1.9	50.7	43.9
Madagascar	219	420	29.8	28.2	26.3	43.7	2.2	0.1	41.6	28.1
Malawi	24	..	27.6	..	72.4	..	..	..	..	..
Malaysia	11,438	21,722	21.6	19.5	34.7	48.0	..	1.7	43.7	30.9
Mali	68	253	32.5	13.8	37.3	58.5	5.1	2.9	25.2	24.7
Mauritania	19	..	9.1	..	57.9	..	..	..	33.0	..
Mauritius	773	1,663	25.8	21.8	55.6	60.5	0.0	1.7	18.5	16.1
Mexico	9,585	16,372	12.1	11.7	64.5	74.4	6.7	7.7	16.7	6.2
Moldova	143	471	29.5	47.5	39.8	23.7	11.6	1.0	19.1	27.7
Mongolia	47	483	31.7	44.4	43.6	46.6	5.3	2.0	19.5	7.0
Morocco	2,020	9,318	20.3	15.9	64.2	64.2	1.4	0.8	14.2	19.0
Mozambique	242	355	24.8	29.6	..	39.4	..	0.5	75.2	30.5
Myanmar	353	256	6.5	50.8	42.7	18.1	0.0	..	50.9	31.2
Namibia	301	509	..	20.6	92.4	75.0	1.5	0.3	6.2	4.1
Nepal	592	252	9.3	14.0	30.0	50.8	..	0.6	60.7	34.6
Netherlands	44,646	80,180	40.4	25.7	14.7	14.2	1.2	1.9	43.7	58.2
New Zealand	4,401	7,776	34.7	21.3	52.7	58.7	0.1	1.4	12.6	18.7
Nicaragua	94	302	17.7	12.8	52.5	76.3	2.5	1.1	27.4	9.7
Niger	12	84	3.3	10.1	57.8	51.2	0.0	1.1	38.9	37.6
Nigeria	608	4,164	16.4	17.5	2.8	0.4	0.6	0.2	80.2	81.8
Norway	13,458	32,730	63.3	46.6	16.6	11.0	3.7	3.3	16.4	39.1
Oman	13	913	7.7	34.8	81.2	59.0	1.1	0.6	10.0	5.7
Pakistan	1,432	2,246	58.0	49.6	7.7	11.3	1.0	3.7	33.4	35.4
Panama	1,298	3,897	60.4	56.9	23.8	24.6	6.1	7.9	9.6	10.6
Papua New Guinea	321	285	10.8	10.9	7.8	1.3	1.2	5.4	80.2	82.4
Paraguay	566	735	13.3	13.2	24.3	12.3	5.0	4.2	57.4	70.3
Peru	1,042	2,323	32.5	22.6	41.1	59.4	7.2	4.7	19.3	13.3
Philippines	9,323	6,453	2.9	17.8	12.2	54.3	0.7	2.0	84.2	25.9
Poland	10,637	20,522	28.6	34.0	21.7	35.3	8.3	1.5	41.4	29.2
Portugal	8,161	17,624	18.6	22.7	59.2	47.6	4.5	2.1	17.7	27.6
Puerto Rico	..	..	..	..	..	..	..	..	..	..



	Commercial service exports		Transport		Travel		Insurance and financial services		Computer, information, communications, and other commercial services	
	\$ millions		% of total		% of total		% of total		% of total	
	1995	2006	1995	2006	1995	2006	1995	2006	1995	2006
Romania	1,476	7,005	31.9	26.9	40.0	18.7	5.4	2.0	22.7	52.5
Russian Federation	10,568	30,691	35.8	32.8	40.8	24.9	0.6	3.1	22.8	39.2
Rwanda	11	74	60.6	40.6	21.9	42.2	..	3.8	17.6	13.4
Saudi Arabia	3,475	7,297	..	..	..	..	..	..	..	..
Senegal	364	598	15.4	16.1	46.1	35.3	0.6	1.6	37.9	47.0
Serbia	..	..	..	..	..	..	..	..	..	..
Sierra Leone	71	40	13.7	34.2	80.5	57.9	0.3	6.1	5.6	1.8
Singapore	25,404	58,957	32.7	35.6	30.0	12.0	8.5	9.4	28.9	43.1
Slovak Republic	2,378	3,270	25.9	43.2	26.2	26.4	4.9	2.3	43.0	28.0
Slovenia	2,016	4,337	25.1	30.7	53.8	41.4	0.6	1.2	20.6	26.7
Somalia	..	..	..	..	..	..	..	..	..	..
South Africa	4,414	11,712	24.2	12.7	48.2	67.2	9.9	7.3	17.7	12.7
Spain	40,019	105,483	15.8	17.2	63.4	48.6	3.9	4.4	16.9	29.7
Sri Lanka	800	1,604	41.9	46.8	28.2	25.6	3.4	3.6	26.5	24.0
Sudan	82	178	0.9	10.5	9.7	70.6	3.7	14.1	85.8	4.8
Swaziland	150	274	18.2	3.9	32.2	27.1	0.0	13.8	49.6	55.1
Sweden	15,336	49,921	32.2	18.5	22.6	18.3	2.4	5.7	42.7	57.5
Switzerland	25,179	50,729	15.1	9.3	37.6	21.0	27.8	33.4	19.5	36.4
Syrian Arab Republic	1,632	2,649	14.5	8.2	77.1	76.4	..	2.4	8.4	12.9
Tajikistan	..	110	..	56.0	..	1.9	..	8.1	..	34.0
Tanzania	566	1,422	0.3	24.0	88.6	64.3	0.0	1.1	11.1	10.7
Thailand	14,652	23,944	16.8	22.5	54.8	51.9	0.7	1.1	27.7	24.6
Timor-Leste	..	..	..	..	..	..	..	..	..	..
Togo	64	145	33.9	39.1	19.9	14.0	1.8	1.0	44.3	45.9
Trinidad and Tobago	331	883	58.6	24.4	23.4	51.3	9.2	15.3	8.8	9.0
Tunisia	2,401	4,162	24.9	29.9	63.7	54.7	1.5	2.7	9.8	12.7
Turkey	14,475	24,233	11.8	17.5	34.2	69.5	1.5	2.1	52.4	10.9
Turkmenistan	79	..	79.9	..	9.3	..	0.9	..	10.0	..
Uganda	104	476	17.9	2.3	75.1	74.5	..	5.2	7.0	18.0
Ukraine	2,846	10,822	75.6	49.4	6.7	32.2	2.7	1.4	15.0	17.0
United Arab Emirates	..	..	..	..	..	..	..	..	..	..
United Kingdom	77,549	225,868	20.7	13.6	26.4	15.0	17.5	26.0	35.4	45.4
United States	198,501	397,833	22.7	17.2	37.7	26.8	4.2	11.7	35.5	44.3
Uruguay	1,309	1,259	30.5	34.4	46.7	47.5	1.5	5.3	21.3	12.8
Uzbekistan	..	..	..	..	..	..	..	..	..	..
Venezuela, RB	1,529	1,469	38.2	27.8	55.5	52.3	0.1	0.1	6.1	19.7
Vietnam	2,243	4,176	..	..	..	..	..	..	..	..
West Bank and Gaza	..	..	..	..	..	..	..	..	..	..
Yemen, Rep.	141	468	21.9	6.7	35.3	38.6	..	..	42.8	54.7
Zambia	112	238	64.3	35.7	25.9	46.2	..	7.4	9.8	10.7
Zimbabwe	353	..	26.4	..	50.6	..	0.3	..	22.7	..
World	1,210,617 t	2,767,235 t	26.9 w	23.2 w	32.5 w	27.6 w	5.9 w	7.5 w	36.2 w	41.7 w
Low income	18,274	111,021	26.7	19.7	25.2	18.2	2.2	3.5	46.3	58.8
Middle income	183,341	459,244	25.0	22.9	45.6	45.8	6.0	2.9	26.4	28.4
Lower middle income	87,021	232,986	21.6	23.2	47.9	42.5	6.6	1.3	27.9	32.9
Upper middle income	96,501	227,532	27.4	22.7	43.7	48.3	5.5	4.1	25.1	25.0
Low & middle income	201,502	566,671	25.1	22.7	44.0	44.2	5.7	3.0	27.9	30.2
East Asia & Pacific	62,745	163,462	17.4	21.5	49.2	42.8	7.1	1.2	30.6	34.5
Europe & Central Asia	56,445	149,843	33.6	32.3	34.9	33.3	2.6	2.2	29.1	32.1
Latin America & Carib.	37,663	79,286	24.0	18.9	51.3	56.6	6.9	5.2	17.9	19.3
Middle East & N. Africa	..	..	..	..	..	..	..	..	..	..
South Asia	10,333	80,602	31.8	19.3	29.7	13.7	2.1	4.2	36.4	62.8
Sub-Saharan Africa	11,933	35,650	25.7	16.9	31.8	43.0	5.8	4.6	40.2	36.1
High income	1,006,903	2,200,476	27.4	23.4	29.1	22.7	6.0	8.8	38.7	45.1
Euro area	419,928	872,274	25.6	22.3	31.5	26.7	5.6	5.5	37.5	45.4

a. Includes Luxembourg.

About the data

Balance of payments statistics, the main source of information on international trade in services, have many weaknesses. Some large economies—such as the former Soviet Union—did not report data on trade in services until recently. Disaggregation of important components may be limited and varies considerably across countries. There are inconsistencies in the methods used to report items. And the recording of major flows as net items is common (for example, insurance transactions are often recorded as premiums less claims). These factors contribute to a downward bias in the value of the service trade reported in the balance of payments.

Efforts are being made to improve the coverage, quality, and consistency of these data. Eurostat and the Organisation for Economic Co-operation and Development, for example, are working together to improve the collection of statistics on trade in services in member countries. In addition, the International Monetary Fund (IMF) has implemented the new classification of trade in services introduced in the fifth edition of its *Balance of Payments Manual* (1993).

Still, difficulties in capturing all the dimensions of international trade in services mean that the record is likely to remain incomplete. Cross-border intrafirm service transactions, which are usually not captured in the balance of payments, have increased in recent years. An example is transnational corporations' use of mainframe computers around the clock for data processing, exploiting time zone differences between their home country and the host countries of their

affiliates. Another important dimension of service trade not captured by conventional balance of payments statistics is establishment trade—sales in the host country by foreign affiliates. By contrast, cross-border intrafirm transactions in merchandise may be reported as exports or imports in the balance of payments.

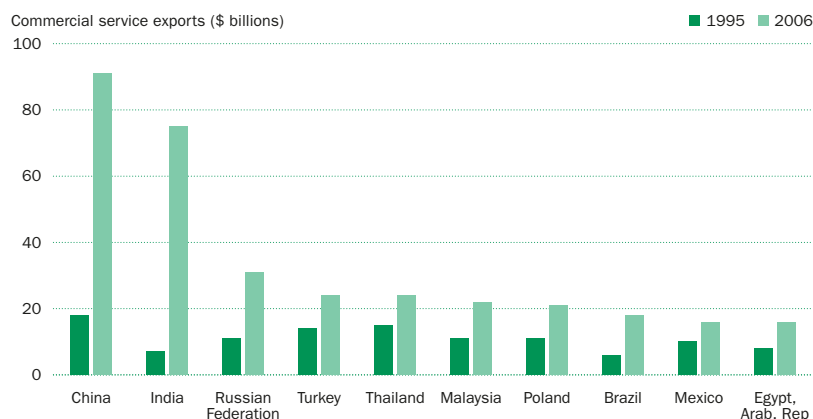
The data on exports of services in the table and on imports of services in table 4.7, unlike those in editions before 2000, include only commercial services and exclude the category "government services not included elsewhere." The data are compiled by the IMF based on returns from national sources. Data on total trade in goods and services from the IMF's Balance of Payments database are shown in table 4.15.

Definitions

- **Commercial service exports** are total service exports minus exports of government services not included elsewhere. International transactions in services are defined by the IMF's *Balance of Payments Manual* (1993) as the economic output of intangible commodities that may be produced, transferred, and consumed at the same time. Definitions may vary among reporting economies.
- **Transport** covers all transport services (sea, air, land, internal waterway, space, and pipeline) performed by residents of one economy for those of another and involving the carriage of passengers, movement of goods (freight), rental of carriers with crew, and related support and auxiliary services. Excluded are freight insurance, which is included in insurance services; goods procured in ports by nonresident carriers and repairs of transport equipment, which are included in goods; repairs of harbors, railway facilities, and airport facilities, which are included in construction services; and rental of carriers without crew, which is included in other services.
- **Travel** covers goods and services acquired from an economy by travelers in that economy for their own use during visits of less than one year for business or personal purposes. Travel services include the goods and services consumed by travelers, such as meals, lodging, and transport (within the economy visited), including car rental.
- **Insurance and financial services** cover freight insurance on goods exported and other direct insurance such as life insurance; financial intermediation services such as commissions, foreign exchange transactions, and brokerage services; and auxiliary services such as financial market operational and regulatory services.
- **Computer, information, communications, and other commercial services** include such activities as international telecommunications and postal and courier services; computer data; news-related service transactions between residents and nonresidents; construction services; royalties and license fees; miscellaneous business, professional, and technical services; and personal, cultural, and recreational services.

Top 10 developing country exporters of commercial services in 2006

4.6a



The top 10 developing country exporters of commercial services accounted for almost 60 percent of developing country commercial service exports and 12 percent of world commercial service exports.

Source: International Monetary Fund balance of payments data files.

Data sources

Data on exports of commercial services are from the IMF, which publishes balance of payments data in its *International Financial Statistics* and *Balance of Payments Statistics Yearbook*.



	Commercial service imports		Transport		Travel		Insurance and financial services		Computer, information, communications, and other commercial services	
	\$ millions		% of total		% of total		% of total		% of total	
	1995	2006	1995	2006	1995	2006	1995	2006	1995	2006
Afghanistan	..	..	..	..	..	..	..	..	..	..
Albania	98	1,552	61.4	16.1	6.7	62.1	22.1	3.6	9.8	18.1
Algeria	..	..	..	..	..	..	..	..	..	..
Angola	1,665	6,860	18.2	23.7	4.5	2.2	2.7	6.1	74.6	68.0
Argentina	6,992	8,222	30.1	27.8	46.9	38.1	7.1	4.4	15.9	29.7
Armenia	52	600	82.6	38.6	6.2	47.7	10.3	5.2	0.9	8.5
Australia	16,979	31,631	36.9	35.8	30.4	37.0	7.2	3.6	25.6	23.6
Austria	27,552	32,398	11.9	14.9	39.5	22.4	5.6	6.6	43.0	56.0
Azerbaijan	297	2,784	31.1	18.3	49.1	7.2	0.8	4.3	19.0	70.2
Bangladesh	1,192	2,111	65.0	76.1	19.6	6.6	5.6	9.3	9.7	8.0
Belarus	276	1,454	35.9	24.9	31.5	50.5	3.6	2.4	29.0	22.1
Belgium	32,511 ^a	52,285	24.1 ^a	24.9	27.7 ^a	29.6	10.2 ^a	7.7	38.0 ^a	37.8
Benin	235	267	59.2	65.2	14.7	10.1	10.4	11.2	15.7	13.5
Bolivia	321	787	65.9	38.0	15.0	28.7	9.3	15.5	9.9	17.8
Bosnia and Herzegovina	262	493	51.5	42.5	30.9	32.1	9.5	12.2	8.1	13.2
Botswana	440	834	42.6	38.6	33.0	33.2	8.1	3.5	16.3	24.7
Brazil	13,161	27,149	44.1	24.2	25.8	21.2	9.6	6.0	20.6	48.6
Bulgaria	1,278	4,103	41.5	32.6	15.3	35.9	..	4.6	43.2	26.9
Burkina Faso	116	..	56.0	..	19.6	..	4.8	..	19.6	..
Burundi	62	190	49.4	26.5	41.0	66.0	5.9	2.5	3.8	5.0
Cambodia	181	746	46.4	58.4	4.6	16.4	4.3	6.0	44.7	19.2
Cameroon	485	1,454	35.4	26.4	21.7	22.2	7.2	7.2	35.7	44.2
Canada	32,985	71,746	24.1	23.6	31.1	28.6	11.3	10.8	33.5	37.0
Central African Republic	114	..	43.7	..	38.0	..	7.9	..	10.4	..
Chad	174	..	55.0	..	14.9	..	1.5	..	28.6	..
Chile	3,524	8,289	54.0	54.9	19.9	15.1	4.1	9.7	21.9	20.3
China	24,635	100,327	38.7	34.3	15.0	24.2	17.3	9.7	29.0	31.8
Hong Kong, China	24,962	36,533	22.2	30.9	54.0	39.3	6.2	5.9	17.6	23.8
Colombia	2,813	5,425	42.4	41.5	31.2	24.5	11.9	8.8	14.5	25.1
Congo, Dem. Rep.	..	..	..	..	..	..	..	..	..	..
Congo, Rep.	690	1,550	18.6	19.9	7.5	6.6	7.3	..	66.6	73.5
Costa Rica	895	1,608	41.4	38.9	36.1	30.2	4.6	7.1	17.9	23.8
Côte d'Ivoire	1,235	2,073	50.5	52.3	15.4	17.4	11.0	..	23.2	30.3
Croatia	1,327	3,491	29.5	20.3	31.8	21.1	3.4	5.3	35.3	53.3
Cuba	..	..	..	..	..	..	..	..	..	..
Czech Republic	4,860	11,726	16.5	23.4	33.7	22.8	5.2	11.3	44.7	42.5
Denmark	13,945	46,137	45.1	43.4	30.8	21.8	..	..	24.1	34.8
Dominican Republic	957	1,486	61.1	62.5	18.1	22.4	10.2	8.2	10.6	6.9
Ecuador	1,141	2,265	42.4	51.7	20.6	20.6	5.9	6.3	31.1	21.4
Egypt, Arab Rep.	4,511	10,288	35.1	44.0	28.3	17.3	4.6	10.2	32.0	28.5
El Salvador	488	1,458	55.1	40.5	14.9	35.5	11.0	8.3	19.0	15.7
Eritrea	45	..	..	..	6.9	..	..	..	93.1	..
Estonia	420	2,427	52.9	42.5	21.5	24.4	4.7	2.2	20.9	30.9
Ethiopia	337	1,154	63.4	54.9	7.5	8.4	7.4	5.7	21.7	31.0
Finland	9,418	15,571	22.8	28.5	24.2	22.0	5.0	1.3	48.0	48.2
France	64,523	106,949	32.9	27.5	25.4	29.2	6.1	5.7	35.6	37.5
Gabon	832	921	17.7	33.5	16.5	23.2	8.6	5.8	57.2	37.5
Gambia, The	47	94	59.6	36.1	30.4	6.8	5.8	5.4	4.2	51.7
Georgia	249	687	27.0	56.4	62.8	24.3	8.4	12.3	1.8	7.0
Germany	130,490	213,283	18.2	24.1	46.2	34.8	1.5	3.7	34.1	37.5
Ghana	331	1,442	61.3	51.3	6.2	23.9	6.5	4.8	26.0	20.0
Greece	4,003	15,899	29.9	55.2	33.1	18.9	4.5	6.8	32.5	19.2
Guatemala	672	1,628	41.4	52.0	21.0	30.4	8.7	12.6	28.9	5.1
Guinea	252	195	58.4	47.3	8.4	12.8	7.2	12.7	26.0	27.2
Guinea-Bissau	27	42	53.1	53.5	14.1	30.9	4.7	0.4	28.1	15.1
Haiti	236	370	77.6	79.5	14.7	15.1	1.7	1.7	5.9	3.7

Structure of service imports

4.7

ECONOMY

	Commercial service imports		Transport		Travel		Insurance and financial services		Computer, information, communications, and other commercial services	
	\$ millions		% of total		% of total		% of total		% of total	
	1995	2006	1995	2006	1995	2006	1995	2006	1995	2006
Honduras	326	994	60.4	48.7	17.5	28.5	2.5	..	19.7	22.8
Hungary	3,765	11,485	12.8	21.0	39.8	18.5	4.9	4.0	42.5	56.5
India	10,062	63,053	56.7	40.0	9.9	11.7	5.6	6.3	27.9	42.1
Indonesia	13,230	21,406	36.7	38.2	16.4	16.8	3.4	3.5	43.4	41.5
Iran, Islamic Rep.	2,192	..	43.0	..	11.0	..	9.9	..	36.1	..
Iraq	..	..	..	..	..	..	..	..	..	..
Ireland	11,252	78,460	15.9	3.2	18.1	8.7	1.4	17.5	64.6	70.5
Israel	8,134	14,704	44.9	32.5	26.1	20.3	3.0	2.8	26.0	44.4
Italy	54,613	98,005	24.5	23.1	27.2	23.6	9.7	4.0	38.6	49.3
Jamaica	1,073	1,969	46.3	45.0	13.8	13.9	9.2	10.7	30.8	30.5
Japan	121,547	133,899	29.6	32.0	30.2	20.1	2.4	5.6	37.8	42.3
Jordan	1,385	2,596	52.3	57.4	30.7	24.1	6.1	8.9	10.9	9.7
Kazakhstan	776	8,581	38.4	17.6	36.4	9.6	..	5.0	25.2	67.8
Kenya	733	1,265	58.8	53.0	19.8	14.1	9.8	13.1	11.6	19.9
Korea, Dem. Rep.	..	..	..	..	..	..	..	..	..	..
Korea, Rep.	25,394	69,787	38.0	33.5	25.0	26.1	1.5	2.2	35.5	38.2
Kuwait	3,826	8,359	39.4	34.0	58.8	62.8	1.7	1.6	0.1	1.6
Kyrgyz Republic	193	456	27.1	39.0	3.4	20.1	4.3	4.8	65.3	36.1
Lao PDR	119	..	43.3	..	25.0	..	4.0	..	27.7	..
Latvia	225	1,962	68.2	32.6	10.8	35.9	7.0	2.9	14.0	28.7
Lebanon	..	8,692	..	16.9	..	34.6	..	3.2	..	45.3
Lesotho	58	75	74.9	72.9	22.6	25.1	0.2	..	2.4	2.0
Liberia	..	..	..	..	..	..	..	..	..	..
Libya	510	2,324	60.4	50.9	15.0	28.7	..	8.5	24.7	11.9
Lithuania	457	2,462	63.9	45.1	23.3	36.9	1.1	2.5	11.7	15.4
Macedonia, FYR	300	548	49.6	42.3	8.8	12.9	20.7	4.4	20.9	40.4
Madagascar	277	462	55.6	48.5	21.1	15.9	3.7	1.0	19.6	34.7
Malawi	151	..	66.8	..	26.0	..	0.1	..	7.2	..
Malaysia	14,821	23,493	37.8	40.8	15.6	17.1	..	3.1	46.5	39.0
Mali	412	583	59.6	61.9	11.9	13.2	1.4	6.8	27.1	18.0
Mauritania	197	..	61.5	..	11.6	..	1.4	..	25.4	..
Mauritius	630	1,319	39.9	40.5	25.2	24.8	4.6	5.4	30.3	29.3
Mexico	9,021	22,329	38.0	12.0	35.1	36.3	12.5	43.2	14.4	8.4
Moldova	193	455	51.6	37.7	29.2	41.2	9.3	2.3	9.9	18.7
Mongolia	87	514	69.6	49.5	22.3	36.5	..	3.9	8.1	10.1
Morocco	1,350	3,568	48.1	49.1	22.4	19.7	3.5	2.6	25.9	28.6
Mozambique	350	729	32.7	37.5	..	24.6	2.2	2.0	65.1	35.9
Myanmar	233	547	11.0	46.5	7.7	6.8	0.5	..	80.8	46.8
Namibia	538	421	36.5	35.6	16.7	28.1	9.5	5.5	37.3	30.8
Nepal	305	488	36.3	38.2	44.7	37.9	3.0	5.9	15.9	18.0
Netherlands	43,618	78,730	28.9	22.1	26.8	21.7	3.0	2.6	41.3	53.7
New Zealand	4,571	7,675	41.2	33.7	27.5	32.9	5.2	3.7	26.1	29.7
Nicaragua	207	457	39.1	56.0	19.3	21.2	3.3	9.6	38.3	13.2
Niger	120	277	74.4	77.1	11.1	11.0	2.6	2.2	12.0	9.7
Nigeria	4,398	7,321	22.4	20.7	20.6	15.1	2.5	..	54.4	64.2
Norway	13,052	30,776	38.2	30.4	32.4	37.6	5.6	4.3	23.7	27.7
Oman	985	3,740	41.8	33.1	4.8	18.4	4.6	9.2	48.8	39.4
Pakistan	2,431	8,087	67.0	37.4	18.4	19.1	4.3	3.1	10.3	40.4
Panama	1,049	1,666	71.0	56.9	11.5	16.3	8.8	14.3	8.7	12.4
Papua New Guinea	642	1,151	25.2	24.2	9.1	4.8	2.8	10.3	63.0	60.7
Paraguay	676	405	66.4	61.9	19.7	22.5	12.4	12.3	1.4	3.3
Peru	1,781	3,269	50.8	44.7	16.7	23.3	10.2	8.8	22.3	23.3
Philippines	6,906	6,024	29.7	56.3	6.1	20.5	1.6	4.1	62.6	19.2
Poland	7,008	17,949	25.2	23.7	5.9	32.1	13.6	4.3	55.3	39.9
Portugal	6,339	11,314	26.8	31.5	33.1	29.2	8.9	4.4	31.1	35.0
Puerto Rico	..	..	..	..	..	..	..	..	..	..



	Commercial service imports		Transport		Travel		Insurance and financial services		Computer, information, communications, and other commercial services	
	\$ millions		% of total		% of total		% of total		% of total	
	1995	2006	1995	2006	1995	2006	1995	2006	1995	2006
Romania	1,801	6,901	33.5	34.8	38.7	19.0	5.3	5.4	22.4	40.8
Russian Federation	20,206	43,703	16.4	15.4	57.4	41.7	0.4	3.7	25.9	39.2
Rwanda	58	214	72.8	51.7	17.1	16.4	..	6.9	10.1	25.0
Saudi Arabia	8,670	19,390	25.3	27.3	..	..	2.8	3.0	71.9	69.6
Senegal	405	681	57.1	55.8	17.7	8.4	7.0	10.2	18.2	25.6
Serbia	..	..	..	..	..	..	..	..	..	..
Sierra Leone	79	75	17.4	58.8	62.5	16.7	3.8	10.1	16.3	14.4
Singapore	20,728	61,745	44.8	37.2	22.5	16.8	10.1	6.6	22.6	39.5
Slovak Republic	1,800	3,012	17.0	29.8	17.8	19.0	4.9	8.7	60.2	42.4
Slovenia	1,429	3,222	30.6	23.5	40.2	30.2	1.8	2.5	27.4	43.8
Somalia	..	..	..	..	..	..	..	..	..	..
South Africa	5,756	13,949	39.9	47.5	32.1	24.3	14.1	5.5	13.8	22.7
Spain	22,354	77,902	31.1	26.4	20.3	21.4	7.4	7.8	41.2	44.4
Sri Lanka	1,169	2,359	58.1	62.0	15.9	15.8	5.4	5.9	20.5	16.2
Sudan	150	2,718	27.3	45.8	28.7	51.6	0.3	0.4	43.7	2.3
Swaziland	206	360	15.7	10.9	20.7	13.4	4.3	18.5	59.2	57.2
Sweden	17,112	39,638	28.4	16.3	31.8	29.1	1.4	3.7	38.4	50.9
Switzerland	14,899	28,616	35.2	21.3	49.8	34.7	1.1	6.1	13.9	37.9
Syrian Arab Republic	1,358	2,437	57.2	51.5	36.7	22.2	..	15.2	6.1	11.2
Tajikistan	..	393	..	61.5	..	1.5	..	8.1	..	28.9
Tanzania	729	1,212	29.8	34.5	49.4	44.1	2.7	4.6	18.0	16.8
Thailand	18,629	32,241	41.8	50.3	22.9	14.4	5.2	5.6	30.2	29.8
Timor-Leste	..	..	..	..	..	..	..	..	..	..
Togo	148	276	70.8	77.3	12.5	2.8	4.4	12.0	12.3	7.9
Trinidad and Tobago	223	471	42.2	40.7	31.0	38.2	7.9	6.5	18.8	14.6
Tunisia	1,245	2,338	45.3	52.8	20.1	17.5	6.5	8.9	28.1	20.8
Turkey	4,654	10,152	30.3	42.4	19.6	27.0	8.4	13.5	41.7	17.0
Turkmenistan	403	..	40.4	..	18.2	..	6.9	..	34.6	..
Uganda	563	975	38.2	48.4	14.3	14.0	4.2	6.3	43.3	31.2
Ukraine	1,334	8,582	34.0	37.4	15.7	33.0	7.3	6.3	42.9	23.3
United Arab Emirates	..	..	..	..	..	..	..	..	..	..
United Kingdom	62,524	170,962	27.1	20.9	39.9	37.0	4.4	7.3	28.7	34.7
United States	129,227	308,349	32.3	30.1	35.8	24.9	5.9	13.6	26.0	31.4
Uruguay	814	863	46.2	49.1	29.0	24.7	4.5	4.6	20.2	21.6
Uzbekistan	..	..	..	..	..	..	..	..	..	..
Venezuela, RB	4,654	5,797	30.7	47.8	36.8	21.2	2.6	8.5	29.9	22.5
Vietnam	2,304	5,282	..	..	..	..	..	..	..	..
West Bank and Gaza	..	..	..	..	..	..	..	..	..	..
Yemen, Rep.	604	1,800	35.6	40.9	12.5	9.0	7.1	7.5	44.8	42.6
Zambia	282	560	78.9	57.6	9.2	9.4	0.0	10.1	11.9	23.0
Zimbabwe	645	..	56.0	..	18.7	..	2.9	..	22.5	..
World	1,220,158 t	2,580,923 t	31.2 w	28.8 w	30.9 w	26.6 w	6.2 w	8.7 w	32.1 w	36.1 w
Low income	32,423	122,594	52.6	45.4	14.4	14.5	5.1	6.8	28.3	34.3
Middle income	210,450	497,838	37.0	33.4	23.8	25.8	9.8	12.6	30.1	28.3
Lower middle income	99,850	250,874	40.3	41.4	17.1	22.4	10.8	7.8	31.9	28.5
Upper middle income	110,799	247,787	34.6	27.3	28.9	28.4	9.0	16.1	28.8	28.1
Low & middle income	242,630	616,140	38.4	34.3	23.0	25.0	9.4	12.1	30.0	28.7
East Asia & Pacific	82,593	194,456	38.0	40.0	15.5	20.6	12.1	6.9	36.7	32.5
Europe & Central Asia	49,260	141,959	26.7	28.5	27.6	30.3	6.7	6.4	39.4	34.9
Latin America & Carib.	52,171	98,845	41.3	25.6	31.2	30.1	10.1	25.2	17.4	19.3
Middle East & N. Africa	20,192	49,265	44.6	..	20.2	..	..	..	29.7	..
South Asia	15,377	77,047	58.6	45.4	13.4	13.1	5.3	6.1	22.6	35.3
Sub-Saharan Africa	24,433	58,709	40.2	45.5	24.1	22.8	8.8	6.0	27.7	26.1
High income	976,943	1,969,987	29.2	27.3	33.0	27.0	5.4	7.8	32.7	38.1
Euro area	421,365	818,771	24.9	24.9	31.8	27.6	5.4	5.2	38.0	42.4

a. Includes Luxembourg.

About the data

Trade in services differs from trade in goods because services are produced and consumed at the same time. Thus services to a traveler may be consumed in the producing country (for example, use of a hotel room) but are classified as imports of the traveler's country. In other cases services may be supplied from a remote location; for example, insurance services may be supplied from one location and consumed in another. For further discussion of the problems of measuring trade in services, see *About the data* for table 4.6.

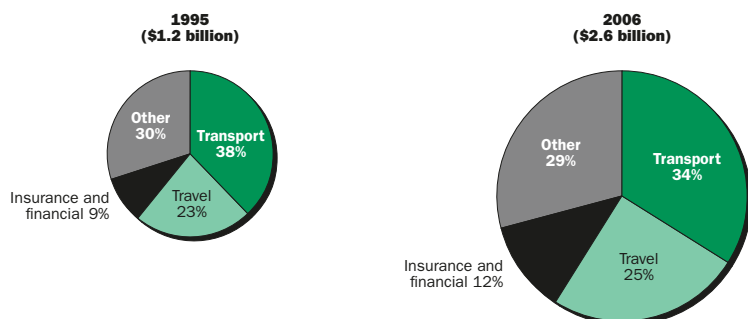
The data on imports of services in the table and on exports of services in table 4.6, unlike those in editions before 2000, include only commercial services and exclude the category "government services not included elsewhere." The data are compiled by the International Monetary Fund (IMF) based on returns from national sources.

Definitions

- **Commercial service imports** are total service imports minus imports of government services not included elsewhere. International transactions in services are defined by the IMF's *Balance of Payments Manual* (1993) as the economic output of intangible commodities that may be produced, transferred, and consumed at the same time. Definitions may vary among reporting economies.
- **Transport** covers all transport services (sea, air, land, internal waterway, space, and pipeline) performed by residents of one economy for those of another and involving the carriage of passengers, movement of goods (freight), rental of carriers with crew, and related support and auxiliary services. Excluded are freight insurance, which is included in insurance services; goods procured in ports by nonresident carriers and repairs of transport equipment, which are included in goods; repairs of harbors, railway facilities, and airfield facilities, which are included in construction services; and rental of carriers without crew, which is included in other services.
- **Travel** covers goods and services acquired from an economy by travelers in that economy for their own use during visits of less than one year for business or personal purposes. Travel services include the goods and services consumed by travelers, such as meals, lodging, and transport (within the economy visited), including car rental.
- **Insurance and financial services** cover freight insurance on goods imported and other direct insurance such as life insurance; financial intermediation services such as commissions, foreign exchange transactions, and brokerage services; and auxiliary services such as financial market operational and regulatory services.
- **Computer, information, communications, and other commercial services** include such activities as international telecommunications, and postal and courier services; computer data; news-related service transactions between residents and nonresidents; construction services; royalties and license fees; miscellaneous business, professional, and technical services; and personal, cultural, and recreational services.

The mix of commercial service imports by developing countries is changing

4.7a



Between 1995 and 2006 developing economies' commercial service imports more than doubled. Insurance and financial services and travel services are displacing transport and other services as the most important services imported.

Source: International Monetary Fund balance of payments data files.

Data sources

Data on imports of commercial services are from the IMF, which publishes balance of payments data in its *International Financial Statistics* and *Balance of Payments Statistics Yearbook*.



	Household final consumption expenditure		General government final consumption expenditure		Gross capital formation		Exports of goods and services		Imports of goods and services		Gross savings	
	% of GDP		% of GDP		% of GDP		% of GDP		% of GDP		% of GDP	
	1990	2006	1990	2006	1990	2006	1990	2006	1990	2006	1990	2006
Afghanistan	..	110	..	9	..	25	..	12	..	56	..	24
Albania	87	90	14	9	21	25	12	25	35	49	21	17
Algeria	55	33	17	12	31	30	26	48	29	24	26	51
Angola	51	50	.. ^a	.. ^a	35	14	82	74	68	38	30	37
Argentina	69	59	13	12	18	24	10	25	10	19	16	26
Armenia	109	70	11	11	18	34	24	22	62	36	-7	30
Australia	59	57	18	18	23	27	19	20	20	22	19	21
Austria	57	56	20	18	23	21	35	58	35	52	21	26
Azerbaijan	77	31	13	8	24	32	28	70	42	41	14	50
Bangladesh	83	76	5	6	19	25	11	19	17	25	21	34
Belarus	59	54	21	20	25	30	50	60	54	64	21	26
Belgium	54	53	22	23	20	22	68	88	63	85	25	24
Benin	82	78	11	15	20	20	20	13	33	26	8	11
Bolivia	76	63	14	15	15	12	23	42	27	33	11	26
Bosnia and Herzegovina	131	82	.. ^a	24	20	16	20	25	71	47	10	7
Botswana	34	28	29	20	25	26	51	55	38	29	36	52
Brazil	62	60	21	20	18	17	7	15	9	12	16	17
Bulgaria	71	70	15	17	16	32	45	64	46	83	12	16
Burkina Faso	63	77	25	21	24	17	14	11	27	25	18	6
Burundi	89	91	19	29	6	17	13	11	27	48	4	1
Cambodia	95	82	6	3	15	21	31	69	47	76	6	17
Cameroon	72	72	9	11	13	18	24	26	18	27	14	17
Canada	57	55	21	19	19	22	37	38	34	34	18	24
Central African Republic	79	88	15	10	14	9	20	14	28	22	6	6
Chad	91	52	7	6	13	22	22	59	34	38	5	23
Chile	61	55	10	10	26	20	29	45	27	31	25	24
China	42	33	14	14	42	45	23	40	21	32	43	54
Hong Kong, China	62	59	8	8	34	21	143	205	148	194	31	32
Colombia	65	61	15	18	26	24	15	22	21	25	18	20
Congo, Dem. Rep.	81	88	5	7	9	16	28	29	24	41	1	9
Congo, Rep.	49	17	13	14	37	24	65	91	64	46	-3	20
Costa Rica	71	66	14	14	18	27	38	50	40	56	15	19
Côte d'Ivoire	66	72	11	8	16	10	42	51	34	41	12	14
Croatia	64	56	29	20	18	33	39	48	49	57	11	24
Cuba	71	..	24	..	7	..	13	..	16	..	..	..
Czech Republic	51	48	21	21	33	27	51	76	55	73	29	24
Denmark	51	49	25	26	20	23	38	52	34	49	22	25
Dominican Republic	79	80	5	7	19	20	31	33	34	40	18	18
Ecuador	68	65	13	11	22	23	26	34	28	33	17	27
Egypt, Arab Rep.	74	71	11	12	20	19	23	30	28	32	22	22
El Salvador	87	94	9	10	20	16	22	27	38	47	15	12
Eritrea	94	81	44	42	23	19	22	8	83	50	4	9
Estonia	54	55	27	17	27	38	68	80	76	90	22	25
Ethiopia	80	94	8	12	18	20	10	16	16	42	21	9
Finland	52	51	23	21	18	21	36	44	29	38	21	27
France	57	57	24	24	19	21	23	27	22	28	19	19
Gabon	41	27	12	8	23	23	59	65	36	24	33	41
Gambia, The	90	96	14	.. ^a	20	25	49	45	73	65	6	10
Georgia	102	82	11	15	4	27	26	33	42	57	-7	7
Germany	58	58	20	18	22	18	24	45	23	40	20	23
Ghana	76	79	12	13	20	32	24	39	33	64	18	27
Greece	74	68	14	14	20	26	15	19	23	27	20	16
Guatemala	86	90	6	6	15	19	19	16	25	31	11	14
Guinea	74	84	8	5	21	13	21	32	25	35	14	8
Guinea-Bissau	95	76	6	18	22	17	12	42	35	53	5	23
Haiti	87	91	7	9	24	29	9	14	27	43	10	..

Structure of demand

4.8

ECONOMY

	Household final consumption expenditure		General government final consumption expenditure		Gross capital formation		Exports of goods and services		Imports of goods and services		Gross savings	
	% of GDP		% of GDP		% of GDP		% of GDP		% of GDP		% of GDP	
	1990	2006	1990	2006	1990	2006	1990	2006	1990	2006	1990	2006
Honduras	64	79	9	14	32	33	44	41	48	66	27	31
Hungary	66	64	11	10	23	25	45	78	45	77	19	19
India	64	58	11	11	27	34	11	23	12	26	27	34
Indonesia	62	62	8	9	32	25	26	31	28	26	28	26
Iran, Islamic Rep.	46	46	16	12	29	34	22	42	13	34	37	40
Iraq	..	..	..	..	..	..	..	..	..	..	..	..
Ireland	54	44	16	16	18	27	76	81	64	69	23	24
Israel	55	55	28	27	25	18	29	45	38	44	15	..
Italy	58	59	18	20	20	21	26	28	22	29	22	19
Jamaica	70	66	11	18	29	33	51	46	61	63	24	26
Japan	55	57	15	18	28	23	9	14	8	13	30	27
Jordan	65	89	24	22	33	27	52	55	73	92	29	14
Kazakhstan	68	46	14	10	23	33	39	51	44	40	18	31
Kenya	70	74	15	16	22	19	33	26	39	36	16	13
Korea, Dem. Rep.	..	..	..	..	..	..	..	..	..	..	..	..
Korea, Rep.	52	54	11	15	38	30	29	43	30	42	36	30
Kuwait	43	28	32	15	15	20	52	68	42	30	..	..
Kyrgyz Republic	75	101	20	19	18	17	29	39	42	76	9	4
Lao PDR	..	65	..	9	..	33	23	36	37	42	15	19
Latvia	63	65	24	17	14	38	43	44	45	64	14	17
Lebanon	101	89	15	15	36	12	11	24	62	40	-3	-4
Lesotho	120	97	18	18	61	33	21	51	120	99	26	27
Liberia	..	86	..	11	..	16	9	38	72	52	..	40
Libya	59	..	22	..	12	..	29	..	22	..	..	..
Lithuania	67	65	22	18	22	27	49	60	60	70	12	13
Macedonia, FYR	70	79	19	19	21	21	33	50	43	68	14	22
Madagascar	90	78	7	9	11	25	24	30	32	41	1	16
Malawi	79	77	21	12	17	24	30	17	48	29	-4	15
Malaysia	48	50	12	12	44	21	94	117	98	100	34	32
Mali	83	75	10	10	23	23	21	32	36	40	14	13
Mauritania	77	61	11	20	20	23	37	55	45	59	17	29
Mauritius	63	68	13	14	29	25	58	60	64	67	26	19
Mexico	67	68	10	12	20	22	30	32	28	33	19	22
Moldova	57	95	27	18	25	34	49	46	58	93	19	23
Mongolia	56	48	13	11	32	35	48	65	49	60	35	44
Morocco	68	55	17	18	21	32	27	33	34	38	17	34
Mozambique	90	76	8	11	27	19	16	41	41	47	1	3
Myanmar	87	..	..^a	..	14	..	1	..	2	..	14	..
Namibia	54	48	30	24	22	29	49	54	56	55	31	42
Nepal	75	83	9	9	25	26	25	14	35	32	23	28
Netherlands	49	47	24	25	21	20	59	74	54	66	27	30
New Zealand	58	60	17	18	23	25	29	28	28	30	18	15
Nicaragua	83	89	11	12	22	29	19	31	35	61	-1	13
Niger	86	79	14	11	7	18	17	15	24	24	-4	12
Nigeria	70	56	11	.. ^a	16	22	44	56	42	35	11	34
Norway	50	41	22	19	22	22	38	46	32	29	26	37
Oman	51	35	25	19	15	18	44	63	36	36	..	..
Pakistan	72	75	12	11	19	22	17	15	19	23	21	24
Panama	52	66	15	12	30	20	101	73	98	71	30	18
Papua New Guinea	42	..	17	..	22	..	62	..	43	..	35	..
Paraguay	76	86	10	10	26	21	59	49	71	66	18	7
Peru	71	61	10	10	25	20	13	29	18	20	25	23
Philippines	74	77	11	10	22	14	36	46	44	48	19	33
Poland	60	62	20	19	19	20	23	41	21	41	20	18
Portugal	65	65	18	21	23	22	29	31	35	39	23	12
Puerto Rico	..	..	..	..	..	..	72	..	97	..	..	..



4.8

Structure of demand

	Household final consumption expenditure		General government final consumption expenditure		Gross capital formation		Exports of goods and services		Imports of goods and services		Gross savings	
	% of GDP		% of GDP		% of GDP		% of GDP		% of GDP		% of GDP	
	1990	2006	1990	2006	1990	2006	1990	2006	1990	2006	1990	2006
Romania	68	73	14	13	24	24	28	34	33	44	19	13
Russian Federation	52	50	19	18	25	20	29	34	26	21	28	30
Rwanda	97	85	10	13	13	21	5	12	26	32	12	14
Saudi Arabia	47	25	24	25	20	18	38	62	28	31	20	..
Senegal	80	80	13	10	14	29	31	26	37	44	8	18
Serbia	73	78	23	21	12	21	17	27	24	47	6	10
Sierra Leone	88	85	14	13	6	15	19	23	26	36	-3	9
Singapore	41	38	8	11	34	19	..	253	..	221	52	..
Slovak Republic	52	57	22	19	24	29	57	86	55	90	27	20
Slovenia	60	54	19	19	23	27	51	69	53	70	23	25
Somalia	..	..	..	..	..	..	..	..	..	..	..	..
South Africa	63	63	18	19	18	20	23	30	22	33	17	14
Spain	60	58	18	18	22	31	22	26	22	32	22	22
Sri Lanka	73	74	11	9	26	29	36	32	46	43	20	25
Sudan	83	70	6	16	20	25	9	16	19	27	-4	10
Swaziland	76	60	22	28	20	17	75	81	93	86	18	19
Sweden	50	47	27	27	17	18	39	51	33	43	20	25
Switzerland	60	60	12	11	23	22	35	48	30	41	30	36
Syrian Arab Republic	66	67	13	13	27	16	31	39	38	36	23	17
Tajikistan	62	109	16	10	29	15	66	23	72	58	22	12
Tanzania ^b	86	70	12	18	20	19	24	24	42	31	0	11
Thailand	55	57	10	12	42	28	42	74	49	70	34	31
Timor-Leste	..	68	..	50	..	19	..	..	..	..	..	249
Togo	77	85	12	10	16	18	32	35	37	49	11	11
Trinidad and Tobago	53	51	12	13	21	16	54	65	39	43	26	32
Tunisia	63	62	16	14	25	24	45	54	49	54	20	25
Turkey	68	71	11	13	25	24	20	28	24	36	25	17
Turkmenistan	44	46	8	13	49	23	75	72	75	54	50	34
Uganda	85	77	11	14	12	23	12	15	21	29	8	15
Ukraine	55	60	21	19	27	24	47	47	50	50	24	23
United Arab Emirates	48	46	16	11	30	24	69	94	63	76	..	..
United Kingdom	64	64	20	22	17	18	28	29	29	33	15	14
United States	68	71	15	16	18	19	11	11	12	16	16	13
Uruguay	73	73	12	11	15	16	19	30	19	30	14	14
Uzbekistan	51	51	22	15	27	22	28	38	28	26	27	36
Venezuela, RB	69	48	7	11	18	25	27	37	22	21	21	40
Vietnam	74	62	8	6	27	36	33	73	42	77	19	37
West Bank and Gaza	98	95	18	32	35	27	16	16	68	70	11	10
Yemen, Rep.	71	..	14	..	22	..	51	..	58	..	20	..
Zambia	72	57	15	10	16	24	36	38	40	30	5	23
Zimbabwe	65	72	18	27	20	17	38	57	41	73	17	0
World	61 w	61 w	17 w	17 w	22 w	22 w	21 w	27 w	21 w	27 w	22 w	21 w
Low income	68	64	11	11	24	30	17	27	19	30	22	30
Middle income	59	55	15	15	27	27	25	36	25	33	26	30
Lower middle income	53	48	13	13	35	35	26	40	27	36	34	41
Upper middle income	63	61	16	15	21	21	24	33	24	30	20	22
Low & middle income	60	56	14	14	26	27	24	35	25	33	25	30
East Asia & Pacific	47	41	13	13	40	39	29	47	29	40	38	47
Europe & Central Asia	61	61	17	16	23	23	29	40	31	40	23	22
Latin America & Carib.	66	63	15	15	20	21	18	26	19	23	18	22
Middle East & N. Africa	62	57	16	14	25	26	27	38	29	35	25	30
South Asia	67	62	10	11	25	32	12	22	15	26	25	32
Sub-Saharan Africa	69	67	15	17	18	21	28	35	30	36	14	18
High income	61	62	17	18	21	21	21	26	20	26	21	19
Euro area	57	57	20	20	21	21	29	40	28	38	21	22

a. Data for general government final consumption expenditure are not available separately; they are included in household final consumption expenditure. b. Covers mainland Tanzania only.

Structure of demand

4.8

About the data

Gross domestic product (GDP) from the expenditure side is made up of household final consumption expenditure, general government final consumption expenditure, gross capital formation (private and public investment in fixed assets, changes in inventories, and net acquisitions of valuables), and net exports (exports minus imports) of goods and services. Such expenditures are recorded in purchaser prices and include net taxes on products.

Because policymakers have tended to focus on fostering the growth of output, and because data on production are easier to collect than data on spending, many countries generate their primary estimate of GDP using the production approach. Moreover, many countries do not estimate all the components of national expenditures but instead derive some of the main aggregates indirectly using GDP (based on the production approach) as the control total. Household final consumption expenditure (private consumption in the 1968 System of National Accounts, or SNA) is often estimated as a residual, by subtracting all other known expenditures from GDP. The resulting aggregate may incorporate fairly large discrepancies. When household consumption is calculated separately, many of the estimates are based on household surveys, which tend to be one-year studies with limited coverage. Thus the estimates quickly become outdated and must be supplemented by estimates using price- and quantity-based statistical procedures. Complicating the issue, in many developing countries the distinction between cash outlays for personal business and those for household use may be blurred. *World Development Indicators* includes in household consumption the expenditures of nonprofit institutions serving households.

General government final consumption expenditure (general government consumption in the 1968 SNA) includes expenditures on goods and services for individual consumption as well as those on services for collective consumption. Defense expenditures, including those on capital outlays (with certain exceptions), are treated as current spending.

Gross capital formation (gross domestic investment in the 1968 SNA) consists of outlays on additions to the economy's fixed assets plus net changes in the level of inventories. It is generally obtained from reports by industry of acquisition and distinguishes only the broad categories of capital formation. The 1993 SNA recognizes a third category of capital formation: net acquisitions of valuables. Included in gross capital formation under the 1993 SNA

guidelines are capital outlays on defense establishments that may be used by the general public, such as schools, airfields, and hospitals, and intangibles such as computer software and mineral exploration outlays. Data on capital formation may be estimated from direct surveys of enterprises and administrative records or based on the commodity flow method using data from production, trade, and construction activities. The quality of data on government fixed capital formation depends on the quality of government accounting systems (which tend to be weak in developing countries). Measures of fixed capital formation by households and corporations—particularly capital outlays by small, unincorporated enterprises—are usually unreliable.

Estimates of changes in inventories are rarely complete but usually include the most important activities or commodities. In some countries these estimates are derived as a composite residual along with household final consumption expenditure. According to national accounts conventions, adjustments should be made for appreciation of the value of inventory holdings due to price changes, but this is not always done. In highly inflationary economies this element can be substantial.

Data on exports and imports are compiled from customs reports and balance of payments data. Although the data from the payments side provide reasonably reliable records of cross-border transactions, they may not adhere strictly to the appropriate definitions of valuation and timing used in the balance of payments or correspond to the change-of-ownership criterion. This issue has assumed greater significance with the increasing globalization of international business. Neither customs nor balance of payments data usually capture the illegal transactions that occur in many countries. Goods carried by travelers across borders in legal but unreported shuttle trade may further distort trade statistics.

Gross savings represent the difference between disposable income and consumption and replace gross domestic savings, a concept used by the World Bank and included in *World Development Indicators* editions before 2006. The change was made to conform to SNA concepts and definitions. For further discussion of the problems in compiling national accounts, see Srinivasan (1994), Heston (1994), and Ruggles (1994). For an analysis of the reliability of foreign trade and national income statistics, see Morgenstern (1963).

Definitions

• **Household final consumption expenditure** is the market value of all goods and services, including durable products (such as cars and computers), purchased by households. It excludes purchases of dwellings but includes imputed rent for owner-occupied dwellings. It also includes government fees for permits and licenses. Expenditures of nonprofit institutions serving households are included, even when reported separately. Household consumption expenditure may include any statistical discrepancy in the use of resources relative to the supply of resources. • **General government final consumption expenditure** is all government current expenditures for purchases of goods and services (including compensation of employees). It also includes most expenditures on national defense and security but excludes military expenditures with potentially wider public use that are part of government capital formation. • **Gross capital formation** is outlays on additions to fixed assets of the economy, net changes in inventories, and net acquisitions of valuables. Fixed assets include land improvements (fences, ditches, drains); plant, machinery, and equipment purchases; and construction (roads, railways, schools, buildings, and so on). Inventories are goods held to meet temporary or unexpected fluctuations in production or sales, and "work in progress." • **Exports and imports of goods and services** are the value of all goods and other market services provided to or received from the rest of the world. They include the value of merchandise, freight, insurance, transport, travel, royalties, license fees, and other services (communication, construction, financial, information, business, personal, government services, and so on). They exclude compensation of employees and investment income (factor services in the 1968 SNA) and transfer payments. • **Gross savings** are gross national income less total consumption, plus net transfers.

Data sources

Data on national accounts indicators for most developing countries are collected from national statistical organizations and central banks by visiting and resident World Bank missions. Data for high-income economies come from Organisation for Economic Co-operation and Development (OECD) data files (see *Annual National Accounts for OECD Member Countries: Data from 1970 Onwards*).



Growth of consumption and investment

	Household final consumption expenditure				General government final consumption expenditure		Gross capital formation		Goods and services			
	average annual % growth				average annual % growth		average annual % growth		average annual % growth			
	Total		Per capita						Exports		Imports	
	1990-2000	2000-06	1990-2000	2000-06	1990-2000	2000-06	1990-2000	2000-06	1990-2000	2000-06	1990-2000	2000-06
Afghanistan	..	..	..	..	..	..	..	..	..	..	..	..
Albania	4.3	5.1	5.2	4.6	2.4	2.1	25.8	4.6	18.9	11.2	15.7	12.8
Algeria	-0.1	..	-1.9	..	3.6	..	-0.6	..	3.2	..	-1.0	..
Angola	..	..	..	..	..	..	..	..	..	..	..	..
Argentina	2.8	1.9	1.5	0.9	2.2	1.3	7.4	6.2	8.7	6.5	15.6	2.3
Armenia	-0.5	8.1	1.1	8.5	-1.5	10.9	-1.9	20.7	-18.4	15.3	-12.7	10.8
Australia	3.6	..	2.4	..	3.0	..	5.7	..	7.4	..	8.1	..
Austria	1.9	1.3	1.5	0.8	2.5	1.0	..	..	5.5	6.2	5.0	5.0
Azerbaijan	1.5	11.3	0.4	10.5	-1.7	10.0	42.9	32.0	6.8	16.4	15.5	20.3
Bangladesh	2.6	4.0	0.5	2.1	4.7	9.6	9.2	8.0	13.1	11.2	9.7	8.4
Belarus	-0.5	10.9	-0.3	11.4	-1.9	2.0	-7.5	12.5	-4.8	8.0	-8.7	10.1
Belgium	1.8	1.3	1.5	0.8	1.4	1.7	2.8	2.8	4.7	2.9	4.5	2.9
Benin	2.6	..	-0.8	..	4.4	..	12.2	7.6	1.8	..	2.1	..
Bolivia	3.6	2.4	1.3	0.5	3.6	3.2	8.5	-1.8	4.5	9.8	6.0	5.3
Bosnia and Herzegovina	..	..	..	..	..	..	..	5.8	..	8.4	..	0.7
Botswana	2.5	4.6	0.1	3.4	7.1	2.0	6.4	-2.7	4.7	4.0	3.8	0.7
Brazil ^a	3.7	2.4	2.2	1.0	1.0	3.0	4.2	0.5	5.9	9.2	11.6	4.4
Bulgaria	-3.7	5.2	-3.0	6.0	-8.4	3.5	-5.0	13.6	3.9	9.4	2.7	12.3
Burkina Faso	5.7	4.4	2.7	1.2	2.9	8.8	3.1	7.5	4.4	9.6	1.9	6.0
Burundi	-4.9	..	..	..	-2.6	..	-0.5	..	-1.2	..	-1.6	..
Cambodia ^a	6.0	7.7	3.4	5.9	7.2	2.3	10.3	13.9	21.7	16.0	14.8	14.0
Cameroon	3.1	4.1	0.5	1.8	0.7	4.9	0.4	9.3	3.2	1.4	5.1	8.5
Canada	2.6	..	1.6	..	0.3	..	4.5	..	8.7	..	7.1	..
Central African Republic ^a	..	0.3	..	-1.4	..	-4.9	..	-1.3	..	-2.6	..	-4.0
Chad ^a	1.5	3.2	-1.8	-0.3	-8.3	6.5	4.0	10.4	2.3	32.5	-1.8	13.4
Chile	7.3	5.1	5.6	4.0	3.7	3.8	9.3	7.5	9.4	5.6	11.7	9.4
China	8.9	7.2	7.8	6.6	9.7	8.8	11.5	12.4	12.9	21.1	14.3	16.9
Hong Kong, China	3.9	2.5	2.1	2.0	3.3	1.3	7.7	1.0	7.8	8.7	8.3	7.6
Colombia	2.2	4.2	0.4	2.7	10.5	1.3	2.0	13.4	5.3	4.4	9.0	11.3
Congo, Dem. Rep. ^a	-4.5	..	-7.2	..	-17.4	..	-0.7	..	-0.5	6.5	-2.4	18.3
Congo, Rep. ^a	-1.8	..	..	..	-4.4	..	10.4	..	3.0	..	2.0	..
Costa Rica ^a	5.1	3.2	2.5	1.4	2.0	1.6	5.1	11.4	10.9	5.7	9.2	6.3
Côte d'Ivoire	4.1	0.0	1.2	-1.7	0.8	2.9	8.1	-0.9	1.9	7.2	8.2	3.4
Croatia	2.7	4.6	3.2	4.9	1.3	0.4	5.4	13.2	5.9	6.1	4.6	8.1
Cuba	..	..	..	..	..	..	..	..	..	..	..	..
Czech Republic	3.0	3.3	3.0	3.3	-0.9	2.5	4.6	5.1	8.7	10.4	12.0	9.9
Denmark	2.2	2.4	1.8	2.1	2.4	1.5	..	..	5.1	4.1	6.1	6.2
Dominican Republic ^a	5.3	3.3	3.4	1.8	5.2	6.1	10.4	0.7	9.1	2.6	9.4	0.5
Ecuador ^a	2.1	5.8	0.3	4.7	-1.5	2.5	-0.6	10.7	5.3	6.5	2.8	11.0
Egypt, Arab Rep.	4.0	3.6	2.1	1.8	4.4	3.5	6.0	3.6	3.6	11.4	3.1	8.5
El Salvador	5.3	3.1	3.3	1.6	2.8	1.6	7.1	2.5	13.4	4.5	11.6	4.6
Eritrea	-5.0	..	-6.7	..	22.6	..	19.1	-3.9	-2.5	-3.2	7.5	-3.3
Estonia	0.6	8.9	2.2	9.3	4.9	1.8	0.1	13.7	11.2	9.3	12.0	10.3
Ethiopia	3.5	7.3	1.1	4.7	9.5	-2.2	2.3	4.6	7.1	11.1	5.8	12.5
Finland	1.7	3.2	1.4	2.9	0.6	1.6	..	..	10.3	4.7	6.4	5.1
France	1.6	2.2	1.2	1.6	1.4	1.6	1.8	2.0	6.9	2.5	5.7	3.9
Gabon ^a	-0.3	2.7	-2.8	1.0	3.7	4.2	3.0	3.3	2.1	-2.9	0.1	-0.5
Gambia, The	3.6	..	-0.1	..	-2.2	..	1.9	8.2	0.1	4.3	0.1	0.8
Georgia	6.1	7.9	7.5	8.9	12.0	4.3	-12.5	16.1	12.2	5.6	11.2	6.9
Germany	1.9	0.3	1.6	0.3	1.9	0.5	..	..	6.0	6.8	5.8	4.8
Ghana	4.1	4.5	1.4	2.3	4.8	-0.8	4.3	17.2	10.1	3.5	10.4	6.8
Greece	2.1	4.0	1.4	3.6	2.1	1.9	..	..	7.6	1.5	7.4	2.1
Guatemala ^a	4.2	3.8	1.8	1.3	5.1	-0.3	6.1	5.6	6.1	0.1	9.2	5.3
Guinea	5.2	4.3	2.0	2.5	-0.5	0.0	0.1	-9.1	0.3	1.3	-1.1	-1.4
Guinea-Bissau	2.6	6.8	-0.4	3.8	1.9	-2.9	-6.5	0.8	15.4	4.1	-0.4	-0.6
Haiti	..	..	..	..	..	..	..	..	..	..	..	..

Growth of consumption and investment

4.9

ECONOMY

	Household final consumption expenditure				General government final consumption expenditure		Gross capital formation		Goods and services			
	average annual % growth		average annual % growth		average annual % growth		average annual % growth		average annual % growth		average annual % growth	
	Total	Per capita	Total	Per capita	Total	Per capita	Total	Per capita	Exports	Imports	Total	Per capita
	1990-2000	2000-06	1990-2000	2000-06	1990-2000	2000-06	1990-2000	2000-06	1990-2000	2000-06	1990-2000	2000-06
Honduras ^a	3.0	5.4	0.6	3.5	2.0	5.4	6.9	3.0	1.6	6.0	3.8	8.2
Hungary	-0.1	4.9	0.1	5.1	0.9	2.9	9.6	-0.6	9.9	10.1	11.4	8.9
India	4.7	5.3	2.9	3.8	6.4	5.2	6.9	11.8	12.3	11.6	14.4	10.2
Indonesia	6.6	3.8	5.0	2.5	0.1	8.1	-0.6	5.0	5.9	7.0	5.7	8.0
Iran, Islamic Rep.	3.2	6.7	1.6	5.2	1.6	2.8	-0.1	7.2	1.2	10.3	-6.8	20.2
Iraq	..	..	..	..	..	..	..	..	..	..	..	..
Ireland	5.3	..	4.5	..	4.2	..	..	..	15.7	..	14.5	..
Israel	4.6	2.9	2.0	1.0	2.9	1.6	1.7	-1.8	10.9	3.3	7.5	1.6
Italy	1.5	0.8	1.5	0.2	-0.3	1.7	..	..	5.1	0.3	3.8	1.2
Jamaica	..	..	..	..	..	..	..	..	..	..	..	..
Japan	1.5	..	1.3	..	2.9	..	-0.8	..	4.1	..	4.2	..
Jordan	4.9	5.6	1.1	3.2	4.7	2.7	0.3	7.0	2.6	8.2	1.5	6.6
Kazakhstan ^a	-8.1	9.8	-7.0	9.3	-7.1	7.4	-18.3	20.1	-2.6	6.5	-11.2	5.1
Kenya	3.6	3.9	0.6	1.3	6.9	1.5	6.1	7.1	1.0	6.6	9.4	6.4
Korea, Dem. Rep.	..	..	..	..	..	..	..	..	..	..	..	..
Korea, Rep.	4.9	3.1	3.9	2.6	4.7	4.8	3.4	3.0	16.0	10.3	10.0	8.4
Kuwait	4.5	..	0.6	..	-2.4	..	1.0	..	-1.6	..	0.8	..
Kyrgyz Republic	-6.5	10.6	-7.4	9.7	-8.8	0.3	-3.9	-1.4	-1.6	1.6	-8.2	11.0
Lao PDR	..	1.6	..	0.0	..	9.4	..	13.6	..	..	..	..
Latvia	-3.9	10.0	-2.7	10.6	1.8	2.6	-3.7	16.1	4.3	8.4	7.6	12.6
Lebanon	1.3	3.0	-0.5	1.8	10.5	2.7	-7.7	-3.8	15.1	11.6	-2.8	3.3
Lesotho	0.5	4.0	-1.2	3.0	6.2	2.3	1.5	-1.9	11.1	9.0	0.9	3.7
Liberia	..	..	..	..	..	..	..	..	..	..	..	..
Libya	..	..	..	..	..	..	..	..	..	..	..	..
Lithuania ^a	5.3	8.9	6.0	9.4	1.9	4.1	11.1	12.1	4.9	12.6	7.5	14.2
Macedonia, FYR	2.2	2.6	1.7	2.3	-0.4	1.0	3.6	0.9	4.2	1.5	7.5	1.9
Madagascar	2.2	2.5	-0.8	-0.3	0.0	6.9	3.3	12.1	3.8	0.1	4.1	6.1
Malawi	5.4	4.1	3.4	1.5	-4.4	5.1	-8.4	21.3	4.0	-9.8	-1.1	4.3
Malaysia	5.3	6.3	2.6	4.4	4.8	9.2	5.3	1.2	12.0	5.3	10.3	6.0
Mali	3.0	0.8	0.3	-2.2	3.2	16.8	0.4	8.3	9.9	8.7	3.5	5.4
Mauritania	..	..	..	..	..	..	..	..	-1.3	11.9	0.6	..
Mauritius	5.1	4.9	3.9	4.0	4.8	4.7	4.7	3.5	5.4	3.7	5.2	2.9
Mexico	3.9	3.0	2.2	2.0	1.8	0.7	4.7	0.5	14.6	4.8	12.3	5.2
Moldova ^a	9.9	9.6	10.7	10.9	-12.4	13.1	-15.5	9.8	0.7	13.0	5.6	15.1
Mongolia ^a	..	..	..	..	..	..	..	..	..	..	..	..
Morocco	1.8	3.9	0.1	2.8	3.9	2.9	2.5	9.7	5.9	6.0	5.1	6.3
Mozambique ^a	3.9	4.5	0.8	2.1	4.2	8.5	10.0	1.5	13.1	18.9	5.0	5.2
Myanmar	3.9	..	..	..	..	..	15.3	..	10.0	..	5.8	..
Namibia	4.8	2.0	1.9	0.6	3.3	1.8	6.9	10.3	3.8	6.0	5.4	5.1
Nepal	..	..	..	..	..	..	..	..	..	..	..	..
Netherlands	3.1	0.4	2.4	0.0	2.0	3.2	4.4	0.2	7.3	4.1	7.6	3.9
New Zealand	3.2	..	2.0	..	2.5	..	6.1	..	5.2	..	6.2	..
Nicaragua ^a	6.1	3.3	3.9	2.0	-1.5	1.2	11.3	-0.3	9.3	7.9	12.2	4.0
Niger	1.8	..	..	..	0.8	..	4.0	..	3.1	..	-2.1	..
Nigeria	0.2	..	..	..	-1.8	..	5.4	..	5.0	..	4.0	..
Norway	3.5	3.5	2.9	2.9	2.7	2.4	6.1	5.1	5.5	1.2	5.8	4.9
Oman	5.4	..	2.6	..	2.4	..	4.0	..	6.2	..	5.9	..
Pakistan	4.9	4.4	2.3	2.1	0.7	9.6	1.8	5.3	1.7	10.5	2.5	9.7
Panama ^a	6.4	5.9	4.2	4.1	1.7	4.2	10.4	1.7	-0.4	4.3	1.2	4.3
Papua New Guinea	5.6	..	..	..	2.7	..	0.5	..	4.3	..	2.8	..
Paraguay	2.6	3.4	0.2	1.5	2.5	-1.8	0.7	3.6	3.1	4.4	2.9	5.0
Peru ^a	4.0	4.0	2.3	2.7	5.2	4.0	7.4	6.0	8.5	8.1	9.0	6.7
Philippines	3.7	4.7	1.5	2.7	3.8	0.4	4.1	-1.4	7.8	5.7	7.8	4.8
Poland ^a	5.2	3.1	5.1	3.3	3.7	3.3	10.6	1.6	11.3	9.2	16.7	6.6
Portugal	3.0	1.4	2.7	0.8	2.8	1.7	..	..	5.3	3.5	7.3	2.0
Puerto Rico	..	..	..	..	..	..	..	..	1.6	..	4.5	..



	Household final consumption expenditure				General government final consumption expenditure		Gross capital formation		Goods and services			
	average annual % growth				average annual % growth		average annual % growth		average annual % growth			
	Total		Per capita						Exports		Imports	
	1990-2000	2000-06	1990-2000	2000-06	1990-2000	2000-06	1990-2000	2000-06	1990-2000	2000-06	1990-2000	2000-06
Romania ^a	1.3	6.1	1.7	6.8	0.8	5.1	-5.1	9.7	8.1	10.3	6.0	11.5
Russian Federation	-0.9	7.6	-0.7	8.0	-2.2	1.7	-19.1	9.4	0.8	8.3	-6.1	17.2
Rwanda ^a	1.1	3.5	0.1	1.0	-1.7	9.3	1.4	6.0	-3.8	15.7	5.0	6.6
Saudi Arabia	..	..	..	..	..	..	..	..	..	..	..	..
Senegal	2.6	4.3	-0.2	1.8	0.9	3.8	3.5	10.0	4.1	0.8	2.0	4.3
Serbia	..	4.7	..	4.9	..	4.2	..	20.8	..	9.1	..	13.1
Sierra Leone	-4.4	..	..	..	10.4	..	-5.6	..	-11.2	..	-0.2	..
Singapore	..	..	..	..	..	..	..	..	..	..	..	..
Slovak Republic	5.6	4.5	5.4	4.5	2.0	3.3	8.1	7.7	8.8	10.9	12.2	10.8
Slovenia	3.9	2.7	3.9	2.6	2.1	3.0	10.9	5.1	1.7	7.8	5.2	7.2
Somalia	..	..	..	..	..	..	..	..	..	..	..	..
South Africa	2.9	5.0	0.6	3.7	0.3	5.0	5.0	7.9	5.6	3.2	7.1	9.0
Spain	2.4	3.5	2.0	1.9	2.7	4.7	..	..	10.5	3.5	9.4	6.4
Sri Lanka ^a	5.7	..	..	..	7.5	..	6.9	5.9	7.5	3.9	8.6	5.0
Sudan	3.8	6.7	1.2	4.7	5.5	9.8	21.5	12.3	11.6	8.2	8.4	14.3
Swaziland ^a	3.8	1.6	0.6	0.4	5.5	-0.5	2.7	3.7	3.8	4.0	4.5	3.0
Sweden	1.3	1.8	0.9	1.4	0.6	1.1	1.8	2.4	8.6	5.2	6.3	3.6
Switzerland	1.1	..	0.5	..	0.8	..	..	..	4.0	..	4.2	..
Syrian Arab Republic	3.0	6.1	0.3	3.4	2.0	5.0	3.3	14.5	12.0	0.6	4.4	11.5
Tajikistan	-4.2	10.6	-5.6	9.4	-19.1	0.9	-17.6	5.8	-1.3	7.8	-3.9	8.3
Tanzania ^b	4.9	2.5	2.0	-0.1	-7.0	15.1	-1.6	7.1	9.3	10.4	3.9	4.2
Thailand	3.7	4.8	2.5	4.1	5.1	4.5	-4.0	6.2	9.5	5.9	4.5	6.4
Timor-Leste	..	-7.7	..	-12.2	..	6.4	..	-4.5	..	..	..	..
Togo	5.0	..	1.7	..	0.0	..	-0.1	..	1.2	..	1.1	..
Trinidad and Tobago	0.7	..	0.1	..	0.3	..	12.5	..	6.9	..	9.9	..
Tunisia	4.3	4.7	2.6	3.7	4.1	4.1	3.6	1.9	5.1	3.6	3.8	2.4
Turkey	3.6	3.7	1.7	2.3	4.9	1.0	5.0	5.7	11.6	10.1	11.0	8.3
Turkmenistan	..	..	..	..	..	..	1.9	..	-6.1	..	0.6	..
Uganda	6.7	4.8	3.3	1.6	7.1	5.9	8.9	8.5	14.7	7.7	10.0	6.6
Ukraine	-6.9	11.8	-6.4	12.7	-4.1	3.2	-18.5	8.3	-3.6	3.5	-6.6	5.3
United Arab Emirates	7.1	..	0.7	..	6.8	..	5.5	..	5.5	..	6.4	..
United Kingdom	2.9	2.7	2.6	2.4	1.0	2.9	5.0	3.6	6.6	4.8	6.8	5.9
United States	3.6	..	2.4	..	0.7	..	7.4	..	7.3	..	9.8	..
Uruguay ^a	5.0	0.6	4.3	0.5	2.3	-1.9	6.3	3.1	6.0	5.4	9.9	2.3
Uzbekistan	..	..	..	..	..	..	-2.5	5.1	2.4	4.4	-1.2	4.6
Venezuela, RB	0.6	7.0	-1.5	5.2	3.7	6.5	11.0	7.1	1.0	-1.0	8.2	10.7
Vietnam	5.4	6.8	3.9	5.4	3.2	7.0	19.8	10.5	24.1	16.2	28.2	17.1
West Bank and Gaza	5.3	-1.8	0.9	-5.8	12.7	1.0	9.2	-4.3	8.7	-1.4	7.5	-2.5
Yemen, Rep.	3.2	..	-0.7	..	1.7	..	11.4	..	16.6	..	8.3	..
Zambia	2.4	0.3	-0.2	-1.6	-8.1	21.1	13.3	-5.2	6.7	20.5	15.5	15.0
Zimbabwe	0.0	..	-1.9	..	-2.2	..	-2.5	..	10.5	..	9.4	..
World	3.0 w	.. w	1.5 w	.. w	1.7 w	.. w	3.5 w	.. w	6.9 w	6.2 w	7.0 w	.. w
Low income	4.2	5.0	2.1	3.1	4.2	5.9	6.4	10.6	8.7	10.2	9.4	10.5
Middle income	4.0	4.7	2.7	3.8	3.3	4.7	2.6	7.8	7.3	10.5	6.5	9.9
Lower middle income	5.5	6.0	4.2	5.0	6.5	6.9	5.6	10.6	7.3	14.1	5.8	12.1
Upper middle income	3.0	3.8	2.0	3.0	1.3	2.8	-0.1	4.1	7.2	6.8	7.0	7.9
Low & middle income	4.0	4.7	2.4	3.4	3.3	4.8	3.0	8.2	7.4	10.5	6.7	9.9
East Asia & Pacific	7.5	6.4	6.1	5.6	8.1	8.3	8.1	11.0	11.0	14.9	10.3	12.5
Europe & Central Asia	1.0	5.6	0.9	5.6	0.1	2.5	-7.8	7.3	3.1	8.9	1.2	10.6
Latin America & Carib.	3.6	3.1	2.0	1.7	2.1	2.4	5.4	3.1	8.5	5.4	10.8	5.7
Middle East & N. Africa	3.0	4.6	0.9	2.8	3.4	3.7	1.2	7.1	4.2	..	0.2	10.7
South Asia	4.5	5.1	2.5	3.4	5.6	5.9	6.5	10.9	10.0	11.0	11.1	9.6
Sub-Saharan Africa	3.1	4.3	0.4	1.8	0.4	4.9	4.5	7.6	5.0	4.5	5.6	8.3
High income	2.8	..	2.0	..	1.5	..	3.7	..	6.8	..	7.0	..
Euro area	1.9	1.4	1.6	0.9	1.4	1.8	..	..	6.6	4.2	6.1	4.1

a. Household final consumption expenditure includes statistical discrepancy. b. Covers mainland Tanzania only.

About the data

Measures of growth in consumption and capital formation are subject to two kinds of inaccuracy. The first stems from the difficulty of measuring expenditures at current price levels, as described in *About the data* for table 4.8. The second arises in deflating current price data to measure volume growth, where results depend on the relevance and reliability of the price indexes and weights used. Measuring price changes is more difficult for investment goods than for consumption goods because of the one-time nature of many investments and because the rate of technological progress in capital goods makes capturing change in quality difficult. (An example is computers—prices have fallen as quality has improved.) Several countries estimate capital formation from the supply side, identifying capital goods entering an economy directly from detailed production and international trade statistics. This means that the price indexes used in deflating production and international trade, reflecting delivered or offered prices, will determine the deflator for capital formation expenditures on the demand side.

Growth rates of household final consumption expenditure, household final consumption expenditure per capita, general government final consumption expenditure, gross capital formation, and exports and imports of goods and services are estimated using constant price data. (Consumption, capital formation, and exports and imports of goods and services as shares of GDP are shown in table 4.8.)

To obtain government consumption in constant prices, countries may deflate current values by applying a wage (price) index or extrapolate from the change in government employment. Neither

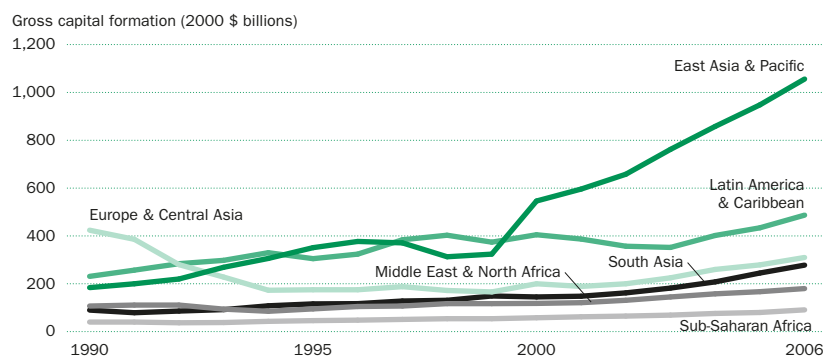
technique captures improvements in productivity or changes in the quality of government services. Deflators for household consumption are usually calculated on the basis of the consumer price index. Many countries estimate household consumption as a residual that includes statistical discrepancies associated with the estimation of other expenditure items, including changes in inventories; thus these estimates lack detailed breakdowns of household consumption expenditures.

Definitions

- **Household final consumption expenditure** is the market value of all goods and services, including durable products (such as cars and computers), purchased by households. It excludes purchases of dwellings but includes imputed rent for owner-occupied dwellings. It also includes government fees for permits and licenses. Expenditures of nonprofit institutions serving households are included, even when reported separately. Household consumption expenditure may include any statistical discrepancy in the use of resources relative to the supply of resources.
- **Household final consumption expenditure per capita** is household final consumption expenditure divided by midyear population.
- **General government final consumption expenditure** is all government current expenditures for goods and services (including compensation of employees). It also includes most expenditures on national defense and security but excludes military expenditures with potentially wider public use that are part of government capital formation.
- **Gross capital formation** is outlays on additions to fixed assets of the economy, net changes in inventories, and net acquisitions of valuables. Fixed assets include land improvements (fences, ditches, drains); plant, machinery, and equipment purchases; and construction (roads, railways, schools, buildings, and so on). Inventories are goods held to meet temporary or unexpected fluctuations in production or sales, and "work in progress."
- **Exports and imports of goods and services** are the value of all goods and other market services provided to or received from the rest of the world. They include the value of merchandise, freight, insurance, transport, travel, royalties, license fees, and other services (communication, construction, financial, information, business, personal, government services, and so on). They exclude compensation of employees and investment income (factor services in the 1968 SNA) and transfer payments.

Investment is rising rapidly in Asia

4.9a



Between 1990 and 2006 investment increased nearly sixfold in East Asia and Pacific and threefold in South Asia.

Source: World Development Indicators data files.

Data sources

Data on national accounts indicators for most developing countries are collected from national statistical organizations and central banks by visiting and resident World Bank missions. Data for high-income economies come from Organisation for Economic Co-operation and Development (OECD) data files (see *Annual National Accounts for OECD Member Countries: Data from 1970 Onwards*).

4.10 Central government finances

	Revenue ^a		Expense		Cash surplus or deficit		Net incurrence of liabilities				Debt and interest payments	
	% of GDP		% of GDP		% of GDP		% of GDP				Total debt % of GDP	Interest % of revenue
	1995	2006	1995	2006	1995	2006	Domestic		Foreign		2006	2006
Afghanistan ^b	..	7.4	..	17.1	..	-1.7	..	0.3	..	2.1	9.3	0.2
Albania ^b	21.2	23.6	25.6	21.9	-8.9	-3.0	7.4	1.9	2.1	1.0	..	15.5
Algeria ^b	30.2	43.1	24.2	17.5	-1.3	13.8	-7.4	3.3	8.6	-2.0	..	1.9
Angola	..	..	..	..	..	..	..	..	..	..	..	..
Argentina	..	18.1	..	18.3	..	-0.5	..	0.5	..	1.5	..	26.5
Armenia ^b	..	18.8	..	16.2	..	-0.3	..	0.3	..	1.0	..	1.8
Australia	..	26.0	..	24.2	..	1.7	..	..	..	..	20.5	3.6
Austria	38.4	39.8	44.2	42.0	-5.4	-1.6	..	..	..	..	63.4	6.9
Azerbaijan ^b	18.0	..	19.8	..	-3.1	..	..	..	..	..	..	..
Bangladesh ^b	..	10.0	..	8.8	..	-0.7	..	2.3	..	0.9	36.2	16.4
Belarus ^b	30.0	36.0	28.7	30.4	-2.7	1.4	2.2	1.2	0.4	0.0	..	0.9
Belgium	41.5	41.2	45.6	41.4	-3.8	0.3	..	..	..	..	84.8	9.2
Benin ^b	..	16.7	..	13.4	..	0.2	..	-2.6	..	2.4	..	1.3
Bolivia	..	23.8	..	24.6	..	12.5	..	0.7	..	-11.2	..	7.9
Bosnia and Herzegovina	..	39.8	..	35.7	..	2.9	..	-0.5	..	0.1	..	1.4
Botswana ^b	40.5	..	30.4	..	4.9	..	0.2	..	-0.4	..	..	..
Brazil ^b	26.9	..	32.9	..	-2.7	..	..	..	..	..	..	..
Bulgaria ^b	35.5	36.8	39.4	31.9	-5.1	3.4	7.4	-0.9	-0.8	-1.2	..	3.4
Burkina Faso	..	12.1	..	12.0	..	-5.7	..	0.1	..	4.0	..	3.1
Burundi ^b	19.3	..	23.6	..	-4.7	..	3.1	..	4.0	..	..	..
Cambodia	..	9.8	..	8.6	..	-1.7	..	-0.3	..	2.1	..	1.5
Cameroon ^b	11.8	..	10.6	..	0.2	..	-0.3	..	0.3	..	..	..
Canada ^b	20.3	19.5	24.2	17.9	-4.3	1.5	4.9	0.1	0.0	0.3	48.6	6.9
Central African Republic ^b	..	8.1	..	9.4	..	-0.5	..	1.2	..	0.1	..	8.0
Chad	..	..	..	..	..	..	..	..	..	..	..	..
Chile	..	25.9	..	17.1	..	7.7	..	-1.9	..	-0.1	..	2.7
China ^b	5.4	9.6	..	10.8	..	-1.6	1.6	1.7	..	0.0	..	4.4
Hong Kong, China	..	..	..	..	..	..	..	..	..	..	..	..
Colombia	..	26.0	..	28.7	..	-3.9	..	9.7	..	1.5	68.0	35.5
Congo, Dem. Rep. ^b	5.3	..	8.2	..	0.0	..	0.0	..	0.2	..	..	..
Congo, Rep.	..	30.9	..	19.9	..	6.4	..	..	..	..	0.2	18.1
Costa Rica ^b	..	24.1	..	22.1	..	1.2	..	..	-0.8	..	..	15.9
Côte d'Ivoire ^b	20.1	17.4	..	19.0	..	-1.4	-1.2	-0.1	3.8	1.2	107.9	8.2
Croatia ^b	43.1	40.0	42.5	39.4	-1.3	-1.8	-2.7	2.1	0.8	-1.4	..	5.4
Cuba	..	..	..	..	..	..	..	..	..	..	..	..
Czech Republic ^b	33.2	30.6	32.6	35.5	-0.9	-4.3	-0.5	2.4	-0.4	1.0	24.6	3.1
Denmark	39.1	36.0	38.2	32.2	1.5	5.1	..	..	..	..	29.0	5.5
Dominican Republic ^b	..	17.9	..	16.5	..	-1.2	..	-1.0	..	2.5	..	8.5
Ecuador ^b	30.9	..	26.3	..	0.1	..	..	..	..	..	..	..
Egypt, Arab Rep. ^b	25.9	24.1	23.8	26.8	-1.1	-5.8	..	..	..	..	..	..
El Salvador	..	17.2	..	19.3	..	-3.2	..	1.5	..	2.5	43.3	15.3
Eritrea	..	..	..	..	..	..	..	..	..	..	..	..
Estonia	..	31.8	..	26.6	..	3.6	..	..	..	..	7.0	0.3
Ethiopia ^b	..	..	..	..	..	..	..	..	..	..	..	..
Finland	39.9	38.3	38.6	35.2	1.9	3.9	0.3	-1.0	-1.3	2.3	39.7	3.6
France	43.3	43.0	47.6	45.6	-4.1	-2.3	..	..	..	..	67.4	5.6
Gabon	..	..	..	..	..	..	..	..	..	..	..	..
Gambia, The ^b	23.7	..	..	..	..	..	..	..	..	..	..	..
Georgia ^b	12.2	22.5	15.4	20.3	-4.3	1.6	2.2	-0.2	2.4	-0.4	28.0	3.1
Germany	29.9	28.9	38.6	30.6	-8.3	-1.4	..	1.6	..	-0.1	43.5	5.9
Ghana ^b	17.0	23.8	..	20.9	..	-2.9	..	..	..	3.3	..	14.4
Greece	30.6	33.6	37.1	35.8	-8.0	-4.5	..	..	..	..	102.1	11.4
Guatemala ^b	8.4	10.7	7.6	11.6	-0.5	-1.7	..	1.6	0.4	1.0	19.0	10.7
Guinea ^b	11.2	..	12.1	..	-4.3	..	-0.1	..	4.5	..	..	..
Guinea-Bissau	..	..	..	..	..	..	..	..	..	..	..	..
Haiti	..	..	..	..	..	..	..	..	..	..	..	..

Central government finances

	Revenue ^a		Expense		Cash surplus or deficit		Net incurrence of liabilities				Debt and interest payments	
	% of GDP		% of GDP		% of GDP		% of GDP		Domestic	Foreign	Total debt % of GDP	Interest % of revenue
	1995	2006	1995	2006	1995	2006	1995	2006				
Honduras	..	19.4	..	20.8	..	-1.3	..	1.4	..	1.0	..	4.7
Hungary	42.6	35.8	49.6	44.1	-4.7	-8.6	3.9	2.0	-0.7	4.4	70.2	10.7
India ^b	12.3	12.7	14.4	15.1	-2.2	-2.8	5.1	3.2	0.0	0.2	60.0	25.8
Indonesia ^b	17.7	18.4	9.7	16.9	3.0	-1.1	-0.6	0.0	-0.4	-0.4	28.8	14.8
Iran, Islamic Rep. ^b	24.2	36.2	15.8	24.8	1.1	3.3	..	1.4	0.1	0.0	..	0.8
Iraq	..	..	..	..	..	..	..	..	..	..	..	..
Ireland	33.6	34.2	37.5	30.9	-2.2	2.7	..	..	..	..	28.2	2.9
Israel	..	39.9	..	44.0	..	-1.6	..	..	..	..	..	10.7
Italy	40.4	37.2	48.0	40.8	-7.5	-3.3	..	..	..	..	109.8	11.9
Jamaica ^b	..	39.2	33.3	38.7	..	0.3	..	..	..	..	140.1	37.6
Japan	20.7	..	..	..	..	..	1.5	..	..	..	..	..
Jordan ^b	28.2	31.7	26.1	35.0	0.9	-3.9	-2.5	3.1	6.1	-3.0	77.5	7.7
Kazakhstan ^b	14.0	16.8	18.7	14.6	-1.8	1.6	0.8	-0.5	2.8	0.0	7.1	1.5
Kenya ^b	21.6	19.8	25.9	17.8	-5.1	1.5	3.9	-0.5	-1.3	-3.8	..	8.9
Korea, Dem. Rep.	..	..	..	..	..	..	..	..	..	..	..	..
Korea, Rep. ^b	17.8	23.3	14.3	21.3	2.4	0.7	-0.3	-0.1	-0.1	-0.3	..	5.4
Kuwait	36.8	37.2	46.4	26.2	-13.6	8.2	..	..	..	..	..	0.1
Kyrgyz Republic ^b	..	18.5	..	17.5	..	-0.6	..	..	..	..	..	4.4
Lao PDR	..	..	..	..	..	..	..	..	..	..	..	..
Latvia ^b	25.8	27.0	28.3	28.7	-2.7	-0.5	2.4	0.6	1.5	0.4	..	1.6
Lebanon	..	21.6	..	26.5	..	-8.5	..	-1.3	..	12.4	..	56.0
Lesotho ^b	49.9	50.0	34.5	40.3	5.1	4.1	0.0	..	6.3	..	..	4.8
Liberia	..	..	..	..	..	..	..	..	..	..	..	..
Libya	..	..	..	..	..	..	..	..	..	..	..	..
Lithuania	..	29.0	..	28.2	..	-0.2	..	-3.3	..	4.1	20.0	2.4
Macedonia, FYR	..	..	..	..	..	..	..	..	..	..	..	..
Madagascar	..	11.7	..	11.6	..	9.9	..	0.8	..	3.0	..	11.2
Malawi	..	..	..	..	..	..	..	..	..	..	..	..
Malaysia ^b	24.4	23.7	17.2	20.1	2.4	-4.3	..	..	-0.8	..	..	10.5
Mali	..	16.7	..	15.7	..	32.1	..	-1.0	..	-34.0	..	0.9
Mauritania	..	..	..	..	..	..	..	..	..	..	..	..
Mauritius ^b	21.6	21.5	19.9	22.2	-1.3	-3.0	3.1	4.7	-0.6	-0.6	43.2	12.0
Mexico ^b	15.3	..	15.0	..	-0.6	..	..	..	5.5	..	..	..
Moldova ^b	28.4	33.8	38.4	32.4	-6.3	0.2	3.0	0.0	2.7	-0.5	29.6	2.8
Mongolia	..	33.3	..	27.1	..	-0.4	..	9.9	..	-6.0	105.5	3.1
Morocco ^b	..	25.1	..	25.9	..	-1.8	..	1.0	..	-0.5	43.7	12.6
Mozambique	..	..	..	..	..	..	..	..	..	..	..	..
Myanmar	6.4	8.0	..	3.4	..	-1.8	..	1.8	..	0.0	..	..
Namibia ^b	31.7	28.1	35.7	31.1	-5.0	-6.8	..	-20.0	..	-0.1	..	9.1
Nepal ^b	10.5	10.9	..	14.7	..	-1.6	0.6	0.7	2.5	0.2	50.3	7.3
Netherlands	41.5	42.2	50.8	41.5	-9.2	0.5	..	..	..	..	49.0	4.4
New Zealand	..	39.6	..	33.8	..	4.7	..	-1.7	..	2.8	45.9	3.9
Nicaragua ^b	12.8	18.8	14.2	19.2	0.6	0.1	..	..	3.4	..	..	7.9
Niger	..	..	..	..	..	..	..	..	..	..	..	..
Nigeria	..	..	..	..	..	..	..	..	..	..	..	..
Norway	..	50.4	..	32.1	..	17.9	..	0.5	..	15.1	48.4	2.3
Oman ^b	27.8	..	32.4	..	-8.9	..	-0.1	..	0.0	..	..	..
Pakistan ^b	17.2	13.5	19.1	15.3	-5.3	-4.2	..	..	..	..	..	33.9
Panama ^b	26.1	..	22.0	..	1.5	..	..	..	..	..	..	..
Papua New Guinea ^b	23.9	..	25.8	..	-0.5	..	1.5	..	-0.7	..	..	..
Paraguay ^b	..	21.3	..	16.7	..	1.2	..	1.0	..	-0.3	..	4.6
Peru ^b	17.4	17.6	17.4	17.3	-1.3	-0.8	..	1.9	3.9	-1.2	..	10.6
Philippines ^b	17.7	16.2	15.9	17.5	-0.8	-1.3	-0.5	-0.1	-0.7	2.0	77.7	33.1
Poland	..	32.2	..	36.2	..	-3.6	..	2.9	..	2.2	47.9	7.1
Portugal	35.3	38.6	37.8	42.3	-3.0	-3.9	-3.5	0.3	4.1	6.3	72.2	6.9
Puerto Rico	..	..	..	..	..	..	..	..	..	..	..	..

4.10 | Central government finances

	Revenue ^a		Expense		Cash surplus or deficit		Net incurrence of liabilities				Debt and interest payments	
	% of GDP		% of GDP		% of GDP		% of GDP		Foreign	Domestic	Total debt % of GDP	Interest % of revenue
	1995	2006	1995	2006	1995	2006	1995	2006				
Romania	..	24.5	..	24.0	..	-1.0	..	-1.0	..	0.1	..	4.1
Russian Federation	21.3	28.8	11.6	19.6	9.3	8.1	..	0.5	..	-2.8	..	2.2
Rwanda ^b	10.6	..	15.0	..	-5.6	..	2.9	..	..	..	..	..
Saudi Arabia	..	..	..	..	..	..	..	..	..	..	..	..
Senegal ^b	15.2	..	..	..	..	..	..	..	..	..	..	..
Serbia ^b	..	..	..	..	..	..	..	..	..	..	..	..
Sierra Leone ^b	9.4	12.3	..	23.8	..	-2.5	0.3	..	..	..	..	21.0
Singapore ^b	26.7	19.9	12.4	13.8	19.8	7.0	10.3	6.1	0.0	..	104.0	0.5
Slovak Republic	..	30.5	..	33.6	..	-3.4	..	4.5	..	0.4	42.4	5.2
Slovenia ^b	36.7	40.2	35.2	40.3	-0.2	-0.8	-0.4	1.5	0.3	-0.4	..	3.7
Somalia	..	..	..	..	..	..	..	..	..	..	..	..
South Africa	..	31.8	..	30.4	..	1.2	..	0.2	..	0.1	..	9.5
Spain	32.0	27.2	37.1	25.2	-5.8	1.9	..	..	..	..	39.8	4.8
Sri Lanka ^b	20.4	17.0	26.0	22.2	-7.6	-7.2	5.2	6.1	3.2	1.5	93.0	29.7
Sudan ^b	7.2	..	6.8	..	-0.4	..	0.3	..	..	..	..	..
Swaziland ^b	..	26.6	..	24.4	..	-2.6	..	..	..	..	..	4.5
Sweden	40.4	37.9	39.0	35.4	2.2	1.9	..	..	..	..	48.5	4.3
Switzerland ^b	22.7	18.6	25.8	19.5	-0.6	-0.4	-0.5	0.3	..	..	28.6	4.3
Syrian Arab Republic ^b	22.9	..	..	..	..	..	..	..	..	..	..	..
Tajikistan ^b	9.3	13.5	11.4	13.7	-3.3	-6.6	0.1	..	2.3	..	..	5.1
Tanzania	..	..	..	..	..	..	..	..	..	..	..	..
Thailand	..	20.2	..	16.2	..	1.9	..	3.0	..	-0.6	26.2	7.1
Timor-Leste	..	..	..	..	..	..	..	..	..	..	..	..
Togo ^b	..	17.7	..	17.8	..	-0.1	..	..	..	..	..	..
Trinidad and Tobago ^b	27.2	32.5	25.3	24.0	-0.1	6.1	2.8	..	2.6	..	..	8.2
Tunisia ^b	30.0	30.1	28.4	29.4	-2.5	-2.8	0.9	0.9	2.9	-2.3	55.1	9.3
Turkey ^b	..	32.9	..	29.1	..	2.5	..	2.2	..	-0.1	67.8	25.4
Turkmenistan	..	..	..	..	..	..	..	..	..	..	..	..
Uganda ^b	10.6	13.5	..	17.4	..	-2.0	..	1.7	..	1.6	..	7.8
Ukraine ^b	..	36.6	..	37.2	..	-1.0	..	-0.4	..	0.9	..	1.7
United Arab Emirates ^b	10.1	..	9.3	..	0.5	..	..	..	..	..	..	..
United Kingdom	37.2	38.8	37.1	41.2	0.3	-2.8	-0.3	3.5	0.0	0.0	49.9	5.3
United States	..	19.3	..	21.3	..	-2.0	..	1.4	..	0.6	46.9	10.9
Uruguay ^b	27.6	27.7	27.1	27.2	-1.2	-0.9	7.9	0.5	1.1	-1.9	70.0	15.4
Uzbekistan	..	..	..	..	..	..	..	..	..	..	..	..
Venezuela, RB ^b	16.9	28.4	18.5	25.2	-2.3	2.2	1.1	1.2	0.1	3.3	..	10.4
Vietnam	..	..	..	..	..	..	..	..	..	..	..	..
West Bank and Gaza	..	..	..	..	..	..	..	..	..	..	..	..
Yemen, Rep. ^b	17.3	..	19.1	..	-3.9	..	..	..	..	..	..	..
Zambia ^b	20.0	17.7	21.4	20.0	-3.1	-2.8	28.0	..	16.2	..	..	13.7
Zimbabwe ^b	26.7	..	32.1	..	-5.4	..	-1.4	..	1.6	..	..	..
World	.. w	27.0 w	.. w	28.0 w	.. w	-1.2 w	.. m	.. m	.. m	.. m	.. m	5.8 m
Low income	13.3	12.9	15.4	15.2	-2.6	-2.6	..	..	..	..	..	..
Middle income	17.2	..	..	..	..	..	..	1.3	..	0.1	..	7.1
Lower middle income	11.5	16.0	..	15.8	..	-0.9	..	1.4	..	0.3	..	7.7
Upper middle income	..	..	..	..	..	..	..	0.6	..	0.0	..	5.4
Low & middle income	16.5	..	..	..	..	..	..	..	..	..	..	9.4
East Asia & Pacific	8.4	11.0	..	11.7	..	-1.3	..	2.1	..	0.0	..	7.6
Europe & Central Asia	..	31.5	..	28.9	..	1.8	..	0.4	..	0.0	..	2.8
Latin America & Carib.	21.2	..	23.4	..	-1.5	..	..	1.5	..	1.2	..	9.6
Middle East & N. Africa	26.1	31.8	..	25.0	..	1.0	..	..	..	..	..	..
South Asia	13.1	12.9	15.3	15.4	-2.7	-3.1	3.8	1.9	1.1	0.8	55.1	25.8
Sub-Saharan Africa	..	..	..	..	..	..	..	..	..	..	..	..
High income	..	27.2	..	28.6	..	-1.3	..	..	..	..	47.6	5.1
Euro area	34.7	35.5	42.2	37.1	-7.4	-1.3	..	..	..	..	63.4	5.7

a. Excludes grants. b. Data were reported on a cash basis and have been adjusted to the accrual framework.

About the data

Tables 4.10–4.12 present an overview of the size and role of central governments relative to national economies. The tables are based on the concepts and recommendations of the International Monetary Fund's (IMF) *Government Finance Statistics Manual 2001*, 2nd edition. Before 2005 *World Development Indicators* reported data derived on the basis of the 1986 manual. The 2001 manual, harmonized with the 1993 System of National Accounts, recommends an accrual accounting method over the cash-based method of the 1986 manual. The new manual focuses on all economic events affecting assets, liabilities, revenues, and expenses, not only those represented by cash transactions. It takes all stocks into account, so that stock data at the end of an accounting period are equal to stock data at the beginning of the period plus flows during the period. The 1986 manual considered only the debt stock data. Further, the new manual does not distinguish between current and capital revenue or expenditures, unlike the 1986 manual. The new manual also introduces the concepts of nonfinancial and financial assets. Most countries still follow the 1986 manual, however. The IMF has reclassified historical *Government Finance Statistics Yearbook* data to conform to the format of the 2001 manual. Because of differences in reporting, the reclassified data understate both revenue and expense.

The 2001 manual describes the economic functions of a government as the provision of goods and services to the community on a nonmarket basis for collective or individual consumption, and the redistribution of income and wealth through transfer payments. Government activities are financed mainly by taxation and other income transfers, though other forms of financing such as borrowing for temporary

periods can also be used. The definition of government excludes public corporations and quasi corporations (such as the central bank).

Units of government meeting this definition exist at many levels, from local administrative units to the national government, but inadequate statistical coverage precludes the presentation of subnational data. Although data for general government are available for a few countries under the 2001 manual, only data for the central government are shown to minimize disparities. Still, different accounting concepts of central government make cross-country comparisons potentially misleading.

Central government can refer to consolidated or budgetary accounting concepts. For most countries central government finance data have been consolidated into one account, but for others only budgetary central government accounts are available. Countries reporting budgetary data are noted in *Primary data documentation*. Because budgetary accounts do not necessarily include all central government units (such as extrabudgetary accounts and social security funds), the picture they provide is usually incomplete.

Data on government revenue and expense are collected by the IMF through questionnaires to member countries and by the Organisation for Economic Co-operation and Development. Despite IMF efforts to standardize the collection of public finance data, statistics are often incomplete, untimely, and not comparable across countries.

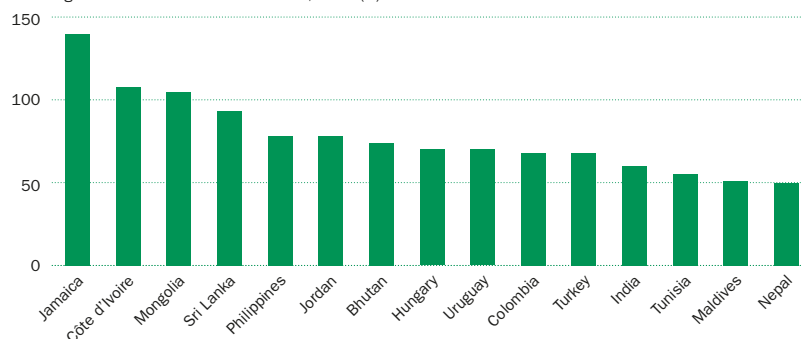
Government finance statistics are reported in local currency. The indicators here are shown as percentages of GDP. Many countries report government finance data by fiscal year; see *Primary data documentation* for information on fiscal year end by country.

Definitions

- **Revenue** is cash receipts from taxes, social contributions, and other revenues such as fines, fees, rent, and income from property or sales. Grants, usually considered revenue, are excluded.
- **Expense** is cash payments for government operating activities in providing goods and services. It includes compensation of employees, interest and subsidies, grants, social benefits, and other expenses such as rent and dividends.
- **Cash surplus or deficit** is revenue (including grants) minus expense, minus net acquisition of nonfinancial assets. In editions before 2005 nonfinancial assets were included under revenue and expenditure in gross terms. This cash surplus or deficit is close to the earlier overall budget balance (still missing is lending minus repayments, which are brought in below as a financing item under net acquisition of financial assets).
- **Net incurrence of liabilities** is domestic financing (obtained from residents) and foreign financing (obtained from nonresidents), or the means by which a government provides financial resources to cover a budget deficit or allocates financial resources arising from a budget surplus. The net incurrence of liabilities should be offset by the net acquisition of financial assets (a third financing item). The difference between the cash surplus or deficit and the three financing items is the net change in the stock of cash.
- **Total debt** is the entire stock of direct government fixed-term contractual obligations to others outstanding on a particular date. It includes domestic and foreign liabilities such as currency and money deposits, securities other than shares, and loans. It is the gross amount of government liabilities reduced by the amount of equity and financial derivatives held by the government. Because debt is a stock rather than a flow, it is measured as of a given date, usually the last day of the fiscal year.
- **Interest payments** are interest payments on government debt—including long-term bonds, long-term loans, and other debt instruments—to domestic and foreign residents.

Fifteen developing economies had a total debt to GDP ratio of 50 percent or higher 4.10a

Central government total debt to GDP ratio, 2006 (%)



Note: Data are for the most recent year available for 2004–06.

Source: International Monetary Fund, *Government Finance Statistics* data files, and *World Development Indicators* data files.

Data sources

Data on central government finances are from the IMF's *Government Finance Statistics Yearbook 2007* and data files. Each country's accounts are reported using the system of common definitions and classifications in the IMF's *Government Finance Statistics Manual 2001*. See these sources for complete and authoritative explanations of concepts, definitions, and data sources.



4.11 Central government expenses

	Goods and services		Compensation of employees		Interest payments		Subsidies and other transfers		Other expense	
	% of expense 1995	% of expense 2006	% of expense 1995	% of expense 2006	% of expense 1995	% of expense 2006	% of expense 1995	% of expense 2006	% of expense 1995	% of expense 2006
Afghanistan ^a	..	57	..	37	..	0	..	6	..	0
Albania ^a	18	12	14	30	9	17	59	42	0	0
Algeria ^a	6	6	39	28	13	5	34	31	8	29
Angola	..	..	..	..	..	..	..	..	..	..
Argentina	..	5	..	12	..	26	..	50	..	7
Armenia ^a	..	37	..	23	..	2	..	33	..	5
Australia	..	10	..	10	..	4	..	70	..	6
Austria	5	5	13	12	8	7	65	65	11	12
Azerbaijan ^a	49	..	10	..	0	..	41	..	0	..
Bangladesh ^a	..	17	..	25	..	20	..	29	..	9
Belarus ^a	39	12	5	12	1	1	55	69	0	5
Belgium	3	2	7	7	18	9	71	79	3	3
Benin ^a	..	31	..	40	..	2	..	8	..	20
Bolivia	..	14	..	21	..	13	..	47	..	5
Bosnia and Herzegovina	..	25	..	29	..	2	..	41	..	4
Botswana ^a	32	..	30	..	2	..	36	..	2	..
Brazil ^a	5	..	8	..	45	..	45	..	1	..
Bulgaria ^a	18	14	7	18	37	4	38	61	2	3
Burkina Faso	..	21	..	39	..	4	..	35	..	0
Burundi ^a	20	..	30	..	6	..	14	..	10	..
Cambodia	..	41	..	33	..	2	..	19	..	5
Cameroon ^a	17	..	40	..	26	..	14	..	..	..
Canada ^a	8	8	10	12	18	8	64	67	..	6
Central African Republic ^a	..	27	..	53	..	9	..	..	..	11
Chad	..	..	..	..	..	..	..	..	..	..
Chile	..	11	..	21	..	4	..	57	..	11
China ^a	..	28	..	1	..	4	..	62	..	5
Hong Kong, China	..	..	..	..	..	..	..	..	..	..
Colombia	..	5	..	19	..	32	..	41	..	3
Congo, Dem. Rep. ^a	37	..	58	..	1	..	2	..	..	..
Congo, Rep.	..	29	..	37	..	29	..	5	..	0
Costa Rica ^a	..	11	..	42	..	17	..	16	..	14
Côte d'Ivoire ^a	..	22	..	34	..	8	..	16	..	20
Croatia ^a	35	9	27	26	3	5	32	53	3	6
Cuba	..	..	..	..	..	..	..	..	..	..
Czech Republic ^a	7	6	9	8	3	3	75	69	5	13
Denmark	8	10	13	14	13	6	64	68	4	4
Dominican Republic ^a	..	16	..	25	..	9	..	42	..	7
Ecuador ^a	6	..	49	..	26	..	..	..	..	..
Egypt, Arab Rep. ^a	21	9	26	28	31	..	7	33	..	12
El Salvador	..	16	..	37	..	14	..	25	..	10
Eritrea	..	..	..	..	..	..	..	..	..	..
Estonia	..	15	..	21	..	0	..	46	..	4
Ethiopia ^a	..	..	..	..	..	..	..	..	..	..
Finland	10	10	10	10	9	4	68	71	7	7
France	8	6	23	22	6	5	59	53	6	2
Gabon	..	..	..	..	..	..	..	..	..	..
Gambia, The ^a	..	..	..	..	..	..	..	..	..	..
Georgia ^a	52	24	11	16	10	4	26	49	..	7
Germany	4	5	5	5	6	6	67	82	20	3
Ghana ^a	..	..	..	45	..	21	..	5	..	..
Greece	10	10	22	25	27	11	36	43	5	3
Guatemala ^a	15	13	50	24	12	10	18	25	6	27
Guinea ^a	17	..	34	..	28	..	9	..	1	..
Guinea-Bissau	..	..	..	..	..	..	..	..	..	..
Haiti	..	..	..	..	..	..	..	..	..	..

Central government expenses

	Goods and services		Compensation of employees		Interest payments		Subsidies and other transfers		Other expense	
	% of expense		% of expense		% of expense		% of expense		% of expense	
	1995	2006	1995	2006	1995	2006	1995	2006	1995	2006
Honduras	..	15	..	46	..	5	..	22	..	12
Hungary	8	9	10	13	20	9	57	62	13	10
India ^a	14	13	10	8	27	22	33	34	0	0
Indonesia ^a	21	8	20	13	16	16	41	63	2	0
Iran, Islamic Rep. ^a	21	11	56	40	0	1	..	29	..	19
Iraq	..	..	..	..	..	..	..	..	..	..
Ireland	5	12	15	26	14	3	33	36	1	1
Israel	..	27	..	24	..	10	..	32	..	9
Italy	4	4	14	15	24	11	54	61	6	10
Jamaica ^a	22	19	24	32	32	38	1	3	21	8
Japan	..	..	..	..	..	..	..	..	..	..
Jordan ^a	7	7	67	40	11	8	12	31	4	16
Kazakhstan ^a	..	20	..	8	3	2	58	54	..	15
Kenya ^a	15	23	28	60	46	10	..	5	2	2
Korea, Dem. Rep.	..	..	..	..	..	..	..	..	..	..
Korea, Rep. ^a	16	10	15	11	3	6	63	52	3	21
Kuwait	33	21	31	32	5	0	24	26	7	21
Kyrgyz Republic ^a	..	26	..	26	..	5	..	35	..	8
Lao PDR	..	..	..	..	..	..	..	..	..	..
Latvia ^a	20	13	20	16	3	2	56	40	0	30
Lebanon	..	3	..	33	..	46	..	16	..	2
Lesotho ^a	32	28	45	37	5	6	8	29	3	..
Liberia	..	..	..	..	..	..	..	..	..	..
Libya	..	..	..	..	..	..	..	..	..	..
Lithuania	..	14	..	20	..	3	..	60	..	6
Macedonia, FYR	..	..	..	..	..	..	..	..	..	..
Madagascar	..	14	..	43	..	21	..	14	..	8
Malawi	..	..	..	..	..	..	..	..	..	..
Malaysia ^a	23	26	34	30	17	12	27	31	1	1
Mali	..	32	..	33	..	3	..	19	..	13
Mauritania	..	..	..	..	..	..	..	..	..	..
Mauritius ^a	12	13	45	36	12	12	28	35	2	4
Mexico ^a	9	..	19	..	19	..	..	..	..	..
Moldova ^a	10	19	8	16	11	3	71	57	1	6
Mongolia	..	36	..	30	..	4	..	31	..	0
Morocco ^a	..	12	..	43	..	12	..	27	..	6
Mozambique	..	..	..	..	..	..	..	..	..	..
Myanmar	..	..	..	..	..	..	..	..	..	..
Namibia ^a	28	28	53	49	1	8	..	14	4	2
Nepal ^a	..	..	..	..	..	6	..	..	..	..
Netherlands	5	7	8	8	9	5	77	80	3	3
New Zealand	..	30	..	25	..	5	..	37	..	6
Nicaragua ^a	14	15	25	34	17	9	29	35	14	7
Niger	..	..	..	..	..	..	..	..	..	..
Nigeria	..	..	..	..	..	..	..	..	..	..
Norway	..	11	..	16	..	4	..	67	..	5
Oman ^a	55	..	30	..	7	..	8	..	0	..
Pakistan ^a	..	37	..	4	28	31	2	28	..	..
Panama ^a	16	..	45	..	8	..	30	..	1	..
Papua New Guinea ^a	19	..	36	..	20	..	26	..	1	..
Paraguay ^a	..	12	..	53	..	6	..	24	..	5
Peru ^a	20	20	19	20	19	11	33	45	8	4
Philippines ^a	15	19	34	31	33	31	15	18	..	2
Poland	..	7	..	12	..	7	..	70	..	7
Portugal	7	6	30	28	10	6	43	48	11	2
Puerto Rico	..	..	..	..	..	..	..	..	..	..



4.11

Central government expenses

	Goods and services		Compensation of employees		Interest payments		Subsidies and other transfers		Other expense	
	% of expense 1995	% of expense 2006	% of expense 1995	% of expense 2006	% of expense 1995	% of expense 2006	% of expense 1995	% of expense 2006	% of expense 1995	% of expense 2006
Romania	..	21	..	19	..	4	..	44	..	12
Russian Federation	27	19	..	20	..	3	..	55	..	3
Rwanda ^a	52	..	36	..	12	..	5	..	..	..
Saudi Arabia	..	..	..	..	..	..	..	..	..	..
Senegal ^a	..	..	..	..	..	..	..	..	..	..
Serbia	..	..	..	..	..	..	..	..	..	..
Sierra Leone ^a	..	28	..	26	..	19	..	9	..	18
Singapore ^a	38	40	39	34	8	1	15	26	..	..
Slovak Republic	..	11	..	14	..	5	..	63	..	7
Slovenia ^a	19	12	21	19	3	4	55	62	3	3
Somalia	..	..	..	..	..	..	..	..	..	..
South Africa	..	11	..	14	..	10	..	58	..	8
Spain	5	5	14	9	11	5	42	75	2	8
Sri Lanka ^a	23	13	20	28	22	24	24	26	10	9
Sudan ^a	44	..	38	..	8	..	10	..	..	..
Swaziland ^a	..	29	..	42	..	5	..	21	..	2
Sweden	11	11	9	10	13	5	64	52	5	3
Switzerland ^a	24	8	6	7	4	4	66	75	0	5
Syrian Arab Republic ^a	..	..	..	..	..	..	..	..	..	..
Tajikistan ^a	47	29	8	9	12	5	33	27	..	30
Tanzania	..	..	..	..	..	..	..	..	..	..
Thailand	..	21	..	40	..	9	..	29	..	4
Timor-Leste	..	..	..	..	..	..	..	..	..	..
Togo ^a	..	..	..	..	..	..	..	..	..	..
Trinidad and Tobago ^a	20	19	36	31	20	11	24	37	1	1
Tunisia ^a	7	6	37	39	13	10	36	36	7	9
Turkey ^a	..	9	..	22	..	29	..	40	..	1
Turkmenistan	..	..	..	..	..	..	..	..	..	..
Uganda ^a	..	30	..	12	..	8	..	49	..	0
Ukraine ^a	..	12	..	13	..	2	..	69	..	4
United Arab Emirates ^a	50	..	37	..	..	..	..	..	..	..
United Kingdom	22	18	7	15	9	5	54	30	9	1
United States	..	15	..	13	..	10	..	61	..	2
Uruguay ^a	13	15	17	22	6	16	64	46	0	..
Uzbekistan	..	..	..	..	..	..	..	..	..	..
Venezuela, RB ^a	6	6	22	16	27	12	61	64	2	3
Vietnam	..	..	..	..	..	..	..	..	..	..
West Bank and Gaza	..	..	..	..	..	..	..	..	..	..
Yemen, Rep. ^a	8	..	67	..	16	..	8	..	0	..
Zambia ^a	32	28	35	37	16	15	19	15	0	5
Zimbabwe ^a	16	..	34	..	31	..	19	..	..	..
World	.. m	13 m	.. m	21 m	.. m	6 m	.. m	45 m	.. m	5 m
Low income	..	..	..	..	..	..	..	..	..	..
Middle income	..	13	..	24	..	7	..	40	..	7
Lower middle income	..	14	..	28	..	9	..	32	..	7
Upper middle income	..	11	..	20	..	5	..	55	..	7
Low & middle income	..	16	..	26	..	10	..	34	..	..
East Asia & Pacific	..	27	..	31	..	7	..	31	..	0
Europe & Central Asia	..	14	..	16	..	3	..	55	..	6
Latin America & Carib.	..	14	..	29	..	11	..	30	..	8
Middle East & N. Africa	8	8	39	40	13	..	..	25	..	11
South Asia	..	25	..	18	27	22	24	27	..	0
Sub-Saharan Africa	..	..	..	..	..	..	..	..	..	..
High income	7	10	15	14	8	5	59	62	5	4
Euro area	5	6	14	12	11	5	55	65	3	3

Note: Components may not sum to 100 percent because of rounding or missing data.
a. Data were reported on a cash basis and have been adjusted to the accrual framework.

About the data

The term *expense* has replaced *expenditure* in the table since the 2005 edition of *World Development Indicators* in accordance with use in the International Monetary Fund's (IMF) *Government Finance Statistics Manual 2001*. Government expenses include all nonrepayable payments, whether current or capital, required or unrequired. Total central government expense as presented in the IMF's *Government Finance Statistics Yearbook* is comparable to the concept used in the 1993 System of National Accounts.

Expenses can be measured either by function (health, defense, education) or by economic type (interest payments, wages and salaries, purchases of goods and services). Functional data are often incomplete, and coverage varies by country because functional responsibilities stretch across levels of government for which no data are available. Defense expenses, usually the central government's responsibility, are shown in table 5.7. For more information on education expenses, see table 2.10; for more on health expenses, see table 2.15.

The classification of expenses by economic type in the table shows whether the government produces goods and services and distributes them, purchases the goods and services from a third party and distributes them, or transfers cash to households to make the purchases directly. When the government produces and provides goods and services, the cost is reflected in compensation of employees, use of goods and services, and consumption of

fixed capital. Purchases from a third party and cash transfers to households are shown as subsidies and other transfers, and other expenses. The economic classification can be problematic. For example, the distinction between current and capital expense may be arbitrary, and subsidies to public corporations or banks may be disguised as capital financing. Subsidies may also be hidden in special contractual pricing for goods and services. For further discussion of government finance statistics, see *About the data* for tables 4.10 and 4.12.

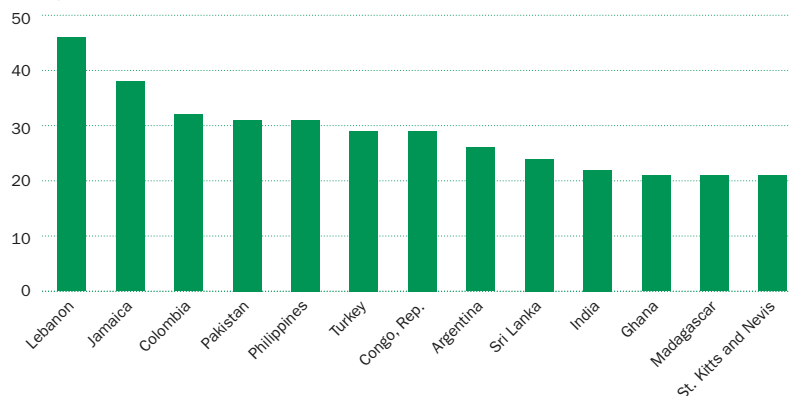
Definitions

- **Goods and services** are all government payments in exchange for goods and services used for the production of market and nonmarket goods and services. Own-account capital formation is excluded.
- **Compensation of employees** is all payments in cash, as well as in kind (such as food and housing), to employees in return for services rendered, and government contributions to social insurance schemes such as social security and pensions that provide benefits to employees.
- **Interest payments** are payments made to nonresidents, to residents, and to other general government units for the use of borrowed money. (Repayment of principal is shown as a financing item, and commission charges are shown as purchases of services.)
- **Subsidies and other transfers** include all unrequired, nonrepayable transfers on current account to private and public enterprises; grants to foreign governments, international organizations, and other government units; and social security, social assistance benefits, and employer social benefits in cash and in kind.
- **Other expense** is spending on dividends, rent, and other miscellaneous expenses, including provision for consumption of fixed capital.

Interest payments are a large part of government expenses for some developing countries

4.11a

Central government interest payments as a share of total expense, 2006 (%)



Interest payments accounted for more than 20 percent of total expenses in 2006 for 13 countries.

Note: Data are for the most recent year for 2004–06.

Source: International Monetary Fund, *Government Finance Statistics* data files, and *World Development Indicators* data files.

Data sources

Data on central government expenses are from the IMF's *Government Finance Statistics Yearbook 2007* and data files. Each country's accounts are reported using the system of common definitions and classifications in the IMF's *Government Finance Statistics Manual 2001*. See these sources for complete and authoritative explanations of concepts, definitions, and data sources.

4.12 Central government revenues

	Taxes on income, profits, and capital gains		Taxes on goods and services		Taxes on international trade		Other taxes		Social contributions		Grants and other revenue	
	% of revenue 1995	% of revenue 2006	% of revenue 1995	% of revenue 2006	% of revenue 1995	% of revenue 2006	% of revenue 1995	% of revenue 2006	% of revenue 1995	% of revenue 2006	% of revenue 1995	% of revenue 2006
Afghanistan ^a	..	4	..	6	..	11	..	2	..	0	..	76
Albania ^a	8	15	39	49	14	8	1	1	15	18	22	10
Algeria ^a	65	6	10	64	18	3	1	1	..	..	5	26
Angola	..	..	..	..	..	..	..	..	..	..	..	..
Argentina	..	19	..	29	..	16	..	14	..	17	..	5
Armenia ^a	..	20	..	32	..	3	..	20	..	12	..	14
Australia	..	65	..	24	..	2	..	0	..	..	..	9
Austria	20	24	21	22	0	0	5	4	41	38	14	12
Azerbaijan ^a	31	..	34	..	33	..	2	..	23	..	0	..
Bangladesh ^a	..	12	..	29	..	33	..	4	..	..	..	22
Belarus ^a	16	7	33	40	6	7	11	8	31	33	3	6
Belgium	36	37	23	25	..	..	2	1	36	35	3	2
Benin ^a	..	19	..	36	..	24	..	6	..	..	..	15
Bolivia	..	7	..	29	..	2	..	6	..	5	..	52
Bosnia and Herzegovina	..	2	..	42	..	0	..	11	..	33	..	11
Botswana ^a	21	..	4	..	15	..	0	..	..	..	59	..
Brazil ^a	14	..	24	..	2	..	4	..	31	..	26	..
Bulgaria ^a	17	14	28	46	8	2	3	0	21	23	23	15
Burkina Faso	..	15	..	35	..	13	..	2	..	..	..	35
Burundi ^a	14	..	30	..	20	..	1	..	5	..	30	..
Cambodia	..	10	..	40	..	22	..	0	..	..	..	28
Cameroon ^a	17	..	25	..	28	..	3	..	2	..	25	..
Canada ^a	50	55	17	16	2	1	..	..	22	22	10	6
Central African Republic ^a	..	14	..	23	..	19	..	4	..	6	..	34
Chad	..	..	..	..	..	..	..	..	..	..	..	..
Chile	..	41	..	34	..	2	..	3	..	5	..	15
China ^a	9	24	61	79	7	-16	0	0	..	..	22	12
Hong Kong, China	..	..	..	..	..	..	..	..	..	..	..	..
Colombia	..	18	..	23	..	9	..	4	..	4	..	42
Congo, Dem. Rep. ^a	21	..	12	..	21	..	5	..	1	..	41	..
Congo, Rep.	..	4	..	16	..	7	..	1	..	4	..	69
Costa Rica ^a	..	14	..	37	..	5	..	2	..	31	..	11
Côte d'Ivoire ^a	15	15	14	15	58	44	3	11	5	8	5	8
Croatia ^a	11	8	42	47	9	2	1	1	33	34	4	8
Cuba	..	..	..	..	..	..	..	..	..	..	..	..
Czech Republic ^a	15	18	32	27	4	0	1	1	40	46	8	8
Denmark	34	37	40	44	..	..	7	3	5	4	14	12
Dominican Republic ^a	..	20	..	54	..	14	..	4	..	1	..	8
Ecuador ^a	50	..	26	..	11	..	1	..	..	..	12	..
Egypt, Arab Rep. ^a	22	32	17	23	13	6	13	3	..	..	35	35
El Salvador	..	24	..	44	..	6	..	1	..	11	..	14
Eritrea	..	..	..	..	..	..	..	..	..	..	..	..
Estonia	..	11	..	30	..	0	..	0	..	33	..	..
Ethiopia ^a	..	..	..	..	..	..	..	..	..	..	..	..
Finland	21	20	34	34	0	..	2	2	32	31	12	13
France	17	25	25	24	0	0	3	4	47	42	8	6
Gabon	..	..	..	..	..	..	..	..	..	..	..	..
Gambia, The ^a	14	..	32	..	42	..	0	..	0	..	7	..
Georgia ^a	7	10	48	51	10	4	..	0	13	15	22	20
Germany	16	17	20	22	..	..	0	..	58	57	6	4
Ghana ^a	15	22	31	22	24	29	..	2	..	..	9	26
Greece	17	19	32	29	0	0	3	3	31	34	16	11
Guatemala ^a	19	28	46	55	23	9	3	1	2	2	6	4
Guinea ^a	8	..	4	..	62	..	2	..	1	..	23	..
Guinea-Bissau	..	..	..	..	..	..	..	..	..	..	..	..
Haiti	..	..	..	..	..	..	..	..	..	..	..	..

Central government revenues

	Taxes on income, profits, and capital gains		Taxes on goods and services		Taxes on international trade		Other taxes		Social contributions		Grants and other revenue	
	% of revenue 1995	% of revenue 2006	% of revenue 1995	% of revenue 2006	% of revenue 1995	% of revenue 2006	% of revenue 1995	% of revenue 2006	% of revenue 1995	% of revenue 2006	% of revenue 1995	% of revenue 2006
Honduras	..	25	..	52	..	6	..	1	..	..	..	15
Hungary	18	20	28	34	8	0	1	2	33	35	12	10
India ^a	23	39	28	30	24	15	0	0	0	0	25	16
Indonesia ^a	46	28	33	32	4	3	1	4	6	3	9	30
Iran, Islamic Rep. ^a	12	13	5	2	9	6	1	1	6	11	66	68
Iraq	..	..	..	..	..	..	..	..	..	..	..	..
Ireland	37	38	35	35	0	0	2	6	17	17	9	4
Israel	..	33	..	28	..	1	..	5	..	16	..	17
Italy	32	34	21	22	..	..	5	5	35	35	6	4
Jamaica ^a	..	14	..	32	..	8	..	21	..	9	..	17
Japan	35	..	14	..	1	..	5	..	26	..	18	..
Jordan ^a	10	12	23	38	22	10	9	15	..	0	36	24
Kazakhstan ^a	11	42	28	42	3	6	5	0	48	..	6	9
Kenya ^a	35	33	40	44	14	10	1	0	0	0	10	12
Korea, Dem. Rep.	..	..	..	..	..	..	..	..	..	..	..	..
Korea, Rep. ^a	31	29	32	28	7	3	10	7	8	16	12	16
Kuwait	1	0	0	..	2	1	0	0	..	..	97	98
Kyrgyz Republic ^a	..	11	..	52	..	13	..	..	..	..	..	24
Lao PDR	..	..	..	..	..	..	..	..	..	..	..	..
Latvia ^a	7	13	41	40	3	1	0	0	35	29	13	17
Lebanon	..	11	..	45	..	8	..	12	..	1	..	24
Lesotho ^a	15	19	12	16	49	49	1	0	..	..	24	15
Liberia	..	..	..	..	..	..	..	..	..	..	..	..
Libya	..	..	..	..	..	..	..	..	..	..	..	..
Lithuania	..	24	..	36	..	0	..	0	..	31	..	10
Macedonia, FYR	..	..	..	..	..	..	..	..	..	..	..	..
Madagascar	..	9	..	12	..	25	..	4	..	..	..	50
Malawi	..	..	..	..	..	..	..	..	..	..	..	..
Malaysia ^a	37	47	26	21	12	6	5	0	1	..	19	26
Mali	..	5	..	15	..	4	..	3	..	..	..	73
Mauritania	..	..	..	..	..	..	..	..	..	..	..	..
Mauritius ^a	12	17	25	44	34	17	6	5	6	5	16	11
Mexico ^a	27	..	54	..	4	..	2	..	14	..	16	..
Moldova ^a	6	3	38	50	5	4	1	0	38	28	2	15
Mongolia	..	16	..	35	..	6	..	0	..	16	..	27
Morocco ^a	..	33	..	38	..	9	..	7	..	..	..	12
Mozambique	..	..	..	..	..	..	..	..	..	..	..	..
Myanmar	20	25	26	31	12	2	..	..	..	..	42	42
Namibia ^a	27	38	32	20	28	32	2	2	..	1	11	8
Nepal ^a	10	11	33	34	26	18	4	5	..	..	27	32
Netherlands	26	26	24	27	..	1	2	3	40	35	8	9
New Zealand	..	58	..	26	..	2	..	0	..	0	..	14
Nicaragua ^a	9	23	52	49	7	5	0	0	11	19	31	23
Niger	..	..	..	..	..	..	..	..	..	..	..	..
Nigeria	..	..	..	..	..	..	..	..	..	..	..	..
Norway	..	33	..	23	..	0	..	1	..	17	..	25
Oman ^a	21	..	1	..	3	..	2	..	..	..	74	..
Pakistan ^a	18	20	27	33	24	13	7	1	..	..	24	33
Panama ^a	20	..	17	..	11	..	3	..	16	..	34	..
Papua New Guinea ^a	40	..	8	..	27	..	2	..	0	..	23	..
Paraguay ^a	..	9	..	35	..	8	..	4	..	15	..	28
Peru ^a	15	24	46	40	10	6	8	6	10	9	11	15
Philippines ^a	33	39	26	25	29	20	4	4	..	..	8	12
Poland	..	14	..	38	..	0	..	1	..	37	..	10
Portugal	23	21	32	34	0	0	2	2	29	32	14	14
Puerto Rico	..	..	..	..	..	..	..	..	..	..	..	..



4.12

Central government revenues

	Taxes on income, profits, and capital gains		Taxes on goods and services		Taxes on international trade		Other taxes		Social contributions		Grants and other revenue	
	% of revenue 1995	% of revenue 2006	% of revenue 1995	% of revenue 2006	% of revenue 1995	% of revenue 2006	% of revenue 1995	% of revenue 2006	% of revenue 1995	% of revenue 2006	% of revenue 1995	% of revenue 2006
Romania	..	13	..	33	..	3	..	0	..	39	..	13
Russian Federation	..	7	..	21	..	29	..	0	..	19	..	24
Rwanda ^a	11	..	25	..	23	..	3	..	2	..	36	..
Saudi Arabia	..	..	..	..	..	..	..	..	..	..	..	..
Senegal ^a	17	..	19	..	36	..	2	..	..	..	26	..
Serbia ^a	..	..	..	..	..	..	..	..	..	..	..	..
Sierra Leone ^a	15	16	34	9	39	27	0	..	..	..	12	48
Singapore ^a	26	30	20	23	1	0	15	10	..	..	38	36
Slovak Republic	..	11	..	35	..	0	..	0	..	40	..	15
Slovenia ^a	13	18	33	32	9	0	0	3	42	38	3	9
Somalia	..	..	..	..	..	..	..	..	..	..	..	..
South Africa	..	51	..	33	..	4	..	3	..	2	..	7
Spain	28	26	21	18	0	0	0	0	40	46	..	7
Sri Lanka ^a	12	16	49	51	17	15	4	3	1	1	18	14
Sudan ^a	17	..	41	..	27	..	1	..	..	..	14	..
Swaziland ^a	..	28	..	19	..	48	..	0	..	..	..	5
Sweden	15	10	26	34	..	..	12	12	35	34	13	10
Switzerland ^a	11	19	21	33	1	1	2	2	49	37	17	8
Syrian Arab Republic ^a	23	..	37	..	13	..	8	..	0	..	19	..
Tajikistan ^a	6	3	63	54	12	11	0	1	13	12	5	18
Tanzania	..	..	..	..	..	..	..	..	..	..	..	..
Thailand	..	36	..	40	..	6	..	1	..	5	..	12
Timor-Leste	..	..	..	..	..	..	..	..	..	..	..	..
Togo ^a	..	..	..	..	..	..	..	..	..	..	..	..
Trinidad and Tobago ^a	50	52	26	15	6	5	1	15	2	4	15	10
Tunisia ^a	16	26	20	33	28	6	4	4	15	19	17	12
Turkey ^a	..	22	..	49	..	1	..	7	..	..	..	21
Turkmenistan	..	..	..	..	..	..	..	..	..	..	..	..
Uganda ^a	10	19	45	30	7	21	2	0	..	..	37	30
Ukraine ^a	..	13	..	31	..	4	..	0	..	35	..	16
United Arab Emirates ^a	..	..	15	..	..	..	..	..	1	..	84	..
United Kingdom	39	39	31	31	..	..	6	6	19	21	5	4
United States	..	57	..	3	..	1	..	1	..	36	..	3
Uruguay ^a	10	11	32	49	4	5	10	4	31	21	8	10
Uzbekistan	..	..	..	..	..	..	..	..	..	..	..	..
Venezuela, RB ^a	38	21	33	25	9	5	0	4	4	2	19	43
Vietnam	..	..	..	..	..	..	..	..	..	..	..	..
West Bank and Gaza	..	..	..	..	..	..	..	..	..	..	..	..
Yemen, Rep. ^a	17	..	10	..	18	..	3	..	..	..	51	..
Zambia ^a	27	33	22	36	36	9	0	0	0	..	15	21
Zimbabwe ^a	36	..	22	..	17	..	3	..	2	..	19	..
World	.. m	21 m	.. m	34 m	.. m	6 m	.. m	2 m	.. m	.. m	.. m	14 m
Low income	..	..	..	..	..	..	..	..	..	..	..	..
Middle income	..	16	..	38	..	5	..	2	..	15	..	14
Lower middle income	19	17	34	39	14	6	..	4	..	13	16	15
Upper middle income	..	14	..	38	..	2	..	1	..	27	..	11
Low & middle income	..	16	..	36	..	8	..	2	..	..	..	17
East Asia & Pacific	35	26	26	35	12	6	..	1	..	..	20	22
Europe & Central Asia	..	13	..	40	..	3	..	0	..	32	..	15
Latin America & Carib.	..	19	..	41	..	6	..	3	..	7	..	15
Middle East & N. Africa	19	11	14	36	16	8	4	4	..	..	35	27
South Asia	15	16	31	33	24	15	4	2	..	0	25	32
Sub-Saharan Africa	..	..	..	..	..	..	..	..	..	..	..	..
High income	24	26	24	27	..	1	3	3	33	34	8	9
Euro area	26	24	23	26	0	0	2	3	40	35	7	7

Note: Components may not sum to 100 percent because of missing data or adjustment to tax revenue.

a. Data were reported on a cash basis and have been adjusted to the accrual framework.

About the data

The International Monetary Fund (IMF) classifies government revenues as taxes, grants, and property income. Taxes are classified by the base on which the tax is levied, grants by the source, and property income by type (for example, interest, dividends, or rent). The most important source of revenue is taxes. Grants are unrequited, nonrepayable, non-compulsory receipts from other government units and foreign governments or from international organizations. Transactions are generally recorded on an accrual basis.

The IMF's *Government Finance Statistics Manual 2001* describes taxes as compulsory, unrequited payments made to governments by individuals, businesses, or institutions. Taxes are classified in six major groups by the base on which the tax is levied: income, profits, and capital gains; payroll and work-force; property; goods and services; international trade and transactions; and other. However, the distinctions are not always clear. Taxes levied on the income and profits of individuals and corporations are classified as direct taxes, and taxes and duties levied on goods and services are classified as indirect taxes. This distinction may be a useful simplification, but it has no particular analytical significance except with respect to the capacity to fix tax rates.

Direct taxes tend to be progressive, whereas indirect taxes are proportional.

Social security taxes do not reflect compulsory payments made by employers to provident funds or other agencies with a like purpose. Similarly, expenditures from such funds are not reflected in government expenses (see table 4.11). For further discussion of taxes and tax policies, see *About the data* for table 5.6. For further discussion of government revenues and expenditures, see *About the data* for tables 4.10 and 4.11.

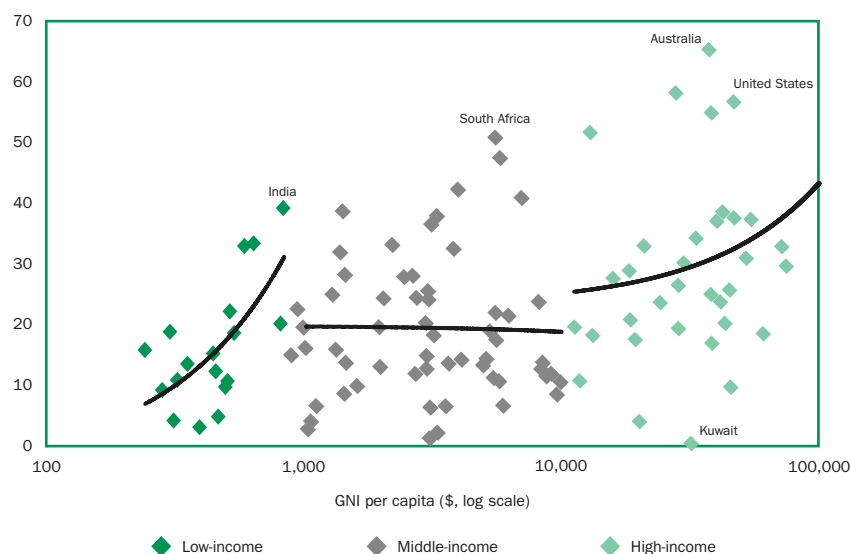
Definitions

- **Taxes on income, profits, and capital gains** are levied on the actual or presumptive net income of individuals, on the profits of corporations and enterprises, and on capital gains, whether realized or not, on land, securities, and other assets. Intragovernmental payments are eliminated in consolidation.
- **Taxes on goods and services** include general sales and turnover or value added taxes, selective excises on goods, selective taxes on services, taxes on the use of goods or property, taxes on extraction and production of minerals, and profits of fiscal monopolies.
- **Taxes on international trade** include import duties, export duties, profits of export or import monopolies, exchange profits, and exchange taxes.
- **Other taxes** include employer payroll or labor taxes, taxes on property, and taxes not allocable to other categories, such as penalties for late payment or nonpayment of taxes.
- **Social contributions** include social security contributions by employees, employers, and self-employed individuals, and other contributions whose source cannot be determined. They also include actual or imputed contributions to social insurance schemes operated by governments.
- **Grants and other revenue** include grants from other foreign governments, international organizations, and other government units; interest; dividends; rent; required, nonrepayable receipts for public purposes (such as fines, administrative fees, and entrepreneurial income from government ownership of property); and voluntary, unrequited, nonrepayable receipts other than grants.

Rich countries rely more on direct taxes

4.12a

Taxes on income and capital gains as a share of central government revenue, 2006 (%)



High-income economies tend to tax income and property, whereas low-income economies tend to rely on indirect taxes on international trade and goods and services. But there are exceptions in all groups.

Note: Data are for the most recent year for 2004–06.

Source: International Monetary Fund, *Government Finance Statistics* data files, and *World Development Indicators* data files.

Data sources

Data on central government revenues are from the IMF's *Government Finance Statistics Yearbook 2007* and data files. Each country's accounts are reported using the system of common definitions and classifications in the IMF's *Government Finance Statistics Manual 2001*. The IMF receives additional information from the Organisation for Economic Co-operation and Development on the tax revenues of some of its members. See the IMF sources for complete and authoritative explanations of concepts, definitions, and data sources.



	Money and quasi money		Claims on private sector		Claims on governments and other public entities		Interest rate					
	annual % growth		Annual growth % of M2		Annual growth % of M2		Deposit		% Lending		Real	
	1995	2006	1995	2006	1995	2006	1995	2006	1995	2006	1995	2006
Afghanistan	..	..	..	..	..	..	..	..	..	..	..	..
Albania	51.8	16.0	1.8	12.4	-8.3	1.9	15.3	5.2	19.7	12.9	8.9	10.8
Algeria	9.6	20.6	1.0	3.4	-10.0	-11.0	16.0	1.8	18.4	8.0	-7.9	-1.0
Angola	4,105.6	57.3	471.4	34.5	119.5	-85.0	125.9	4.5	206.3	19.5	-84.7	4.2
Argentina	-2.8	20.3	-1.1	13.1	7.8	-15.0	11.9	6.4	17.9	8.6	14.2	-4.3
Armenia	64.3	32.9	70.3	14.8	7.2	-10.1	63.2	5.8	111.9	16.5	-18.9	11.4
Australia	8.5	15.2	12.5	18.1	0.4	-0.9	6.1	4.0	10.7	9.4	8.2	4.6
Austria ^a	..	..	..	..	..	..	2.2	..	6.4	..	6.1	..
Azerbaijan	25.4	86.9	6.1	55.7	-32.7	5.5	..	10.6	..	17.9	..	10.1
Bangladesh	12.1	20.2	25.0	12.2	4.8	6.3	6.0	9.1	14.0	15.3	6.2	9.7
Belarus	158.4	39.9	61.4	45.5	44.7	-4.3	100.8	7.7	175.0	8.8	-63.9	-1.7
Belgium ^a	..	..	..	..	..	..	4.0	1.6	8.4	7.5	7.1	5.4
Benin	-1.8	14.5	2.2	6.4	6.0	-13.3	3.5	3.5	16.8	..	13.0	..
Bolivia	7.7	24.0	13.7	4.3	1.1	-11.5	18.9	4.0	51.0	11.9	35.5	-0.3
Bosnia and Herzegovina	22.0	25.7	23.9	20.4	-0.4	-0.9	51.9	3.7	73.5	8.0	76.3	1.4
Botswana	12.3	67.4	-1.7	14.2	10.0	-55.0	9.8	8.9	14.4	16.5	5.2	2.6
Brazil	44.3	18.9	40.5	14.3	14.6	10.8	52.2	13.9	78.2	50.8	65.5	44.6
Bulgaria	40.5	27.6	22.1	17.8	-7.2	-7.0	35.9	3.2	79.4	8.9	10.1	0.7
Burkina Faso	22.3	11.0	2.9	12.1	-7.3	-7.5	3.5	3.5	16.8	..	16.6	..
Burundi	-10.2	24.6	-9.9	13.6	-2.2	27.6	..	..	15.3	17.1	-0.7	14.1
Cambodia	43.6	40.5	12.5	25.5	1.2	-9.8	8.7	1.8	18.7	16.4	6.4	11.2
Cameroon	-6.2	10.3	0.3	1.8	-2.2	-22.6	5.5	4.3	16.0	15.3	-0.8	11.2
Canada	4.8	12.6	3.8	13.3	0.2	1.2	5.3	1.8	8.7	5.8	6.2	3.4
Central African Republic	4.3	-4.2	3.9	2.2	-7.9	5.7	5.5	4.3	16.0	15.3	5.2	11.0
Chad	48.8	52.3	6.4	-1.3	-18.6	-25.1	5.5	4.3	16.0	15.3	6.6	5.2
Chile	24.3	16.1	34.9	20.4	-2.0	-4.5	13.7	5.1	18.2	8.0	7.0	-3.3
China	29.5	16.0	21.1	10.1	0.7	0.1	11.0	2.5	12.1	6.1	-1.5	2.4
Hong Kong, China	10.6	16.2	9.8	1.0	-2.4	-0.7	5.6	2.7	8.8	7.8	6.1	7.9
Colombia	28.2	20.2	34.3	43.9	2.9	-10.6	32.3	6.3	42.7	12.9	20.1	7.1
Congo, Dem. Rep.	357.6	57.5	59.6	19.3	-7.9	13.6	60.0	..	293.9	..	-30.5	..
Congo, Rep.	-0.1	45.7	6.3	1.5	2.0	-89.6	5.5	4.3	16.0	15.3	12.2	0.1
Costa Rica	4.8	26.3	0.0	21.7	5.7	-2.2	23.9	9.8	36.7	22.2	11.9	11.0
Côte d'Ivoire	18.1	10.3	13.3	4.8	0.3	-1.7	3.5	3.5	16.8	..	16.8	..
Croatia	40.4	18.0	30.5	20.6	-2.4	-1.5	5.5	1.7	20.2	9.9	14.2	6.3
Cuba	..	..	..	..	..	..	..	..	..	..	..	..
Czech Republic	29.3	9.9	15.8	10.5	2.1	2.3	7.0	1.2	12.8	5.6	-3.6	3.5
Denmark	6.2	9.6	2.6	39.7	-1.5	-3.3	3.9	2.4	10.3	..	9.0	..
Dominican Republic	17.8	12.5	15.3	7.0	-2.6	37.5	14.9	9.8	30.7	19.5	16.0	11.1
Ecuador	6.8	13.1	15.1	14.1	-74.8	-5.5	43.3	4.1	55.7	9.5	45.7	2.2
Egypt, Arab Rep.	9.9	15.0	12.1	5.5	0.6	6.8	10.9	6.0	16.5	12.6	4.5	4.9
El Salvador	13.5	11.9	22.6	9.9	-0.9	-2.5	14.4	..	19.1	..	7.8	..
Eritrea	21.0	5.8	27.8	0.9	20.5	8.6	..	..	..	..	..	..
Estonia	27.5	28.2	22.0	74.3	-5.5	-1.2	8.7	2.8	19.0	5.0	-9.4	-1.0
Ethiopia	9.0	20.0	13.4	14.7	-3.5	5.4	11.5	3.6	15.1	7.0	2.1	-0.7
Finland ^a	..	..	..	..	..	..	3.2	1.0	7.8	3.7	2.9	3.0
France ^a	..	..	..	..	..	..	4.5	2.4	8.1	6.6	6.7	4.9
Gabon	10.1	16.4	11.9	10.1	5.8	-13.7	5.5	4.3	16.0	15.3	14.5	6.9
Gambia, The	14.2	26.2	-5.0	8.3	15.2	3.8	12.5	12.7	25.0	29.8	20.3	24.7
Georgia	40.2	39.7	-11.1	50.5	73.8	-11.2	31.0	11.4	58.2	18.8	10.6	9.5
Germany ^a	..	..	..	..	..	..	3.9	..	10.9	..	8.9	..
Ghana	43.2	42.8	10.2	20.1	28.1	10.9	28.7	8.9	..	..	..	..
Greece ^a	..	..	..	..	..	..	15.8	2.2	23.1	6.8	12.1	3.1
Guatemala	15.6	13.4	36.1	12.0	-7.1	0.8	7.9	4.5	21.2	12.8	11.5	6.1
Guinea	11.3	33.4	12.1	19.8	8.4	18.1	17.5	14.4	21.5	..	14.7	..
Guinea-Bissau	43.0	4.4	-6.7	5.7	-20.4	-1.5	3.5	3.5	32.9	..	-8.2	..
Haiti	27.1	4.6	15.7	3.1	0.1	-5.4	10.7	6.2	24.8	43.3	-2.4	27.2

Monetary indicators

4.13

ECONOMY

	Money and quasi money		Claims on private sector		Claims on governments and other public entities		Interest rate					
	annual % growth		Annual growth % of M2		Annual growth % of M2		Deposit		% Lending		Real	
	1995	2006	1995	2006	1995	2006	1995	2006	1995	2006	1995	2006
Honduras	29.2	22.5	16.5	24.0	-7.4	-1.6	12.0	9.3	27.0	17.4	1.7	11.7
Hungary	20.9	14.3	4.9	17.1	20.2	5.5	24.4	7.4	32.6	8.1	4.6	4.2
India	11.0	21.6	6.0	16.8	3.4	2.4	..	..	15.5	11.2	5.9	5.0
Indonesia	27.5	14.9	25.9	7.4	-2.3	0.8	16.7	11.4	18.9	16.0	8.3	2.1
Iran, Islamic Rep.	30.1	29.1	9.8	27.0	17.3	-8.4	..	11.8	..	14.0	..	2.7
Iraq	..	30.8	..	6.7	..	-29.9	..	..	..	14.4	..	..
Ireland ^a	..	..	..	..	..	..	0.4	0.0	6.6	2.7	3.4	-0.8
Israel	21.7	5.1	18.3	3.4	-0.5	-1.8	14.1	3.2	20.2	7.4	1.9	5.0
Italy ^a	..	..	..	..	..	..	6.4	0.9	13.2	5.6	7.9	3.8
Jamaica	28.0	15.8	18.0	11.5	6.1	-3.5	23.2	7.0	43.6	17.6	17.5	10.7
Japan	4.1	-0.7	1.3	-0.1	2.5	-0.3	0.9	0.7	3.5	1.7	4.0	2.5
Jordan	5.7	12.8	9.6	15.6	-3.8	-1.0	7.7	4.6	10.7	8.2	8.6	2.3
Kazakhstan	108.2	78.1	-72.5	105.2	24.7	-44.4	..	..	..	..	..	..
Kenya	29.0	18.0	26.7	10.2	6.6	3.1	13.6	5.1	28.8	13.6	15.8	14.1
Korea, Dem. Rep.	..	..	..	..	..	..	..	..	..	..	..	..
Korea, Rep.	15.6	4.4	21.6	19.5	-1.2	1.2	8.8	4.5	9.0	6.0	1.5	6.4
Kuwait	9.4	21.7	10.9	23.7	-0.2	-5.7	6.5	4.9	8.4	8.6	3.4	-13.6
Kyrgyz Republic	14.8	51.5	0.1	18.1	62.6	-0.5	36.7	5.6	65.0	23.2	21.9	12.8
Lao PDR	16.4	26.7	18.1	-1.5	-7.2	1.8	14.0	5.0	25.7	30.0	5.0	24.2
Latvia	-21.4	38.7	-23.8	88.8	6.5	-2.3	14.8	3.5	34.6	7.3	5.5	-3.4
Lebanon	16.4	7.8	13.1	1.9	6.0	6.6	16.3	8.0	24.7	10.3	12.8	4.4
Lesotho	9.8	35.3	-2.3	4.8	-18.7	-22.7	13.3	4.5	16.4	12.2	6.5	7.7
Liberia	29.5	34.6	-6.0	15.9	37.2	76.6	6.4	3.4	15.6	15.5	8.5	2.7
Libya	9.6	14.1	3.1	1.0	3.6	-112.6	5.5	2.5	7.0	6.3	..	-7.4
Lithuania	28.9	22.5	12.7	40.3	-2.4	-8.3	20.1	1.2	27.1	5.1	-14.5	-1.4
Macedonia, FYR	11.7	21.5	-147.3	16.5	-243.6	-4.7	24.1	6.6	46.0	12.2	24.6	8.1
Madagascar	16.2	26.4	9.6	9.6	-13.1	-17.4	18.5	22.3	37.5	29.5	-5.3	16.4
Malawi	56.2	16.4	2.8	19.0	-10.4	-9.8	37.3	11.0	47.3	32.3	-16.9	11.6
Malaysia	18.5	11.5	29.2	6.2	-0.7	1.6	5.9	3.1	8.7	6.5	4.9	2.3
Mali	7.3	6.0	18.9	1.4	-11.6	-9.9	3.5	3.5	16.8	..	14.5	..
Mauritania	-5.1	10.5	-42.5	18.7	-28.9	-15.8	9.0	8.0	20.3	23.1	17.0	4.3
Mauritius	18.6	10.1	8.7	7.2	3.0	0.5	12.2	9.6	20.8	21.1	16.1	16.3
Mexico	31.9	11.1	-2.9	17.7	27.6	3.2	39.8	3.3	59.4	7.5	15.6	2.9
Moldova	65.3	23.5	34.6	21.5	19.1	-0.7	25.4	11.9	36.7	18.1	7.7	4.9
Mongolia	32.6	30.8	14.4	31.8	-31.8	-37.3	74.6	13.0	134.4	21.4	46.9	-1.4
Morocco	7.0	17.0	6.9	10.4	5.1	0.0	7.3	3.7	10.0	11.5	8.3	11.9
Mozambique	47.7	22.6	21.8	13.4	-12.5	-8.3	38.8	10.4	24.4	18.6	18.0	11.9
Myanmar	36.5	27.3	13.4	6.8	19.7	23.5	9.8	9.5	16.5	15.0	-2.4	-2.2
Namibia	22.6	29.6	30.5	20.3	1.7	-7.2	10.8	6.3	18.5	11.2	12.1	1.9
Nepal	15.6	14.7	18.0	11.0	3.6	0.1	9.6	2.3	12.9	8.0	4.7	1.2
Netherlands ^a	..	..	..	..	..	..	4.4	3.0	7.2	3.5	5.0	2.0
New Zealand	9.3	16.0	15.8	16.6	-3.9	-1.0	8.5	6.9	12.1	12.3	9.9	10.8
Nicaragua	35.1	8.4	30.3	22.5	-21.5	-10.0	11.1	4.9	19.9	11.6	5.7	0.9
Niger	3.8	14.8	-22.8	15.2	10.2	-31.6	3.5	3.5	16.8	..	15.5	..
Nigeria	19.4	-33.9	22.3	19.5	-9.1	-23.6	13.5	9.7	20.2	16.9	-22.9	8.3
Norway	3.8	3.4	9.5	10.4	-1.9	-5.3	5.0	1.8	7.6	4.0	4.4	-4.2
Oman	7.7	24.6	9.3	20.6	-2.3	-5.5	6.5	4.0	9.4	7.4	7.5	-1.4
Pakistan	13.8	14.6	10.8	10.6	8.7	1.6	..	4.2	..	11.0	..	1.6
Panama	8.4	22.3	14.5	13.8	-4.3	0.1	7.2	3.8	11.1	8.4	10.6	6.1
Papua New Guinea	13.7	38.9	0.2	16.1	5.0	-3.0	7.3	1.0	13.1	10.6	0.0	0.8
Paraguay	0.5	8.7	4.9	6.0	0.1	-3.1	21.2	6.7	33.9	30.1	17.9	17.5
Peru	29.3	11.8	31.1	4.2	-8.1	-5.1	9.6	3.2	36.2	23.9	20.5	15.5
Philippines	23.9	19.6	27.9	3.7	3.0	1.2	8.4	5.3	14.7	9.8	6.6	4.3
Poland	35.6	14.8	19.1	15.7	3.1	2.1	26.8	2.8	33.5	5.5	-5.2	4.5
Portugal ^a	..	..	..	..	..	..	8.4	..	13.8	..	10.0	..
Puerto Rico	..	..	..	..	..	..	..	..	..	..	..	..



	Money and quasi money		Claims on private sector		Claims on governments and other public entities		Interest rate					
	annual % growth		Annual growth % of M2		Annual growth % of M2		Deposit		% Lending		Real	
	1995	2006	1995	2006	1995	2006	1995	2006	1995	2006	1995	2006
Romania	69.6	36.2	23.1	34.6	11.6	-0.9	..	..	..	..	..	..
Russian Federation	112.6	40.5	46.2	37.2	73.6	-21.8	102.0	4.1	320.3	10.4	72.3	-4.9
Rwanda	69.5	18.0	32.7	14.5	-41.0	-13.8	10.9	7.9	18.5	16.1	6.9	6.4
Saudi Arabia	3.4	20.4	3.4	7.3	1.4	-17.7	6.2	5.0	..	..	..	..
Senegal	7.4	12.5	1.2	4.8	1.0	2.7	3.5	3.5	16.8	..	17.8	..
Serbia	33.0	38.3	88.5	18.5	34.1	-16.0	19.1	5.1	78.0	16.6	..	0.8
Sierra Leone	19.6	21.4	1.6	4.1	-101.6	-62.0	7.0	10.4	28.8	24.0	-3.6	8.6
Singapore	8.5	19.4	19.7	4.2	-8.1	2.5	3.5	0.6	6.4	5.3	4.0	5.1
Slovak Republic	18.4	14.5	3.4	14.0	-4.8	-1.1	9.0	3.6	16.8	7.7	6.3	4.8
Slovenia	31.5	8.4	36.8	27.7	5.8	-2.3	15.4	2.8	23.4	7.4	-1.5	5.0
Somalia	..	..	..	..	..	..	..	..	..	..	..	..
South Africa	16.0	21.2	18.9	29.2	-4.1	-5.2	13.5	7.1	17.9	11.2	6.9	4.0
Spain ^a	..	..	..	..	..	..	7.7	..	10.1	..	4.9	..
Sri Lanka	35.8	19.0	75.4	15.9	5.4	3.1	12.1	10.2	18.0	7.0	8.0	-2.7
Sudan	72.7	29.7	10.6	26.3	389.1	17.7	..	..	..	..	..	..
Swaziland	3.9	25.1	1.3	22.5	-14.8	-24.6	9.4	4.9	17.1	11.2	-0.2	5.2
Sweden	3.1	11.9	-1.1	24.5	-4.0	0.2	6.2	0.8	11.1	3.3	7.3	2.1
Switzerland	4.6	4.9	4.0	10.0	0.2	0.4	1.3	1.4	5.5	3.0	4.6	1.6
Syrian Arab Republic	9.2	7.3	3.9	2.9	6.1	0.9	4.0	1.0	9.0	8.0	2.2	-4.4
Tajikistan	..	59.7	..	45.5	..	-13.8	23.9	9.1	75.5	24.4	6.2	3.4
Tanzania	33.0	18.3	-3.9	13.2	16.3	-16.2	24.6	6.6	42.8	15.4	12.6	8.6
Thailand	17.7	6.7	40.3	3.5	-4.2	-1.8	11.6	4.4	13.3	7.4	7.3	2.2
Timor-Leste	..	..	..	..	..	..	..	..	..	..	..	..
Togo	22.3	22.6	17.6	0.0	14.9	0.1	3.5	3.5	17.5	..	13.8	..
Trinidad and Tobago	4.0	21.7	9.0	16.0	0.6	-18.3	6.9	4.8	15.2	10.9	10.7	3.1
Tunisia	6.6	11.6	10.4	8.0	-1.2	3.4	..	..	..	..	..	..
Turkey	104.2	32.6	66.9	24.8	30.1	4.3	76.0	21.6	..	..	..	..
Turkmenistan	449.5	..	76.3	..	-573.1	..	..	..	..	..	..	..
Uganda	13.9	17.6	9.6	10.8	-41.2	-10.1	7.6	9.1	20.2	18.7	9.9	10.7
Ukraine	115.5	34.3	7.7	51.4	95.4	-0.5	70.3	7.6	122.7	15.2	-56.8	1.3
United Arab Emirates	10.2	23.2	10.7	29.5	-4.3	1.1	..	..	..	..	..	..
United Kingdom	20.3	11.9	19.6	16.4	9.5	-1.1	4.1	..	6.7	4.7	3.9	2.2
United States	6.9	9.0	6.0	7.3	0.2	0.8	..	..	8.8	8.0	6.7	4.6
Uruguay	39.0	11.7	34.2	5.3	1.0	-12.8	57.7	1.8	93.1	9.3	36.9	2.3
Uzbekistan	..	..	..	..	..	..	..	..	..	..	..	..
Venezuela, RB	36.6	75.4	15.3	38.1	32.8	11.2	24.7	10.3	39.7	15.5	-7.9	-1.2
Vietnam	25.7	29.7	12.7	21.8	0.8	0.9	8.5	7.6	20.1	11.2	10.5	3.6
West Bank and Gaza	..	5.6	..	2.9	..	2.4	..	3.0	..	7.7	..	8.0
Yemen, Rep.	50.7	26.1	6.0	3.6	13.3	-5.2	23.8	13.0	31.5	18.0	-3.2	4.1
Zambia	55.5	44.2	34.2	22.4	185.8	-36.9	30.2	10.3	45.5	23.2	5.4	9.8
Zimbabwe	25.5	1,453.0	25.5	624.0	-0.3	274.6	25.9	203.4	34.7	496.5	23.0	-0.7

a. As members of the euro area, these countries share a single currency, the euro.

About the data

Money and the financial accounts that record the supply of money lie at the heart of a country's financial system. There are several commonly used definitions of the money supply. The narrowest, M1, encompasses currency held by the public and demand deposits with banks. M2 includes M1 plus time and savings deposits with banks that require a prior notice for withdrawal. M3 includes M2 as well as various money market instruments, such as certificates of deposit issued by banks, bank deposits denominated in foreign currency, and deposits with financial institutions other than banks. However defined, money is a liability of the banking system, distinguished from other bank liabilities by the special role it plays as a medium of exchange, a unit of account, and a store of value.

The banking system's assets include its net foreign assets and net domestic credit. Net domestic credit includes credit extended to the private sector and general government and credit extended to the nonfinancial public sector in the form of investments in short- and long-term government securities and loans to state enterprises; liabilities to the public and private sectors in the form of deposits with the banking system are netted out. Net domestic credit also includes credit to banking and nonbank financial institutions.

Domestic credit is the main vehicle through which changes in the money supply are regulated, with central bank lending to the government often playing the most important role. The central bank can regulate lending to the private sector in several ways—for example, by adjusting the cost of the refinancing facilities it provides to banks, by changing market interest rates through open market operations, or by controlling the availability of credit through changes in the reserve requirements imposed on banks and ceilings on the credit provided by banks to the private sector.

Monetary accounts are derived from the balance sheets of financial institutions—the central bank, commercial banks, and nonbank financial intermediaries. Although these balance sheets are usually reliable, they are subject to errors of classification, valuation, and timing and to differences in accounting practices. For example, whether interest income is recorded on an accrual or a cash basis can make a substantial difference, as can the treatment of nonperforming assets. Valuation errors typically arise with respect to foreign exchange transactions, particularly in countries with flexible exchange rates or in those that have undergone currency devaluation

during the reporting period. The valuation of financial derivatives and the net liabilities of the banking system can also be difficult. The quality of commercial bank reporting also may be adversely affected by delays in reports from bank branches, especially in countries where branch accounts are not computerized. Thus the data in the balance sheets of commercial banks may be based on preliminary estimates subject to constant revision. This problem is likely to be even more serious for nonbank financial intermediaries.

Many interest rates coexist in an economy, reflecting competitive conditions, the terms governing loans and deposits, and differences in the position and status of creditors and debtors. In some economies interest rates are set by regulation or administrative fiat. In economies with imperfect markets, or where reported nominal rates are not indicative of effective rates, it may be difficult to obtain data on interest rates that reflect actual market transactions. Deposit and lending rates are collected by the International Monetary Fund (IMF) as representative interest rates offered by banks to resident customers. The terms and conditions attached to these rates differ by country, however, limiting their comparability. Real interest rates are calculated by adjusting nominal rates by an estimate of the inflation rate in the economy. A negative real interest rate indicates a loss in the purchasing power of the principal. The real interest rates in the table are calculated as $(i - P) / (1 + P)$, where i is the nominal lending interest rate and P is the inflation rate (as measured by the GDP deflator).

Definitions

• **Money and quasi money** are the sum of currency outside banks, demand deposits other than those of the central government, and the time, savings, and foreign currency deposits of resident sectors other than the central government. This definition of the money supply, often called M2, corresponds to lines 34 and 35 in the IMF's *International Financial Statistics* (IFS). The change in money supply is measured as the difference in end-of-year totals relative to M2 in the preceding year. • **Claims on private sector** (IFS line 32d) include gross credit from the financial system to individuals, enterprises, nonfinancial public entities not included under net domestic credit, and financial institutions not included elsewhere. • **Claims on governments and other public entities** (IFS line 32an + 32b + 32bx + 32c) usually comprise direct credit for specific purposes, such as financing the government budget deficit; loans to state enterprises; advances against future credit authorizations; and purchases of treasury bills and bonds, net of deposits by the public sector. Public sector deposits with the banking system also include sinking funds for the service of debt and temporary deposits of government revenues. • **Deposit interest rate** is the rate paid by commercial or similar banks for demand, time, or savings deposits. • **Lending interest rate** is the rate charged by banks on loans to prime customers. • **Real interest rate** is the lending interest rate adjusted for inflation as measured by the GDP deflator.

Data sources

Data on monetary and financial statistics are published by the IMF in its monthly *International Financial Statistics* and annual *International Financial Statistics Yearbook*. The IMF collects data on the financial systems of its member countries. The World Bank receives data from the IMF in electronic files that may contain more recent revisions than the published sources. The discussion of monetary indicators draws from an IMF publication by Marcello Caiola, *A Manual for Country Economists* (1995). Also see the IMF's *Monetary and Financial Statistics Manual* (2000) for guidelines for the presentation of monetary and financial statistics. Data on real interest rates are derived from World Bank data on the GDP deflator.



	Official exchange rate		Purchasing power parity (PPP) conversion factor		Ratio of PPP conversion factor to market exchange rate	Real effective exchange rate	GDP implicit deflator		Consumer price index		Wholesale price index	
	local currency units to \$		local currency units to international \$				average annual % growth		average annual % growth		average annual % growth	
	2006	2007 ^a	1995	2006	2006	Index 2000 = 100 2006	1990-2000	2000-06	1990-2000	2000-06	1990-2000	2000-06
Afghanistan	49.50	..	..	17.5	0.4	..	..	11.8	..	..	..	..
Albania	98.10	83.02	27.1	48.0	0.5	..	38.0	3.8	31.5	3.0	..	5.1
Algeria	72.65	67.07	18.2	39.6	0.5	83.2	18.5	8.1	17.3	2.6	2.1	3.5
Angola	80.37	75.02	0.0	49.4	0.6	..	739.4	67.2	711.0	65.1	..	..
Argentina	3.05	3.12	0.9	1.4	0.5	..	5.2	12.2	8.9	10.9	0.3	19.8
Armenia	416.04	304.10	116.3	181.0	0.4	106.3	212.5	4.2	103.3	3.4	13.2	0.9
Australia	1.33	1.15	1.3	1.4	1.1	124.7	1.5	3.7	2.1	3.0	1.1	3.2
Austria ^b	0.80	0.69	1.0	0.9	1.1	105.4	1.7	1.6	2.2	1.9	0.3	2.2
Azerbaijan	0.89	0.85	0.2	0.3	0.4	..	203.0	7.3	192.4	5.5	..	..
Bangladesh	68.93	68.59	19.2	23.1	0.3	..	4.0	4.1	5.5	5.9	..	..
Belarus	2,144.56	2,153.40	3.5	836.5	0.4	..	355.1	31.3	267.6	25.7	266.4	30.0
Belgium ^b	0.80	0.69	0.9	0.9	1.1	109.4	1.8	2.0	1.9	2.0	1.2	2.0
Benin	522.89	449.94	187.1	225.7	0.4	..	8.7	3.3	8.3	2.7	..	..
Bolivia	8.01	7.65	1.6	2.4	0.3	79.5	8.6	6.0	8.7	3.4	..	..
Bosnia and Herzegovina	1.56	1.34	0.6	0.8	0.5	..	3.3	3.4	..	..	..	..
Botswana	5.84	6.03	1.4	2.7	0.5	..	9.7	6.1	10.4	8.4	..	..
Brazil	2.18	1.79	0.7	1.4	0.6	..	211.9	9.2	199.5	8.4	204.9	13.2
Bulgaria	1.56	1.34	0.0	0.6	0.4	125.4	103.3	4.5	117.5	5.3	85.7	5.0
Burkina Faso	522.89	449.94	184.3	198.9	0.4	..	3.7	3.1	5.5	2.6	..	..
Burundi	1,028.43	1,137.21	126.3	341.2	0.3	73.2	13.4	8.3	16.1	7.3	..	..
Cambodia	4,103.25	3,999.00	1,140.0	1,297.1	0.3	94.3	3.4	3.4	4.9	3.1	..	..
Cameroon	522.89	449.94	236.0	252.4	0.5	113.2	6.3	2.4	6.5	2.1	..	..
Canada	1.13	1.00	1.2	1.2	1.1	126.8	1.5	2.5	1.7	2.3	2.7	1.0
Central African Republic	522.89	449.94	267.5	265.2	0.5	129.3	4.5	2.1	5.3	2.1	6.3	4.4
Chad	522.89	449.94	134.9	221.1	0.4	126.7	7.1	8.8	6.9	2.8	..	..
Chile	530.29	499.28	261.8	361.2	0.7	96.6	7.9	6.8	8.9	2.6	7.0	5.7
China	7.97	7.37	3.3	3.5	0.4	94.4	7.9	3.5	8.6	1.5	..	..
Hong Kong, China	7.77	7.80	8.2	5.5	0.7	..	4.0	-2.9	5.9	-1.0	0.6	0.1
Colombia	2,361.14	2,016.70	484.1	1,104.8	0.5	103.6	21.7	6.7	20.3	6.1	16.4	6.0
Congo, Dem. Rep.	468.28	..	0.0	234.8	0.5	32.8	964.9	35.7	932.8	41.1	..	..
Congo, Rep.	522.89	449.94	153.5	300.1	0.6	..	9.0	4.7	9.6	2.7	0.6	..
Costa Rica	511.30	498.69	106.3	270.2	0.5	92.7	15.9	9.8	15.6	11.2	14.1	11.8
Côte d'Ivoire	522.89	449.94	261.4	294.1	0.6	115.9	9.2	3.1	7.2	3.0	..	..
Croatia	5.84	5.02	3.1	3.9	0.7	111.8	86.0	3.7	86.2	2.5	83.7	2.3
Cuba	..	..	..	..	..	..	2.5	2.6	..	..	..	..
Czech Republic	22.60	18.04	11.2	14.2	0.6	132.3	12.8	2.3	6.9	2.0	8.2	2.0
Denmark	5.95	5.12	8.4	8.4	1.4	108.4	1.6	2.3	2.1	1.9	1.1	1.9
Dominican Republic	33.37	33.76	6.9	18.7	0.6	99.1	9.4	19.0	8.7	19.0	..	..
Ecuador	1.00	1.00	0.4	0.4	0.4	147.1	4.3	10.6	37.1	8.9	..	8.5
Egypt, Arab Rep.	5.73	5.53	1.2	1.7	0.3	..	8.7	6.4	8.8	5.8	6.1	9.5
El Salvador	1.00	1.00	0.4	0.5	0.5	..	6.2	3.2	8.5	3.4	..	3.9
Eritrea	15.38	15.38	1.8	5.2	0.3	..	6.4	15.4	..	..	..	..
Estonia	12.47	10.74	4.6	8.0	0.6	..	53.8	4.0	23.1	3.4	8.2	2.0
Ethiopia	8.70	9.12	2.2	2.4	0.3	100.0	5.8	4.6	5.5	7.1	..	..
Finland ^b	0.80	0.69	1.1	1.0	1.2	104.0	2.0	0.8	1.5	1.1	1.0	1.3
France ^b	0.80	0.69	1.0	0.9	1.1	107.6	1.3	1.9	1.6	1.9	..	1.6
Gabon	522.89	449.94	187.6	268.0	0.5	102.1	7.0	4.3	4.6	1.2	..	..
Gambia, The	28.07	22.24	3.9	7.6	0.3	54.3	4.2	14.3	4.1	10.6	..	..
Georgia	1.78	1.60	0.4	0.8	0.4	..	356.7	6.5	27.1	5.6	..	..
Germany ^b	0.80	0.69	1.0	0.9	1.1	106.7	1.7	0.9	2.1	1.6	0.4	2.4
Ghana	0.92	0.97	573.5	4,133.3	0.5	116.1	26.7	21.1	28.4	18.2	..	..
Greece ^b	0.80	0.69	0.6	0.7	0.9	114.6	9.2	3.4	9.0	3.4	3.0	3.8
Guatemala	7.60	7.63	2.3	4.0	0.5	..	10.4	7.1	10.1	7.2	..	..
Guinea	3,644.33	..	645.8	1,635.0	0.3	..	5.5	17.2	..	..	..	..
Guinea-Bissau	522.89	449.94	116.0	202.6	0.4	..	32.5	0.7	34.0	1.2	..	..
Haiti	40.41	36.22	5.4	17.4	0.4	..	22.8	17.4	21.9	20.4	..	..

Exchange rates and prices

	Official exchange rate		Purchasing power parity (PPP) conversion factor		Ratio of PPP conversion factor to market exchange rate	Real effective exchange rate	GDP implicit deflator		Consumer price index		Wholesale price index	
	local currency units to \$		local currency units to international \$				average annual % growth		average annual % growth		average annual % growth	
	2006	2007 ^a	1995	2006			2006	2006	1990–2000	2000–06	1990–2000	2000–06
Honduras	18.90	18.90	2.8	7.1	0.4	..	18.9	7.8	22.8	8.0	..	..
Hungary	210.39	173.86	60.2	129.1	0.6	127.0	19.6	5.3	20.3	5.4	16.8	2.9
India	45.31	39.44	11.2	15.1	0.3	..	8.1	4.2	9.1	4.2	7.4	4.9
Indonesia	9,159.32	9,333.60	1,025.3	4,332.6	0.5	..	15.8	9.6	13.7	9.3	15.4	8.6
Iran, Islamic Rep.	9,170.94	9,368.13	564.5	2,877.9	0.3	135.2	27.7	17.4	26.0	14.1	28.4	10.2
Iraq	1,467.42	..	..	558.7	..	..	13.9	0.3	..	..	..	..
Ireland ^b	0.80	0.69	0.8	1.0	1.3	125.9	3.5	3.3	2.3	3.4	1.6	0.1
Israel	4.46	3.90	3.1	3.7	0.8	78.0	10.8	1.3	9.7	1.6	8.1	4.5
Italy ^b	0.80	0.69	0.8	0.9	1.1	110.8	3.8	2.8	3.7	2.4	2.9	2.4
Jamaica	65.74	71.17	14.2	32.6	0.5	..	23.0	10.0	23.5	10.8	..	..
Japan	116.30	112.25	174.9	124.5	1.1	72.0	0.1	−1.3	0.8	−0.3	−0.9	0.0
Jordan	0.71	0.71	0.4	0.4	0.6	..	3.2	2.6	3.5	2.9	..	8.2
Kazakhstan	126.09	120.78	17.4	67.9	0.5	..	204.7	13.5	86.7	7.1	12.6	11.5
Kenya	72.10	63.30	15.4	30.6	0.4	..	16.6	5.3	15.6	8.9	..	..
Korea, Dem. Rep.	..	..	..	..	..	..	..	..	..	..	..	..
Korea, Rep.	954.79	930.76	735.8	761.8	0.8	..	5.7	2.0	5.1	3.2	3.6	2.3
Kuwait	0.29	0.27	0.1	0.2	0.7	..	0.8	8.3	2.0	1.8	1.4	2.3
Kyrgyz Republic	40.15	35.01	3.5	12.0	0.3	..	110.6	5.3	18.1	4.0	36.0	7.2
Lao PDR	10,159.92	9,541.42	308.9	3,032.3	0.3	..	27.0	10.3	28.2	10.3	..	..
Latvia	0.56	0.48	0.2	0.3	0.6	..	48.0	6.1	33.8	4.5	15.2	5.3
Lebanon	1,507.50	1,507.50	841.3	867.1	0.6	..	17.8	1.7	21.3	..	..	..
Lesotho	6.77	6.81	2.1	3.5	0.5	129.4	9.8	5.5	9.9	8.1	..	..
Liberia	58.01	60.77	0.6	30.6	0.5	..	51.8	10.1	..	..	..	..
Libya	1.31	1.22	..	0.9	0.7	..	..	22.8	5.6	−3.0	..	..
Lithuania	2.75	2.37	1.2	1.5	0.6	..	75.1	2.0	40.5	1.1	32.6	3.5
Macedonia, FYR	48.80	42.02	17.1	19.0	0.4	100.0	79.3	2.3	14.4	1.8	10.9	0.7
Madagascar	2,142.30	1,792.15	286.8	700.4	0.3	..	19.1	11.5	18.7	10.5	..	..
Malawi	136.01	140.17	3.9	45.3	0.3	73.3	33.6	23.6	33.8	13.8	..	..
Malaysia	3.67	3.33	1.4	1.7	0.5	99.0	3.9	4.9	3.6	1.9	3.4	4.3
Mali	522.89	449.94	226.3	242.2	0.5	..	7.0	3.7	5.2	1.7	..	..
Mauritania	265.53	..	62.2	124.3	0.5	..	8.7	11.4	6.1	7.3	..	..
Mauritius	31.71	29.04	10.5	14.8	0.5	..	6.4	5.4	6.9	5.4	..	..
Mexico	10.90	10.85	2.7	7.2	0.7	..	19.0	6.7	19.4	4.7	18.4	6.5
Moldova	13.13	11.29	1.2	4.8	0.4	102.9	119.6	10.9	14.5	10.7	..	..
Mongolia	1,165.37	1,187.63	158.3	497.8	0.4	..	57.8	13.3	39.8	6.5	..	..
Morocco	8.80	7.78	4.9	4.8	0.5	92.9	4.0	1.0	3.8	1.7	2.9	−0.6
Mozambique	25.40	25.84	3,938.1	11,203.4	0.4	..	34.7	8.0	31.8	12.2	..	..
Myanmar	5.78	5.45	40.9	254.4	..	..	25.5	21.1	25.9	23.7	..	..
Namibia	6.77	6.81	2.5	4.5	0.7	..	10.4	5.2	..	4.3	..	..
Nepal	72.76	63.63	15.5	23.4	0.3	..	8.0	5.2	8.7	4.7	..	..
Netherlands ^b	0.80	0.69	0.9	0.9	1.1	111.9	2.1	2.3	2.4	2.2	1.3	2.3
New Zealand	1.54	1.30	1.5	1.5	1.0	128.1	1.7	2.4	1.7	2.5	1.4	2.5
Nicaragua	17.57	18.87	3.0	6.0	0.3	88.2	42.4	7.2	..	7.4	..	..
Niger	522.89	449.94	203.1	221.8	0.4	..	6.0	2.3	6.1	2.0	..	..
Nigeria	128.65	118.21	17.3	63.0	0.5	133.1	29.5	15.8	32.5	14.6	..	..
Norway	6.41	5.50	7.0	9.2	1.4	111.3	2.7	3.9	2.2	1.7	1.6	5.8
Oman	0.39	0.39	0.2	0.2	0.6	..	0.1	4.3	..	0.7	..	..
Pakistan	60.27	61.22	10.1	20.2	0.3	97.0	11.1	6.1	9.7	5.6	10.4	6.7
Panama	1.00	1.00	0.5	0.6	0.6	..	3.6	1.7	1.1	1.1	1.0	2.0
Papua New Guinea	3.06	2.83	0.8	1.5	0.5	101.3	7.0	7.9	9.3	7.1	..	..
Paraguay	5,635.46	4,731.70	966.4	2,153.9	0.4	88.1	11.5	10.9	13.1	8.8	5.8	13.1
Peru	3.27	2.98	1.2	1.5	0.5	..	26.7	3.4	27.3	2.0	23.7	2.2
Philippines	51.31	41.74	14.1	22.2	0.4	102.5	8.3	5.3	7.7	5.3	5.0	9.0
Poland	3.10	2.48	1.2	1.9	0.6	109.8	24.7	2.3	25.3	2.3	19.8	2.8
Portugal ^b	0.80	0.69	0.6	0.7	0.9	111.5	5.2	3.1	4.5	3.0	..	2.3
Puerto Rico	1.00	1.00	..	..	..	..	3.0	..	..	..	..	..



4.14

Exchange rates and prices

	Official exchange rate		Purchasing power parity (PPP) conversion factor		Ratio of PPP conversion factor to market exchange rate	Real effective exchange rate	GDP implicit deflator		Consumer price index		Wholesale price index	
	local currency units to \$		local currency units to international \$				average annual % growth		average annual % growth		average annual % growth	
	2006	2007 ^a	1995	2006	2006	Index 2000 = 100	1990-2000	2000-06	1990-2000	2000-06	1990-2000	2000-06
Romania	2.81	2.43	0.1	1.5	0.5	128.9	98.0	19.6	100.5	15.6	93.8	19.3
Russian Federation	27.19	24.57	1.5	14.3	0.5	163.4	161.5	17.0	108.0	13.6	110.8	17.2
Rwanda	551.71	..	133.6	196.9	0.4	..	14.6	6.6	15.8	7.4	..	..
Saudi Arabia	3.75	3.75	1.8	2.5	0.7	81.7	1.6	7.5	1.0	0.5	1.3	1.5
Senegal	522.89	449.94	252.4	250.9	0.5	..	6.0	1.7	5.4	1.4	..	..
Serbia	67.15	54.68	..	30.5	0.5	..	..	21.9	42.4	20.3	..	..
Sierra Leone	2,961.91	2,982.38	382.8	1,188.0	0.4	73.5	32.1	8.3	29.3	7.3	..	..
Singapore	1.59	1.45	1.3	1.0	0.7	94.3	1.3	0.2	1.7	0.7	-1.0	3.3
Slovak Republic	29.70	22.64	12.6	17.1	0.6	142.7	11.2	4.4	7.4	5.8	9.5	5.3
Slovenia	191.03 ^c	0.69 ^d	96.0	145.8	0.8	..	28.7	4.8	11.9	4.9	9.0	4.1
Somalia	..	..	..	..	..	..	..	..	..	..	..	..
South Africa	6.77	6.81	2.3	4.0	0.6	104.2	9.9	6.5	8.7	4.9	7.4	5.2
Spain ^b	0.80	0.69	0.7	0.8	1.0	114.9	3.9	4.1	3.8	3.2	2.4	2.8
Sri Lanka	103.91	109.13	18.9	37.6	0.4	..	9.1	8.8	9.9	9.7	8.1	9.7
Sudan	217.15	2.03	15.3	111.6	0.5	..	76.8	9.8	71.9	7.8	..	..
Swaziland	6.77	6.81	1.6	3.4	0.5	..	12.5	8.4	9.4	6.5	..	..
Sweden	7.38	6.47	10.0	9.1	1.2	96.8	2.2	1.4	1.9	1.4	2.4	2.2
Switzerland	1.25	1.14	2.0	1.7	1.4	101.7	1.0	0.9	1.6	0.9	-0.4	0.6
Syrian Arab Republic	11.23	11.23	12.7	20.8	0.4	..	7.9	6.0	6.4	4.8	4.7	2.2
Tajikistan	3.30	3.46	0.0	0.9	0.3	..	235.0	20.3	..	..	..	..
Tanzania	1,251.90	1,158.93	172.6	407.6	0.3	..	21.6	7.3	20.9	3.7	..	..
Thailand	37.88	33.66	15.1	16.2	0.4	..	4.2	2.7	4.9	2.6	3.8	5.2
Timor-Leste	..	..	..	0.2	..	..	..	1.5	..	..	..	..
Togo	522.89	449.94	238.0	232.0	0.4	112.4	7.0	0.7	8.5	2.3	..	..
Trinidad and Tobago	6.31	6.31	3.7	4.9	0.8	112.6	5.4	4.8	5.7	5.1	2.8	2.0
Tunisia	1.33	1.23	0.5	0.6	0.4	84.6	4.4	2.4	4.4	2.9	3.6	3.5
Turkey	1.43	1.18	0.0	0.9	0.7	..	76.1	21.7	79.9	23.5	..	9.5
Turkmenistan	..	..	..	4,306.3	0.4	..	408.0	..	..	..	..	..
Uganda	1,831.45	1,747.17	483.6	644.1	0.4	87.8	11.8	5.5	10.5	4.7	..	..
Ukraine	5.05	5.05	0.3	1.9	0.4	110.7	271.0	12.6	190.4	7.8	198.5	11.4
United Arab Emirates	3.67	3.67	2.7	3.5	0.9	..	2.2	4.9	..	..	..	..
United Kingdom	0.54	0.49	0.6	0.6	1.2	103.1	2.9	2.7	2.9	2.6	2.4	1.6
United States	1.00	1.00	1.0	1.0	1.0	92.4	2.0	2.5	2.7	2.6	1.2	3.9
Uruguay	24.07	21.69	5.7	13.7	0.6	78.1	31.1	10.0	33.9	10.5	27.2	17.1
Uzbekistan	..	..	11.1	356.9	0.3	..	245.8	27.7	..	..	..	..
Venezuela, RB	2,147.00	2,147.00	72.7	1,306.5	0.6	73.4	45.3	28.2	49.0	20.8	44.1	29.6
Vietnam	15,994.25	..	3,162.7	4,899.4	0.3	..	15.2	6.3	3.3	5.2	..	..
West Bank and Gaza	..	..	1.1	1.3	0.3	..	4.9	3.2	4.0	3.8	..	..
Yemen, Rep.	197.05	199.33	21.8	76.3	0.4	..	22.4	13.0	26.3	12.8	..	..
Zambia	3,603.07	3,834.24	396.9	2,625.9	0.7	176.7	52.1	19.4	57.0	18.9	68.8	..
Zimbabwe	22,364.00	255.00	25.7	33,068.2	1.5	..	26.7	232.0	29.0	296.4	25.3	..

Note: The differences in the growth rates of the GDP deflator and consumer and wholesale price indexes are due mainly to data availability of each of the indexes during the period.

a. December or latest monthly data available. b. As members of the euro area, these countries share a single currency, the euro. c. Tolars. d. Euros.

Exchange rates and prices

About the data

In a market-based economy household, producer, and government choices about resource allocation are influenced by relative prices, including the real exchange rate, real wages, real interest rates, and other prices in the economy. Relative prices also largely reflect these agents' choices. Thus relative prices convey vital information about the interaction of economic agents in an economy and with the rest of the world.

The exchange rate is the price of one currency in terms of another. Official exchange rates and exchange rate arrangements are established by governments. Other exchange rates recognized by governments include market rates, which are determined largely by legal market forces, and for countries with multiple exchange arrangements, principal rates, secondary rates, and tertiary rates. (Also see *Statistical methods* for alternative conversion factors in the *World Bank Atlas* method of calculating gross national income (GNI) per capita in U.S. dollars.)

Official or market exchange rates are often used to compare prices across currencies. Since rates reflect at best the relative prices of tradable goods, the volume of goods and services that a U.S. dollar buys in the United States may not correspond to what a U.S. dollar converted to another country's currency at the official exchange rate would buy in that country. Since identical volumes of goods and services in different countries correspond to different values (and vice versa) when official exchange rates are used, an alternative method to compare prices across countries converts national currency estimates of GNI to a common unit of account using conversion factors that reflect equivalent purchasing power. Based on price and expenditure surveys conducted by the International Comparison Program, purchasing power parity (PPP) conversion factors are applied to equalize price levels across countries. See *About the data* for table 1.1 for further discussion.

The ratio of the PPP conversion factor to the market exchange rate—or the national price level—allows comparison of the cost of the bundle of goods that make up gross domestic product (GDP) across countries. The market exchange rate (or alternative conversion factor) is the official exchange rate adjusted by World Bank staff for some countries to reflect actual price changes. National price levels vary systematically, rising with GNI per capita. The real effective exchange rate is a nominal effective exchange rate index adjusted for relative movements in national price or cost indicators of the home country, selected countries, and the euro area. A nominal effective exchange rate index is the ratio (expressed on the base 2000 = 100) of an index of a currency's period-average exchange rate to a weighted geometric average of exchange rates for currencies of selected

countries and the euro area. For most high-income countries weights are derived from industrial country trade in manufactured goods. Data are compiled from the nominal effective exchange rate index and a cost indicator of relative normalized unit labor costs in manufacturing. For selected other countries the nominal effective exchange rate index is based on manufactured goods and primary products trade with partner or competitor countries. For these countries the real effective exchange rate index is the nominal index adjusted for relative changes in consumer prices; an increase represents an appreciation of the local currency. Because of conceptual and data limitations, changes in real effective exchange rates should be interpreted with caution.

Inflation is measured by the rate of increase in a price index, but actual price change can be negative. The index used depends on the prices being examined. The GDP deflator reflects price changes for total GDP. The most general measure of the overall price level, it accounts for changes in government consumption, capital formation (including inventory appreciation), international trade, and the main component, household final consumption expenditure. The GDP deflator is usually derived implicitly as the ratio of current to constant price GDP—or a Paasche index. It is defective as a general measure of inflation for policy use because of long lags in deriving estimates and because it is often an annual measure.

Consumer price indexes are produced more frequently and so are more current. They are also constructed explicitly, based on surveys of the cost of a defined basket of consumer goods and services. Nevertheless, consumer price indexes should be interpreted with caution. The definition of a household, the basket of goods, and the geographic (urban or rural) and income group coverage of consumer price surveys can vary widely by country. In addition, weights are derived from household expenditure surveys, which, for budgetary reasons, tend to be conducted infrequently in developing countries, impairing comparability over time. Although useful for measuring consumer price inflation within a country, consumer price indexes are of less value in comparing countries.

Wholesale price indexes are based on the prices of commodities that are significant in a country's output or consumption at the first commercial transaction. Prices are farm-gate prices for agricultural commodities and ex-factory prices for industrial goods. Preference is given to indexes with the broadest coverage of the economy.

The least-squares method is used to calculate growth rates of the GDP implicit deflator, consumer price index, and wholesale price index.

Definitions

- **Official exchange rate** is the exchange rate determined by national authorities or the rate determined in the legally sanctioned exchange market. It is calculated as an annual average based on monthly averages (local currency units relative to the U.S. dollar).
- **Purchasing power parity (PPP) conversion factor** is the number of units of a country's currency required to buy the same amount of goods and services in the domestic market that a U.S. dollar would buy in the United States.
- **Ratio of PPP conversion factor to market exchange rate** is the result obtained by dividing the PPP conversion factor by the market exchange rate.
- **Real effective exchange rate** is the nominal effective exchange rate (a measure of the value of a currency against a weighted average of several foreign currencies) divided by a price deflator or index of costs.
- **GDP implicit deflator** measures the average annual rate of price change in the economy as a whole for the periods shown.
- **Consumer price index** reflects changes in the cost to the average consumer of acquiring a basket of goods and services that may be fixed or may change at specified intervals, such as yearly. The Laspeyres formula is generally used.
- **Wholesale price index** refers to a mix of agricultural and industrial goods at various stages of production and distribution, including import duties. The Laspeyres formula is generally used.

Data sources

Data on official and real effective exchange rates and consumer and wholesale price indexes are from the International Monetary Fund's *International Financial Statistics*. PPP conversion factors and GDP deflators are from the World Bank's data files.



Balance of payments current account

	Goods and services				Net income		Net current transfers		Current account balance		Total reserves ^a	
	\$ millions				\$ millions		\$ millions		\$ millions		\$ millions	
	Exports		Imports									
	1995	2006	1995	2006	1995	2006	1995	2006	1995	2006	1995	2006
Afghanistan	..	..	..	..	..	..	..	..	..	..	..	..
Albania	304	2,297	836	4,500	44	263	477	1,270	-12	-671	265	1,813
Algeria	..	..	..	..	..	..	..	..	..	..	4,164	81,463
Angola	3,836	33,346	3,519	16,289	-767	-6,178	156	-190	-295	10,690	213	8,599
Argentina	24,987	54,123	26,066	41,088	-4,636	-5,440	597	497	-5,118	8,092	15,979	32,022
Armenia	300	1,510	726	2,536	40	215	168	694	-218	-117	111	1,072
Australia	69,710	158,002	74,841	166,759	-14,036	-32,076	-109	-213	-19,277	-41,046	14,952	55,079
Austria	89,906	179,503	92,055	166,059	-1,597	-1,830	-1,702	-1,355	-5,448	10,259	23,369	12,911
Azerbaijan	785	13,955	1,290	8,133	-6	-2,681	111	566	-401	3,708	121	2,500
Bangladesh	4,431	12,888	7,589	16,784	68	-841	2,265	5,933	-824	1,196	2,376	3,877
Belarus	5,269	22,137	5,752	23,723	-51	-107	76	182	-458	-1,512	377	1,417
Belgium	190,686 ^b	340,727	178,798 ^b	330,926	6,808 ^b	7,531	-4,463 ^b	-6,661	14,232 ^b	10,671	24,120	13,437
Benin	614	772	895	1,145	-8	-18	121	164	-167	-226	198	912
Bolivia	1,234	4,297	1,574	3,437	-207	-364	244	822	-303	1,319	1,005	3,194
Bosnia and Herzegovina	..	4,496	..	8,187	..	409	..	2,049	..	-1,233	80	3,372
Botswana	2,421	5,292	2,050	3,451	-32	-772	-39	871	300	1,940	4,695	7,992
Brazil	52,641	157,270	63,293	120,466	-11,105	-27,489	3,621	4,306	-18,136	13,621	51,477	85,843
Bulgaria	6,776	20,108	6,502	25,985	-432	47	132	821	-26	-5,010	1,635	11,756
Burkina Faso	272	..	483	..	-29	..	255	..	15	..	347	555
Burundi	129	93	259	448	-13	-9	153	229	10	-135	216	131
Cambodia	969	4,989	1,375	5,539	-57	-290	277	503	-186	-337	192	1,411
Cameroon	2,040	3,630	1,608	3,970	-412	-443	69	176	90	-608	15	1,735
Canada	219,501	461,118	200,991	429,289	-22,721	-10,416	-117	-616	-4,328	20,797	16,369	35,063
Central African Republic	179	..	244	..	-23	..	63	..	-25	..	238	132
Chad	190	..	411	..	-7	..	191	..	-38	..	147	632
Chile	19,358	65,620	18,301	44,329	-2,714	-19,392	307	3,357	-1,350	5,256	14,860	19,397
China [†]	147,240	1,061,682	135,282	852,769	-11,774	11,755	1,435	29,199	1,618	249,866	80,288	1,080,756
Hong Kong, China	..	389,883	..	368,167	..	657	..	-2,222	..	20,151	55,424	133,211
Colombia	12,294	28,554	16,012	30,352	-1,596	-6,003	799	4,743	-4,516	-3,057	8,452	15,437
Congo, Dem. Rep.	..	..	..	..	..	..	..	..	..	..	157	..
Congo, Rep.	1,374	4,964	1,346	2,917	-695	-1,122	42	-22	-625	903	64	1,848
Costa Rica	4,451	11,023	4,717	12,422	-226	-68	134	349	-358	-1,118	1,060	3,117
Côte d'Ivoire	4,337	9,010	3,806	7,256	-787	-728	-237	-496	-492	529	529	1,798
Croatia	6,972	21,454	9,106	24,678	-53	-1,384	802	1,389	-1,385	-3,220	1,896	11,488
Cuba	..	..	..	..	..	..	..	..	..	..	..	..
Czech Republic	28,202	108,450	30,044	103,940	-104	-8,204	572	-891	-1,374	-4,586	14,613	31,457
Denmark	65,655	143,295	57,860	134,061	-4,549	2,611	-1,391	-4,506	1,855	7,339	11,652	31,084
Dominican Republic	5,731	10,664	6,137	12,748	-769	-1,735	992	3,033	-183	-786	373	2,127
Ecuador	5,196	14,141	5,708	13,737	-930	-1,950	442	3,049	-1,000	1,503	1,788	2,027
Egypt, Arab Rep.	13,260	36,680	17,140	40,553	-405	738	4,031	5,770	-254	2,635	17,122	26,007
El Salvador	2,040	5,070	3,623	8,741	-67	-519	1,389	3,335	-262	-855	940	1,963
Eritrea	135	..	498	..	8	..	324	..	-32	..	40	25
Estonia	2,573	13,128	2,860	14,833	3	-751	126	11	-158	-2,446	583	2,786
Ethiopia	768	2,199	1,446	5,276	-19	18	736	1,274	39	-1,786	815	833
Finland	47,973	93,630	37,705	81,955	-4,440	885	-597	-1,682	5,231	10,878	10,657	7,499
France	362,717	601,590	333,746	628,801	-8,964	26,452	-9,167	-27,555	10,840	-28,315	58,510	98,239
Gabon	2,945	4,228	1,723	2,155	-665	-965	-42	-184	515	924	153	1,122
Gambia, The	177	201	232	316	-5	-38	52	87	-8	-66	106	121
Georgia	575	2,567	1,413	4,413	127	169	197	522	-514	-1,154	199	931
Germany	603,815	1,304,419	592,056	1,149,108	-2,737	28,805	-38,769	-33,370	-29,746	150,745	121,816	111,637
Ghana	1,582	5,125	2,120	8,286	-129	-127	523	2,248	-144	-1,040	804	2,269
Greece	15,523	56,063	24,711	80,952	-1,684	-8,958	8,008	4,282	-2,864	-29,565	16,119	2,850
Guatemala	2,823	7,420	3,728	12,750	-159	-379	491	4,117	-572	-1,592	783	4,055
Guinea	700	811	1,011	964	-85	-27	179	18	-216	-162	87	97
Guinea-Bissau	30	83	89	127	-21	-10	46	67	-35	14	20	82
Haiti	192	698	802	2,086	-31	7	553	1,382	-87	1	199	254
[†] Data for Taiwan, China	128,369	253,061	124,171	234,046	4,188	9,581	-2,912	-3,935	5,474	24,661	95,559	274,800

Balance of payments current account

4.15 **ECONOMY**

	Goods and services				Net income		Net current transfers		Current account balance		Total reserves ^a	
	\$ millions				\$ millions		\$ millions		\$ millions		\$ millions	
	Exports		Imports									
	1995	2006	1995	2006	1995	2006	1995	2006	1995	2006	1995	2006
Honduras	1,635	3,796	1,852	6,055	-226	-287	243	2,352	-201	-195	270	2,642
Hungary	19,765	87,643	19,916	87,169	-1,701	-8,344	203	449	-1,650	-7,421	12,017	21,590
India	38,013	198,971	48,225	230,232	-3,734	-4,264	8,382	26,109	-5,563	-9,415	22,865	178,050
Indonesia	52,923	115,032	54,461	95,493	-5,874	-14,465	981	4,863	-6,431	9,937	14,908	42,597
Iran, Islamic Rep.	18,953	..	15,113	..	-478	..	-4	..	3,358	..	..	..
Iraq	..	..	..	..	..	..	..	..	..	..	8,347	19,655
Ireland	49,439	173,857	42,169	151,307	-7,325	-31,101	1,776	-544	1,721	-9,095	8,770	832
Israel	27,482	62,992	35,290	61,892	-2,655	-576	5,673	7,466	-4,790	7,990	8,123	29,153
Italy	295,618	515,634	250,319	529,153	-15,644	-17,118	-4,579	-16,675	25,076	-47,312	60,690	75,773
Jamaica	3,394	4,782	3,729	7,098	-371	-603	607	1,749	-99	-1,170	681	2,318
Japan	493,991	733,111	419,556	670,065	44,285	118,156	-7,676	-10,684	111,044	170,517	192,620	895,321
Jordan	3,479	7,693	4,903	12,972	-279	581	1,444	2,790	-259	-1,909	2,279	6,982
Kazakhstan	5,975	41,570	6,102	32,840	-146	-9,317	59	-1,207	-213	-1,795	1,660	19,127
Kenya	2,948	5,963	3,542	8,200	-325	-70	518	1,781	-400	-526	384	2,416
Korea, Dem. Rep.	..	..	..	..	..	..	..	..	..	..	..	..
Korea, Rep.	147,761	383,718	155,104	373,268	-1,303	-539	-19	-3,820	-8,665	6,092	32,804	239,148
Kuwait	14,215	65,610	12,615	24,542	4,881	13,385	-1,465	-3,457	5,016	50,996	4,543	14,180
Kyrgyz Republic	448	1,185	726	2,253	-35	-34	79	716	-235	-386	134	817
Lao PDR	408	..	748	..	-6	..	110	..	-237	..	99	460
Latvia	2,088	8,783	2,193	13,251	19	-532	71	479	-16	-4,522	602	4,511
Lebanon	..	14,417	..	17,253	..	210	..	1,280	..	-1,347	8,100	19,239
Lesotho	199	754	1,046	1,456	314	379	210	390	-323	67	457	658
Liberia	..	..	..	..	..	..	..	..	..	..	28	72
Libya	7,513	37,962	5,755	15,783	133	-595	-220	586	1,672	22,170	7,415	62,229
Lithuania	3,191	17,774	3,902	20,900	-13	-817	109	725	-614	-3,218	829	5,773
Macedonia, FYR	1,302	2,998	1,773	4,258	-30	-3	213	1,239	-288	-24	275	1,889
Madagascar	749	1,332	987	2,042	-167	-80	129	236	-276	-554	109	583
Malawi	470	..	660	..	-44	..	157	..	-78	..	115	142
Malaysia	83,369	182,673	86,851	147,865	-4,144	-4,729	-1,017	-4,591	-8,644	25,488	24,699	82,876
Mali	529	1,375	991	1,833	-41	-207	219	228	-284	-438	323	970
Mauritania	504	..	510	..	-48	..	76	..	22	..	90	..
Mauritius	2,349	4,004	2,454	4,736	-19	50	101	71	-22	-611	887	1,309
Mexico	89,321	266,390	82,168	278,963	-12,689	-13,544	3,960	24,124	-1,576	-1,993	17,046	76,329
Moldova	884	1,542	1,006	3,129	-18	401	56	800	-85	-387	257	775
Mongolia	508	2,031	521	1,880	-25	-145	77	215	39	222	158	1,062
Morocco	9,044	21,751	11,243	25,811	-1,318	-421	2,330	6,333	-1,186	1,851	3,874	20,791
Mozambique	411	2,767	1,055	3,407	-140	-496	339	501	-445	-634	195	1,216
Myanmar	1,307	4,834	2,020	2,906	-110	-1,248	562	122	-261	802	651	1,383
Namibia	1,734	3,177	2,100	2,974	139	-85	403	946	176	1,064	221	450
Nepal	1,029	1,234	1,624	2,934	9	62	230	1,787	-356	150	646	1,565
Netherlands	241,517	469,195	216,558	421,267	7,247	20,371	-6,434	-12,504	25,773	55,795	47,162	23,902
New Zealand	17,882	30,364	17,248	32,376	-3,957	-7,878	255	509	-3,068	-9,381	4,410	14,068
Nicaragua	662	2,319	1,150	3,905	-372	-124	138	856	-722	-855	142	922
Niger	321	565	457	1,049	-47	-10	31	182	-152	-312	95	371
Nigeria	12,342	52,233	12,841	24,609	-2,878	-6,732	799	3,310	-2,578	24,202	1,709	42,735
Norway	56,058	155,654	46,848	94,494	-1,919	-2,574	-2,059	-3,372	5,233	55,213	22,976	56,842
Oman	6,078	22,499	5,035	13,636	-374	-1,698	-1,469	-2,788	-801	4,377	1,943	5,014
Pakistan	10,214	20,507	14,185	35,112	-1,939	-3,129	2,562	10,940	-3,349	-6,795	2,528	12,878
Panama	7,610	12,415	7,768	11,928	-466	-1,298	153	258	-471	-552	781	1,335
Papua New Guinea	2,992	3,580	1,905	2,692	-488	-538	75	291	674	640	267	1,441
Paraguay	4,802	5,645	5,200	6,197	110	-51	195	386	-92	-217	1,106	1,702
Peru	6,622	26,251	9,597	18,266	-2,482	-7,581	832	2,185	-4,625	2,589	8,653	17,442
Philippines	26,795	52,979	33,317	59,463	3,662	-799	880	13,180	-1,980	5,897	7,781	22,963
Poland	35,716	138,052	33,825	142,839	-1,995	-14,500	958	8,203	854	-11,084	14,957	48,474
Portugal	32,260	61,387	39,545	76,063	21	-6,753	7,132	3,147	-132	-18,281	22,063	9,883
Puerto Rico	..	..	..	..	..	..	..	..	..	..	..	..



	Goods and services				Net income		Net current transfers		Current account balance		Total reserves ^a	
	\$ millions				\$ millions		\$ millions		\$ millions		\$ millions	
	Exports		Imports									
	1995	2006	1995	2006	1995	2006	1995	2006	1995	2006	1995	2006
Romania	9,404	39,368	11,306	54,199	-241	-4,079	369	6,125	-1,774	-12,785	2,624	30,206
Russian Federation	92,987	334,853	82,809	209,431	-3,369	-29,628	156	-1,537	6,965	94,257	18,024	303,773
Rwanda	75	276	374	731	7	-21	350	296	57	-180	99	440
Saudi Arabia	53,450	218,602	44,874	104,466	2,800	641	-16,694	-15,711	-5,318	99,066	10,399	30,445
Senegal	1,506	2,180	1,821	3,194	-124	-131	195	632	-244	-513	272	1,334
Serbia	..	..	..	..	..	..	..	..	..	..	..	11,889
Sierra Leone	128	313	260	434	-30	-41	43	62	-118	-101	35	184
Singapore	157,658	334,055	144,520	292,161	2,130	-4,185	-894	-1,383	14,373	36,326	68,816	136,259
Slovak Republic	10,969	..	10,658	..	-14	..	93	..	390	..	3,863	13,364
Slovenia	10,377	25,741	10,749	26,109	201	-506	95	-214	-75	-1,088	1,821	7,139
Somalia	..	..	..	..	..	..	..	..	..	..	..	..
South Africa	34,402	75,855	33,375	84,232	-2,875	-5,293	-645	-2,817	-2,493	-16,487	4,464	25,593
Spain	133,910	322,761	135,000	395,527	-5,402	-26,454	4,525	-7,125	-1,967	-106,344	40,531	19,340
Sri Lanka	4,617	8,508	5,982	11,621	-137	-388	732	2,169	-770	-1,334	2,112	2,943
Sudan	681	5,862	1,238	9,894	-3	-2,014	60	1,324	-500	-4,722	2	1,660
Swaziland	1,020	2,259	1,274	2,329	81	1	144	168	-30	98	298	373
Sweden	95,525	199,130	81,142	167,115	-6,473	1,095	-2,970	-4,696	4,940	28,413	25,870	28,017
Switzerland	123,320	219,219	108,916	190,987	10,708	36,938	-4,409	-10,321	20,703	54,849	68,620	64,461
Syrian Arab Republic	5,757	13,169	5,541	11,879	-560	-935	607	565	263	920	..	..
Tajikistan	..	1,646	..	2,349	..	-64	..	746	..	-21	39	204
Tanzania	1,265	3,206	2,139	5,113	-110	-85	395	550	-590	-1,442	270	2,259
Thailand	70,292	152,059	82,246	146,408	-2,114	-6,844	487	3,368	-13,582	2,175	36,939	67,008
Timor-Leste	..	..	..	..	..	..	..	..	..	..	..	..
Togo	465	837	671	1,451	-34	-35	118	188	-122	-461	130	375
Trinidad and Tobago	2,799	10,569	2,110	6,265	-390	-760	-4	50	294	3,594	379	6,608
Tunisia	7,979	15,802	8,811	16,489	-716	-1,586	774	1,639	-774	-634	1,689	6,912
Turkey	36,581	116,484	40,113	144,361	-3,204	-6,584	4,398	1,687	-2,338	-32,774	13,891	63,265
Turkmenistan	1,774	..	1,796	..	17	..	5	..	0	..	1,168	..
Uganda	664	1,494	1,490	3,229	-96	-225	639	1,720	-281	-240	459	1,811
Ukraine	17,090	50,239	18,280	53,307	-434	-1,722	472	3,173	-1,152	-1,617	1,069	22,360
United Arab Emirates	..	..	..	..	..	..	..	..	..	..	7,778	27,617
United Kingdom	322,114	679,164	327,000	768,279	3,393	33,509	-11,943	-21,943	-13,436	-77,548	49,144	47,039
United States	794,397	1,445,702	890,784	2,204,226	20,899	36,633	-38,073	-89,595	-113,561	-811,486	175,996	221,089
Uruguay	3,507	5,660	3,568	5,762	-227	-469	76	134	-213	-436	1,813	3,091
Uzbekistan	..	..	..	..	..	..	..	..	..	..	..	..
Venezuela, RB	20,753	66,782	16,905	38,503	-1,943	-1,092	109	-38	2,014	27,149	10,715	36,715
Vietnam	9,498	36,618	12,334	38,562	-384	-1,219	1,200	3,380	-2,020	217	1,324	13,384
West Bank and Gaza	..	..	..	..	..	..	..	..	..	..	..	..
Yemen, Rep.	2,160	7,865	2,471	7,781	-561	-1,234	1,056	1,356	184	206	638	7,543
Zambia	1,222	4,125	1,338	3,222	-249	-124	182	171	-182	950	223	720
Zimbabwe	2,344	..	2,515	..	-294	..	40	..	-425	..	888	..
World	6,395,987 t	14,635,235 t	6,247,521 t	14,403,234 t								
Low income	111,208	453,874	145,057	504,594								
Middle income	1,085,148	3,830,081	1,112,568	3,340,141								
Lower middle income	485,240	1,991,516	508,950	1,683,108								
Upper middle income	598,809	1,861,137	604,464	1,666,426								
Low & middle income	1,196,157	4,281,393	1,256,657	3,837,134								
East Asia & Pacific	397,583	1,632,160	413,802	1,371,821								
Europe & Central Asia	269,117	1,014,166	278,118	973,486								
Latin America & Carib.	272,866	760,863	288,144	692,844								
Middle East & N. Africa	..	..	108,418	257,095								
South Asia	58,893	243,917	78,652	300,538								
Sub-Saharan Africa	89,634	230,089	97,459	248,989								
High income	5,194,902	10,422,094	4,989,710	10,616,832								
Euro area	2,090,190	4,175,306	1,968,796	4,061,245								

a. International reserves including gold valued at London gold price. b. Includes Luxembourg.

About the data

The balance of payments records an economy's transactions with the rest of the world. Balance of payments accounts are divided into two groups: the current account, which records transactions in goods, services, income, and current transfers, and the capital and financial account, which records capital transfers, acquisition or disposal of non-produced, nonfinancial assets, and transactions in financial assets and liabilities. The table presents data from the current account plus gross international reserves.

The balance of payments is a double-entry accounting system that shows all flows of goods and services into and out of an economy; all transfers that are the counterpart of real resources or financial claims provided to or by the rest of the world without a quid pro quo, such as donations and grants; and all changes in residents' claims on and liabilities to nonresidents that arise from economic transactions. All transactions are recorded twice—once as a credit and once as a debit. In principle the net balance should be zero, but in practice the accounts often do not balance, requiring inclusion of a balancing item, net errors and omissions.

Discrepancies may arise in the balance of payments because there is no single source for balance of payments data and therefore no way to ensure that the data are fully consistent. Sources include customs data, monetary accounts of the banking

system, external debt records, information provided by enterprises, surveys to estimate service transactions, and foreign exchange records. Differences in collection methods—such as in timing, definitions of residence and ownership, and the exchange rate used to value transactions—contribute to net errors and omissions. In addition, smuggling and other illegal or quasi-legal transactions may be unrecorded or misrecorded. For further discussion of issues relating to the recording of data on trade in goods and services, see *About the data* for tables 4.4–4.7.

The concepts and definitions underlying the data in the table are based on the fifth edition of the International Monetary Fund's (IMF) *Balance of Payments Manual* (1993). That edition redefined as capital transfers some transactions previously included in the current account, such as debt forgiveness, migrants' capital transfers, and foreign aid to acquire capital goods. Thus the current account balance now reflects more accurately net current transfer receipts in addition to transactions in goods, services (previously nonfactor services), and income (previously factor income). Many countries maintain their data collection systems according to the fourth edition of the *Balance of Payments Manual* (1977). Where necessary, the IMF converts such reported data to conform to the fifth edition (see *Primary data documentation*). Values are in U.S. dollars converted at market exchange rates.

Definitions

• **Exports and imports of goods and services** are all transactions between residents of an economy and the rest of the world involving a change in ownership of general merchandise, goods sent for processing and repairs, nonmonetary gold, and services. • **Net income** is receipts and payments of employee compensation for nonresident workers, and investment income (receipts and payments on direct investment, portfolio investment, and other investments and receipts on reserve assets). Income derived from the use of intangible assets is recorded under business services. • **Net current transfers** are recorded in the balance of payments whenever an economy provides or receives goods, services, income, or financial items without a quid pro quo. All transfers not considered to be capital are current. • **Current account balance** is the sum of net exports of goods and services, net income, and net current transfers. • **Total reserves** are 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. The gold component of these reserves is valued at year-end (December 31) London prices (\$386.75 an ounce in 1995 and \$635.70 an ounce in 2006).

Top 15 economies with the largest current account surplus—and top 15 economies with the largest current account deficit in 2006

4.15a

Economy	Surplus (\$ billions)	Share of GDP (%)
China	249.9	9.4
Japan	170.5	3.9
Germany	150.7	5.2
Saudi Arabia	99.1	
Russian Federation	94.3	9.6
Netherlands	55.8	8.4
Norway	55.2	16.5
Switzerland	54.8	14.4
Kuwait	51.0	
Singapore	36.3	27.5
Sweden	28.4	7.4
Venezuela, RB	27.1	14.9
Malaysia	25.5	16.9
Taiwan, China	24.7	6.7
Libya	22.2	44.1

Economy	Deficit (\$ billions)	Share of GDP (%)
United States	–811.5	–6.2
Spain	–106.3	–8.7
United Kingdom	–77.5	–3.3
Italy	–47.3	–2.6
Australia	–41.0	–5.3
Turkey	–32.8	–8.1
Greece	–29.6	–9.6
France	–28.3	–1.3
Portugal	–18.3	–9.4
Congo, Dem. Rep	–16.5	–6.5
Romania	–12.8	–10.5
Poland	–11.1	–3.3
India	–9.4	–1.0
New Zealand	–9.4	–9.0
Ireland	–9.1	–4.1

Source: International Monetary Fund balance of payments data files and *World Development Indicators* data files.

Data sources

Data on the balance of payments are published in the IMF's *Balance of Payments Statistics Yearbook* and *International Financial Statistics*. The World Bank exchanges data with the IMF through electronic files that in most cases are more timely and cover a longer period than the published sources. More information about the design and compilation of the balance of payments can be found in the IMF's *Balance of Payments Manual*, fifth edition (1993), *Balance of Payments Textbook* (1996), and *Balance of Payments Compilation Guide* (1995). The IMF's International Financial Statistics and Balance of Payments databases are available on CD-ROM.

STATES AND MARKETS

5



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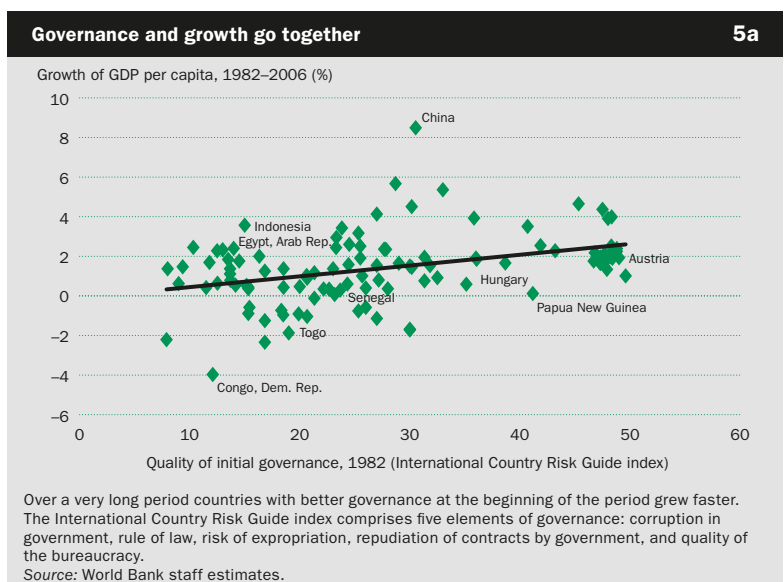
Measuring governance

The breakup of the Soviet Union and the emergence of democracies in many developing countries have increased interest in governance. Good governance, strong institutions, and control of corruption are important for development success. Failures of the state can negate development gains, particularly in low-income economies, many of them fragile states.

Improvements in data and econometric techniques have permitted large cross-country studies on the impact of governance and institutions on investment and growth. This research has produced strong evidence that the quality of governance has a big impact on economic growth, a relationship that is robust over time and across countries (figure 5a). It shows that corruption discourages private investment and distorts resource allocation in ways that hurt the poor. Research also finds that public spending to expand primary education and reduce child and infant mortality produces more benefits in countries with less corruption. And it finds that good governance in a country increases the likelihood of development projects succeeding.

The World Bank defines *governance* as the way public officials and institutions acquire and exercise authority to provide public goods and services, including education, health care, infrastructure, and a sound investment climate. Bad governance is often equated with corruption. But the concepts, while related, are different. Corruption, the abuse of public office for private gain, is an outcome of poor governance, reflecting the breakdown of accountability. Fighting corruption requires addressing underlying failures of governance.

As citizens, investors, policymakers, and donors become more aware of the importance of good governance to development, they increasingly demand information that better tracks progress and increases the transparency of public sector management and anticorruption programs (box 5b). The growing interest in the quality of governance has driven what a recent Organisation for Economic Co-operation and Development publication describes as “explosive growth in the use of quantitative indicators in developing countries” (OECD 2006, p. 13). At least 140 sets of governance indicators, with thousands of individual indicators, are now publicly available. Some look at rules, some at how the rules are implemented, some at outcomes, and some are aggregate measures, summarizing more specific indicators.



Types of governance indicators

Rules indicators attempt to establish the presence or absence of rules and processes. Do countries have laws guaranteeing the right to information? Do they have independent anticorruption commissions? Are budget documents published?

Such indicators are used to measure specific institutional reforms. They require narrow and explicit definitions of what is being measured. Typically, these indicators are prepared by country experts and validated by outside experts.

Interpreting these indicators is not easy. There may be clarity about the existence of a specific rule, law, or legal body, but this does not make the resulting indicators more objective than perception-based indicators. Those who frame the questions have a concept of a “good system” and may impose their own prejudices and values. Nor do formal rules necessarily lead to desired outcomes. An anticorruption commission, for example, may not guarantee less corruption (figure 5c). And while the rules may have normative values of their own—access to budget documents, for instance, is desirable in itself—it is not clear how they influence governance outcomes or reforms. Most important, assessments of complicated rules are subject to errors of fact and judgment, particularly when the analyst has to determine the net effect of many conflicting rules and regulations.

The *Doing Business* indicators in table 5.3 are based on information collected by local experts. The methodology uses factual information about laws and regulations to assess the business climate of a country. The results at the two extremes are far from surprising. New Zealand, Singapore, and the United States are the easiest countries to do business in, while the fragile states of Democratic Republic of Congo, Central African Republic, and Guinea-Bissau are the most difficult. However, China and India, two of the fastest growing economies in the world, rank 83rd and 120th, suggesting either that their rules are not a serious impediment to growth or that the business environment is not as unfavorable as these rankings imply.

Part of the explanation may lie in what the data represent. For comparability, the data refer to businesses in each country’s most populous city, which may not be representative. The reports cover only domestically owned, limited liability companies and a limited set of transactions. Indicators of the time it takes to start a business involve judgment by local experts. Businesses may get things done faster, if they deploy “speed money,” or slower, if they are poorly informed about policies and procedures. For the serious analyst the indicators are only a starting point. Understanding what the data say opens doors to better understanding governance.

Who uses governance indicators?

Box 5b

- *Citizens* are more conscious of the need to hold their governments accountable, and governance indicators increase awareness of the quality of governance. The indicators can provide citizens with information to monitor service delivery and measure how their government—local, provincial, or national—is performing. Citizens can compare indicators with those of similar countries.
- *Investors, lenders, and businesses*, both domestic and foreign, know that the quality of governance influences the investment climate and the return on investments. They want to be better informed about the governance and corruption risks that they are likely to face. Many of the earliest efforts to provide governance indicators came from credit and investment risk evaluation agencies in response to these commercial needs.
- *Governments*, following the maxim that “what you cannot measure you cannot manage,” need to monitor their own

performance to improve the effectiveness of their policies and institutions and to better understand how outcomes can be improved. Governance indicators can provide benchmarks against which governments can measure their progress.

- *Donors* are accountable to their citizens for the development assistance they provide. They are thus anxious to know that the resources that they provide will be used for the intended purposes and to compare performance across countries. In preparing their development assistance strategies, they rely on governance assessments that use a wide range of governance indicators. These governance assessments are used to inform country programming and assistance priorities, allocate aid money using transparent and consistent criteria, provide a basis for a dialogue with partner governments, and assess political and fiduciary risks, among other purposes.

Outcome indicators—some highly specific, others more general—attempt to measure the consequences of governance. Typically, they are perceptions-based indicators that capture the views of relevant stakeholders or interested observers, including experts, officials, researchers, decisionmakers, opinion makers, businesses, and citizens. The indicators provide information on how the rules operate in practice (figure 5d). But they have some problems. It is difficult to identify a connection between particular rules and particular outcomes. And outcome indicators are often measured on a cardinal scale—say, from 1 to 5 or 10. Unless the criteria for assigning specific scores are clear and independently verified, there is a risk of arbitrary scoring and confusion about the relative importance of scores.

Four frequently used sets of outcome indicators—covering civil and political rights, political risk, corruption, and overall governance (table 5e)—rely on expert assessments or a combination of expert assessments and surveys of firms, households, and opinion makers. Expert assessments are cheaper and with careful benchmarking may be used for cross-country comparisons. But experts often disagree, so it is best not to rely on any one set of experts.

Surveys of firms and households may be better grounded in country realities. The views of respondents matter,

because they are able to act on their beliefs. If they believe the courts are highly corrupt, they will avoid seeking legal recourse through the courts and instead choose arbitration or informal means of settling disputes. While governments may discount outsiders' views, citizens and firms' views matter.

There are few household surveys on governance, but many firm-level surveys. The World Bank's Enterprise Surveys provide an overview of the international investment climate, reporting on some governance outcomes, such as unofficial payments as a share of firms' sales, the time required to resolve disputes in court, the cost of providing security against crime, and the efficiency and client orientation of the tax system.

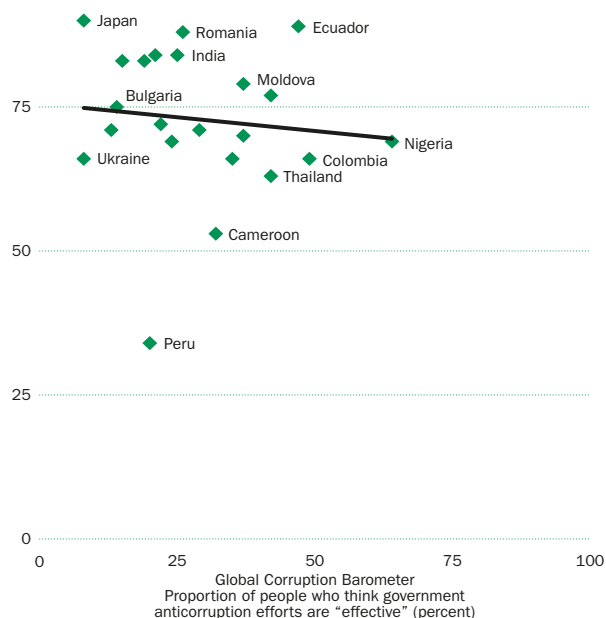
The distinction between rules and outcome indicators is not absolute. Some rules indicators also implicitly measure outcomes. As noted, the time required to register a business is the outcome of applicable regulations and not a measure of the time it actually takes.

Actionable indicators or second-generation indicators stem from the desire to identify specific policies, procedures, and institutional arrangements that contribute to the overall quality of governance. Actionable indicators have received greater attention as part of the World Bank's Governance and

Not producing the desired results

5c

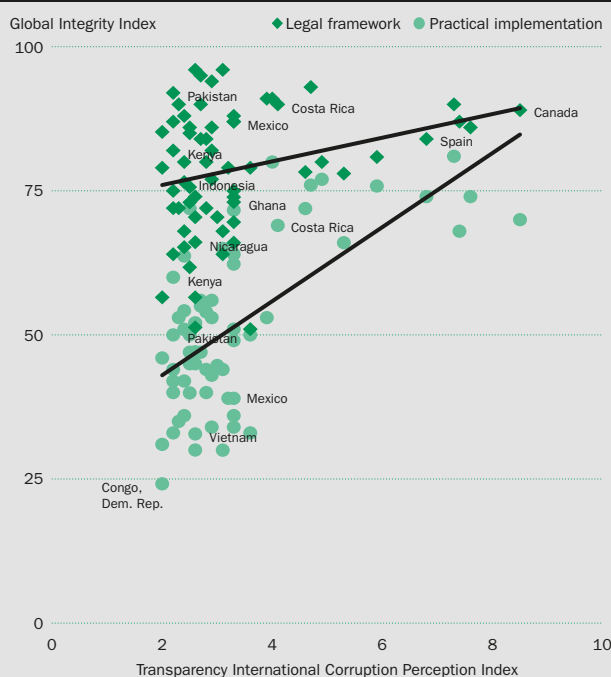
Global Integrity Index Rating of the anticorruption agency
100



Anticorruption agencies should help reduce corruption, but even when agency rules and implementation are rated highly by experts, citizens are not convinced that their governments' efforts are effective. This appears to confirm other research findings that cast doubt on the effectiveness of such agencies. Citizens may also be using their survey responses to send a message to their governments about the need to do more. Source: World Bank staff estimates.

Governance in theory and in practice

5d



Rules indicators and outcome indicators produce different assessments. Global Integrity produces summary indexes of countries' legal frameworks and practical implementation of controls on corruption. Scores on the practical implementation measure generally lie below the legal framework measure. And the practical measure is more strongly correlated with Transparency International's broad-based Corruption Perception Index, suggesting that the Transparency International sources put more weight on outcomes than on rules. Source: World Bank staff estimates.

Anticorruption Strategy. These indicators look beyond the rules to how they are actually implemented (table 5f). Some examples of these indicators follow:

- The Public Expenditure and Financial Accountability program aims to provide governments and donors a shared pool of information on public financial management performance and a common platform for policy dialogue.
- The Global Integrity Index is based on six key aspects of global integrity: civil society; public information and media; elections; government accountability, administration, and civil service; oversight and regulation; and anticorruption and rule of law. These six aspects cover 23 subcategories and 290 indicators, all narrowly and explicitly defined.

Such indicators are called “actionable” for four reasons:

- They provide more clarity about the steps governments can take to improve their ratings.
- They shed light on the efficacy of certain public sector reforms in improving governance.
- They are replicable—that is, independent observers can arrive at roughly the same scores when the questions are explicit and precise.
- They allow meaningful discussion between the raters and those being rated and thus stimulate policy dialogue on these issues.

Efforts like those described in table 5f are planned or under way in other areas, including public accountability, human resources management, and provincial and local governance.

Despite these efforts, major gaps remain in topical coverage (such as legal and judicial reforms), country coverage, periodicity, and methods. Actionable indicators are subject to many of the same measurement errors as other governance indicators. Experts may disagree even over narrowly defined assessments. The coverage of countries and years, while expanding, is still limited. The Global Integrity Index provides two observations for only 25 countries and three observations for only 8. Much work remains to be done in understanding which of the profusion of “actionable” indicators are also “action worthy,” in the sense of leading to desired governance and development outcomes. Progress is bound to be gradual, a long-term undertaking needing the support of key development institutions.

Aggregate indicators are composite measures combining the scores on many separate indicators. Among the most widely used and cited governance indicators are the World Bank’s Worldwide Governance Indicators, which draw on 33 sources to produce indicators on six dimensions of governance for 212 countries and territories, and Transparency International’s Corruption Perceptions Index, which draws on 12 sources and covers 180 countries.

Examples of governance outcome indicators

5e

Indicator or objective	Nature and number of indicators	Country coverage
Since 1972 <i>Freedom House</i> has produced <i>Freedom in the World</i> , an annual survey that provides an “evaluation of the state of global freedom as experienced by individuals.” http://www.freedomhouse.org	Countries are scored on political rights and civil liberties outcomes on a 1–7 scale and then rated not free, partly free, or free. The ratings are based on a checklist of 10 political rights and 15 civil liberties.	193 countries and 15 related and disputed territories.
Since 1980 <i>Political Risk Services Group</i> has produced <i>International Country Risk Guide</i> (ICRG) to meet the needs of clients for an in-depth analysis of potential risks to international business. http://www.prsgroup.com	The political risk guide assigns points to 12 risk components relevant to governance.	140 countries monthly and 21 annually.
Since 1995 <i>Transparency International</i> has ranked countries by the degree to which corruption is perceived to exist among public officials and politicians. The Corruption Perceptions Index (CPI) defines corruption as “the abuse of public office for private gain,” encompassing both administrative and political corruption. http://www.transparency.org	The CPI is a composite, a poll of polls, that draws on corruption-related data from expert and business surveys by a variety of independent institutions. The CPI reflects views from around the world, including in-country experts. The 2007 CPI draws on 14 polls and surveys from 12 independent institutions.	180 countries.
Since 1999 <i>Worldwide Governance Indicators</i> have provided aggregate governance outcomes from 1996 onward. http://www.govindicators.org	Governance is measured along six dimensions: voice and accountability, political stability and absence of violence, government effectiveness, regulatory quality, rule of law, and control of corruption.	212 countries.

Aggregation is not unique to governance indicators. Weighted averages or more complex statistical methods are used to produce broad indicators of social conditions. The United Nations Development Programme's Human Development Index is an example. Aggregation is also necessary to summarize the results of large sets of "actionable indicators." For example, the World Bank uses the aggregate Country Policy and Institutional Assessment (CPIA) rating, an average of 16 more detailed components, to allocate concessional lending across countries. Properly designed, aggregation can provide estimates of the variance of the underlying indicators. But it also loses some of the detail, reducing its usefulness as a policy tool. It is important, therefore, to provide access to the underlying indicators, as the Worldwide Governance Indicators now do in most cases (figure 5g).

Aggregate indicators, despite their limitations, have opened doors to much research and analysis on governance and corruption. They provide a starting point for drilling down deeper into country governance systems. And the increasing variety and richness of disaggregated indicators—covering more topics in more depth for more countries over longer periods, using a variety of methods—enables drilling down even further and increasing understanding of the factors driving aggregate success or failure.

Drilling down: the Worldwide Governance Indicators

5g

Worldwide Governance Indicators Indonesia 2006		Sources	Year	Governance score	Standard error
Voice and accountability		14	2006	-0.25	0.14
Political stability		10	2006	-1.17	0.22
Government effectiveness		14	2006	-0.38	0.15
Regulatory quality		12	2006	-0.26	0.17
Rule of law		19	2006	-0.82	0.13
Control of corruption		17	2006	-0.77	0.13

WGI sources (partial list)		Type	Values
Bertelsmann Transformation Index		Experts	0.61
Institute for Management and Development			
World Competitiveness Yearbook		Survey	0.38
International Budget Project Open Budget Index		Experts	0.41
Political Risk Services International			
Country Risk Guide		Experts	0.41

Open Budget Index 2006 (partial list)	
Executive's budget proposal	Questions 1–55, 67, 68, 69
Citizens budget	Question 61
Pre-budget statement	Questions 72, 73, 74
Auditors report	Questions 112–114, 116, 120–122

61. Does the executive publish a "citizens budget" or some nontechnical presentation intended for a wide audience that describes the budget and its proposals?

Starting from the Worldwide Governance Indicator of Voice and accountability, it is possible to drill down to the underlying indicators on which it is based. And for some it is possible to go farther, to the scoring of individual questions. Good documentation and access to the original data make aggregate indicators more useful.

Selected actionable governance indicators

5f

Indicator or objective	Nature and number of indicators	Country coverage
<i>Public Expenditure and Financial Accountability Assessment</i> , initiated in 2001, measures critical dimensions of open and orderly public financial management systems. www.pefa.org .	28 high-level indicators that capture six dimensions of public financial management.	67 completed, of which 26 are publicly available.
<i>OECD Assessment Methodology for Public Procurement Systems</i> , developed over 2003–04 through an Organisation for Economic Co-operation and Development Development Assistance Committee– and World Bank–led roundtable and now being piloted, measures compliance, performance, and transparency and integrity of public procurement systems. www.oecd.org/dac .	12 indicators with 54 subindicators in four broad areas: legislative and regulatory framework, institutional framework and management capacity, procurement operations and market practice, and integrity and transparency.	22 countries participating in pilot program; reports available online for 9.
<i>Open Budget Index</i> , launched in October 2006 by civil society organizations in 59 countries, provides comprehensive practical information to gauge a government's commitment to budget transparency and accountability. www.openbudgetindex.org	122 items that assess public availability of key budget documents, quality of information, and timeliness of dissemination.	59 in 2006; 88 targeted and 80 expected for 2008
<i>Global Integrity Index</i> , launched in 2002 by the Washington, D.C.,–based Center for Public Integrity and a new independent nonprofit called Global Integrity formally started in 2005, assesses the existence and effectiveness of anticorruption mechanisms that promote public integrity. The index evaluates the existence of laws, regulations, and institutions; their implementation; and the access average citizens have to those mechanisms. www.globalintegrity.org	More than 290 discrete integrity indicators generate the index, which is organized into six broad categories.	25 countries in 2004, 41 in 2006, 48 in 2007, 33 assessed at least twice.

Why governance is difficult to measure

Measuring governance is not easy. A broad concept, governance embraces many institutions and the formal and informal rules that guide their operation. Governance also involves a range of players—citizens, their elected leaders, public officials, and those delivering services—who respond to the incentives created by these rules. Formal rules are more readily observed. Informal rules, less easily measured, may have a greater influence on the quality of governance and require a much deeper understanding of the workings of society. That is why many governance measures rely on the views of experts or the managers of firms—because they understand the principles of governance or have practical experience of the formal and informal rules of the game (figure 5h). Demand for such measures comes from a variety of stakeholders (see box 5b).

Measuring governance can involve assessing how public institutions work as a whole or in their many parts, such as the effectiveness of the judiciary or the bureaucracy or the process for setting and monitoring the budget. Because the concepts are so broad, the same terms may be applied in many different ways. Thus, the *rule of law* may be interpreted narrowly—to mean whether the country's laws are clear and well understood, whether property rights and contracts are effectively enforced. Or they may be interpreted more broadly—to mean

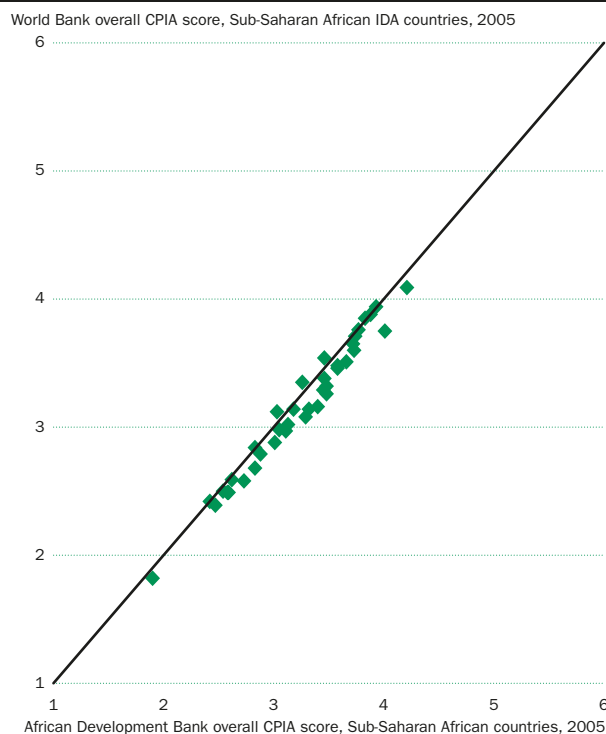
the equality of all citizens in the eyes of the law so that no individual, however powerful, stands above the law. Reaching a consensus on such concepts is not easy (figure 5i). Because most definitions tend to be broad, the boundaries between different indicators risk being blurred.

That governance is difficult to measure does not imply that governance is not measurable. Nor should demonstrable errors of measurement deter the effort. All indicators are subject to error. The national accounts reported in *World Development Indicators* are estimated and later subject to revision, at times very large. Because it is difficult and costly to obtain reliable data through surveys and official records, maternal mortality is often estimated from models. Poverty estimates depend on surveys of household consumption patterns and the judgment of experts about an appropriate poverty line.

Still, measuring corruption is particularly problematic. Those with direct knowledge of corruption are likely to want to keep it secret. In some cases administrative corruption can be gauged through surveys of citizens and business or the judgments of informed experts. But often the state's capture by special interests is difficult to assess because that lies outside the direct experience of citizens and small businesses.

Experts generally agree on governance assessments at the aggregate level . . .

5h



The World Bank and African Development Bank rate countries independently using similar Country Performance and Institutional Assessments (CPIA), an aggregation of 16 specific scores. Overall scores are normalized to a scale of 1 to 6. Source: World Bank staff estimates.

. . . but experts can still disagree, even using a very specific assessment protocol

5i



On CPIA item 13, which assesses the quality of budgetary and financial management, differences between the scores assigned by the World Bank and African Development Bank for an individual component differ by as much as 1.5 points on a scale of 1 to 6. Source: World Bank staff estimates.

Measurement errors

All governance indicators are subject to significant measurement errors, but these errors are rarely reported. Measures based on sample surveys are subject to sampling error, and those based on expert assessments to informant error. Because any indicator is an imperfect measure of the broader concepts it pertains to, a third source of error might be called proxy error. High levels of overall corruption in the customs service, even if accurately measured, might not reflect corruption in the country. To increase the reliability of governance measures, measurement errors should be quantified and reported where possible.

In combining information from different sources, aggregate indicators can smooth the idiosyncrasies of their underlying components. The Worldwide Governance Indicators, for instance, draw on indicators from 33 sources to produce six aggregate indicators. The statistical model for combining the indicators assumes that the observed empirical indicators of governance provide noisy or imperfect signals of the fundamentally unobservable concept of governance. The model estimates the variance of the aggregate estimate for each country, conditional on the observed data, and provides estimates of the variance of the underlying indicators as well (Kaufmann and Kraay forthcoming). The more the individual indicators agree, the smaller is the measured error of the aggregate.

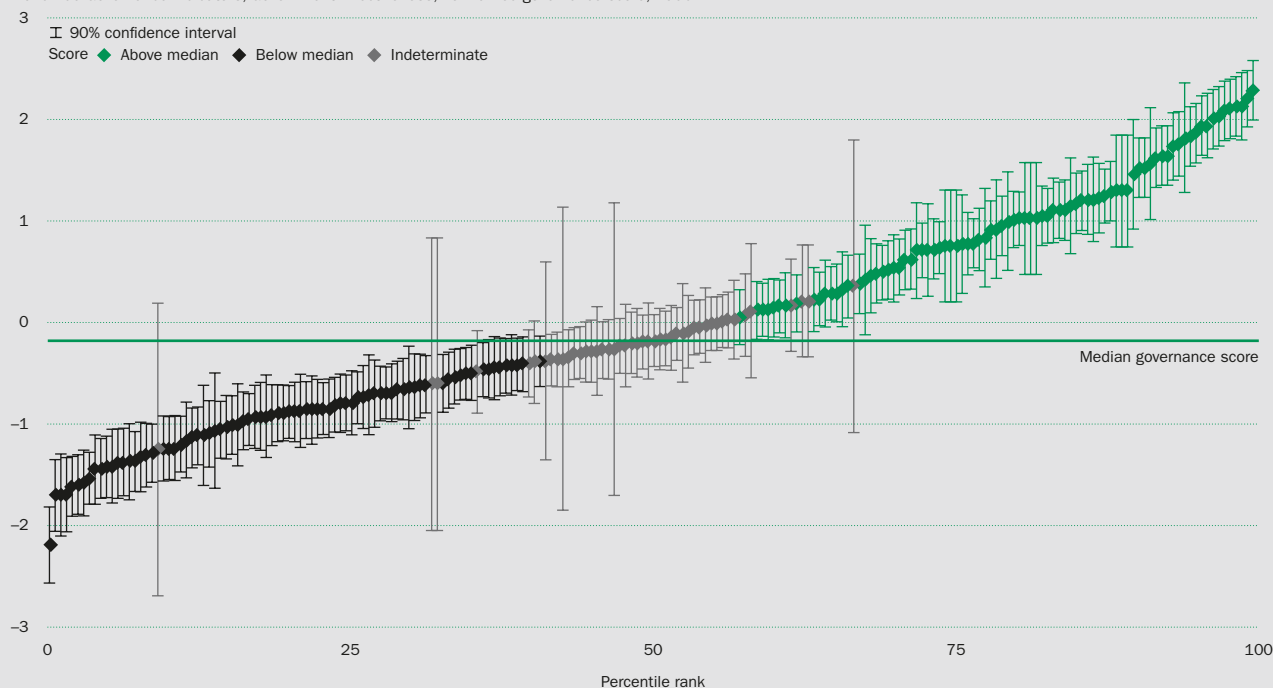
In explicitly measuring margins of error, the Worldwide Governance Indicators inform users of the uncertainty surrounding the estimates. For some countries with similar scores, overlapping confidence intervals make comparisons of differences meaningless. But statistically reliable statements can be made in many cases when scores differ by larger amounts. Figure 5j shows the World Governance Indicators government effectiveness scores and margins of error for 212 countries. The 81 countries at the lower end of the distribution of governance have scores that are almost certainly below the median, and the 85 countries at the upper end of the distribution are almost certainly above the median (with a probability of 90 percent or higher). But for the 46 countries in the middle of the distribution there is at least a 10 percent chance that a score below the median could be above it, or vice versa.

Recognition of measurement errors should discourage naïve ranking of countries on governance performance. Transparency International, which uses country rankings as a way of shaming countries into fighting corruption, nevertheless cautions users against comparing countries with close scores. Its country rankings also cannot be compared from year to year as country coverage keeps changing and expanding.

**Comparing governance scores
in the light of uncertainty**

5j

Worldwide Governance Indicators, Government Effectiveness, normalized governance score, 2006



Countries' scores on the Worldwide Governance Indicators aggregate indicator of government effectiveness are shown in rank order. The error bars show a 90 percent confidence interval around each score. Because of measurement error, differences in scores cannot be determined with certainty. In this example the scores of the 46 countries in the middle of the distribution cannot be determined to be significantly above or below the median value.
 Source: World Bank staff estimates.

Looking ahead

The proliferation of governance indicators has led to several recent efforts to take stock of where this work stands and what the next areas of emphasis should be (see UNDP 2007a; Knack, Kugler, and Manning 2003; Arndt and Oman 2006; World Bank 2006g; Kaufmann and Kraay forthcoming; Levy 2007; Thomas 2006).

Four priorities stand out.

First, it is important to evaluate all governance indicators, exposing them to peer review and strengthening them to increase public confidence in their use. The methods and underlying assumptions used to produce them should be carefully reviewed. The quality of the underlying data should be evaluated, including the role of experts and surveys. And methods of better estimating the uncertainties associated with all measures of governance should be studied so that users of data are aware of the uncertainties they are dealing with.

Second, given the strong interest from policymakers in indicators of remediable policy or institutional failures, progress on action-worthy indicators is a high priority. To build on the promise of the initial round of Public Expenditure and Financial Accountability (PEFA) Assessments, formally launched two years ago, it will be important to extend them to more countries, to conduct regular periodic assessments, and to ensure that results are disseminated. The example of PEFA generating information on the quality of public financial systems also opens the door to similar approaches in other areas. The World Bank has already identified some key areas for undertaking similar assessments, including decentralization, public accountability, and human resources management.

Decentralization is particularly promising, because it enables central governments to monitor the performance of provincial and local governments, improving information on governance in the country as a whole.

Third, one difficulty with the proliferation of disaggregated, specific indicators is that they do not provide guidance to users on which of the many subindicators are most critical to particular governance outcomes. Research on this is a high priority, to identify a core set of the most important indicators that influence governance outcomes, allowing governments and donors to focus their reforms on those critical areas.

Fourth, given the growing recognition of how understanding a country's political economy can produce better development outcomes, the quality of current efforts to measure political trends and outcomes should be reviewed for their capacity to shed light on development prospects and outcomes.

These and other issues could be part of a program of work led by the World Bank, as a major user and producer of governance indicators (box 5k).

This section of *World Development Indicators* includes a broad range of indicators that shed light on the effectiveness and accountability of governments and their interaction with the private sector. Tables 5.2–5.6 provide an overview of the climate for investment and doing business and of the tax and regulatory roles of the state. Table 5.8 provides the World Bank's Country Policy and Institutional Assessment data for 77 International Development Association–eligible countries. Other tables show data on financial markets, public and private provision of infrastructure, and defense, all of which depend on effective government spending and oversight.

Governance indicators are now routinely collected and used by the World Bank for a number of purposes.

Resource allocation. The Bank's Country Policy and Institutional Assessment Indicators (CPIA) enter into the International Development Association (IDA) country performance rating (CPR) with an effective weight of 67 percent. The CPR is used as part of the IDA performance assessment, which is used to allocate IDA resources among eligible countries.

Global monitoring. The 2006 *Global Monitoring Report* included 13 governance indicators in its statistical appendix (see table).

Governance indicators from *Global Monitoring Report*

Category	Indicator
Overall governance performance	1. Control of corruption (Worldwide Governance Indicators)
	2. Corruption perceptions index (Transparency International)
	3. Unofficial payments (Enterprise Surveys)
	4. Policy outcome (CPIA cluster a–c average)
	5. Aggregate public institutions (CPIA cluster d)
	6. Licensing time (Doing Business)
	7. Time spent on regulations (Enterprise Surveys)
Bureaucratic capability	8. Budget/financial management (CPIA 13)
	9. Public administration (CPIA 15)
Checks and balances institutions	10. Voice and accountability (Worldwide Governance Indicators)
	11. Rule of law (Worldwide Governance Indicators)
	12. Property rights and rule-based governance (CPIA 12)
	13. Executive constraints (Polity IV)

Country governance monitoring. Diagnosing governance obstacles at the country level and designing and monitoring reforms, now a requirement under the World Bank's new Governance and Anticorruption Strategy, employ a range of aggregate and actionable indicators including the Worldwide Governance Indicators, the Transparency International indicator, Public Expenditure and Financial Accountability indicators, the Doing Business indicators, the investment climate assessments, public financial management studies, the World Bank Institute Governance and Anticorruption diagnostic surveys, and quantitative service delivery surveys and report cards. These feature in the Bank's analytical and advisory assistance, project documents, and country assistance strategies.

Actionable indicators. The Bank's new Governance and Anticorruption Strategy calls for the development and promotion of actionable indicators, including decentralization, public accountability, human resources management, and the Public Expenditure and Financial Accountability (PEFA). This work includes extending the coverage of PEFA and the Global Integrity Index to more countries and encouraging countries to permit the publication of PEFA data.

Research. In studies on governance outcomes World Bank research increasingly uses large cross-country governance databases including Polity IV, the database of political institutions; the Worldwide Governance Indicators; and Transparency International's Corruption Perceptions Index.

Data. Bank staff manage, produce, and analyze several databases on governance: the Investment Climate Assessments, the Doing Business database, the Database of Political Institutions, and the annual *Governance Matters* report (Kaufmann, Kraay, and Mastruzzi 2007, *Governance Matters VI*), which since 2003 has generated annual aggregate indicators on worldwide governance based on external data sources.



5.1

Private sector in the economy

	Investment commitments in infrastructure projects with private participation ^a								Domestic credit to private sector	Businesses registered		Micro, small, and medium-size enterprises		
	\$ millions									% of GDP	New	Total	Total	per 1,000 people
	Telecommunications		Energy		Transport		Water and sanitation							
	1995-99	2000-06	1995-99	2000-06	1995-99	2000-06	1995-99	2000-06						
	1995-99	2000-06	1995-99	2000-06	1995-99	2000-06	1995-99	2000-06	2006	2005	2005	2000-05 ^b	2000-05 ^b	
Afghanistan	..	747.5	..	1.6	..	..	..	..	..	..	..	..	..
Albania	..	569.2	0.0	789.0	..	308.0	..	8.0	21.8	2,388	16,423	38,331	12.2	
Algeria	..	4,124.5	..	2,720.0	..	120.9	..	510.0	12.5	12,164	103,482	580,000	18.7	
Angola	..	528.7	..	54.4	..	55.0	..	..	7.5	..	..	..	..
Argentina	10,498.6	6,859.8	12,992.6	5,642.1	6,996.5	522.2	3,307.1	791.6	13.0	53,000	450,535	..	..
Armenia	112.5	317.1	0.0	67.0	..	63.0	..	0.0	8.8	9,667	123,951	99,805	33.1	
Australia	..	..	..	..	..	..	..	..	109.6	81,079	935,047	1,269,000	63.0
Austria	..	..	..	..	..	..	..	..	114.9	14,669	172,602	252,399	30.9
Azerbaijan	122.0	769.2	..	375.2	..	..	..	0.0	12.2	..	..	49,527	6.0
Bangladesh	438.1	2,187.3	554.9	501.5	0.0	0.0	..	..	36.2	5,328	67,459	177,000	1.2
Belarus	20.0	955.8	500.0	..	..	..	..	..	20.2	..	..	25,108	2.5
Belgium	..	..	..	..	..	..	..	..	83.3	25,492	343,761	686,533	66.2
Benin	..	133.9	..	590.0	..	..	..	..	16.7	..	..	..	..
Bolivia	528.0	594.3	2,777.3	934.3	168.7	16.6	682.0	..	36.1	1,625	24,649	..	..
Bosnia and Herzegovina	0.0	860.5	..	277.9	..	..	..	..	48.4	1,409	34,035	14,986	3.8
Botswana	97.0	122.0	..	..	..	..	..	..	19.6	7,301	79,543	13,137	7.2
Brazil	45,135.2	46,959.3	33,042.3	29,351.3	16,960.8	4,060.7	1,850.0	1,215.3	36.5	..	..	4,903,268	27.4
Bulgaria	202.5	2,641.1	..	3,566.1	..	533.7	..	152.0	47.4	..	..	216,489	27.7
Burkina Faso	..	331.9	5.6	..	63.3	..	..	..	16.7	..	..	..	..
Burundi	..	53.6	..	..	..	..	..	..	21.0	..	..	..	..
Cambodia	102.4	198.1	143.0	88.1	120.0	325.3	..	..	9.1	1,551	10,349	..	..
Cameroon	12.7	457.4	..	531.8	90.0	0.0	..	..	9.0	..	..	..	..
Canada	..	..	..	..	..	..	..	..	195.3	85,083	1,357,881	2,245,245	69.5
Central African Republic	1.1	0.0	..	..	..	..	..	..	6.6	..	..	..	..
Chad	2.0	37.4	..	0.0	..	..	..	..	2.5	..	..	..	..
Chile	673.5	1,485.6	6,594.1	1,525.1	3,104.1	4,936.2	4,190.3	1,495.2	82.4	31,088	170,636	700,000	43.4	
China	5,970.0	8,548.0	17,166.6	10,847.0	10,852.5	20,347.4	985.9	4,300.4	113.6	..	..	8,000,000	6.3
Hong Kong, China	..	..	..	..	..	..	..	..	139.5	74,122	557,002	263,959	38.9
Colombia	1,384.3	3,012.0	6,985.4	695.0	995.5	1,919.8	321.0	619.3	35.7	987	20,026	664,000	15.2	
Congo, Dem. Rep.	48.0	547.4	..	..	0.0	..	..	..	2.9	..	..	..	..
Congo, Rep.	54.7	71.8	325.0	..	..	..	..	0.0	2.2	2,160	34,514	..	..
Costa Rica	..	..	301.2	160.0	..	508.2	..	..	39.1	44,301	392,726	40,921	9.6
Côte d'Ivoire	752.3	147.9	260.6	0.0	241.3	140.0	..	..	14.1	..	..	..	..
Croatia	978.0	1,602.1	368.5	7.1	672.2	451.0	..	298.7	68.7	8,733	113,708	94,088	21.2	
Cuba	..	60.0	165.0	..	..	0.0	..	600.0	..	..	..	..	..
Czech Republic	6,178.5	8,996.0	944.1	3,865.3	283.7	106.7	135.5	263.7	40.9	30,945	273,688	..	..
Denmark	..	..	..	..	..	..	..	..	185.1	33,047	234,432	257,950	47.8
Dominican Republic	163.0	424.0	979.0	1,306.6	..	1,148.9	..	..	25.8	..	..	..	..
Ecuador	696.4	588.6	30.0	431.0	686.8	1,651.0	..	500.0	24.0	..	..	1,043,440	83.7
Egypt, Arab Rep.	1,914.5	7,222.9	634.0	678.0	123.9	821.5	..	..	55.3	9,595	367,559	..	..
El Salvador	720.2	1,282.1	900.2	85.0	..	..	..	..	42.9	2,617	40,739	461,642	73.3
Eritrea	..	40.0	..	..	..	..	..	..	29.0	..	..	..	..
Estonia	628.2	467.1	26.5	..	1.0	298.4	..	115.0	78.4	9,945	73,999	65,194	48.4	
Ethiopia	..	..	..	..	..	..	..	..	27.2	..	..	..	..
Finland	..	..	..	..	..	..	..	..	77.8	7,710	114,061	221,000	42.4
France	..	..	..	..	..	..	..	..	98.7	144,521	1,225,291	2,612,960	43.2
Gabon	8.4	26.6	294.0	0.0	46.7	177.4	..	..	9.3	..	..	..	..
Gambia, The	..	6.6	..	0.0	..	..	..	..	15.6	..	..	..	..
Georgia	61.0	493.8	159.0	134.5	..	168.5	..	..	19.5	5,035	56,840	33,860	7.6
Germany	..	..	..	..	..	..	..	..	109.8	66,747	465,615	3,162,111	38.3
Ghana	491.1	371.5	110.0	590.0	..	10.0	..	0.0	18.0	6,189	100,272	25,679	1.2	
Greece	..	..	..	..	..	..	..	..	72.3	2,381	33,839	771,000	69.9
Guatemala	1,366.3	836.1	1,223.2	110.0	33.8	..	..	..	26.8	4,251	68,451	..	..
Guinea	120.3	98.6	36.4	..	..	..	..	..	5.0	..	..	..	..
Guinea-Bissau	..	6.9	..	..	..	..	..	..	4.0	..	..	..	..
Haiti	102.5	148.0	4.7	5.5	..	..	..	..	13.3	9	300	..	..

Private sector in the economy

5.1

	Investment commitments in infrastructure projects with private participation ^a								Domestic credit to private sector	Businesses registered		Micro, small, and medium-size enterprises		
	\$ millions									% of GDP 2006	New 2005	Total 2005	Total 2000-05 ^b	per 1,000 people 2000-05 ^b
	Telecommunications		Energy		Transport		Water and sanitation							
	1995-99	2000-06	1995-99	2000-06	1995-99	2000-06	1995-99	2000-06						
Honduras	51.3	224.2	112.1	358.8	10.5	120.0	..	207.9	49.0	..	..	257,953	41.6
Hungary	6,430.2	5,798.1	3,812.1	2,090.6	135.0	3,297.5	205.8	0.0	55.4	22,251	240,556	..	..
India	7,456.8	27,912.6	7,096.7	11,572.2	1,349.1	11,365.7	..	2.1	45.0	38,129	712,800	..	..
Indonesia	8,847.5	8,108.1	9,942.1	2,485.7	1,530.8	2,400.7	955.2	36.7	24.6	19,851	259,799	41,362,315	195.3	
Iran, Islamic Rep.	28.0	695.0	..	650.0	..	..	..	..	47.3	..	..	..	..
Iraq	..	1,074.0	..	..	..	..	..	..	..	..	..	..	..
Ireland	..	..	..	..	..	..	..	..	183.4	17,234	160,707	97,000	24.3
Israel	..	..	..	..	..	..	..	..	89.6	14,687	379,503	468,338	67.6
Italy	..	..	..	..	..	..	..	..	95.6	104,364	1,688,198	4,486,000	77.9
Jamaica	..	701.0	43.0	279.0	0.0	565.0	..	..	27.9	..	..	..	..
Japan	..	..	..	..	..	..	..	..	182.0	114,013	2,572,088	5,712,191	44.7
Jordan	39.9	1,952.6	..	..	182.0	0.0	0.0	169.0	98.0	7,706	102,716	141,327	26.7
Kazakhstan	1,633.5	1,788.9	1,825.0	300.0	..	..	..	100.0	47.8	3,302	32,150	..	..
Kenya	193.0	2,053.0	238.0	116.7	53.4	404.0	0.0	..	27.7	7,371	125,102	2,800,000	85.1	
Korea, Dem. Rep.	..	..	..	..	..	..	..	..	..	..	..	..	..
Korea, Rep.	..	..	..	..	..	..	..	..	102.0	..	..	2,998,223	62.4
Kuwait	..	..	..	..	..	..	..	..	63.1	..	..	..	..
Kyrgyz Republic	100.8	47.4	..	..	..	..	..	..	10.5	..	..	142,475	28.3
Lao PDR	100.1	97.7	535.5	2,050.0	0.0	0.0	..	..	6.0	..	..	..	..
Latvia	600.9	817.4	106.0	71.1	75.0	135.0	..	..	86.8	10,856	193,893	32,571	13.8
Lebanon	485.7	138.1	..	..	..	153.0	..	0.0	77.9	3,127	63,423	..	..
Lesotho	15.7	93.9	..	0.0	..	..	..	..	8.9	..	..	..	..
Liberia	..	80.8	..	..	..	..	..	..	8.4	..	..	..	..
Libya	..	..	..	..	..	..	..	..	15.5	..	..	..	..
Lithuania	832.7	1,112.0	10.0	399.3	..	..	..	..	50.6	4,507	71,085	56,428	16.5
Macedonia, FYR	..	808.6	..	391.0	..	..	..	..	30.2	10,814	157,973	55,742	27.5
Madagascar	30.0	12.6	..	0.0	..	48.5	..	..	10.2	1,234	19,305	..	..
Malawi	23.1	66.8	..	0.0	6.0	..	..	..	8.7	420	5,595	747,396	64.3
Malaysia	3,188.6	3,770.8	1,610.2	6,840.6	8,135.6	4,992.4	10.0	6,502.2	108.1	..	..	518,996	20.2
Mali	..	82.6	..	365.9	..	55.4	..	..	17.2	..	..	..	..
Mauritania	..	92.1	..	..	..	..	..	..	..	..	..	..	..
Mauritius	..	393.0	109.3	0.0	42.6	..	..	..	78.0	..	..	75,267	62.2
Mexico	10,757.5	20,763.4	2,120.8	6,795.3	4,706.1	5,388.4	305.0	548.7	22.1	306,400	4,290,000	2,891,300	28.3	
Moldova	84.6	80.1	60.0	25.3	38.0	0.0	..	..	27.9	5,033	61,333	25,667	6.5
Mongolia	21.9	22.1	..	..	..	..	..	..	32.8	..	..	..	..
Morocco	1,240.0	6,715.1	5,978.0	1,049.0	..	340.0	..	..	58.1	13,407	155,947	450,000	15.4
Mozambique	29.0	138.6	..	1,205.8	441.0	334.6	25.5	..	13.8	..	..	..	..
Myanmar	..	..	719.0	..	50.0	..	..	..	5.6	..	..	..	..
Namibia	55.0	35.0	4.0	1.0	..	..	..	0.0	61.7	..	..	..	..
Nepal	..	97.3	98.2	39.0	..	..	..	..	37.7	..	..	3,040	0.1
Netherlands	..	..	..	..	..	..	..	..	176.2	116,000	1,030,000	735,160	45.0
New Zealand	..	..	..	..	..	..	..	..	144.2	62,695	388,846	334,031	81.7
Nicaragua	24.5	294.3	232.4	126.3	..	104.0	..	..	33.8	..	..	..	..
Niger	..	85.5	..	..	..	..	..	3.4	8.3	..	..	..	..
Nigeria	69.0	9,485.8	..	1,920.0	..	2,617.6	..	..	15.0	..	..	..	..
Norway	..	..	..	..	..	..	..	..	..	47,436	298,360	316,243	68.4
Oman	..	1,047.0	183.0	1,364.3	77.5	473.8	..	0.0	34.9	..	..	7,373	3.0
Pakistan	75.5	9,068.0	4,298.3	800.7	421.3	322.0	..	..	29.0	4,227	44,897	2,956,704	19.0
Panama	1,429.2	307.9	669.2	455.5	994.6	51.4	25.0	..	88.6	..	..	..	..
Papua New Guinea	..	..	65.0	..	..	..	71.0	..	17.1	..	..	..	..
Paraguay	259.3	365.5	..	..	58.0	..	..	..	16.9	..	..	548,000	98.4
Peru	4,774.5	2,643.2	3,004.9	2,511.2	86.3	1,537.5	..	152.0	17.8	33,349	554,135	658,837	24.4	
Philippines	5,358.3	5,235.3	6,998.0	4,275.2	1,364.0	1,260.5	7,567.2	503.9	30.0	13,328	..	808,634	10.0	
Poland	4,913.2	18,179.1	628.1	2,352.7	169.4	1,672.0	6.1	64.3	33.6	23,864	509,894	1,654,822	43.3	
Portugal	..	..	..	..	..	..	..	..	157.4	16,770	262,686	693,000	66.4
Puerto Rico	..	..	..	..	..	..	..	..	..	..	..	2,069	0.5



	Investment commitments in infrastructure projects with private participation ^a								Domestic credit to private sector	Businesses registered		Micro, small, and medium-size enterprises		
	\$ millions									% of GDP	New	Total	Total	per 1,000 people
	Telecommunications		Energy		Transport		Water and sanitation							
	1995-99	2000-06	1995-99	2000-06	1995-99	2000-06	1995-99	2000-06							2006	2005	2005	2000-05^{b}	2000-05^{b}
Romania	2,072.8	4,179.9	100.0	2,065.6	23.4	..	..	1,116.0	26.3	91,386	851,562	392,544	18.1
Russian Federation	5,639.1	27,700.4	2,281.3	1,726.0	406.0	253.4	108.0	938.5	30.8	446,605	4,767,300	6,891,300	48.1	
Rwanda	8.0	82.3	..	1.6	..	..	..	..	13.5	..	..	..	..
Saudi Arabia	..	..	..	..	..	..	..	..	50.7	..	..	..	..
Senegal	273.9	805.1	124.0	93.3	..	55.4	20.0	0.0	23.1	23	1,000	..	..
Serbia	1,590.0	3,197.0	..	..	..	..	..	0.0	26.8	14,608	270,872	68,220	9.1
Sierra Leone	7.0	88.8	..	..	..	..	..	..	4.4	..	..	..	..
Singapore	..	..	..	..	..	..	..	..	98.6	19,501	102,662	136,363	32.2
Slovak Republic	488.5	2,993.9	..	4,459.6	..	42.0	0.0	13.6	39.2	7,507	81,775	70,553	13.1	
Slovenia	..	..	..	..	..	..	..	..	68.8	3,237	40,560	91,066	45.6
Somalia	0.0	13.4	..	..	..	..	..	..	..	..	..	..	..
South Africa	2,975.3	6,856.5	3.0	1,261.2	1,386.4	3,987.7	56.9	31.3	160.8	41,356	553,425	..	..
Spain	..	..	..	..	..	..	..	..	167.4	139,119	2,193,691	3,168,735	73.0
Sri Lanka	559.9	938.2	192.3	270.8	240.0	..	..	..	32.8	4,754	58,518	121,426	6.3
Sudan	18.3	1,454.0	..	..	..	30.0	..	..	0.1	..	..	22,460	0.7
Swaziland	21.2	27.7	..	..	..	..	..	..	23.7	..	..	..	..
Sweden	..	..	..	..	..	..	..	..	117.3	21,695	301,814	898,454	99.6
Switzerland	..	..	..	..	..	..	..	..	174.3	8,998	140,580	344,000	46.9
Syrian Arab Republic	..	628.0	..	..	..	37.0	..	..	14.9	216	2,268	..	..
Tajikistan	1.2	8.5	..	16.0	..	..	..	..	16.0	..	..	92,964	14.7
Tanzania	100.2	585.3	127.0	376.4	16.5	27.7	..	8.5	12.2	3,933	59,163	2,700,000	75.8	
Thailand	2,735.2	6,732.7	6,875.4	4,693.3	1,941.1	939.0	289.0	306.5	88.0	..	..	842,360	13.7
Timor-Leste	..	0.0	..	..	..	..	..	..	..	..	..	4,138	4.5
Togo	5.0	0.0	0.0	657.7	0.0	..	..	..	16.9	..	..	..	..
Trinidad and Tobago	0.0	190.0	207.0	39.0	..	..	0.0	120.0	34.3	..	..	19,150	14.5
Tunisia	..	3,094.0	291.0	30.0	..	..	..	..	65.0	6,353	62,563	..	..
Turkey	3,269.7	14,780.3	2,992.2	6,084.5	610.0	4,160.6	942.0	..	34.1	86,900	593,166	210,134	3.1	
Turkmenistan	..	36.3	..	..	..	..	..	..	..	..	..	..	..
Uganda	119.3	387.6	..	125.7	..	404.0	0.0	0.0	7.9	8,096	89,503	160,453	6.1	
Ukraine	1,094.6	4,028.1	..	160.0	..	..	..	..	44.9	28,716	471,839	343,786	7.3
United Arab Emirates	..	..	..	..	..	..	..	..	60.9	..	..	..	..
United Kingdom	..	..	..	..	..	..	..	..	175.8	333,700	2,160,000	4,415,260	73.8
United States	..	..	..	..	..	..	..	..	201.1	676,830	5,156,000	5,868,737	20.0
Uruguay	63.7	144.2	86.0	330.0	20.0	251.1	..	368.0	26.2	..	..	125,000	37.9
Uzbekistan	513.8	385.6	..	..	..	..	..	0.0	..	..	..	212,424	8.3
Venezuela, RB	4,877.9	4,428.0	103.0	39.5	268.0	34.0	25.0	15.0	17.1	..	..	11,314	0.5
Vietnam	256.0	690.0	435.5	2,279.0	85.0	20.0	38.8	174.0	71.3	..	..	90,935	1.1
West Bank and Gaza	265.0	279.8	..	150.0	..	..	0.0	..	8.0	..	..	97,194	27.7
Yemen, Rep.	..	647.6	..	15.8	190.0	..	..	..	6.9	1,800	21,332	310,000	16.1
Zambia	64.2	446.3	274.0	3.0	..	15.6	..	0.0	9.7	3,389	65,155	..	..
Zimbabwe	46.0	92.0	600.0	..	85.0	..	..	..	26.6	..	..	..	..
World	.. s	.. s	.. s	.. s	.. s	.. s	.. s	.. s	136.7 w	3,658,665 s	38,885,427 s			
Low income	11,569.9	60,085.8	15,726.4	23,465.5	3,121.9	16,176.2	155.3	188.0	38.3	75,510	1,221,960			
Middle income	147,572.8	255,063.3	136,018.9	114,473.2	63,231.9	70,618.4	21,831.5	21,613.6	60.1	1,389,189	16,463,270			
Lower middle income	38,688.6	76,783.1	65,675.8	37,500.4	18,401.9	34,404.2	10,800.3	7,913.7	81.3	182,097	2,737,021			
Upper middle income	108,884.2	178,280.2	70,343.1	76,972.8	44,829.9	36,214.2	11,031.2	13,699.9	41.4	1,207,092	13,726,249			
Low & middle income	159,142.7	315,149.1	151,745.3	137,938.7	66,353.8	86,794.6	21,986.8	21,801.6	57.3	1,464,699	17,685,230			
East Asia & Pacific	26,616.5	33,533.1	44,490.3	33,565.9	24,079.0	30,285.2	9,917.1	11,823.7	98.7	21,402	270,148			
Europe & Central Asia	30,761.6	94,150.4	12,842.2	25,358.4	2,129.0	11,084.7	1,261.9	2,691.1	35.1	783,581	8,648,355			
Latin America & Carib.	83,557.9	92,346.7	72,527.6	51,226.9	35,089.7	22,852.5	10,705.4	6,562.5	30.9	477,627	5,971,458			
Middle East & N. Africa	3,973.1	27,618.6	7,086.0	6,657.1	573.4	2,426.2	0.0	679.0	41.3	54,368	879,290			
South Asia	8,530.3	41,008.4	12,240.4	13,185.8	2,010.4	11,687.7	..	2.1	42.6	52,438	883,674			
Sub-Saharan Africa	5,703.3	26,491.9	2,558.8	7,944.5	2,472.2	8,458.3	102.4	43.2	78.4	75,283	1,032,305			
High income	..	..	..	..	..	..	..	..	161.7	2,193,966	21,200,197		
Euro area	..	..	..	..	..	..	..	..	115.7	658,331	7,178,119		

a. Data refer to total for the period shown. Includes projects that became privatized during financial closure years 1990–2006. b. Data are for the most recent year available.

Private sector in the economy

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. Between 1990 and 2006 more than 3,800 projects in more than 139 developing countries introduced private participation in at least one infrastructure sector.

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. The data are from the World Bank's Private Participation in Infrastructure (PPI) Project Database, which tracks more than 3,800 projects, newly owned or managed by private companies, that reached financial closure in developing economies in 1990–2006. 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 2007 World Bank Group Entrepreneurship Survey, which includes entrepreneurial activity in 84 countries for 2003–05. 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 2007 survey improves on the 2006 survey's 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 www.ifc.org/ifcext/sme.nsf/Content/Entrepreneurship+Database.

Formal and informal micro, small, and medium-size enterprises employ more than half the working population in many market economies and account for about 90 percent of firms. And they contribute significantly to innovation. If small businesses are allowed to compete on a level playing field, the good ones can become larger, workers can earn higher wages, and productivity will increase. A good investment climate—one that provides opportunities and incentives for firms, reduces legal and regulatory costs, lowers the costs of providing financial services, and facilitates the transfer of technology and knowledge and the upgrading of capabilities in small and medium-size firms—is important for economic progress, better jobs, and a more inclusive society.

Data on the business registration of micro, small, and medium-size enterprises are collected by governments, international organizations, foundations, and small business organizations. These data have been collated by the International Finance Corporation (IFC) and are available in two databases: Entrepreneurship Data, and Micro, Small, and Medium Enterprises: A Collection of Published Data. This IFC initiative is a work in progress, improved and updated as new data become available. Because the concepts and definitions of micro, small, and medium-size enterprises vary by source, using these data for precise country rankings may be inappropriate. See www.ifc.org/ifcext/sme.nsf/Content/Resources for additional information on sources and precise firm size.

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, 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 facilities and investments in government assets. Investments in facilities are resources the project company commits to invest during the contract period in new facilities or in expansion and modernization of existing facilities. Investments in government assets 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 firms registered in the calendar year. • **Total businesses registered** are the year-end stock of total registered limited liability firms. • **Micro, small, and medium-size enterprises** are business that may be defined by the number of employees. There is no international standard definition of firm size; however, many institutions that collect information use the following size categories: micro enterprises, 0–9 employees; small enterprises, 10–49 employees; and medium-size enterprises, 50–249 employees.

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 and micro, small, and medium-size enterprises are from the IFC's Micro, Small, and Medium Enterprises database (www.ifc.org/ifcext/sme.nsf/Content/Resources).



	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 management met with tax officials	Time required to obtain operating license days	Unofficial payments to public officials % of firms	Losses due to theft, robbery, vandalism, and arson % of sales	Firms that do not report all sales for tax purposes % 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	ISO certification ownership % of firms	Average time to clear exports through customs days	Firms offering formal training % of firms
Afghanistan		..	..	..	..	..	..	..	..	..	..	..	..
Albania ^a	2005	10.4	6.6	..	64.3	0.0	66.2	14.1	27.9	10.9	16.7	1.4	47.5
Algeria	2002	..	..	..	75.2	0.5	70.4	..	16.9	4.3	..	8.6	31.8
Angola ^a	2006	7.1	5.2	24.1	46.3	2.4	67.8	23.4	2.1	3.7	5.1	16.5	19.4
Argentina ^a	2006	14.1	4.6	175.8	18.7	3.7	49.1	30.3	6.9	1.4	26.9	5.5	52.2
Armenia ^a	2005	3.0	2.9	..	24.6	0.0	26.2	12.5	35.0	2.5	5.7	5.0	35.9
Australia		..	..	..	..	..	..	..	..	..	..	..	..
Austria		..	..	..	..	..	..	..	..	..	..	..	..
Azerbaijan ^a	2005	5.2	1.3	..	37.8	0.2	38.7	14.4	0.6	5.9	10.3	1.6	16.3
Bangladesh ^a	2007	3.2	1.4	6.1	82.2	1.2	..	16.1	11.6	10.6	7.8	8.4	16.2
Belarus ^a	2005	3.6	3.1	..	26.2	0.2	20.0	23.8	10.5	3.8	8.9	3.0	49.7
Belgium		..	..	..	..	..	..	..	..	..	..	..	..
Benin	2004	6.5	6.3	39.9	57.7	0.3	39.6	..	20.8	6.5	2.7	6.3	35.3
Bolivia ^a	2006	13.5	3.5	30.0	32.0	3.3	51.4	41.1	21.1	4.4	13.8	15.3	53.9
Bosnia and Herzegovina ^a	2005	4.3	1.9	..	24.1	0.4	29.2	25.2	17.5	2.4	14.5	2.0	47.2
Botswana ^a	2006	5.0	2.4	13.7	27.6	3.2	65.3	40.9	11.3	1.4	12.7	1.4	37.7
Brazil	2003	7.2	..	..	..	0.4	82.8	..	22.9	1.6	19.1	8.2	67.1
Bulgaria ^a	2005	2.8	4.7	..	36.1	0.3	39.7	36.5	24.7	1.3	11.0	2.0	32.3
Burkina Faso ^a	2006	9.5	2.5	..	87.0	1.8	58.8	23.3	22.3	3.9	7.4	2.8	43.1
Burundi ^a	2006	5.7	2.1	27.3	56.5	4.9	42.7	34.8	12.3	10.7	7.1	..	22.1
Cambodia	2003	8.6	7.2	..	82.4	1.6	91.0	..	6.8	2.2	2.8	..	22.5
Cameroon ^a	2006	12.8	6.4	15.6	77.4	3.8	38.7	35.3	18.0	3.9	16.4	4.3	42.4
Canada		..	..	..	..	..	..	..	..	..	..	..	..
Central African Republic		..	..	..	..	..	..	..	..	..	..	..	..
Chad		..	..	..	..	..	..	..	..	..	..	..	..
Chile ^a	2006	9.0	5.4	67.7	8.2	1.3	27.9	27.8	29.0	1.8	22.0	5.8	46.9
China	2003	18.3	14.4	11.8	72.6	0.1	49.5	..	9.8	1.3	35.9	6.7	84.8
Hong Kong, China		..	..	..	..	..	..	..	..	..	..	..	..
Colombia ^a	2006	14.3	2.5	28.2	8.2	2.9	38.7	43.0	30.5	2.3	5.9	7.1	39.5
Congo, Dem. Rep. ^a	2006	6.3	10.0	17.8	83.8	6.5	65.4	21.2	3.3	5.6	4.3	3.6	11.4
Congo, Rep.		..	..	..	..	..	..	..	..	..	..	..	..
Costa Rica	2005	9.6	0.7	..	33.8	0.4	68.3	34.7	9.3	1.9	10.5	3.5	46.4
Côte d'Ivoire		..	..	..	..	..	..	..	..	..	..	..	..
Croatia ^a	2005	2.7	2.3	..	20.8	0.2	33.3	20.0	29.7	2.4	16.1	2.0	59.9
Cuba		..	..	..	..	..	..	..	..	..	..	..	..
Czech Republic ^a	2005	2.1	1.7	..	25.5	0.4	51.1	21.8	11.4	1.6	12.5	3.6	60.3
Denmark		..	..	..	..	..	..	..	..	..	..	..	..
Dominican Republic	2005	8.8	2.7	..	26.3	0.7	73.6	..	3.6	15.2	9.6	11.4	53.3
Ecuador ^a	2006	17.3	2.6	19.9	20.7	3.0	37.6	32.7	23.8	2.7	18.2	7.0	61.6
Egypt, Arab Rep.	2004	..	7.2	112.8	21.2	..	33.0	..	7.9	4.5	12.0	4.8	13.4
El Salvador ^a	2006	9.2	4.1	35.4	27.3	5.6	42.3	39.6	17.3	2.9	11.0	2.6	49.6
Eritrea	2002	3.8	..	..	6.8	..	84.2	5.3	30.5	..	6.6	..	20.3
Estonia ^a	2005	2.3	2.2	..	16.2	0.4	24.7	34.1	17.8	1.1	13.2	1.8	64.9
Ethiopia ^a	2006	3.8	1.8	11.4	12.4	1.4	51.6	30.9	11.0	0.9	4.2	4.3	38.2
Finland		..	..	..	..	..	..	..	..	..	..	..	..
France		..	..	..	..	..	..	..	..	..	..	..	..
Gabon		..	..	..	..	..	..	..	..	..	..	..	..
Gambia, The ^a	2006	7.3	3.2	9.1	52.1	8.7	88.1	21.3	7.6	11.8	22.2	5.0	25.6
Georgia ^a	2005	3.1	7.9	..	11.1	0.3	36.0	36.9	12.5	9.2	13.0	3.4	24.0
Germany		..	..	..	..	..	..	..	..	..	..	..	..
Ghana ^a	2007	4.0	4.6	6.4	38.8	3.7	59.2	44.0	16.0	6.0	6.8	7.8	33.0
Greece		..	..	..	..	..	..	..	..	..	..	..	..
Guatemala ^a	2006	9.2	3.9	75.4	13.0	5.2	44.2	28.4	12.8	4.5	8.0	4.5	28.1
Guinea ^a	2006	2.7	3.6	13.0	84.8	8.3	95.4	25.4	0.9	14.0	5.2	4.3	21.1
Guinea-Bissau ^a	2006	2.9	4.4	30.4	62.2	3.3	68.2	19.9	0.7	5.3	8.4	5.6	12.4
Haiti		..	..	..	..	..	..	..	..	..	..	..	..

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 management met with tax officials	Time required to obtain operating license days	Unofficial payments to public officials % of firms	Losses due to theft, robbery, vandalism, and arson % of sales	Firms that do not report all sales for tax purposes % 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	ISO certification ownership % of firms	Average time to clear exports through customs days	Firms offering formal training % of firms
Honduras ^a	2006	4.6	2.4	31.6	12.7	6.1	36.0	39.9	8.5	3.8	16.5	6.0	33.3
Hungary ^a	2005	4.0	2.5	..	32.1	0.1	40.0	40.1	22.3	1.4	23.1	4.5	39.9
India	2006	6.7	3.1	..	47.5	0.1	59.2	9.1	19.4	6.6	22.5	15.6	15.9
Indonesia	2003	4.0	2.0	18.6	44.2	0.2	44.0	..	13.9	3.3	22.1	4.1	23.8
Iran, Islamic Rep.	..	..	..	..	..	..	..	..	..	..	..	..	..
Iraq	..	..	..	..	..	..	..	..	..	..	..	..	..
Ireland	..	..	..	..	..	..	..	..	..	..	..	..	..
Israel	..	..	..	..	..	..	..	..	..	..	..	..	..
Italy	..	..	..	..	..	..	..	..	..	..	..	..	..
Jamaica	2005	6.3	2.2	..	17.7	1.1	28.8	32.2	10.6	11.8	16.4	4.3	53.5
Japan	..	..	..	..	..	..	..	..	..	..	..	..	..
Jordan	2006	6.7	2.2	6.4	4.1	1.3	13.0	13.1	8.6	1.7	15.5	3.8	23.9
Kazakhstan ^a	2005	3.1	4.0	..	45.1	0.3	23.2	36.1	15.4	2.2	9.9	6.8	30.7
Kenya	2003	11.7	5.5	11.6	63.0	0.8	45.9	..	25.7	8.1	..	4.7	48.5
Korea, Dem. Rep.	2005	3.2	..	..	..	..	..	..	..	..	..	..	..
Korea, Rep.	2005	3.2	2.4	..	14.1	0.0	43.7	19.1	11.5	..	17.6	7.2	39.5
Kuwait	..	..	..	..	..	..	..	..	..	..	..	..	..
Kyrgyz Republic ^a	2005	6.1	3.5	43.9	66.3	0.7	43.2	27.3	7.9	4.1	11.9	4.1	47.0
Lao PDR	2005	4.5	3.8	..	31.2	1.5	14.9	..	13.8	4.3	3.3	2.0	28.2
Latvia ^a	2005	2.9	2.2	..	31.3	0.5	26.3	42.3	15.1	1.4	9.3	2.0	51.7
Lebanon	2006	12.0	4.7	..	51.2	0.5	67.5	27.9	26.8	6.0	20.9	7.4	67.8
Lesotho	2003	19.8	14.3	..	33.3	0.1	35.4	..	6.7	8.5	8.6	2.3	24.6
Liberia	..	..	..	..	..	..	..	..	..	..	..	..	..
Libya	..	..	..	..	..	..	..	..	..	..	..	..	..
Lithuania ^a	2005	5.1	4.2	55.5	44.6	0.4	39.0	25.5	15.6	1.2	15.1	1.8	52.6
Macedonia, FYR ^a	2005	8.2	2.7	..	26.0	0.3	52.2	17.5	9.0	1.8	11.0	2.4	37.4
Madagascar	2005	20.8	2.7	..	24.5	1.9	21.0	..	13.0	6.6	6.6	3.5	48.5
Malawi ^a	2006	5.8	8.9	17.4	35.7	2.3	55.3	15.8	20.6	22.6	17.2	3.5	51.6
Malaysia	2002	7.3	5.2	..	..	0.3	..	..	23.8	1.8	31.4	2.5	42.0
Mali	2003	7.5	6.9	8.1	59.6	0.5	55.1	..	16.8	1.7	6.5	8.1	25.5
Mauritania ^a	2006	5.8	1.9	10.7	82.1	5.6	82.5	17.3	3.2	1.6	5.9	3.9	25.5
Mauritius	2005	9.6	2.1	..	17.5	0.1	26.3	..	36.3	2.9	28.4	4.4	62.1
Mexico ^a	2006	20.5	2.3	11.9	20.0	3.4	57.7	24.8	2.6	2.4	20.3	5.4	24.6
Moldova ^a	2005	3.6	2.7	44.7	36.0	0.1	40.2	27.5	17.7	2.7	6.9	2.6	32.5
Mongolia	2004	6.0	7.3	..	..	0.6	80.4	..	32.8	1.5	20.5	3.5	46.2
Morocco	2004	9.2	0.8	4.9	..	0.0	10.7	..	24.7	0.7	22.3	2.2	33.5
Mozambique	..	..	..	..	..	..	..	..	..	..	..	..	..
Myanmar	..	..	..	..	..	..	..	..	..	..	..	..	..
Namibia ^a	2006	2.9	1.6	9.6	11.4	3.0	45.5	33.4	8.1	0.7	17.6	1.5	44.5
Nepal	..	..	..	..	..	..	..	..	..	..	..	..	..
Netherlands	..	..	..	..	..	..	..	..	..	..	..	..	..
New Zealand	..	..	..	..	..	..	..	..	..	..	..	..	..
Nicaragua ^a	2006	9.3	2.5	19.7	16.8	3.8	60.4	41.4	13.0	8.7	18.7	5.0	28.9
Niger ^a	2006	11.5	4.3	10.9	69.7	6.1	29.7	10.0	14.4	2.5	4.8	7.4	34.4
Nigeria	..	..	..	..	..	..	..	..	..	..	..	..	..
Norway	..	..	..	..	..	..	..	..	..	..	..	..	..
Oman	..	..	5.2	11.8	33.2	..	42.5	..	6.5	4.2	10.8	4.2	20.9
Pakistan	2002	8.7	4.2	35.2	57.0	0.1	..	..	3.6	4.9	17.0	9.7	11.1
Panama ^a	2006	10.3	2.7	41.2	24.2	2.7	54.2	37.1	19.2	2.4	14.7	5.7	43.9
Papua New Guinea	..	..	..	..	..	..	..	..	..	..	..	..	..
Paraguay ^a	2006	7.9	2.2	37.8	68.0	3.1	42.8	44.8	8.0	2.5	7.1	5.5	46.9
Peru ^a	2006	13.5	2.5	81.1	9.2	2.4	27.2	32.8	30.8	3.2	14.6	5.6	57.7
Philippines	2003	6.9	3.9	25.0	44.7	0.9	57.9	..	5.5	5.9	15.8	6.6	21.7
Poland ^a	2005	3.0	2.7	16.5	23.7	0.4	43.9	33.6	20.7	1.6	13.9	3.3	48.4
Portugal	..	..	..	..	..	..	..	..	..	..	..	..	..
Puerto Rico	..	..	..	..	..	..	..	..	..	..	..	..	..



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 management met with tax officials	Time required to obtain operating license days	Unofficial payments to public officials % of firms	Losses due to theft, robbery, vandalism, and arson % of sales	Firms that do not report all sales for tax purposes % 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	ISO certification ownership % of firms	Average time to clear exports through customs days	Firms offering formal training % of firms
Romania ^a	2005	1.1	1.8	..	33.1	0.2	26.9	27.7	23.2	2.1	16.8	2.4	32.7
Russian Federation ^a	2005	6.3	2.5	..	59.9	0.5	40.3	28.6	10.2	2.0	9.3	8.2	37.3
Rwanda ^a	2006	5.9	4.0	6.5	20.0	7.1	28.9	41.0	15.9	8.7	10.8	6.7	27.6
Saudi Arabia	..	..	..	..	..	..	..	..	..	..	..	..	..
Senegal	2003	..	6.7	30.5	25.3	0.6	..	..	26.3	4.3	6.1	6.6	32.7
Serbia ^a	2005	8.1	4.1	..	31.8	0.6	33.3	25.0	16.7	2.4	11.7	3.2	47.5
Sierra Leone	..	..	..	..	..	..	..	..	..	..	..	..	..
Singapore	..	..	..	..	..	..	..	..	..	..	..	..	..
Slovak Republic ^a	2005	3.0	1.8	..	34.3	0.4	22.0	18.2	13.2	1.2	10.0	5.8	79.4
Slovenia	2005	3.7	1.4	..	11.2	0.2	35.6	34.5	29.6	1.1	20.2	2.9	69.9
Somalia	..	..	..	..	..	..	..	..	..	..	..	..	..
South Africa	2003	9.2	3.3	6.4	2.1	0.5	15.9	..	24.2	0.4	42.4	4.5	64.0
Spain	..	..	..	..	..	..	..	..	..	..	..	..	..
Sri Lanka	2004	3.5	5.1	49.5	16.3	0.5	42.0	..	16.2	..	..	7.6	32.6
Sudan	..	..	..	..	..	..	..	..	..	..	..	..	..
Swaziland	2006	4.4	1.9	24.0	40.6	3.4	74.6	28.6	7.7	2.5	22.1	4.0	51.0
Sweden	..	..	..	..	..	..	..	..	..	..	..	..	..
Switzerland	..	..	..	..	..	..	..	..	..	..	..	..	..
Syrian Arab Republic	2003	10.3	6.0	..	..	..	79.9	..	2.9	8.6	7.4	6.3	21.0
Tajikistan	2005	3.3	3.0	15.3	45.7	0.3	34.5	21.8	1.0	7.3	6.5	5.4	30.9
Tanzania	2006	4.0	3.3	15.9	49.1	3.9	71.0	30.9	6.8	9.6	14.7	5.7	36.5
Thailand	2004	1.3	1.7	37.1	..	0.1	..	..	74.7	1.4	44.6	1.4	76.3
Timor-Leste	..	..	..	..	..	..	..	..	..	..	..	..	..
Togo	..	..	..	..	..	..	..	..	..	..	..	..	..
Trinidad and Tobago	..	..	..	..	..	..	..	..	..	..	..	..	..
Tunisia	..	..	..	..	..	..	..	..	..	..	..	..	..
Turkey	2005	10.8	2.2	..	45.7	0.2	63.1	8.9	7.5	2.2	12.6	4.5	25.5
Turkmenistan	..	..	..	..	..	..	..	..	..	..	..	..	..
Uganda	2006	5.2	2.9	9.3	50.6	4.1	74.5	34.7	7.7	10.2	15.5	4.7	35.0
Ukraine	2005	8.1	4.7	..	48.0	0.4	24.4	34.9	14.7	2.7	10.8	4.7	44.0
United Arab Emirates	..	..	..	..	..	..	..	..	..	..	..	..	..
United Kingdom	..	..	..	..	..	..	..	..	..	..	..	..	..
United States	..	..	..	..	..	..	..	..	..	..	..	..	..
Uruguay	2006	7.0	2.2	133.8	7.1	2.1	45.5	41.6	6.8	0.9	6.8	2.8	24.6
Uzbekistan	2005	2.5	3.5	..	36.8	0.1	14.6	17.2	3.3	2.7	8.7	5.1	16.2
Venezuela, RB	2006	33.6	3.4	41.6	..	6.8	..	..	35.7	4.4	12.5	14.1	42.3
Vietnam	2005	3.1	2.2	..	67.2	0.1	70.3	27.4	29.2	..	11.4	4.9	44.0
West Bank and Gaza	2006	5.7	5.2	21.3	5.2	7.5	25.7	18.0	4.2	4.6	18.2	6.0	26.5
Yemen, Rep.	..	..	..	..	..	..	..	..	..	..	..	..	..
Zambia	2002	13.0	2.9	..	44.4	2.8	53.5	..	17.4	3.8	5.8	2.3	34.2
Zimbabwe	..	..	..	..	..	..	..	..	..	..	..	..	..

a. Representative sample of the nonagricultural economy, excluding financial and public services.

Business environment: enterprise surveys

5.2

About the data

The World Bank Group's Enterprise Surveys collect firm-level data on the business environment to analyze how it changes and affects firm performance and growth. Enterprise Surveys cover 11 dimensions of the business environment and are available for more than 70,000 firms in 104 countries.

Firms evaluating alternative 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 performance and monitoring progress.

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. The time needed to obtain licenses and permits and the associated red tape constrains firm operations.

In some countries doing business requires unofficial payments or gifts to "get things done" in customs, taxes, licenses, regulations, services, and the like. Corruption such as this harms the business environment by distorting policymaking, undermining government credibility, and diverting public resources. Crime, theft, and disorder may also impose costs on businesses and society.

In many developing countries informal businesses operate without licenses, which constrains private sector growth because these firms have less access to financial and public services and can engage in fewer types of contracts and investments.

Equal opportunities for men and women contribute to development. The table shows female participation in firm ownership as a measure of women's integration as decisionmakers in business.

When financial markets work well, they connect firms to lenders and investors, allowing firms to seize opportunities and grow their businesses: creditworthy firms can obtain credit from financial intermediaries at competitive prices. But too often market imperfections and government-induced distortions limit a firm's access to credit and thus restrain private sector development and economic growth.

The reliability and availability of infrastructure benefit households and are crucial for development. Firms with access to modern and efficient infrastructure—telecommunications, reliable

electricity, and transport—can be more productive. Firm-level innovation and use of modern technology may improve enterprises' ability to compete in the business environment.

Delays in clearing customs can be costly, deterring firms from engaging in foreign trade or making them uncompetitive in foreign markets. 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 table presents data for 27 countries in Europe and Central Asia and 2 comparator countries in Asia (Republic of Korea and Vietnam) that are based on the joint European Bank for Reconstruction and Development (EBRD)–World Bank Business Environment and Enterprise Performance Surveys (BEEPS). All other data are from the World Bank Financial and Private Sector Development Group's Enterprise Surveys. All BEEPS economies project plus the Latin American and Caribbean and Sub-Saharan African countries for 2006 (except Burkina Faso, Cameroon, and Cape Verde), Jordan, and the 2007 surveys for Bangladesh and Ghana draw a sample from the universe of registered nonagricultural businesses, excluding the financial and public sectors. Economies in the table with samples that are representative of the economy are footnoted. Samples for most of the remaining economies were drawn from the manufacturing sector.

Samples are selected by simple random sampling or stratified random sampling. Typical sample sizes range from 100 to 1,800, depending on the size of the economy. BEEPS use a simple random sample method based on GDP contributions, and therefore samples are self-weighted. Latin American and Caribbean and Sub-Saharan African countries (except Burkina Faso, Cameroon, and Cape Verde), Bangladesh, and Jordan use stratified random sampling, with three levels of stratification: sector, firm size, and geographic region. At the sector level the strata were defined by a few selected manufacturing industries, the retail industry (to represent the services sector), and a residual stratum for the rest of the economy. Firm size is stratified into small, medium, and large. Geographic stratification is defined by country. Stratified random sampling allows indicators to be computed by sector, size, and geographic region. Economywide indicators can also be computed with more precision than under simple random sampling when individual observations are properly weighted.

Definitions

- **Survey year** is the year in which the underlying data were collected.
- **Time dealing with officials** is the time senior management spends dealing with the requirements of government regulation.
- **Average number of times management met 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 the establishment applied for it to the day it was granted.
- **Unofficial payments to public officials** are the percentage of firms expected to make informal payments to public officials to "get things done" with regard to customs, taxes, licenses, regulations, services, and the like.
- **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 that do not report all sales for tax purposes** are the percentage of firms that expressed that a typical firm reports less than 100 percent of sales for tax purposes; such firms are termed "informal firms."
- **Firms with female participation in ownership** are the percentage of firms with a woman among the principal owners.
- **Firms using banks to finance investment** are the percentage of firms using banks to finance investments.
- **Value lost due to electrical outages** is the percentage of sales lost due to power outages.
- **ISO certification ownership** is the percentage of firms that have earned a quality certification recognized by the International Organization for Standardization (ISO).
- **Average time to clear 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).



5.3

Business environment: Doing Business indicators

	Starting a business			Registering property		Dealing with licenses		Employing workers	Enforcing contracts		Protecting investors	Closing a business
	Number of procedures June 2007	Time required days June 2007	Cost % of per capita income June 2007	Number of procedures June 2007	Time required days June 2007	Number of procedures to build a warehouse June 2007	Time required to build a warehouse days June 2007	Rigidity of employment index 0–100 (least to most rigid) June 2007	Number of procedures June 2007	Time required days June 2007	Disclosure index 0–10 (least to most disclosure) June 2007	Time to resolve insolvency years June 2007
Afghanistan	4	9	84.6	9	250	13	340	23	47	1,642	0	..
Albania	10	36	20.9	7	47	24	331	35	39	390	0	..
Algeria	14	24	13.2	14	51	22	240	48	47	630	6	2.5
Angola	12	119	343.7	7	334	14	337	69	46	1,011	5	6.2
Argentina	14	31	9.7	5	65	28	338	41	36	590	6	2.8
Armenia	9	18	4.8	3	4	19	116	31	50	285	5	1.9
Australia	2	2	0.8	5	5	16	221	3	28	262	8	1.0
Austria	8	28	5.4	3	32	13	194	37	26	397	3	1.1
Azerbaijan	13	30	6.9	7	61	31	207	38	39	267	4	2.7
Bangladesh	8	74	46.2	8	425	14	252	35	41	1,442	6	4.0
Belarus	10	48	8.8	7	231	17	350	27	28	225	5	5.8
Belgium	3	4	5.3	7	132	14	169	20	27	505	8	0.9
Benin	7	31	195.0	3	118	15	332	40	42	720	6	4.0
Bolivia	15	50	134.1	7	92	17	249	79	37	591	1	1.8
Bosnia and Herzegovina	12	54	30.1	7	331	16	467	46	38	595	3	3.3
Botswana	11	108	9.9	4	30	24	167	20	29	987	8	1.7
Brazil	18	152	10.4	14	45	18	411	46	45	616	6	4.0
Bulgaria	9	32	8.4	9	19	22	131	29	40	564	10	3.3
Burkina Faso	6	18	82.1	8	182	32	226	61	37	446	6	4.0
Burundi	11	43	251.0	5	94	20	384	41	44	558	4	..
Cambodia	10	86	190.3	7	56	23	709	45	44	401	5	..
Cameroon	13	37	129.2	5	93	15	426	46	43	800	6	3.2
Canada	2	3	0.9	6	17	14	75	4	36	570	8	0.8
Central African Republic	10	14	205.4	3	69	21	239	61	43	660	6	4.8
Chad	19	75	188.8	6	44	9	181	46	41	743	6	..
Chile	9	27	8.6	6	31	18	155	24	36	480	7	4.5
China	13	35	8.4	4	29	37	336	24	35	406	10	1.7
Hong Kong, China	5	11	3.1	5	54	23	155	0	24	211	10	1.1
Colombia	11	42	19.3	9	23	14	146	27	34	1,346	8	3.0
Congo, Dem. Rep.	13	155	487.2	8	57	14	322	74	43	685	3	5.2
Congo, Rep.	10	37	150.1	7	137	14	169	69	44	560	6	3.0
Costa Rica	12	77	21.3	6	21	23	178	32	40	877	2	3.5
Côte d'Ivoire	10	40	135.8	7	62	21	628	38	33	770	6	2.2
Croatia	8	40	11.7	5	174	22	255	50	38	561	1	3.1
Cuba	..	..	..	..	..	..	..	..	..	..	..	..
Czech Republic	10	17	10.6	4	123	36	180	31	27	820	2	6.5
Denmark	4	6	0.0	6	42	6	69	10	34	380	7	1.1
Dominican Republic	9	22	31.1	7	60	17	214	32	34	460	5	3.5
Ecuador	14	65	29.2	10	17	19	148	51	39	498	1	5.3
Egypt, Arab Rep.	7	9	28.6	7	193	28	249	27	42	1,010	7	4.2
El Salvador	9	26	73.1	5	31	34	155	24	30	786	5	4.0
Eritrea	13	84	125.8	12	101	..	..	20	39	405	4	..
Estonia	5	7	2.0	3	51	13	117	58	36	425	8	3.0
Ethiopia	7	16	41.3	13	43	12	128	34	39	690	4	3.0
Finland	3	14	1.0	3	14	18	38	48	33	235	6	0.9
France	5	7	1.1	9	123	13	137	56	30	331	10	1.9
Gabon	9	58	164.0	8	60	14	210	59	38	1,070	6	5.0
Gambia, The	9	32	279.0	5	371	17	146	23	32	434	2	3.0
Georgia	5	11	9.5	5	5	12	113	7	36	285	8	3.3
Germany	9	18	5.7	4	40	12	100	44	33	394	5	1.2
Ghana	11	42	41.4	5	34	18	220	37	36	487	7	1.9
Greece	15	38	23.3	12	23	15	169	55	39	819	1	2.0
Guatemala	11	26	47.3	5	30	22	235	28	28	1,459	3	3.0
Guinea	13	41	138.3	6	104	32	255	41	50	276	6	3.8
Guinea-Bissau	17	233	255.5	9	211	15	167	66	41	1,140	6	..
Haiti	12	202	133.9	5	405	11	1,179	21	35	508	2	5.7

Business environment: Doing Business indicators

5.3

	Starting a business			Registering property		Dealing with licenses		Employing workers	Enforcing contracts		Protecting investors	Closing a business
	Number of procedures	Time required days	Cost % of per capita income	Number of procedures	Time required days	Number of procedures to build a warehouse	Time required to build a warehouse days	Rigidity of employment index 0–100 (least to most rigid)	Number of procedures	Time required days	Disclosure index 0–10 (least to most disclosure)	Time to resolve insolvency years
	June 2007	June 2007	June 2007	June 2007	June 2007	June 2007	June 2007	June 2007	June 2007	June 2007	June 2007	June 2007
Honduras	13	21	59.9	7	24	17	125	43	45	480	1	3.8
Hungary	6	16	17.7	4	63	31	211	30	33	335	2	2.0
India	13	33	74.6	6	62	20	224	30	46	1,420	7	10.0
Indonesia	12	105	80.0	7	42	19	196	44	39	570	9	5.5
Iran, Islamic Rep.	8	47	5.3	9	36	19	670	40	39	520	5	4.5
Iraq	11	77	93.5	5	8	14	215	38	51	520	4	..
Ireland	4	13	0.3	5	38	11	185	17	20	515	10	0.4
Israel	5	34	4.4	7	144	20	235	24	35	890	7	4.0
Italy	9	13	18.7	8	27	14	257	38	41	1,210	7	1.8
Jamaica	6	8	8.7	5	54	10	236	4	34	565	4	1.1
Japan	8	23	7.5	6	14	15	177	17	30	316	7	0.6
Jordan	10	14	66.2	8	22	18	122	30	39	689	5	4.3
Kazakhstan	8	21	7.6	8	52	38	231	20	38	230	7	3.3
Kenya	12	44	46.1	8	64	10	100	21	44	465	3	4.5
Korea, Dem. Rep.	..	..	..	..	..	..	..	..	..	..	..	..
Korea, Rep.	10	17	16.9	7	11	13	34	37	35	230	7	1.5
Kuwait	13	35	1.6	8	55	25	104	13	50	566	7	4.2
Kyrgyz Republic	8	21	8.8	4	4	20	291	38	39	177	8	4.0
Lao PDR	8	103	16.5	9	135	24	172	37	42	443	0	..
Latvia	5	16	3.0	8	54	26	188	43	27	279	5	3.0
Lebanon	6	46	94.1	8	25	20	211	25	37	721	9	4.0
Lesotho	8	73	37.4	6	101	15	601	24	41	695	2	2.6
Liberia	12	99	493.3	13	50	25	398	31	41	1,280	4	3.0
Libya	..	..	..	..	..	..	..	..	..	..	..	..
Lithuania	7	26	3.0	3	3	17	156	48	30	210	5	1.7
Macedonia, FYR	9	15	6.6	6	98	19	192	50	39	385	5	3.7
Madagascar	5	7	22.7	8	134	16	268	63	38	871	5	..
Malawi	10	37	188.7	6	88	21	213	25	42	432	4	2.6
Malaysia	9	24	18.1	5	144	25	285	10	30	600	10	2.3
Mali	11	26	132.1	5	29	14	208	38	39	860	6	3.6
Mauritania	11	65	56.2	4	49	25	201	45	46	400	5	8.0
Mauritius	6	7	5.3	6	210	18	107	23	37	750	6	1.7
Mexico	8	27	13.3	5	74	11	131	48	38	415	8	1.8
Moldova	9	23	11.5	6	48	30	292	38	31	365	7	2.8
Mongolia	8	20	4.3	5	11	21	126	34	32	314	5	4.0
Morocco	6	12	11.5	8	47	19	163	63	40	615	6	1.8
Mozambique	10	29	21.6	8	42	17	361	54	31	1,010	5	5.0
Myanmar	..	..	..	..	..	..	..	..	..	..	..	..
Namibia	10	99	22.3	9	23	12	139	20	33	270	5	1.5
Nepal	7	31	73.9	3	5	15	424	52	39	735	6	5.0
Netherlands	6	10	6.0	2	5	18	230	42	25	514	4	1.1
New Zealand	2	12	0.1	2	2	7	65	7	30	216	10	1.3
Nicaragua	6	39	119.1	8	124	17	219	27	35	540	4	2.2
Niger	11	23	174.8	5	32	16	293	70	39	545	6	5.0
Nigeria	9	34	56.6	14	82	18	350	7	39	457	5	2.0
Norway	6	10	2.3	1	3	14	252	47	33	310	7	0.9
Oman	9	34	4.3	2	16	16	242	24	51	598	8	4.0
Pakistan	11	24	14.0	6	50	12	223	43	47	880	6	2.8
Panama	7	19	22.0	7	44	25	149	69	31	686	1	2.5
Papua New Guinea	8	56	26.4	4	72	24	217	10	43	591	5	3.0
Paraguay	7	35	77.6	6	46	13	291	59	38	591	6	3.9
Peru	10	72	29.9	5	33	21	210	55	41	468	8	3.1
Philippines	15	58	26.8	8	33	21	177	35	37	842	1	5.7
Poland	10	31	21.2	6	197	30	308	37	38	830	7	3.0
Portugal	7	7	3.4	5	42	20	327	48	35	577	6	2.0
Puerto Rico	7	7	0.8	8	194	22	209	21	41	620	7	3.8



5.3

Business environment: Doing Business indicators

	Starting a business			Registering property		Dealing with licenses		Employing workers	Enforcing contracts		Protecting investors	Closing a business
	Number of procedures June 2007	Time required days June 2007	Cost % of per capita income June 2007	Number of procedures June 2007	Time required days June 2007	Number of procedures to build a warehouse June 2007	Time required to build a warehouse days June 2007	Rigidity of employment index 0–100 (least to most rigid) June 2007	Number of procedures June 2007	Time required days June 2007	Disclosure index 0–10 (least to most disclosure) June 2007	Time to resolve insolvency years June 2007
Romania	6	14	4.7	8	150	17	243	66	32	537	9	3.3
Russian Federation	8	29	3.7	6	52	54	704	44	37	281	6	3.8
Rwanda	9	16	171.5	5	371	16	227	42	24	310	2	..
Saudi Arabia	7	15	32.3	4	4	18	125	13	44	635	7	2.8
Senegal	10	58	107.0	6	114	14	217	61	44	780	6	3.0
Serbia	11	23	8.9	6	111	20	204	46	36	635	7	2.7
Sierra Leone	9	26	1,075.2	8	235	47	235	51	40	515	3	2.6
Singapore	5	5	0.8	3	9	11	102	0	22	120	10	0.8
Slovak Republic	9	25	4.2	3	17	13	287	36	30	565	3	4.0
Slovenia	9	60	8.5	6	391	15	208	63	32	1,350	3	2.0
Somalia	..	..	..	..	..	..	..	..	..	..	..	..
South Africa	8	31	7.1	6	24	17	174	42	30	600	8	2.0
Spain	10	47	15.1	4	18	11	233	56	39	515	5	1.0
Sri Lanka	5	39	8.5	8	83	22	214	27	40	1,318	4	1.7
Sudan	10	39	57.9	6	9	19	271	36	53	810	0	..
Swaziland	13	61	38.7	11	46	13	93	17	40	972	0	2.0
Sweden	3	15	0.6	1	2	8	116	39	30	508	6	2.0
Switzerland	6	20	2.1	4	16	14	154	17	32	417	0	3.0
Syrian Arab Republic	13	43	55.7	4	34	21	128	37	55	872	6	4.1
Tajikistan	13	49	39.6	6	37	32	191	51	34	295	0	3.0
Tanzania	12	29	47.1	10	119	21	308	63	38	462	3	3.0
Thailand	8	33	5.6	2	2	11	156	18	35	479	10	2.7
Timor-Leste	9	82	11.9	..	..	22	208	34	51	1,800	3	..
Togo	13	53	245.7	5	295	15	277	54	41	588	6	3.0
Trinidad and Tobago	9	43	0.9	8	162	20	261	7	42	1,340	4	..
Tunisia	10	11	8.3	5	49	20	93	49	39	565	0	1.3
Turkey	6	6	20.7	6	6	25	188	42	36	420	8	3.3
Turkmenistan	..	..	..	..	..	..	..	..	..	..	..	..
Uganda	18	28	92.0	13	227	16	143	3	38	535	2	2.2
Ukraine	10	27	7.8	10	93	29	429	45	30	354	1	2.9
United Arab Emirates	11	62	36.9	3	6	21	125	20	50	607	4	5.1
United Kingdom	6	13	0.8	2	21	19	144	7	30	404	10	1.0
United States	6	6	0.7	4	12	19	40	0	32	300	7	1.5
Uruguay	11	44	46.0	8	66	30	234	31	40	720	3	2.1
Uzbekistan	7	15	14.2	12	78	26	260	34	42	195	4	4.0
Venezuela, RB	16	141	28.2	8	47	11	395	79	29	510	3	4.0
Vietnam	11	50	20.0	4	67	13	194	27	34	295	6	5.0
West Bank and Gaza	12	92	280.4	10	72	21	199	31	44	700	6	..
Yemen, Rep.	12	63	178.8	6	21	13	107	33	37	520	6	3.0
Zambia	6	33	30.5	6	70	17	254	34	35	471	3	2.7
Zimbabwe	10	96	21.3	4	30	19	952	33	38	410	8	3.3
World	9 u	44 u	61.1 u	6 u	81 u	18 u	223 u	34 u	38 u	605 u	5 u	3.0 u
Low income	10	54	134.9	7	114	19	288	40	40	645	5	3.8
Middle income	9	48	43.1	6	76	19	216	34	38	621	5	3.1
Lower middle income	10	53	56.5	6	86	18	218	33	39	635	4	3.3
Upper middle income	9	41	24.0	6	61	21	212	35	38	602	5	2.9
Low & middle income	10	50	75.9	7	89	19	241	36	39	630	5	3.3
East Asia & Pacific	9	47	40.8	5	112	19	179	21	37	591	5	3.1
Europe & Central Asia	9	26	11.6	6	81	24	261	39	36	392	5	3.2
Latin America & Carib.	10	73	47.8	7	67	17	242	34	39	692	4	3.2
Middle East & N. Africa	10	39	80.5	7	47	19	218	38	43	707	6	3.5
South Asia	8	33	40.7	6	134	16	247	27	44	1,047	4	5.0
Sub-Saharan Africa	11	56	148.1	7	105	18	262	43	39	643	5	3.4
High income	7	22	6.6	5	51	17	158	28	34	516	6	2.0
Euro area	7	22	7.4	6	70	14	190	45	31	591	6	1.4

Business environment: Doing Business indicators

5.3

About the data

These indicators on the environment for doing business identify regulations that enhance or constrain business investment, productivity, and growth. The data are from the World Bank's Doing Business database, which includes data on 178 economies. The indicators in the table point to the administrative and regulatory reforms and institutions needed to create a favorable environment for doing business.

When entrepreneurs start a business, the first obstacles they face are the administrative and legal procedures required to register the new firm. Countries differ widely in how they regulate the entry of new businesses. In some countries the process is straightforward and affordable. In others the procedures are so burdensome that entrepreneurs may opt to run their business informally. The data on starting a business cover the number of start-up procedures, the time required, and the cost to complete them.

Property registries were developed to raise tax revenue, but they have benefited entrepreneurs as well. Securing rights to legally transfer land and buildings, a major source of wealth in most countries, strengthens incentives to invest and facilitates trade. More complex procedures to register property are associated with less perceived security of property rights, more informality, and more corruption. The data cover the number of procedures required and time required to legally transfer property.

Construction is a large sector in most economies, and the table includes data on the number of procedures and time required for a business in the construction industry to complete the legal procedures to build a standardized warehouse. These include obtaining all necessary licenses and permits, completing all required notifications and inspections, and submitting the relevant documents to the authorities.

Every economy has a complex system of laws and institutions to protect the interests of workers and guarantee a minimum standard of living for its population. The rigidity of employment index focuses on the regulation of employment. The index is the average of three subindexes: a difficulty of hiring index, a rigidity of working hours index, and a difficulty of firing index. All subindexes have several components and take values between 0 and 100, with higher values indicating more rigid regulation.

Contract enforcement is critical to enable businesses to engage with new borrowers or customers. The institution that enforces contracts between debtors and creditors, and suppliers and customers, is the court. The efficiency of contract enforcement

is reflected in two indicators: the number of judicial procedures to resolve a commercial dispute and the time to enforce a commercial contract.

What companies disclose to the public has a large impact on investor protection. Both investors and entrepreneurs benefit greatly from such legal protection. The disclosure index is based on several measures that cover disclosure of ownership and interests in related party transactions to reduce expropriation of minority investors.

Unviable businesses prevent assets and human capital from being allocated to more productive uses in new companies or in viable companies that are financially distressed. The time to close a business (resolve insolvency) captures the average time to complete a procedure, as estimated by insolvency lawyers. Delays due to legal derailment tactics that parties to the insolvency may use, in particular extension of response periods or appeals, are taken into account.

To ensure cross-country comparability, several standard characteristics of a company are defined in all surveys, such as size, ownership, location, legal status, and type of activities undertaken. For example, for the starting a business data, standard characteristics include that the business is a limited liability company; operates in the country's most populous city; is 100 percent domestically owned and has five owners, none of them a legal entity; has start-up capital of 10 times income per capita; has paid-in cash; performs general industrial or commercial activities, such as production or sale of products or services to the public; does not perform foreign trade activities or handle products subject to a special tax regime; does not use heavily polluting production processes; leases the commercial plant and offices and is not a proprietor of real estate; does not qualify for investment incentives or any special benefits; has up to 50 employees within one month of commencement of operations, all of them nationals; has turnover at least 100 times income per capita; and has a company deed at least 10 pages long. The data were collected through a study of laws and regulations in each country, surveys of regulators or private sector professionals on each topic, and cooperative arrangements with private consulting firms and business and law associations. Note that some of these assumptions do not apply to all *Doing Business* indicators.

For more information on the methodology, see www.doingbusiness.org/.

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. Data are 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. If a procedure can be expedited at additional cost, the fastest procedure, independent of cost, is chosen. • **Cost for starting a business** is normalized as a percentage of gross national income (GNI) per capita. • **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 licenses to build a warehouse** is the number of calendar days to complete the required procedures for building a warehouse. If a procedure can be expedited at additional cost, the fastest procedure, independent of cost, is chosen. • **Rigidity of employment index**, a measure of employment regulation, is the average of three subindexes: a difficulty of hiring index, a rigidity of hours index, and a difficulty of firing index. Higher values indicate more rigid regulations. • **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. • **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).



5.4

Stock markets

	Market capitalization				Market liquidity		Turnover ratio		Listed domestic companies		S&P/EMDB indexes	
	\$ millions		% of GDP		Value of shares traded % of GDP		Value of shares traded % of market capitalization		number		% change	
	2000	2007	2000	2006	2000	2006	2000	2007	2000	2007	2006	2007
Afghanistan	..	..	..	..	..	..	..	..	..	..	..	..
Albania	..	..	..	..	..	..	..	..	..	..	..	..
Algeria	..	..	..	..	..	..	..	..	..	..	..	..
Angola	..	..	..	..	..	..	..	..	..	..	..	..
Argentina	166,068	86,684	58.4	37.2	2.1	2.1	4.8	9.8	127	107	57.6	0.7 ^a
Armenia	2	60	0.1	0.9	0.0	0.1	4.6	9.4	105	35	..	..
Australia	372,794	1,095,858	93.3	140.4	56.6	105.9	56.5	87.0	1,330	1,751	..	..
Austria	29,935	191,300	15.4	59.4	4.8	24.7	29.8	50.4	97	96	..	..
Azerbaijan	4	..	0.1	..	..	..	..	..	2	..	..	..
Bangladesh	1,186	6,793	2.5	5.8	1.6	1.5	74.4	95.5	221	278	12.9	126.4 ^b
Belarus	..	..	..	..	..	..	..	..	..	..	..	..
Belgium	182,481	396,220	78.7	100.6	16.4	42.1	20.7	48.5	174	153	..	..
Benin	..	..	..	..	..	..	..	..	..	..	..	..
Bolivia	1,742	2,223	20.7	19.9	0.8	0.0	0.1	0.0	26	35	..	..
Bosnia and Herzegovina	..	..	..	..	..	..	..	..	..	..	..	..
Botswana	978	5,887	15.8	37.2	0.8	0.7	4.8	2.1	16	18	53.0	37.2 ^b
Brazil	226,152	1,370,377	35.1	66.6	15.7	23.8	43.5	56.2	459	442	43.1	74.7 ^a
Bulgaria	617	21,793	4.9	32.8	0.5	4.8	9.2	34.1	503	369	31.4	39.0 ^b
Burkina Faso	..	..	..	..	..	..	..	..	..	..	..	..
Burundi	..	..	..	..	..	..	..	..	..	..	..	..
Cambodia	..	..	..	..	..	..	..	..	..	..	..	..
Cameroon	..	..	..	..	..	..	..	..	..	..	..	..
Canada	841,385	1,700,708	116.1	133.7	87.6	101.5	77.3	81.1	1,418	3,790	..	..
Central African Republic	..	..	..	..	..	..	..	..	..	..	..	..
Chad	..	..	..	..	..	..	..	..	..	..	..	..
Chile	60,401	212,910	79.7	119.7	8.0	19.7	9.4	21.8	258	238	28.6	22.6 ^a
China	580,991	6,226,305	48.5	91.7	60.2	61.8	158.3	197.5	1,086	1,530	80.7	66.6 ^a
Hong Kong, China	623,398	1,714,953	368.6	903.6	223.4	437.7	61.3	60.0	779	1,165	..	..
Colombia	9,560	101,956	11.4	36.6	0.5	7.4	3.8	15.4	126	96	12.7	12.7 ^b
Congo, Dem. Rep.	..	..	..	..	..	..	..	..	..	..	..	..
Congo, Rep.	..	..	..	..	..	..	..	..	..	..	..	..
Costa Rica	2,924	1,944	18.3	8.7	0.7	0.2	12.0	3.1	21	16	..	..
Côte d'Ivoire	1,185	8,353	11.4	23.7	0.3	0.6	2.6	2.3	41	38	35.6	115.6 ^b
Croatia	2,742	65,977	14.9	67.6	1.0	4.2	7.4	7.2	64	353	85.2	68.1 ^b
Cuba	..	..	..	..	..	..	..	..	..	..	..	..
Czech Republic	11,002	73,420	19.4	34.0	11.6	23.0	60.3	73.4	131	32	30.9	49.7 ^a
Denmark	107,666	231,015	67.3	83.9	57.2	64.2	86.0	86.4	225	201	..	..
Dominican Republic	141	..	0.8	..	..	..	..	..	6	..	..	..
Ecuador	704	4,266	4.4	9.8	0.1	0.7	5.5	7.0	30	35	32.0	3.8 ^b
Egypt, Arab Rep.	28,741	139,289	28.8	87.0	11.1	44.2	34.7	48.3	1,076	435	10.2	52.2 ^a
El Salvador	2,041	5,465	15.5	29.3	0.2	0.9	1.3	3.7	40	48	..	..
Eritrea	..	..	..	..	..	..	..	..	..	..	..	..
Estonia	1,846	6,037	32.8	36.3	5.8	5.9	18.9	31.6	23	18	30.3	-15.5 ^b
Ethiopia	..	..	..	..	..	..	..	..	..	..	..	..
Finland	293,635	265,477	241.0	126.0	169.6	169.4	64.3	150.2	154	134	..	..
France	1,446,634	2,428,572	108.9	108.0	81.6	111.4	74.1	119.6	808	717	..	..
Gabon	..	..	..	..	..	..	..	..	..	..	..	..
Gambia, The	..	..	..	..	..	..	..	..	..	..	..	..
Georgia	24	668	0.8	8.6	0.1	1.2	..	18.6	269	231	..	..
Germany	1,270,243	1,637,826	66.8	56.5	56.3	85.8	79.1	173.9	1,022	656	..	..
Ghana	502	2,380	10.1	25.0	0.2	0.4	1.5	5.1	22	32	9.7	21.6 ^b
Greece	110,839	208,284	76.9	67.5	66.0	34.8	63.7	60.8	329	318	..	..
Guatemala	240	..	1.2	..	0.0	..	0.0	..	44	..	..	..
Guinea	..	..	..	..	..	..	..	..	..	..	..	..
Guinea-Bissau	..	..	..	..	..	..	..	..	..	..	..	..
Haiti	..	..	..	..	..	..	..	..	..	..	..	..

	Market capitalization				Market liquidity		Turnover ratio		Listed domestic companies		S&P/EMDB indexes	
	\$ millions		% of GDP		Value of shares traded % of GDP		Value of shares traded % of market capitalization		number		% change	
	2000	2007	2000	2006	2000	2006	2000	2007	2000	2007	2006	2007
Honduras	458	..	8.8	..	..	..	..	..	46	..	..	..
Hungary	12,021	47,651	25.1	37.1	25.3	27.6	90.7	102.6	60	41	31.4	13.1 ^a
India	148,064	1,819,101	32.2	89.8	110.8	70.0	133.6	95.9	5,937	4,887	46.7	78.6 ^a
Indonesia	26,834	211,693	16.3	38.1	8.7	13.4	32.9	66.7	290	383	67.9	49.3 ^a
Iran, Islamic Rep.	7,350	37,943	7.3	17.4	1.1	2.2	12.7	12.7	304	332	..	..
Iraq	..	..	..	..	..	..	..	..	..	..	..	..
Ireland	81,882	163,358	85.0	74.2	15.0	36.3	19.2	57.6	76	57	..	..
Israel	64,081	236,361	53.0	123.4	19.3	63.2	36.3	54.8	654	654	-6.3	34.3 ^a
Italy	768,364	1,026,640	70.0	55.5	70.9	73.8	104.0	149.7	291	284	..	..
Jamaica	3,582	12,335	44.6	122.5	0.9	3.0	2.5	3.1	46	41	-1.5	0.3 ^b
Japan	3,157,222	4,726,269	67.6	108.2	57.7	143.1	69.9	132.1	2,561	3,362	5.9	-5.2 ^b
Jordan	4,943	41,216	58.4	210.8	4.9	142.2	7.7	52.2	163	245	-36.0	32.6 ^b
Kazakhstan	1,342	43,688	7.3	53.9	0.5	4.9	25.1	14.7	23	67	..	..^c
Kenya	1,283	13,387	10.1	49.9	0.4	5.7	3.6	11.6	57	51	60.3	11.8 ^b
Korea, Dem. Rep.	..	..	..	..	..	..	..	..	..	..	..	..
Korea, Rep.	171,587	1,123,633	33.5	94.1	208.7	150.9	233.2	191.6	1,308	1,767	13.3	27.7 ^a
Kuwait	20,772	188,046	55.1	161.0	11.2	116.4	21.3	74.0	77	181	-4.6	39.9 ^b
Kyrgyz Republic	4	93	0.3	3.3	1.7	3.5	..	148.2	80	8	..	..
Lao PDR	..	..	..	..	..	..	..	..	..	..	..	..
Latvia	563	3,111	7.2	13.4	2.9	0.6	48.6	4.7	64	41	1.5	1.9 ^b
Lebanon	1,583	10,858	9.4	36.4	0.7	9.0	6.7	10.9	12	11	-9.2	40.5 ^b
Lesotho	..	..	..	..	..	..	..	..	..	..	..	..
Liberia	..	..	..	..	..	..	..	..	..	..	..	..
Libya	..	..	..	..	..	..	..	..	..	..	..	..
Lithuania	1,588	10,134	13.9	34.2	1.8	7.0	14.8	9.2	54	40	9.7	14.3 ^b
Macedonia, FYR	7	1,098	0.2	17.7	3.3	3.1	6.6	22.4	1	43	..	..
Madagascar	..	..	..	..	..	..	..	..	..	..	..	..
Malawi	..	587	..	18.6	..	0.5	13.8	3.5	..	10	..	..
Malaysia	116,935	325,663	129.5	156.2	64.8	44.4	44.6	51.6	795	1,036	34.6	44.6 ^a
Mali	..	..	..	..	..	..	..	..	..	..	..	..
Mauritania	1,090	..	97.2	..	..	..	..	..	40	..	..	..
Mauritius	1,331	5,666	29.8	56.7	1.7	2.2	5.0	8.7	40	41	44.3	94.0 ^b
Mexico	125,204	397,725	21.5	41.5	7.8	9.5	32.3	29.5	179	125	41.1	12.8 ^a
Moldova	392	..	30.4	22.1	1.9	0.8	5.8	5.9	36	..	..	..
Mongolia	37	113	3.4	3.6	0.7	0.3	7.3	13.5	410	386	..	..
Morocco	10,899	75,495	29.4	75.5	3.0	20.6	9.2	39.6	53	74	78.5	45.3 ^a
Mozambique	..	..	..	..	..	..	..	..	..	..	..	..
Myanmar	..	..	..	..	..	..	..	..	..	..	..	..
Namibia	311	702	9.1	8.3	0.6	0.3	4.5	3.5	13	9	12.8	39.4 ^b
Nepal	790	1,805	14.4	20.2	0.6	0.8	6.9	4.4	110	135	..	..
Netherlands	640,456	779,645	166.3	117.7	175.9	165.5	101.4	159.7	234	226	..	..
New Zealand	18,866	44,940	35.8	43.0	20.5	18.9	45.9	44.7	142	154	..	..
Nicaragua	..	..	..	..	..	..	..	..	..	..	..	..
Niger	..	..	..	..	..	..	..	..	..	..	..	..
Nigeria	4,237	86,347	9.2	28.5	0.6	3.1	7.3	28.7	195	212	34.0	108.3 ^b
Norway	65,034	281,081	38.6	83.9	35.7	104.8	93.4	148.7	191	195	..	..
Oman	3,463	23,060	17.4	49.5	2.8	10.4	14.2	30.9	131	125	7.9	67.0 ^b
Pakistan	6,581	70,262	8.9	35.9	44.6	99.8	475.5	167.3	762	654	1.3	41.7 ^b
Panama	2,794	5,716	24.0	33.4	1.3	0.8	1.7	2.7	29	22	..	..
Papua New Guinea	1,520	6,632	49.6	117.3	0.0	0.4	..	0.5	7	9	..	..
Paraguay	224	409	3.5	4.4	0.1	0.0	3.5	0.5	56	55	..	..
Peru	10,562	105,960	19.8	64.6	2.9	4.6	12.6	7.8	230	190	82.5	66.4 ^a
Philippines	25,957	103,224	34.2	58.2	10.8	9.6	15.8	33.1	228	242	50.3	36.0 ^a
Poland	31,279	207,322	18.3	44.0	8.5	16.2	49.9	44.1	225	328	38.1	23.2 ^a
Portugal	60,681	104,201	53.9	53.5	48.3	36.1	85.5	82.1	109	47	..	..
Puerto Rico	..	..	..	..	..	..	..	..	..	..	..	..



5.4 | Stock markets

	Market capitalization				Market liquidity		Turnover ratio		Listed domestic companies		S&P/EMDB indexes	
	\$ millions		% of GDP		Value of shares traded % of GDP		Value of shares traded % of market capitalization		number		% change	
	2000	2007	2000	2006	2000	2006	2000	2007	2000	2007	2006	2007
Romania	1,069	44,925	2.9	27.0	0.6	3.5	23.1	19.2	5,555	2,096	54.2	32.8 ^b
Russian Federation	38,922	1,503,011	15.0	107.1	7.8	52.1	36.9	63.9	249	328	62.0	21.9 ^a
Rwanda	..	..	..	..	..	..	..	..	..	..	..	..
Saudi Arabia	67,171	515,111	35.6	93.6	9.2	401.9	27.1	199.2	75	111	-48.9	35.6 ^b
Senegal	..	..	..	..	..	..	..	..	..	..	..	..
Serbia	734	10,985	4.6	34.3	0.1	4.2	0.0	16.3	6	1,111	..	..
Sierra Leone	..	..	..	..	..	..	..	..	..	..	..	..
Singapore	152,827	276,329	164.8	209.1	98.7	139.5	52.1	62.2	418	461	..	..
Slovak Republic	1,217	6,971	6.0	10.1	4.4	0.2	129.8	0.5	493	153	24.0	57.4 ^b
Slovenia	2,547	28,963	13.2	40.7	2.4	2.7	20.7	10.7	38	87	74.3	95.0 ^b
Somalia	..	..	..	..	..	..	..	..	..	..	..	..
South Africa	204,952	833,548	154.2	280.2	58.3	122.5	33.9	52.5	616	422	17.2	15.5 ^a
Spain	504,219	1,323,090	86.8	108.0	169.8	157.6	210.7	169.1	1,019	3,339	..	..
Sri Lanka	1,074	7,553	6.6	28.8	0.9	3.7	11.0	12.3	239	235	45.3	-10.6 ^b
Sudan	..	..	..	..	..	..	..	..	..	..	..	..
Swaziland	73	200	5.3	7.5	0.0	0.0	9.8	0.0	6	6	..	..
Sweden	328,339	573,250	135.7	149.4	161.2	176.4	111.2	138.6	292	321	..	..
Switzerland	792,316	1,212,508	322.0	318.7	247.6	338.3	82.0	119.6	252	256	..	..
Syrian Arab Republic	..	..	..	..	..	..	..	..	..	..	..	..
Tajikistan	..	..	..	..	..	..	..	..	..	..	..	..
Tanzania	233	541	2.6	4.2	0.4	0.1	2.4	2.1	4	6	..	..
Thailand	29,489	196,046	24.0	68.4	19.0	48.9	53.2	62.0	381	475	6.2	39.4 ^a
Timor-Leste	..	..	..	..	..	..	..	..	..	..	..	..
Togo	..	..	..	..	..	..	..	..	..	..	..	..
Trinidad and Tobago	4,330	15,605	53.1	85.9	1.7	2.3	3.1	2.4	27	37	-6.5	-2.8 ^b
Tunisia	2,828	5,355	14.5	14.7	3.2	1.7	23.3	13.0	44	50	47.9	15.6 ^b
Turkey	69,659	286,572	34.9	40.3	89.7	56.5	206.2	134.2	315	319	-4.0	74.8 ^a
Turkmenistan	..	..	..	..	..	..	..	..	..	..	..	..
Uganda	35	116	0.6	1.2	0.0	0.1	..	5.2	2	5	..	..
Ukraine	1,881	111,757	6.0	40.3	0.9	1.1	19.6	2.7	139	276	48.6	112.2 ^b
United Arab Emirates	5,727	224,675	8.1	173.9	0.2	110.4	3.9	85.0	54	90	-44.6	52.1 ^b
United Kingdom	2,576,992	3,794,310	178.7	159.6	127.2	178.5	66.6	123.8	1,904	2,913	26.2	5.6 ^d
United States	15,104,037	19,425,855	154.7	147.6	326.3	252.7	200.8	182.8	7,524	5,133	13.6	3.5 ^e
Uruguay	161	125	0.8	0.6	0.0	0.0	0.5	1.6	16	10	..	..
Uzbekistan	32	715	0.2	4.2	0.1	0.1	..	5.9	5	114	..	..
Venezuela, RB	8,128	8,251	6.9	4.5	0.6	0.4	8.9	1.3	85	53	79.0	..
Vietnam	..	19,542	..	14.9	..	1.8	..	85.6	..	121	..	10.7 ^b
West Bank and Gaza	765	2,729	18.6	67.2	4.6	26.3	10.0	29.7	24	33	..	..
Yemen, Rep.	..	..	..	..	..	..	..	..	..	..	..	..
Zambia	236	1,186	7.3	11.0	0.2	0.2	20.8	2.1	9	14	..	..
Zimbabwe	2,432	5,333	32.9	70.3	3.8	9.7	10.8	11.0	69	82	912.3	-83.8 ^b
World	32,187,756 s	54,194,991 s	102.7 w	113.9 w	152.8 w	143.4 w	122.1 w	94.3 w	47,877 s	50,212 s		
Low income	166,802	967,029	23.9	67.0	78.1	55.0	151.9	93.3	7,922	6,911		
Middle income	1,833,330	7,056,701	37.2	74.2	26.8	36.8	71.5	94.5	15,335	13,195		
Lower middle income	751,235	3,186,679	35.8	74.5	37.5	44.5	107.8	146.4	4,940	5,205		
Upper middle income	1,082,095	3,870,022	38.3	74.0	18.7	30.6	46.0	50.8	10,395	7,990		
Low & middle income	2,000,132	8,023,730	35.6	73.3	33.2	39.2	81.4	94.3	23,257	20,106		
East Asia & Pacific	780,487	3,026,517	47.2	85.1	49.9	52.4	125.2	163.5	3,190	4,080		
Europe & Central Asia	163,360	1,603,092	19.0	66.7	26.3	35.1	83.9	64.1	8,141	6,070		
Latin America & Carib.	620,263	1,470,534	31.8	51.7	8.4	13.5	27.4	34.8	1,762	1,509		
Middle East & N. Africa	60,573	242,122	19.7	48.9	5.0	19.4	12.6	28.3	1,807	1,443		
South Asia	157,695	877,581	26.1	77.2	90.2	67.5	167.9	101.3	7,269	6,089		
Sub-Saharan Africa	217,754	803,885	89.9	159.9	32.3	65.4	22.2	30.1	1,088	915		
High income	30,187,624	46,171,261	117.3	126.1	178.8	174.6	130.7	150.2	24,620	30,106		
Euro area	5,432,330	8,639,721	87.0	81.2	80.4	96.4	90.4	139.0	4,535	6,318		

a. Data refer to the S&P/IFC investable index. b. Data refer to the S&P/IFC Global index. c. Data refer to the Nikkei 225 index. d. Data refer to the FT 100 index. e. Data refer 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 stock market indicators in the table 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 between 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, from the Standard & Poor's Emerging Markets Data Base (S&P/EMDB) indexes, 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.

The S&P/EMDB, the source for all the data in the table, provides regular updates on 58 emerging stock markets encompassing more than 3,800 stocks. Standard & Poor's maintains a series of indexes for investors interested in investing in stock markets in developing countries. At the core of the S&P/EMDB indexes, the Global (S&P/IFCG) index is intended to represent the most active stocks in the markets it covers and to be the broadest possible indicator of market movements. The Investable (S&P/IFCI) index, which applies the same calculation methodology as the S&P/IFCG index, is designed to measure the returns that foreign portfolio investors might receive from investing in emerging market stocks that are legally and practically open to foreign portfolio investment. These indexes are widely used benchmarks for international portfolio management. See Standard & Poor's (2000) 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/EMDB indexes** measure the U.S. dollar price change in the stock markets covered by the S&P/IFCI country index and S&P/IFCG indexes.

Data sources

Data on stock markets are from Standard & Poor's *Global Stock Markets Factbook 2007*, 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				Bank capital to asset ratio	Ratio of bank nonperforming loans to total gross loans	Domestic credit provided by banking sector	Interest rate spread	Risk premium on lending
	Legal rights index	Credit information index	% of adult population Public credit registry coverage	Private credit bureau coverage					
	0–10 (weak to strong)	0–6 (low to high)	June 2007	June 2007	% 2006	% 2006	% of GDP 2006	Lending rate minus deposit rate percentage points 2006	Prime lending rate minus treasury bill rate percentage points 2006
Afghanistan	0	0	0.0	0.0	..	..	..	..	..
Albania	9	0	0.0	0.0	6.2	3.1	54.5	7.7	7.5
Algeria	3	2	0.2	0.0	..	..	4.0	6.3	5.9
Angola	3	4	2.3	0.0	11.3	13.3	–3.6	15.0	..
Argentina	3	6	25.5	100.0	13.6	3.4	30.8	2.2	..
Armenia	5	5	2.8	13.5	22.9	2.5	8.1	10.7	11.7
Australia	9	5	0.0	100.0	4.9	0.2	115.0	5.5	..
Austria	5	6	1.3	40.6	5.2	2.6	128.4	..	..
Azerbaijan	7	4	1.4	0.0	14.2	7.2	13.6	7.3	7.8
Bangladesh	7	2	0.7	0.0	4.0	13.2	58.1	6.2	..
Belarus	2	3	0.0	0.0	17.8	1.2	27.2	1.2	..
Belgium	5	4	57.2	0.0	3.7	1.8	110.2	..	4.8
Benin	4	1	7.8	0.0	..	..	10.2	..	..
Bolivia	1	5	12.1	22.6	10.0	8.7	39.4	7.9	7.3
Bosnia and Herzegovina	7	5	0.0	63.7	13.8	4.0	47.8	4.3	..
Botswana	7	4	0.0	58.3	9.7	2.8	–14.3	7.6	..
Brazil	2	5	17.1	46.4	9.9	4.1	81.7	36.9	36.4
Bulgaria	6	6	25.4	3.0	10.4	2.2	43.0	5.7	6.3
Burkina Faso	4	1	2.1	0.0	..	..	14.4	..	..
Burundi	1	1	0.2	0.0	..	..	42.1	..	..
Cambodia	0	0	0.0	0.0	..	..	6.0	14.6	..
Cameroon	3	2	1.0	0.0	..	..	8.2	11.0	..
Canada	7	6	0.0	100.0	5.7	0.4	220.8	4.0	1.8
Central African Republic	3	2	1.4	0.0	..	..	17.5	11.0	..
Chad	3	1	0.2	0.0	..	..	4.7	11.0	..
Chile	4	5	26.2	33.5	6.8	0.8	83.5	2.9	..
China	3	4	49.2	0.0	6.1	7.5	136.9	3.6	..
Hong Kong, China	1	5	0.0	64.7	11.8	1.1	134.6	5.1	4.5
Colombia	2	5	0.0	39.9	10.8	2.6	48.0	6.6	..
Congo, Dem. Rep.	3	0	0.0	0.0	..	..	4.6	..	..
Congo, Rep.	3	2	2.4	0.0	..	..	–9.3	11.0	..
Costa Rica	4	5	6.1	52.7	10.2	1.5	44.7	12.4	..
Côte d'Ivoire	3	1	2.8	0.0	..	..	17.8	..	..
Croatia	6	3	0.0	72.4	10.3	5.2	80.6	8.2	..
Cuba	..	..	..	..	..	..	..	..	..
Czech Republic	6	5	4.2	53.0	6.2	4.1	48.4	4.4	3.1
Denmark	8	4	0.0	11.5	6.2	0.4	189.3	..	..
Dominican Republic	4	6	13.3	35.4	10.0	4.5	47.1	9.6	..
Ecuador	1	5	37.9	44.1	13.7	3.3	17.5	5.4	..
Egypt, Arab Rep.	1	4	1.6	0.0	5.5	24.7	99.3	6.6	3.1
El Salvador	3	6	17.2	74.6	11.8	1.9	45.7	..	..
Eritrea	3	0	0.0	0.0	..	..	139.0	..	..
Estonia	4	5	0.0	19.7	8.4	0.2	81.6	2.2	..
Ethiopia	4	2	0.1	0.0	..	..	53.7	3.4	6.9
Finland	6	5	0.0	14.9	9.2	0.3	81.3	2.7	..
France	6	4	24.8	0.0	5.8	3.2	115.5	4.3	..
Gabon	3	2	2.4	0.0	..	11.1	8.3	11.0	..
Gambia, The	4	0	0.0	0.0	..	..	27.0	17.1	..
Georgia	5	4	0.0	0.2	18.8	2.5	23.9	7.3	12.1
Germany	8	6	0.7	98.1	4.7	4.0	132.0	..	..
Ghana	5	0	0.0	0.0	12.4	7.9	32.4	..	..
Greece	3	4	0.0	38.7	5.2	5.5	90.5	..	..
Guatemala	3	5	20.7	13.1	8.2	4.6	32.8	8.3	..
Guinea	4	0	0.0	0.0	..	..	15.7	..	..
Guinea-Bissau	3	1	0.9	0.0	..	..	10.5	..	..
Haiti	3	2	0.7	0.0	..	..	27.8	37.1	32.7

Financial access, stability, and efficiency

5.5

	Getting credit				Bank capital to asset ratio	Ratio of bank nonperforming loans to total gross loans	Domestic credit provided by banking sector	Interest rate spread	Risk premium on lending
	Legal rights index	Credit information index	% of adult population	Private					
	0–10 (weak to strong)	0–6 (low to high)	Public credit registry coverage	credit bureau coverage					
	June 2007	June 2007	June 2007	June 2007					
					% 2006	% 2006	% of GDP 2006	Lending rate minus deposit rate percentage points 2006	Prime lending rate minus treasury bill rate percentage points 2006
Honduras	6	6	12.7	58.0	8.4	6.6	40.6	8.1	..
Hungary	6	5	0.0	6.9	8.7	2.5	68.1	0.6	1.2
India	6	4	0.0	10.8	6.6	3.5	63.4	..	..
Indonesia	5	3	20.5	0.2	10.7	13.1	41.7	4.6	..
Iran, Islamic Rep.	5	3	22.2	0.0	..	..	49.2	4.2	..
Iraq	4	0	0.0	0.0	..	..	..	..	..
Ireland	8	5	0.0	100.0	4.3	0.7	182.0	2.6	..
Israel	8	5	0.0	91.6	5.9	1.9	76.6	3.2	2.1
Italy	3	5	11.0	71.5	7.1	5.3	112.9	..	2.4
Jamaica	5	0	0.0	0.0	8.7	2.6	63.9	10.6	4.9
Japan	6	6	0.0	68.3	5.3	2.5	307.7	1.0	1.2
Jordan	5	2	0.8	0.0	10.7	4.3	116.5	3.6	..
Kazakhstan	5	4	0.0	13.7	8.9	4.8	32.5	..	..
Kenya	8	4	0.0	1.5	..	5.2	40.3	8.5	6.9
Korea, Dem. Rep.	..	..	..	..	..	..	..	..	..
Korea, Rep.	5	5	0.0	74.2	9.2	0.8	107.1	1.5	..
Kuwait	4	4	0.0	14.5	12.0	3.9	71.7	3.7	..
Kyrgyz Republic	5	3	0.0	1.6	..	..	11.7	17.6	18.4
Lao PDR	2	0	0.0	0.0	..	..	7.3	25.0	11.7
Latvia	8	4	2.6	0.0	7.6	0.4	89.0	3.8	3.2
Lebanon	4	5	4.7	0.0	8.4	13.5	196.2	2.3	5.0
Lesotho	5	0	0.0	0.0	..	1.0	−5.7	7.6	5.3
Liberia	4	0	0.0	0.0	..	..	177.8	13.6	..
Libya	..	..	..	..	..	..	−53.8	3.8	0.6
Lithuania	4	6	6.6	7.3	7.1	1.0	49.5	4.5	2.2
Macedonia, FYR	6	3	4.0	0.0	..	11.2	23.7	5.5	..
Madagascar	1	0	0.1	0.0	6.2	10.1	9.7	7.2	8.3
Malawi	7	0	0.0	0.0	..	..	13.9	21.3	13.0
Malaysia	8	6	44.5	..	7.6	8.5	119.4	3.3	3.3
Mali	3	1	2.5	0.0	..	..	13.6	..	..
Mauritania	4	1	0.2	0.0	..	..	..	15.1	11.2
Mauritius	5	1	38.6	0.0	..	..	111.1	11.5	..
Mexico	3	6	0.0	61.2	13.2	2.1	39.3	4.2	0.3
Moldova	6	0	0.0	0.0	17.0	4.3	35.0	6.2	10.8
Mongolia	5	3	9.5	0.0	..	..	20.9	8.4	..
Morocco	3	1	2.3	0.0	7.4	10.9	78.5	7.9	..
Mozambique	3	3	0.9	0.0	6.4	3.7	10.0	8.2	3.5
Myanmar	..	..	..	..	..	..	28.1	5.5	..
Namibia	5	5	0.0	59.9	8.3	2.9	63.9	4.9	3.9
Nepal	4	2	0.0	0.2	..	..	50.4	5.9	6.0
Netherlands	7	5	0.0	78.1	4.0	1.0	186.7	0.6	..
New Zealand	9	5	0.0	100.0	..	..	142.3	5.3	5.2
Nicaragua	3	5	14.8	100.0	8.8	8.0	74.4	6.7	..
Niger	3	1	1.0	0.0	..	..	7.9	..	..
Nigeria	7	0	0.0	0.0	14.7	21.9	..	7.2	6.9
Norway	6	4	0.0	100.0	5.0	0.6	..	2.2	..
Oman	4	2	12.4	0.0	13.2	7.8	34.9	3.4	..
Pakistan	4	4	4.6	1.4	8.8	7.7	43.0	6.8	2.4
Panama	6	6	0.0	41.6	11.3	1.5	90.8	4.6	..
Papua New Guinea	5	0	0.0	0.0	..	..	23.2	9.6	6.6
Paraguay	3	6	11.0	48.7	12.5	3.3	18.0	23.4	..
Peru	4	6	20.7	33.0	9.5	1.6	15.0	20.7	..
Philippines	3	3	0.0	5.5	11.7	18.6	48.6	4.5	4.5
Poland	4	4	0.0	51.5	7.9	9.4	42.4	4.0	1.3
Portugal	4	4	67.1	11.3	6.4	1.3	160.9	..	..
Puerto Rico	6	5	0.0	62.0	..	..	..	..	..



	Getting credit				Bank capital to asset ratio	Ratio of bank nonperforming loans to total gross loans	Domestic credit provided by banking sector	Interest rate spread	Risk premium on lending
	Legal rights index	Credit information index	% of adult population Public credit registry coverage	% of adult population Private credit bureau coverage					
	0–10 (weak to strong) June 2007	0–6 (low to high) June 2007	June 2007	June 2007	% 2006	% 2006	% of GDP 2006	Lending rate minus deposit rate percentage points 2006	Prime lending rate minus treasury bill rate percentage points 2006
Romania	7	5	4.1	10.9	8.9	8.4	26.8	..	..
Russian Federation	3	4	0.0	4.4	12.5	2.6	21.4	6.4	..
Rwanda	1	2	0.2	0.0	9.2	27.2	9.7	8.1	6.2
Saudi Arabia	3	6	0.0	23.5	9.3	2.0	37.3	..	..
Senegal	3	1	4.0	0.0	8.1	16.0	23.3	..	..
Serbia	7	5	0.1	51.3	15.6	21.4	23.6	11.5	6.3
Sierra Leone	5	0	0.0	0.0	19.0	20.9	10.6	13.6	6.3
Singapore	9	4	0.0	42.7	9.6	2.8	72.6	4.7	2.4
Slovak Republic	9	4	1.2	56.0	8.0	3.7	50.4	4.1	..
Slovenia	6	2	2.5	0.0	7.4	4.9	76.3	4.6	4.1
Somalia	..	..	..	..	..	..	..	..	..
South Africa	5	6	0.0	52.1	7.8	1.2	197.4	4.0	3.8
Spain	6	6	44.9	8.3	7.2	0.6	177.7	..	..
Sri Lanka	3	3	0.0	2.9	6.7	9.6	44.1	-3.2	-2.0
Sudan	4	0	0.0	0.0	..	..	0.2	..	..
Swaziland	5	5	0.0	37.6	..	2.0	15.7	6.2	3.6
Sweden	6	4	0.0	100.0	4.9	0.5	125.8	2.5	1.6
Switzerland	6	5	0.0	24.0	4.9	0.3	187.4	1.6	1.7
Syrian Arab Republic	3	0	0.0	0.0	..	..	33.5	7.0	..
Tajikistan	4	0	0.0	0.0	..	..	15.4	15.3	..
Tanzania	5	0	0.0	0.0	..	..	11.2	8.8	3.8
Thailand	5	5	0.0	27.9	9.2	7.5	101.3	2.9	..
Timor-Leste	2	0	0.0	0.0	..	..	..	..	..
Togo	3	1	2.7	0.0	..	..	17.4	..	..
Trinidad and Tobago	5	4	0.0	34.4	..	..	21.0	6.1	4.8
Tunisia	2	4	13.7	0.0	7.7	19.2	72.4	..	..
Turkey	3	5	10.3	2.7	11.3	3.2	60.2	..	..
Turkmenistan	..	..	..	..	..	..	..	..	..
Uganda	3	0	0.0	0.0	9.7	2.8	9.4	9.6	10.6
Ukraine	8	0	0.0	0.0	12.1	17.8	46.2	7.6	..
United Arab Emirates	3	2	1.4	0.0	12.6	6.3	59.5	..	..
United Kingdom	10	6	0.0	84.6	8.9	0.9	176.9	..	0.0
United States	7	6	0.0	100.0	10.5	0.8	230.8	..	3.2
Uruguay	5	6	14.1	93.8	9.8	1.9	32.2	7.4	4.7
Uzbekistan	2	0	0.0	0.0	..	..	..	..	..
Venezuela, RB	4	0	0.0	0.0	9.8	1.1	18.8	5.2	..
Vietnam	6	3	9.2	0.0	..	..	75.0	3.5	6.4
West Bank and Gaza	5	3	1.8	0.0	..	..	9.2	4.8	..
Yemen, Rep.	3	0	0.1	0.0	..	..	4.8	5.0	2.4
Zambia	6	0	0.0	0.0	..	10.8	16.6	12.8	12.8
Zimbabwe	6	0	0.0	0.0	12.1	23.2	93.1	293.1	174.1
World	4.6 u	2.7 u	4.6 u	19.6 u	8.9 m	3.0 m	187.9 w	6.6 m	
Low income	3.8	0.9	1.0	0.3	..	..	53.2	11.3	
Middle income	4.4	2.9	6.2	17.5	10.0	3.4	76.7	6.6	
Lower middle income	4.0	2.7	5.9	13.9	10.7	4.0	99.1	7.2	
Upper middle income	5.0	3.3	6.6	22.8	9.8	3.2	63.4	5.9	
Low & middle income	4.2	2.2	4.3	11.3	9.4	5.3	76.7	7.3	
East Asia & Pacific	3.9	1.6	6.6	3.9	..	..	119.6	6.5	
Europe & Central Asia	5.6	3.3	2.4	14.4	10.3	3.2	37.6	6.8	
Latin America & Carib.	4.0	3.4	8.9	32.1	10.1	2.6	54.9	7.4	
Middle East & N. Africa	3.5	2.1	4.6	0.0	..	..	49.8	4.3	
South Asia	3.9	1.9	0.7	1.9	6.6	7.7	60.6	6.7	
Sub-Saharan Africa	4.0	1.3	2.1	4.6	..	..	94.4	9.6	
High income	5.8	4.4	5.7	49.9	6.2	1.1	194.3	4.4	
Euro area	5.6	4.3	16.1	35.5	5.2	1.6	132.2	..	

Financial access, stability, and efficiency

About the data

Financial sector development has positive impacts on economic growth and poverty. The size of the sector determines the amount of resources mobilized for investment. Access to finance can expand opportunities for all—not just the rich and well connected—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. The banking system is the largest sector in the financial system in most countries, so most indicators in the table cover the banking system.

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. For secured transactions, such as mortgages or vehicle loans, having rapid access to information in property registries is also vital, and for small business loans corporate registry data are needed. An effective way to improve access to credit is to increase information about potential borrowers' creditworthiness and make it easy to create and enforce collateral agreements. Lenders look at a borrower's credit history and collateral when extending loans. Where credit registries and effective collateral laws are absent—as in many developing countries—banks make fewer loans. Indicators that cover financial access, or getting credit, include the legal rights index (ranges from 0, weaker, to 10, stronger), credit information index (ranges from 0, less, to 6, more), public registry coverage, and private bureau coverage. The legal rights index is based on seven aspects related to legal rights in collateral law and three aspects in bankruptcy law. The depth of credit information index assesses six features of the public registry or the private credit bureau. For more information on these indexes, see www.doingbusiness.org/MethodologySurveys/.

The size and mobility of international capital flows have made 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 huge and widespread costs on the economy. The ratio of bank capital to assets, a measure of bank solvency and resiliency, provides a measure of the extent to which banks can deal with unexpected losses. Capital includes tier 1 capital (paid-up shares and common stock), which is a common feature in all countries' banking systems,

and total regulatory capital, which includes several specified types of subordinated debt instruments that need not be repaid if the funds are required to maintain minimum capital levels (these comprise tier 2 and tier 3 capital). Total assets include all nonfinancial and financial assets. Data are from internally consistent financial statements, to enhance the quality and analytical usefulness of the indicator.

The ratio of bank nonperforming loans to total gross loans is a measure of bank health and efficiency. It helps to identify problems with asset quality in the loan portfolio. A high ratio may signal deterioration in the quality of the credit portfolio. International guidelines recommend that loans be classified as nonperforming when payments of principal and interest are past due by 90 days or more or when future payments are not expected to be received in full. See the International Monetary Fund's (IMF) *Global Financial Stability Report* for detailed information.

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 the efficiency by which the financial sector intermediates funds. A narrow interest rate spread means low transaction costs, which lowers the overall 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. A small spread indicates that the market considers its best corporate customers to be low risk. Interest rate spreads are expressed as annual averages. In some countries this spread may be negative, indicating that the market considers its best corporate clients to be lower risk than the government.

Definitions

• **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. • **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. • **Public credit registry coverage** is the number of individuals and firms listed in a public credit registry with current information on repayment history, unpaid debts, or credit outstanding as a percentage of the adult population. • **Private credit bureau coverage** is the number of individuals or firms listed by a private credit bureau with current information on repayment history, unpaid debts, or credit outstanding as a percentage of the adult population. • **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). 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*.



	Tax revenue collected by central government		Taxes payable by businesses			Highest marginal tax rate ^a		
	% of GDP		Number of payments June 2007	Time to prepare, file, and pay taxes hours June 2007	Total tax rate % of profit June 2007	Individual		
	2000	2006				% 2006	On income over \$ 2006	Corporate % 2006
Afghanistan ^b	..	5.8	6	275	35.5	..	..	..
Albania ^b	16.1	17.3	44	240	46.8	20	2,003	20
Algeria ^b	36.9	32.1	33	451	72.6	..	..	..
Angola	..	..	31	272	53.2	..	..	..
Argentina	9.8	14.2	19	615	112.9	35	41,379	35
Armenia ^b	..	14.4	50	1,120	36.6	..	..	..
Australia	22.1	23.7	12	107	50.6	47	72,519	30
Austria	19.6	20.0	22	170	54.6	50	63,750	25
Azerbaijan ^b	12.7	..	38	952	40.9	35	12,632	22
Bangladesh ^b	7.6	8.1	17	400	39.5	..	..	..
Belarus ^b	16.6	22.2	124	1,188	144.4	..	..	..
Belgium	27.4	26.1	11	156	64.3	50	39,625	34
Benin ^b	15.5	15.8	55	270	73.3	35	..	38
Bolivia	13.2	17.3	41	1,080	78.1	..	..	25
Bosnia and Herzegovina	..	22.4	51	368	44.1	15	..	30
Botswana ^b	..	..	19	140	17.2	25	19,569	15
Brazil ^b	11.3	..	11	2,600	69.2	28	11,486	15
Bulgaria ^b	18.3	23.7	17	616	36.7	24	4,586	15
Burkina Faso ^b	..	11.2	45	270	48.9	..	..	..
Burundi ^b	13.6	..	32	140	278.7	..	..	..
Cambodia	8.2	8.2	27	137	22.6	20	36,652	20
Cameroon ^b	11.2	..	41	1,400	51.9	..	..	..
Canada ^b	15.0	14.1	9	119	45.9	29	97,756	22
Central African Republic ^b	..	6.0	54	504	203.8	..	..	..
Chad	..	..	54	122	63.7	..	..	..
Chile	16.7	20.7	10	316	25.9	40	6,127	17
China ^b	6.8	8.7	35	872	73.9	45	8,637	..
Hong Kong, China	..	..	4	80	24.4	20	11,568	18
Colombia	13.3	14.1	69	268	82.4	22	43,154	39
Congo, Dem. Rep. ^b	3.5	..	32	308	229.8	50	4,920	40
Congo, Rep.	9.2	..	89	606	65.4	..	..	..
Costa Rica ^b	..	14.1	43	402	55.7	25	19,414	30
Côte d'Ivoire ^b	14.6	14.9	66	270	45.4	10	4,550	35
Croatia ^b	26.2	23.3	28	196	32.5	45	3,765	20
Cuba	..	..	..	..	..	..	..	..
Czech Republic ^b	15.4	14.6	12	930	48.6	32	13,823	24
Denmark	31.0	31.2	9	135	33.3	59	53,117	28
Dominican Republic ^b	..	16.8	74	286	40.2	30	29,596	30
Ecuador ^b	..	..	8	600	35.3	25	61,440	25
Egypt, Arab Rep. ^b	14.6	15.8	36	711	47.9	20	6,920	..
El Salvador	10.7	13.4	66	224	33.8	..	..	..
Eritrea	..	..	18	216	84.5	..	..	..
Estonia	15.9	16.6	10	81	49.2	23	1,908	23
Ethiopia ^b	10.7	..	20	198	31.1	35 ^c	..	30 ^c
Finland	24.6	21.9	20	269	47.8	28	72,750	26
France	23.2	22.7	23	132	66.3	48	60,673	33
Gabon	..	..	28	272	44.2	..	..	..
Gambia, The ^b	..	..	50	376	286.7	..	..	..
Georgia ^b	7.7	15.5	29	387	38.6	12	..	20
Germany	11.9	11.4	16	196	50.8	42	65,190	25
Ghana ^b	17.2	22.4	32	304	32.9	25	10,581	25
Greece	20.2	17.2	21	264	48.6	40	28,750	29
Guatemala ^b	10.1	10.2	39	344	37.5	31	38,663	31
Guinea ^b	11.1	..	56	416	49.9	..	..	..
Guinea-Bissau	..	..	46	208	45.9	..	..	..
Haiti	..	..	53	160	40.0	..	..	..

	Tax revenue collected by central government		Taxes payable by businesses			Highest marginal tax rate ^a		
	% of GDP		Number of payments June 2007	Time to prepare, file, and pay taxes hours June 2007	Total tax rate % of profit June 2007	Individual		
	2000	2006				% 2006	On income over \$ 2006	Corporate % 2006
Honduras	..	17.9	47	424	51.4	25	26,553	25
Hungary ^b	21.9	20.1	24	340	55.1	36	7,766	16
India ^b	9.0	10.7	60	271	70.6	30	5,669	34
Indonesia ^b	11.6	12.3	51	266	37.3	35	20,608	30
Iran, Islamic Rep. ^b	6.3	7.6	22	292	47.4	35	114,101	25
Iraq	..	..	13	312	24.7	..	..	..
Ireland	26.1	26.7	9	76	28.9	42	40,000	13
Israel	29.6	28.6	33	230	36.0	49	94,530	31
Italy	23.2	22.9	15	360	76.2	43	125,000	33
Jamaica ^b	24.7	29.2	72	414	51.3	25	1,993	33
Japan ^b	..	..	13	350	52.0	37	163,310	30
Jordan ^b	19.0	26.2	26	101	31.1	..	..	..
Kazakhstan ^b	10.2	16.3	9	271	36.7	20	55,810	30
Kenya ^b	16.8	18.3	41	432	50.9	30	5,841	30
Korea, Dem. Rep. ^b	..	..	..	..	..	..	..	..
Korea, Rep. ^b	16.1	15.7	48	290	34.9	35	78,116	25
Kuwait	1.3	1.0	14	118	14.4	0	..	0
Kyrgyz Republic ^b	..	14.3	75	202	61.4	..	..	..
Lao PDR	..	..	34	672	35.5	..	..	..
Latvia	14.2	15.7	7	219	32.6	25	..	15
Lebanon	12.2	16.3	19	180	35.4	..	..	..
Lesotho	32.7	44.3	22	342	20.8	..	..	..
Liberia	..	..	37	158	81.6	..	..	..
Libya	..	..	..	..	..	..	..	..
Lithuania	14.6	18.1	24	166	48.3	33	..	15
Macedonia, FYR ^b	..	..	52	96	49.8	24	14,610	15
Madagascar	11.3	10.7	26	238	46.5	..	..	..
Malawi	..	..	30	370	32.2	..	..	..
Malaysia ^b	14.3	..	35	166	36.0	28	65,963	28
Mali	13.2	15.7	58	270	51.4	..	..	..
Mauritania	..	..	38	696	107.5	..	..	..
Mauritius ^b	18.2	18.2	7	161	21.7	30	16,949	25
Mexico ^b	11.7	..	27	552	51.2	29	9,470	29
Moldova ^b	14.7	19.9	49	218	44.0	20	1,667	15
Mongolia	..	..	42	204	38.4	..	..	..
Morocco	19.9	22.5	28	358	53.1	..	..	..
Mozambique	..	..	37	230	34.3	32	43,710	32
Myanmar ^b	3.0	4.7	..	..	..	..	..	..
Namibia ^b	30.0	..	37	..	26.5	35	31,447	35
Nepal ^b	8.7	8.9	33	408	32.5	..	..	..
Netherlands	22.3	23.7	9	180	43.4	52	65,285	30
New Zealand	29.5	34.2	8	70	35.1	39	42,254	33
Nicaragua ^b	13.8	17.5	64	240	63.2	30	29,886	30
Niger	..	..	42	270	42.4	..	..	..
Nigeria	..	..	35	1,120	29.9	..	..	..
Norway	27.4	29.2	4	87	42.0	..	..	28
Oman ^b	7.2	..	14	62	21.6	0	..	12
Pakistan ^b	10.1	9.5	47	560	40.7	35	11,763	37
Panama ^b	10.2	..	59	482	50.8	30	200,000	30
Papua New Guinea ^b	19.4	..	33	206	41.7	..	..	..
Paraguay ^b	..	12.1	35	328	35.3	10	..	0
Peru ^b	12.2	13.5	9	424	41.5	30	49,899	30
Philippines ^b	13.7	14.3	47	195	52.8	32	9,076	35
Poland	16.0	17.5	41	418	38.4	40	22,854	19
Portugal	21.5	22.0	8	328	44.8	42	75,000	25
Puerto Rico	..	..	16	140	44.3	33	50,000	20



5.6

Tax policies

	Tax revenue collected by central government		Taxes payable by businesses			Highest marginal tax rate ^a		
	% of GDP		Number of payments June 2007	Time to prepare, file, and pay taxes hours June 2007	Total tax rate % of profit June 2007	Individual		
	2000	2006				% 2006	On income over \$ 2006	Corporate % 2006
Romania	11.7	12.2	96	202	46.9	16	4,617	16
Russian Federation	13.7	16.7	22	448	51.4	13	..	24
Rwanda	..	..	34	168	33.8	..	..	..
Saudi Arabia	..	..	14	79	14.5	0	..	0
Senegal ^b	16.1	..	59	696	46.0	0	..	..
Serbia ^b	..	..	66	279	35.8	..	..	..
Sierra Leone ^b	10.2	11.0	22	399	233.5	..	..	..
Singapore ^b	15.4	12.7	5	49	23.2	21	192,771	20
Slovak Republic	..	14.0	31	344	50.5	19	14,087	19
Slovenia ^b	21.2	21.9	22	260	39.2	50	..	25
Somalia	..	..	..	..	..	..	..	..
South Africa	24.0	29.0	11	350	37.1	40	47,170	29
Spain	16.2	12.9	8	298	62.0	29	58,524	35
Sri Lanka ^b	14.5	15.3	62	256	63.7	35	4,975	35
Sudan ^b	6.4	..	42	180	31.6	..	..	..
Swaziland ^b	..	..	33	104	36.6	33	11,792	30
Sweden	19.7	21.3	2	122	54.5	25	61,673	28
Switzerland ^b	11.3	10.5	24	63	29.1	..	..	9
Syrian Arab Republic ^b	17.4	..	21	336	46.7	..	..	..
Tajikistan	7.7	9.8	54	224	82.2	..	..	..
Tanzania	..	..	48	172	44.3	30	5,740	30
Thailand	..	16.9	35	264	37.7	37	99,453	30
Timor-Leste	..	..	15	640	28.3	..	..	..
Togo ^b	..	13.9	53	270	48.2	..	..	..
Trinidad and Tobago ^b	22.1	27.9	40	114	33.1	25	7,937	25
Tunisia ^b	21.3	21.0	46	268	61.0	..	..	..
Turkey ^b	..	25.9	15	223	45.1	35	100,298	30
Turkmenistan	..	..	..	..	..	..	..	..
Uganda ^b	10.9	13.0	33	237	32.3	30	2,763	30
Ukraine ^b	14.1	18.0	99	2,085	57.3	13	..	25
United Arab Emirates ^b	1.7	..	14	12	14.4	0	..	..
United Kingdom	29.0	28.8	8	105	35.7	40	60,545	30
United States	12.7	11.9	10	325	46.2	35	326,450	35
Uruguay ^b	16.7	19.3	53	304	40.7	0	..	30
Uzbekistan	..	..	118	196	96.3	29	960	12
Venezuela, RB ^b	13.3	15.6	70	864	53.3	34	93,767	34
Vietnam ^b	..	..	32	1,050	41.1	40	5,044	28
West Bank and Gaza	..	..	27	154	17.1	..	..	..
Yemen, Rep. ^b	9.4	..	32	248	41.4	..	..	..
Zambia ^b	18.6	17.2	37	132	16.1	30	368	35
Zimbabwe ^b	..	..	52	256	53.0	45	26,249	30
World	15.7 w	16.8 w	34 u	323 u	50.7 u			
Low income	9.5	10.7	41	327	67.4			
Middle income	..	..	37	377	45.3			
Lower middle income	9.4	11.4	40	401	45.8			
Upper middle income	..	..	32	344	44.5			
Low & middle income	..	..	38	359	53.2			
East Asia & Pacific	7.7	9.5	31	295	39.9			
Europe & Central Asia	16.1	18.9	50	455	51.4			
Latin America & Carib.	11.4	..	40	435	48.7			
Middle East & N. Africa	15.7	17.3	27	276	41.4			
South Asia	9.3	10.6	31	306	41.4			
Sub-Saharan Africa	..	..	39	321	68.0			
High income	16.5	16.7	17	188	41.5			
Euro area	19.1	18.5	16	211	50.9			

a. Data are from PriceWaterhouseCoopers's *World Wide Tax Summaries Online*. b. Data on central government taxes 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*.

Tax policies

5.6

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 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 *Doing Business 2008*.

A potentially important influence on both domestic and international investors is a tax system's progressivity, as reflected in the highest marginal tax rate levied at the national level on individual and corporate income. Data for individual marginal tax rates generally refer to employment income. In some countries the highest marginal tax rate is also the basic or flat rate, and other surtaxes, deductions, and the like may apply. And in many countries several different corporate tax rates may be levied, depending on the type of business (mining, banking, insurance, agriculture, manufacturing), ownership (domestic or foreign), volume of sales, and whether surtaxes or exemptions are included. The corporate tax rates in the table are mainly general rates applied to domestic companies. For more detailed information, see the country's laws, regulations, and tax treaties and PricewaterhouseCoopers's *Worldwide Tax Summaries Online* (www.pwc.com).

Definitions

- **Tax revenue collected by central government** refers to 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.
- **Total tax rate** is the total amount of taxes payable by businesses (except for consumption taxes) after accounting for deductions and exemptions as a percentage of profit. For further details on the method used for assessing the total tax payable, see *Doing Business 2008*.
- **Highest marginal tax rate** is the highest rate shown on the national schedule of tax rates applied to the annual taxable income of individuals and corporations. Also presented are the income levels for individuals above which the highest marginal tax rates levied at the national level apply.

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 2008* (www.doingbusiness.org). Data on individual and corporate tax rates are from PricewaterhouseCoopers's *Worldwide Tax Summaries Online* (www.pwc.com).



Military expenditures and arms transfers

	Military expenditures				Armed forces personnel				Arms transfers			
	% of GDP		% of central government expenditure		thousands		% of labor force		\$ millions 1990 prices			
	1995	2006	1995	2006	1995	2006	1995	2006	Exports	2006	Imports	2006
Afghanistan	..	9.9	..	..	383	51	6.2	0.6	0	..	..	28
Albania	2.1	1.6	8.2	6.3	87	12	6.0	0.8	..	..	24	42
Algeria	3.0	2.7	12.2	15.3	163	334	1.8	2.4	..	..	365	173
Angola	8.1	5.4	..	..	122	110	2.3	1.5	..	..	1	22
Argentina	1.6	0.9	..	5.9	99	107	0.7	0.6	3	..	75	53
Armenia	4.1	2.8	..	17.3	61	47	4.2	3.7	..	..	49	151
Australia	1.9	1.8	..	7.5	57	51	0.6	0.5	28	4	149	777
Austria	1.1	0.8	2.4	2.0	56	40	1.4	1.0	11	61	24	21
Azerbaijan	2.7	3.3	13.8	..	127	82	3.8	1.9	..	..	25	45
Bangladesh	1.4	1.1	..	13.6	171	214	0.3	0.3	..	..	121	208
Belarus	1.6	1.7	5.7	5.5	106	183	2.1	3.8	8	24	..	254
Belgium	1.6	1.1	3.4	2.7	47	40	1.1	0.9	299	50	16	4
Benin	..	..	..	..	7	8	0.3	0.2	..	..	..	..
Bolivia	1.8	1.5	..	5.9	64	83	2.2	1.9	..	..	1	25
Bosnia and Herzegovina	..	1.6	..	4.8	92	9	5.3	0.4	..	..	52	..
Botswana	3.5	3.0	11.5	..	9	11	1.5	1.6	..	..	7	9
Brazil	1.9	1.5	4.8	..	681	754	0.9	0.8	28	1	259	323
Bulgaria	2.6	2.3	6.6	7.1	136	75	3.5	2.5	2	..	1	20
Burkina Faso	1.5	1.4	..	11.5	10	11	0.2	0.2	..	..	..	19
Burundi	4.2	5.5	17.8	..	15	82	0.5	2.1	..	..	..	..
Cambodia	5.4	1.7	..	19.4	309	191	6.2	2.8	0	..	33	..
Cameroon	1.3	1.4	11.8	..	24	23	0.4	0.3	..	..	4	5
Canada	1.6	1.2	6.4	6.5	76	64	0.5	0.4	326	227	356	109
Central African Republic	1.2	1.1	..	12.3	5	3	0.3	0.2	..	..	..	9
Chad	1.7	0.9	..	..	35	35	1.2	0.9	..	..	1	2
Chile	3.1	3.6	..	21.2	130	103	2.3	1.6	30	..	459	1,125
China	1.7 ^a	1.9 ^a	.. ^a	18.2 ^a	4,130	3,605	0.6	0.5	1,017	564	641	3,261
Hong Kong, China	..	..	..	..	..	..	..	..	..	..	..	..
Colombia	2.6	3.5	..	12.1	233	398	1.4	1.7	..	..	37	33
Congo, Dem. Rep.	1.5	0.0	13.5	..	65	65	0.4	0.3	..	..	0	13
Congo, Rep.	..	1.1	..	..	17	12	1.4	0.8	..	..	27	4
Costa Rica	..	..	..	..	16	10	1.2	0.5	..	..	3	..
Côte d'Ivoire	0.8	..	..	..	15	19	0.3	0.3	..	..	2	14
Croatia	9.4	1.6	22.2	4.1	150	21	7.2	1.1	..	..	22	8
Cuba	..	..	..	..	124	76	2.5	1.4	..	..	..	..
Czech Republic	1.9	1.7	5.9	4.9	92	26	1.8	0.5	122	56	0	65
Denmark	1.7	1.4	..	4.4	33	30	1.2	1.1	8	3	130	133
Dominican Republic	0.6	0.5	..	3.1	40	65	1.3	1.6	..	..	4	27
Ecuador	2.4	2.3	6.0	..	57	57	1.3	0.9	..	..	11	33
Egypt, Arab Rep.	3.9	2.7	16.3	9.9	610	866	3.5	3.7	7	..	1,698	538
El Salvador	1.0	0.6	..	3.0	39	28	1.8	1.0	0	..	3	..
Eritrea	20.8	..	..	..	55	202	4.4	10.6	..	..	3	70
Estonia	1.0	1.4	..	5.4	6	7	0.8	1.1	8	..	17	8
Ethiopia	1.6	2.6	..	..	120	183	0.5	0.5	..	..	70	162
Finland	1.5	1.4	..	3.8	35	32	1.4	1.2	20	31	159	84
France	3.0	2.4	6.2	5.3	502	354	2.0	1.3	795	1,557	43	121
Gabon	..	1.2	..	..	10	7	2.1	1.2	..	..	..	63
Gambia, The	0.8	0.5	..	..	1	1	0.2	0.1	..	..	..	7
Georgia	2.2	3.1	8.2	15.2	14	33	0.5	1.5	..	7	8	70
Germany	1.6	1.3	4.2	4.3	365	246	0.9	0.6	1,430	1,855	252	216
Ghana	0.8	0.7	..	3.8	13	7	0.2	0.1	..	..	7	27
Greece	3.3	3.2	9.0	9.1	202	161	4.5	3.1	18	23	870	1,452
Guatemala	1.0	0.4	13.1	3.6	57	35	1.8	0.8	..	..	3	..
Guinea	1.4	2.0	..	..	19	13	0.6	0.3	..	..	..	..
Guinea-Bissau	0.9	4.0	..	..	9	9	1.9	1.4	..	..	4	..
Haiti	..	..	..	..	7	5	0.2	0.1	..	..	..	..

Military expenditures and arms transfers

5.7

	Military expenditures				Armed forces personnel				Arms transfers			
	% of GDP		% of central government expenditure		thousands		% of labor force		\$ millions 1990 prices			
	1995	2006	1995	2006	1995	2006	1995	2006	Exports	2006	Imports	2006
Honduras	..	0.6	..	2.8	24	20	1.3	0.7	..	..	..	..
Hungary	1.6	1.2	3.0	2.7	73	44	1.7	1.0	6	68	24	337
India	2.7	2.7	18.4	17.7	2,150	2,589	0.6	0.6	2	11	968	1,710
Indonesia	1.6	1.2	16.2	8.3	461	582	0.5	0.5	25	8	319	54
Iran, Islamic Rep.	2.4	4.8	15.2	19.4	763	585	4.4	2.0	1	9	355	891
Iraq	..	..	..	..	407	495	7.0	6.0	..	..	..	195
Ireland	1.0	0.5	2.7	1.7	13	10	0.9	0.5	..	..	43	11
Israel	8.6	8.4	..	19.0	178	185	8.5	6.7	113	287	308	994
Italy	1.7	1.7	3.6	4.1	585	440	2.6	1.8	365	878	332	697
Jamaica	0.6	0.6	1.7	1.4	4	3	0.3	0.3	..	..	..	25
Japan	1.0	0.9	..	..	252	252	0.4	0.4	158	..	1,254	392
Jordan	5.8	4.9	22.3	14.1	129	111	10.3	5.9	77	13	19	117
Kazakhstan	1.1	0.9	5.7	6.2	75	81	1.0	1.0	25	5	99	53
Kenya	1.6	1.6	6.4	9.3	29	29	0.2	0.2	..	..	12	25
Korea, Dem. Rep.	..	..	..	..	1,243	1,295	12.0	11.4	52	13	82	5
Korea, Rep.	2.8	2.7	19.4	12.1	641	692	3.0	2.8	21	89	1,788	1,292
Kuwait	13.6	4.8	29.3	17.1	22	23	2.5	1.6	..	..	608	107
Kyrgyz Republic	3.5	3.1	..	17.5	7	21	0.4	0.9	61	..	..	1
Lao PDR	2.9	..	..	..	137	129	7.9	5.5	..	..	14	4
Latvia	0.9	1.6	3.1	5.7	11	17	0.9	1.5	8	..	16	4
Lebanon	6.4	4.1	..	16.8	63	76	5.0	4.7	..	..	34	1
Lesotho	3.7	2.4	10.7	5.9	2	2	0.3	0.3	..	..	..	1
Liberia	31.2	..	..	..	21	2	2.6	0.2	..	..	..	..
Libya	4.1	1.5	..	..	81	76	5.1	3.0	8	24	..	5
Lithuania	0.4	1.2	..	4.2	9	24	0.5	1.5	..	..	4	33
Macedonia, FYR	3.0	2.0	..	..	18	19	2.2	2.2	0	29	0	..
Madagascar	0.9	1.0	..	8.5	29	22	0.5	0.3	..	..	19	..
Malawi	0.8	..	..	..	10	7	0.2	0.1	..	..	2	..
Malaysia	2.8	2.0	16.0	..	140	134	1.7	1.2	0	..	876	654
Mali	2.2	2.2	..	14.3	15	12	0.4	0.2	..	..	7	13
Mauritania	2.0	2.5	..	..	21	21	2.4	1.7	..	..	2	..
Mauritius	0.4	0.2	1.8	0.9	2	2	0.4	0.4	..	..	30	..
Mexico	0.6	0.4	3.8	..	189	280	0.5	0.6	..	..	42	68
Moldova	0.9	0.3	2.4	0.9	15	8	0.8	0.4	36	4	6	..
Mongolia	1.7	1.3	..	..	31	16	3.3	1.3	..	..	..	..
Morocco	5.9	3.7	..	14.2	238	246	2.7	2.2	..	..	30	49
Mozambique	1.5	0.9	..	..	12	11	0.2	0.1	..	..	..	..
Myanmar	3.7	..	..	..	371	513	1.7	1.9	..	..	245	7
Namibia	2.0	2.9	..	..	8	15	1.5	2.2	..	..	4	13
Nepal	0.9	1.9	..	12.8	63	131	0.8	1.2	..	..	1	4
Netherlands	1.9	1.5	3.8	3.6	78	46	1.0	0.5	421	1,481	47	171
New Zealand	1.4	1.0	..	3.0	10	9	0.6	0.4	3	1	7	8
Nicaragua	1.1	0.7	7.8	3.4	12	14	0.8	0.7	5	..	..	..
Niger	1.0	1.1	..	..	11	10	0.3	0.2	..	..	3	..
Nigeria	0.7	0.7	..	..	89	162	0.2	0.3	..	..	2	72
Norway	2.4	1.5	..	4.7	31	16	1.4	0.6	22	2	84	509
Oman	14.6	11.8	45.2	..	48	47	6.2	4.9	1	1	182	406
Pakistan	6.0	3.8	31.4	24.9	846	923	2.2	1.5	1	17	..	..
Panama	1.2	..	5.6	..	12	12	1.1	0.8	..	..	0	..
Papua New Guinea	1.0	0.5	3.9	..	4	3	0.2	0.1	..	..	0	..
Paraguay	1.4	0.8	..	4.9	28	26	1.4	0.9	..	..	2	1
Peru	1.9	1.2	10.7	7.9	178	198	1.8	1.5	..	5	32	365
Philippines	1.4	0.9	8.5	5.0	149	147	0.5	0.4	..	..	30	43
Poland	2.0	2.0	..	5.4	302	148	1.7	0.9	176	169	195	224
Portugal	2.4	2.1	5.7	5.0	104	91	2.1	1.6	1	..	24	431
Puerto Rico	..	..	..	..	..	..	..	..	..	..	..	..



	Military expenditures				Armed forces personnel				Arms transfers			
	% of GDP		% of central government expenditure		thousands		% of labor force		\$ millions 1990 prices			
	1995	2006	1995	2006	1995	2006	1995	2006	Exports	2006	Imports	2006
Romania	2.8	1.9	..	8.2	297	154	2.4	1.5	6	..	3	131
Russian Federation	4.4	4.0	38.3	20.5	1,800	1,446	2.5	2.0	3,363	6,623	40	4
Rwanda	4.4	2.7	..	..	47	53	1.9	1.2	..	..	1	..
Saudi Arabia	9.3	8.5	..	..	178	240	3.0	2.8	2	36	987	148
Senegal	1.7	1.6	..	..	17	19	0.5	0.4	..	..	2	..
Serbia	4.3	2.1	..	..	165	24	..	..	2	5	20	..
Sierra Leone	2.9	1.0	..	5.1	7	11	0.4	0.4	..	..	15	..
Singapore	4.4	4.7	35.1	34.0	66	167	3.7	7.3	0	3	269	54
Slovak Republic	3.2	1.7	..	5.1	51	17	2.1	0.6	91	79	218	4
Slovenia	1.6	1.7	4.7	4.2	13	11	1.3	1.1	..	..	19	2
Somalia	..	..	..	..	225	0	8.4	0.0	..	..	..	..
South Africa	2.2	1.4	..	4.5	277	103	1.7	0.5	15	115	38	862
Spain	1.4	1.0	3.9	4.2	282	222	1.7	1.1	82	803	363	378
Sri Lanka	5.3	2.4	20.3	11.0	236	213	3.3	2.5	..	..	49	20
Sudan	2.7	..	..	..	134	123	1.6	1.2	..	..	3	48
Swaziland	2.4	1.9	..	..	3	..	1.1	..	..	..	..	..
Sweden	2.3	1.4	..	4.0	100	25	2.2	0.5	222	472	96	122
Switzerland	1.3	0.9	5.2	4.9	31	23	0.8	0.5	36	144	93	72
Syrian Arab Republic	6.2	3.8	..	..	531	401	11.4	5.1	0	3	43	9
Tajikistan	1.0	2.2	..	15.8	18	17	0.9	0.8	..	..	27	13
Tanzania	1.6	1.1	..	..	36	28	0.2	0.1	..	..	3	..
Thailand	2.3	1.1	..	6.8	421	420	1.3	1.2	..	5	520	47
Timor-Leste	..	..	..	..	..	1	..	0.3	..	..	..	..
Togo	2.4	1.6	..	..	8	10	0.4	0.4	..	..	3	..
Trinidad and Tobago	..	..	..	..	7	3	1.3	0.5	..	..	..	..
Tunisia	1.9	1.4	6.7	4.8	59	48	2.1	1.2	..	..	46	16
Turkey	3.9	2.9	..	9.8	690	612	3.0	2.2	0	45	1,580	486
Turkmenistan	2.3	..	..	..	11	22	0.7	1.0	..	..	..	10
Uganda	2.2	2.1	..	12.0	52	47	0.6	0.4	..	..	32	15
Ukraine	2.8	2.1	..	5.7	519	215	2.0	1.0	215	133	0	29
United Arab Emirates	5.2	2.0	49.2	..	71	51	5.5	1.9	27	7	427	2,439
United Kingdom	3.0	2.6	..	6.3	233	181	0.8	0.6	1,402	1,063	659	463
United States	3.8	4.1	..	19.5	1,636	1,498	1.2	1.0	11,288	7,938	767	443
Uruguay	2.1	1.2	7.9	4.3	27	25	1.8	1.5	..	..	8	7
Uzbekistan	1.1	..	..	..	42	87	0.5	0.7	..	4	..	..
Venezuela, RB	1.6	1.1	8.7	4.4	80	82	0.9	0.6	..	5	5	388
Vietnam	2.6	..	..	..	622	495	1.8	1.1	..	..	269	179
West Bank and Gaza	..	..	..	..	..	56	..	7.0	..	..	1	0
Yemen, Rep.	6.4	6.0	33.4	..	70	138	1.7	2.2	..	..	175	308
Zambia	1.6	2.3	..	11.3	23	16	0.6	0.3	..	..	5	15
Zimbabwe	19.1	2.3	0.1	..	68	51	1.4	0.9	..	..	1	20
World	2.5 w	2.5 w	.. w	11.2 w	30,182 s	27,030 s	1.2 w	0.9 w	21,064 s	22,904 s	22,357 s	26,241 s
Low income	2.7	2.4	19.4	18.3	7,694	7,160	1.0	0.9	115	11	2,250	2,681
Middle income	2.3	2.0	..	..	16,027	14,271	1.2	0.9	4,996	7,717	8,509	11,361
Lower middle income	2.1	2.0	..	15.7	10,405	9,878	1.0	0.8	1,304	730	4,302	6,115
Upper middle income	2.5	2.0	..	..	5,622	4,393	1.7	1.2	3,692	6,987	4,207	5,246
Low & middle income	2.4	2.1	..	..	23,721	21,431	1.1	0.9	5,111	7,728	10,759	14,042
East Asia & Pacific	1.8	1.8	..	17.2	8,021	7,535	0.9	0.7	1,039	572	2,994	4,250
Europe & Central Asia	3.5	2.9	..	13.0	4,874	3,434	2.3	1.6	4,011	6,975	2,301	1,560
Latin America & Carib.	1.7	1.3	5.1	..	2,105	2,281	1.0	0.9	36	6	935	2,412
Middle East & N. Africa	4.2	3.5	17.6	16.2	3,172	3,479	4.2	3.1	8	49	2,951	2,399
South Asia	3.0	2.7	20.4	18.4	3,852	4,121	0.8	0.7	2	11	1,463	2,247
Sub-Saharan Africa	2.0	1.3	..	..	1,698	582	0.7	0.5	15	115	115	1,174
High income	2.5	2.6	..	10.6	6,461	5,599	1.4	1.1	15,953	15,176	11,598	12,199
Euro area	2.0	1.6	4.0	4.3	2,298	1,707	1.7	1.1	3,235	4,884	2,149	3,351

Note: For some countries data are partial or uncertain or based on rough estimates; see SIPRI (2007).

a. Estimates differ from official statistics of the government of China, which has published the following estimates: military expenditure as 1.0 percent of GDP in 1995 and 1.4 percent in 2005 and 9.3 percent of central government expenditure in 1995 and 7.3 percent in 2005 (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, 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 the Stockholm International Peace Research Institute (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 strictly comparable across countries. More information on SIPRI's military expenditure project can be found at 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 Project 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 value 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 Project is available at www.sipri.org/contents/armstrad/.

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, missiles, and ships designed for military use. Excluded are transfers of other military equipment such as 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 2007: Armaments, Disarmament, and International Security*. Data on armed forces personnel are from the International Institute for Strategic Studies' *The Military Balance 2008*. Data on arms transfers are from SIPRI's Arms Transfer Project (www.sipri.org/contents/armstrad/).



	IDA 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
		2006	2006	2006	2006	2006	2006	2006	2006
Afghanistan	2.6	4.0	3.0	3.0	3.3	3.0	2.0	2.5	2.5
Albania	3.7	4.5	3.5	4.0	4.0	5.0	4.0	3.5	4.2
Angola	2.7	3.0	3.0	2.0	2.7	4.0	2.5	2.0	2.8
Armenia	4.3	5.5	5.0	5.5	5.3	4.5	3.5	4.0	4.5
Azerbaijan	3.7	4.5	4.5	4.5	4.5	4.0	3.0	3.5	3.5
Bangladesh	3.4	4.0	3.5	4.5	4.0	3.5	3.0	3.5	3.3
Benin	3.6	4.5	4.0	3.5	4.0	4.5	3.5	3.5	3.8
Bhutan	3.8	4.5	4.0	4.0	4.2	3.0	3.0	3.5	3.2
Bolivia	3.7	4.0	4.0	4.5	4.2	5.0	3.5	2.5	3.7
Bosnia and Herzegovina	3.7	4.5	3.5	4.0	4.0	3.5	4.0	3.5	3.7
Burkina Faso	3.7	4.5	4.5	4.0	4.3	4.0	3.0	3.0	3.3
Burundi	3.0	3.5	3.5	2.5	3.2	3.5	3.0	2.5	3.0
Cambodia	3.2	4.0	3.0	3.5	3.5	3.5	2.5	3.5	3.2
Cameroon	3.2	4.0	4.0	2.5	3.5	3.5	3.0	3.0	3.2
Cape Verde	4.1	4.5	4.5	4.0	4.3	4.0	4.0	3.5	3.8
Central African Republic	2.4	3.0	3.0	1.5	2.5	3.5	2.5	2.0	2.7
Chad	2.8	3.5	3.0	2.5	3.0	3.0	3.0	3.0	3.0
Comoros	2.4	2.5	2.0	1.5	2.0	2.5	2.5	2.5	2.5
Congo, Dem. Rep.	2.8	3.5	3.5	2.5	3.2	4.0	2.0	3.0	3.0
Congo, Rep.	2.8	3.5	2.5	2.5	2.8	3.5	2.5	2.5	2.8
Côte d'Ivoire	2.5	2.5	2.0	1.0	1.8	3.5	3.0	3.0	3.2
Djibouti	3.1	3.5	2.5	2.5	2.8	4.0	3.5	3.0	3.5
Dominica	3.8	4.0	4.5	3.0	3.8	4.0	4.0	4.5	4.2
Eritrea	2.5	2.0	2.0	2.5	2.2	1.5	2.0	2.0	1.8
Ethiopia	3.4	3.0	4.0	3.5	3.5	3.0	3.0	3.5	3.2
Gambia, The	3.1	3.5	3.0	2.5	3.0	4.0	3.0	3.0	3.3
Georgia	4.1	4.5	4.5	4.5	4.5	4.5	3.5	4.5	4.2
Ghana	3.9	4.0	4.5	4.0	4.2	4.0	3.5	4.0	3.8
Grenada	3.8	4.0	3.0	3.0	3.3	4.0	3.5	4.5	4.0
Guinea	2.9	2.5	3.0	2.5	2.7	4.5	3.0	3.0	3.5
Guinea-Bissau	2.6	2.0	2.5	1.5	2.0	4.0	3.0	2.5	3.2
Guyana	3.4	3.5	3.5	4.0	3.7	4.0	3.5	3.0	3.5
Haiti	2.9	3.5	3.5	2.5	3.2	4.0	3.0	2.5	3.2
Honduras	3.9	4.5	4.0	4.0	4.2	5.0	3.5	4.0	4.2
India	3.8	4.5	3.5	4.5	4.2	3.5	4.0	3.5	3.7
Indonesia	3.7	4.5	4.0	4.5	4.3	4.5	3.5	3.0	3.7
Kenya	3.7	4.5	4.0	4.0	4.2	4.0	3.5	4.0	3.8
Kiribati	3.1	2.5	2.0	5.0	3.2	3.0	3.0	3.0	3.0

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 striving to meet the Millennium Development Goals.

The World Bank's IDA Resource Allocation Index (IRAI), which is 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 Liberia, Myanmar, and Somalia because they were not rated in the 2006 exercise even though they are

IDA eligible. Serbia and Montenegro as a unified country was IDA eligible in 2005, rated in that year's exercise, and included in last year's table, but neither Serbia nor Montenegro is IDA eligible as an independent country and thus neither is rated in the 2006 exercise nor included in this year's table. Afghanistan and Timor-Leste are included in this year's table. Country assessments have been carried out annually by World Bank staff since the mid-1970s. 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

Public policies and institutions

5.8

	IDA 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
		2006	2006	2006	2006	2006	2006	2006	2006
Kyrgyz Republic	3.6	4.5	3.5	4.0	4.0	5.0	3.5	3.5	4.0
Lao PDR	3.1	4.0	3.5	3.5	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
Madagascar	3.6	4.0	3.0	3.5	3.5	4.0	3.5	4.0	3.8
Malawi	3.4	3.5	3.0	3.0	3.2	4.0	3.0	3.5	3.5
Maldives	3.6	3.0	2.5	3.5	3.0	4.0	4.0	4.0	4.0
Mali	3.7	4.5	4.0	4.5	4.3	4.0	3.0	3.5	3.5
Mauritania	3.3	3.0	3.0	4.0	3.3	4.5	2.5	3.5	3.5
Moldova	3.7	4.0	4.0	4.0	4.0	3.5	3.5	3.5	3.5
Mongolia	3.4	4.0	3.0	3.0	3.3	4.5	3.0	3.5	3.7
Mozambique	3.5	4.0	4.0	4.5	4.2	4.5	3.0	3.0	3.5
Nepal	3.4	4.5	3.5	3.5	3.8	4.0	3.0	3.0	3.3
Nicaragua	3.8	4.0	4.0	4.5	4.2	4.5	3.5	3.5	3.8
Niger	3.3	4.0	3.5	3.5	3.7	4.0	3.0	3.0	3.3
Nigeria	3.2	4.0	4.0	4.0	4.0	3.0	3.0	3.0	3.0
Pakistan	3.6	4.0	3.5	4.5	4.0	4.0	4.5	4.0	4.2
Papua New Guinea	3.1	4.0	3.5	4.0	3.8	4.0	3.0	3.0	3.3
Rwanda	3.6	4.0	4.0	3.5	3.8	3.5	3.5	3.5	3.5
Samoa	3.9	4.0	3.5	4.0	3.8	4.5	4.0	3.5	4.0
São Tomé and Príncipe	3.0	3.0	3.0	2.5	2.8	4.0	2.5	3.0	3.2
Senegal	3.7	4.0	4.0	4.0	4.0	4.0	3.5	3.5	3.7
Sierra Leone	3.1	4.0	3.5	3.5	3.7	3.0	3.0	2.5	3.0
Solomon Islands	2.8	3.5	3.5	2.5	3.2	3.5	3.0	2.5	2.8
Sri Lanka	3.6	3.0	3.0	3.5	3.2	4.0	4.0	4.0	3.8
St. Lucia	3.9	4.5	3.5	4.0	4.0	4.0	4.0	4.5	4.2
St. Vincent & Grenadines	3.8	4.0	3.5	3.5	3.7	2.5	4.0	4.5	4.2
Sudan	2.5	3.5	3.0	1.5	2.7	4.0	3.0	3.0	2.8
Tajikistan	3.3	4.5	4.0	4.0	4.2	4.0	3.0	3.5	3.5
Tanzania	3.9	5.0	4.5	4.0	4.5	3.5	3.5	3.5	3.7
Timor-Leste	2.7	2.5	3.0	3.5	3.0	3.5	2.5	1.5	2.5
Togo	2.5	2.5	2.0	1.5	2.0	4.0	2.5	3.0	3.2
Tonga	2.9	3.0	2.0	3.0	2.7	3.0	3.0	3.0	3.0
Uganda	3.9	4.5	4.5	4.5	4.5	4.0	3.5	4.0	3.8
Uzbekistan	3.0	3.0	3.5	4.0	3.5	2.5	2.5	2.5	2.5
Vanuatu	3.1	3.5	3.0	4.0	3.5	3.5	3.0	3.0	3.2
Vietnam	3.9	5.5	4.5	4.0	4.7	3.5	3.0	3.5	3.3
Yemen, Rep.	3.3	3.5	3.0	4.5	3.7	4.5	2.5	3.0	3.3
Zambia	3.4	4.0	3.5	3.5	3.7	4.0	3.0	3.0	3.3
Zimbabwe	1.8	1.0	1.0	1.0	1.0	2.0	2.5	2.0	2.2

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 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 actual 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 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	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
	2006	2006	2006	2006	2006	2006	2006	2006	2006	2006	2006	2006
Afghanistan	2.0	2.5	3.0	2.0	2.0	2.3	1.5	3.0	2.5	2.0	2.5	2.3
Albania	4.0	3.5	3.5	3.5	3.0	3.5	3.0	4.0	4.0	3.0	2.5	3.3
Angola	3.0	2.5	2.5	2.5	3.0	2.7	2.0	2.5	2.5	2.5	2.5	2.4
Armenia	4.5	4.5	4.0	4.5	3.5	4.2	3.5	4.0	3.5	4.0	3.5	3.5
Azerbaijan	4.0	4.0	3.0	4.0	3.0	3.6	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	2.5	3.0	3.0	3.0	2.5	2.8
Benin	3.0	3.0	3.5	3.0	3.5	3.2	3.0	3.5	3.5	3.0	3.5	3.3
Bhutan	4.0	4.0	4.5	3.5	4.5	4.1	3.5	3.5	4.0	4.0	4.0	3.8
Bolivia	4.0	4.0	4.5	3.0	3.5	3.8	2.5	3.5	4.0	3.0	3.5	3.3
Bosnia and Herzegovina	4.5	3.0	3.5	3.5	3.5	3.6	3.0	3.5	4.5	3.0	3.0	3.4
Burkina Faso	3.5	4.0	3.5	3.5	3.5	3.6	3.5	4.0	3.5	3.5	3.0	3.5
Burundi	3.5	3.0	3.0	3.0	3.0	3.1	2.5	3.0	3.0	2.5	2.5	2.7
Cambodia	4.0	3.0	3.5	3.0	3.0	3.3	2.5	3.0	3.0	2.5	2.5	2.7
Cameroon	3.5	3.0	3.5	3.0	3.0	3.2	2.5	3.5	3.5	3.0	2.5	3.0
Cape Verde	4.5	4.5	4.5	4.5	3.5	4.3	4.0	3.5	3.5	4.0	4.5	3.9
Central African Republic	2.5	2.0	2.0	2.0	2.5	2.2	2.0	2.0	2.5	2.0	2.5	2.2
Chad	2.5	3.0	2.5	2.5	2.5	2.6	2.0	2.5	2.5	3.0	2.0	2.4
Comoros	3.0	3.0	3.0	2.5	2.0	2.7	2.5	1.5	2.5	2.0	2.5	2.2
Congo, Dem. Rep.	3.0	3.0	3.0	3.0	2.5	2.9	2.0	2.5	2.5	2.5	2.0	2.3
Congo, Rep.	3.0	2.5	3.0	2.5	2.5	2.7	2.5	3.0	3.0	2.5	2.5	2.7
Côte d'Ivoire	2.5	1.5	2.0	2.5	3.0	2.3	2.0	2.5	4.0	2.0	2.0	2.5
Djibouti	3.0	3.0	3.5	3.0	3.0	3.1	2.5	3.0	3.5	2.5	2.5	2.8
Dominica	4.0	3.5	4.0	3.5	3.5	3.7	4.0	3.0	3.5	3.5	4.0	3.6
Eritrea	3.5	3.0	3.5	3.0	2.0	3.0	2.5	2.5	3.5	3.0	2.5	2.8
Ethiopia	3.0	4.5	3.5	3.5	3.5	3.6	3.0	4.0	4.0	3.0	2.5	3.3
Gambia, The	3.5	3.0	3.5	2.5	3.0	3.1	3.5	2.5	3.5	3.0	2.0	2.9
Georgia	4.5	4.5	4.0	4.0	3.5	4.1	3.5	4.0	4.0	3.5	3.5	3.7
Ghana	4.0	4.0	4.0	3.5	3.5	3.8	3.5	4.0	4.5	3.5	4.0	3.9
Grenada	5.0	3.5	4.0	3.5	4.0	4.0	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	2.5	3.0	3.0	2.5	2.6
Guinea-Bissau	2.5	3.0	2.5	2.5	2.5	2.6	2.5	2.5	3.0	2.5	2.5	2.6
Guyana	4.0	3.5	3.5	3.0	3.0	3.4	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	2.0	2.4
Honduras	4.0	4.0	4.0	3.5	3.0	3.7	3.5	4.0	4.0	3.0	3.0	3.5
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
Indonesia	3.5	4.0	3.5	3.5	3.0	3.5	2.5	3.5	3.5	3.5	3.0	3.2
Kenya	3.0	3.5	3.5	3.0	3.0	3.2	3.0	3.5	4.0	3.5	3.0	3.4
Kiribati	3.0	3.0	2.5	3.0	3.0	2.9	3.5	3.0	3.0	3.0	3.5	3.2

Definitions

• **IDA 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 to all people. • **Policies**

	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
	2006	2006	2006	2006	2006	2006	2006	2006	2006	2006	2006	2006
Kyrgyz Republic	4.5	3.5	3.5	3.5	3.0	3.6	2.5	3.0	3.5	2.5	2.5	2.8
Lao PDR	3.5	3.5	3.0	2.0	3.5	3.1	3.0	3.0	2.5	3.0	2.0	2.7
Lesotho	4.0	3.0	3.5	3.0	3.5	3.4	3.5	3.0	4.0	3.0	3.5	3.4
Madagascar	3.5	3.5	3.5	3.5	4.0	3.6	3.5	3.0	3.5	3.5	3.5	3.4
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	4.0	3.5	4.0	3.9	4.0	3.0	4.0	4.0	2.5	3.5
Mali	3.5	3.5	3.5	3.5	3.0	3.4	3.5	3.5	4.0	3.0	3.5	3.5
Mauritania	3.5	3.5	3.5	3.0	3.5	3.4	3.0	2.5	3.5	3.0	2.5	2.9
Moldova	5.0	3.5	4.0	3.5	3.5	3.9	3.5	3.5	3.0	3.0	3.0	3.2
Mongolia	3.5	3.0	3.5	3.5	2.5	3.2	3.0	4.0	3.5	3.5	2.5	3.3
Mozambique	3.5	3.5	3.5	3.0	3.0	3.3	3.0	3.5	3.5	2.5	3.0	3.1
Nepal	3.5	3.5	3.5	3.0	3.0	3.3	3.0	3.5	3.5	3.0	3.0	3.2
Nicaragua	3.5	4.0	3.5	3.5	3.5	3.6	3.0	4.0	4.0	3.0	3.0	3.4
Niger	2.5	3.5	3.0	3.0	3.0	3.0	3.0	3.5	3.5	3.0	3.0	3.2
Nigeria	3.0	3.5	3.0	3.0	3.0	3.1	2.5	3.0	3.0	2.5	3.0	2.8
Pakistan	2.0	3.5	3.5	3.0	3.5	3.1	3.0	3.5	3.5	3.5	2.5	3.2
Papua New Guinea	2.5	3.0	2.5	3.0	1.5	2.5	2.0	3.5	3.5	2.5	3.0	2.9
Rwanda	3.5	4.5	4.5	3.5	3.0	3.8	3.0	4.0	3.5	3.5	3.0	3.4
Samoa	4.0	4.0	4.0	3.5	4.0	3.9	4.0	3.5	4.0	4.0	4.0	3.9
São Tomé and Príncipe	3.0	3.5	2.5	2.5	2.5	2.8	2.5	2.5	3.5	3.0	3.5	3.0
Senegal	3.5	3.5	3.5	3.0	3.5	3.4	3.5	3.5	4.5	3.5	3.0	3.6
Sierra Leone	3.0	3.0	3.0	2.5	2.0	2.8	2.5	3.5	2.5	3.0	2.5	2.9
Solomon Islands	3.0	2.5	3.0	3.5	2.0	2.6	2.5	2.5	3.5	2.0	3.0	2.5
Sri Lanka	4.0	3.5	4.0	4.0	3.5	3.7	3.5	4.0	3.5	3.0	3.5	3.5
St. Lucia	4.0	3.5	4.0	3.5	3.5	3.8	4.0	3.5	3.5	3.5	4.5	3.8
St. Vincent & Grenadines	4.5	3.5	4.0	2.0	3.5	3.8	4.0	3.5	3.0	3.5	4.0	3.7
Sudan	2.0	2.5	2.5	3.5	2.5	2.3	2.0	2.0	3.0	2.5	2.0	2.3
Tajikistan	3.5	3.0	3.0	3.5	2.5	3.1	2.5	3.0	4.0	2.5	2.0	2.6
Tanzania	4.0	4.0	4.0	2.5	3.5	3.8	3.5	4.5	3.0	3.5	3.5	3.8
Timor-Leste	3.0	3.0	2.5	2.5	2.0	2.6	1.5	3.0	3.0	2.5	3.0	2.6
Togo	3.0	2.0	3.0	2.5	2.5	2.6	2.5	2.0	2.5	2.0	2.0	2.2
Tonga	2.5	3.5	4.0	3.0	3.0	3.2	3.5	2.5	3.0	2.5	2.0	2.7
Uganda	3.5	4.5	4.0	3.5	4.0	3.9	3.5	4.0	3.0	3.0	3.0	3.3
Uzbekistan	3.5	3.5	4.0	3.5	3.5	3.6	2.0	3.0	3.0	2.5	1.5	2.4
Vanuatu	3.0	3.5	2.5	2.0	3.0	2.8	3.0	3.5	3.5	2.5	3.0	3.1
Vietnam	4.5	4.5	4.0	3.0	3.5	3.9	3.5	4.0	3.5	3.5	3.0	3.5
Yemen, Rep.	2.5	3.5	3.0	3.5	3.0	3.1	2.5	3.0	3.0	3.0	3.0	2.9
Zambia	3.5	3.5	3.5	3.0	3.5	3.4	3.0	3.5	3.5	3.0	3.0	3.2
Zimbabwe	2.5	1.5	2.0	1.5	2.5	2.0	1.0	2.0	3.5	2.0	1.0	1.9

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.



	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
	2000-05 ^a	2000-05 ^a	2000-05 ^a	2000-05 ^a	2000-06 ^a	2000-06 ^a	2000-06 ^a	2006	2006	2006	2006
Afghanistan	34,782	23.7	..	..	..	..	..	..	..	..	..
Albania	18,000	39.0	197	2,200	447	73	26	..	4	213	0
Algeria	108,302	70.2	..	..	3,572	929	1,471	..	45	2,900	24
Angola	51,429	10.4	166,045	4,709	2,761	..	..	..	5	263	81
Argentina	231,374	30.0	..	..	..	..	..	1,758	74	6,612	125
Armenia	7,515	90.0	2,131	231	711	27	654	..	6	606	7
Australia	812,972	..	290,280	168,630	9,528	1,290	46,164	5,689	353	46,952	2,570
Austria	133,928	100.0	69,000	26,411	5,690	8,470	17,036	..	150	8,785	572
Azerbaijan	59,141	49.4	10,892	7,536	2,122	878	10,067	..	13	1,253	16
Bangladesh	239,226	9.5	..	..	2,855	4,164	817	904	8	1,729	191
Belarus	94,797	88.6	9,231	15,055	5,498	13,568	43,559	..	6	307	1
Belgium	150,567	78.0	126,680	54,856	3,542	9,150	8,130	8,672	158	3,641	740
Benin	19,000	9.5	..	..	578	66	86	..	..	..	..
Bolivia	62,479	7.0	..	..	..	..	..	..	22	1,443	11
Bosnia and Herzegovina	21,846	52.3	..	300	1,000	53	1,173	..	..	..	..
Botswana	24,455	33.2	..	..	888	171	842	..	7	214	0
Brazil	1,751,868	5.5	..	..	..	..	..	6,305	561	40,945	1,412
Bulgaria	44,033	99.0	14,401	6,840	4,154	2,389	5,164	..	12	808	3
Burkina Faso	92,495	4.2	..	..	622	..	..	..	2	73	0
Burundi	12,322	10.4	..	..	..	..	..	..	..	..	..
Cambodia	38,257	6.3	201	3	650	45	92	..	4	256	1
Cameroon	50,000	10.0	..	..	1,016	357	1,076	..	11	425	29
Canada	1,408,900	39.9	493,814	184,774	67,346	1,430	445,689	4,309	1,042	46,727	1,503
Central African Republic	24,307	..	..	..	..	..	..	..	..	..	..
Chad	33,400	0.8	..	..	..	..	..	..	..	..	..
Chile	79,604	20.2	..	..	2,035	737	1,241	2,127	95	6,017	1,028
China	1,930,544	81.6	929,210	869,320	62,200	666,200	2,170,700	84,686	1,543	158,013	7,692
Hong Kong, China	1,955	100.0	..	..	..	..	..	23,539	130	21,796	8,326
Colombia	164,257	..	157	38,199	2,137	..	7,751	1,511	175	10,616	1,051
Congo, Dem. Rep.	153,497	1.8	..	..	3,641	140	444	..	..	..	..
Congo, Rep.	17,289	5.0	..	..	795	135	231	..	..	..	..
Costa Rica	35,330	24.4	..	..	..	..	..	834	36	943	10
Côte d'Ivoire	80,000	8.1	..	..	639	10	129	710	..	..	..
Croatia	28,472	84.4	3,403	9,328	2,726	1,266	2,835	..	22	1,389	2
Cuba	60,856	49.0	..	..	..	..	..	..	12	812	30
Czech Republic	127,781	100.0	90,055	46,600	9,513	6,631	14,385	..	75	4,922	39
Denmark	72,257	100.0	70,635	11,058	2,212	5,459	2,030	669	14	582	1
Dominican Republic	12,600	49.4	..	..	1,743	..	..	537	..	..	..
Ecuador	43,197	15.0	10,641	5,453	966	..	..	671	31	2,110	6
Egypt, Arab Rep.	92,370	81.0	..	..	5,150	40,837	3,917	4,916	47	4,988	309
El Salvador	10,029	19.8	..	..	283	..	..	..	25	2,579	20
Eritrea	4,010	21.8	..	..	306	..	..	..	..	..	..
Estonia	57,016	22.7	3,190	7,641	959	248	10,311	..	8	598	1
Ethiopia	37,018	13.4	219,113	2,456	..	..	..	..	34	1,720	157
Finland	78,821	65.0	70,300	27,800	5,732	3,478	9,706	1,401	115	7,597	409
France	950,985	100.0	771,000	193,000	29,286	76,159	41,898	4,005	806	59,538	6,135
Gabon	9,170	10.2	..	..	810	95	2,219	..	9	508	78
Gambia, The	3,742	19.3	16	..	..	..	..	..	..	..	..
Georgia	20,247	39.4	5,200	570	1,515	720	6,127	..	5	272	3
Germany	..	100.0	1,062,700	237,609	34,218	72,554	88,022	15,053	1,085	99,647	8,134
Ghana	57,613	17.9	..	..	977	85	242	..	1	96	7
Greece	117,533	91.8	..	18,360	2,576	1,854	613	1,769	133	9,481	71
Guatemala	14,095	34.5	..	..	886	..	..	800	..	..	..
Guinea	44,348	9.8	..	..	1,115	..	..	..	..	..	..
Guinea-Bissau	3,455	27.9	..	..	..	..	..	..	..	..	..
Haiti	4,160	24.3	..	..	..	..	..	..	..	..	..

Transport services

5.9

	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
	2000-05 ^a	2000-05 ^a	2000-05 ^a	2000-05 ^a	2000-06 ^a	2000-06 ^a	2000-06 ^a	2006	2006	2006	2006
Honduras	13,600	20.4	..	..	699	..	..	553	..	..	..
Hungary	159,568	43.9	13,300	12,505	7,730	6,953	8,537	..	46	2,592	20
India	3,383,344	47.4	..	..	63,465	575,702	407,398	6,190	454	40,289	843
Indonesia	372,929	55.3	..	..	..	14,345	4,430	3,740	357	29,867	469
Iran, Islamic Rep.	179,388	67.4	..	..	7,131	11,149	19,127	1,529	136	13,623	92
Iraq	45,550	84.3	..	..	1,963	570	1,682	..	..	..	..
Ireland	96,602	100.0	..	15,900	1,919	1,781	303	1,065	350	50,738	131
Israel	17,589	100.0	..	..	899	1,618	1,149	1,774	36	4,357	1,124
Italy	484,688	100.0	97,560	192,700	16,225	46,144	20,131	9,963	448	36,709	1,377
Jamaica	21,532	73.9	..	..	272	..	..	2,150	21	1,527	15
Japan	1,177,278	77.7	947,562	327,632	20,052	245,957	22,632	18,274	670	102,845	8,480
Jordan	7,601	100.0	..	..	293	..	1,024	..	27	2,046	259
Kazakhstan	90,800	83.0	91,651	47,100	14,205	12,129	191,200	..	19	1,283	16
Kenya	63,265	14.1	..	22	1,917	226	1,399	..	29	2,685	301
Korea, Dem. Rep.	31,200	6.4	..	..	5,214	..	..	..	2	105	2
Korea, Rep.	102,293	76.8	91,665	12,545	3,392	31,004	10,108	15,711	224	34,843	7,752
Kuwait	5,749	85.0	..	..	..	..	..	750	21	2,628	239
Kyrgyz Republic	18,500	91.1	5,874	1,336	424	50	561	..	5	219	1
Lao PDR	31,210	14.4	..	..	..	..	..	..	10	327	3
Latvia	69,829	100.0	2,869	2,767	2,375	894	17,921	..	29	1,410	13
Lebanon	6,970	..	..	..	401	..	..	..	11	969	74
Lesotho	5,940	18.3	..	..	..	..	..	..	..	..	..
Liberia	10,600	6.2	..	..	490	..	..	..	..	..	..
Libya	83,200	57.2	..	..	2,757	..	..	..	13	1,152	0
Lithuania	79,497	78.2	38,484	15,908	1,772	428	12,457	..	11	430	1
Macedonia, FYR	13,182	..	842	4,100	699	94	441	..	2	209	0
Madagascar	49,827	11.6	..	..	732	10	12	..	14	573	19
Malawi	15,451	45.0	..	..	710	26	38	..	6	146	2
Malaysia	98,721	81.3	..	..	1,667	1,181	1,178	13,419	164	17,833	2,597
Mali	18,709	18.0	..	..	733	196	189	..	..	..	..
Mauritania	7,660	11.3	..	..	717	..	..	..	2	149	0
Mauritius	2,015	100.0	..	..	..	..	..	..	14	1,056	195
Mexico	355,796	37.0	422,915	204,217	..	..	..	2,680	318	21,243	457
Moldova	12,737	86.3	1,640	1,577	1,075	355	2,980	..	4	274	1
Mongolia	49,250	3.5	557	242	1,810	1,228	8,857	..	6	348	6
Morocco	57,626	61.9	..	1,256	1,907	2,987	5,919	561	55	4,109	51
Mozambique	30,400	18.7	..	..	3,070	172	768	..	10	350	5
Myanmar	27,966	11.4	..	..	..	..	..	..	29	1,621	3
Namibia	42,237	12.8	47	591	..	..	..	..	7	401	0
Nepal	17,280	56.9	..	..	59	..	..	..	7	510	7
Netherlands	126,100	90.0	..	77,100	2,813	14,730	4,331	10,044	251	27,454	4,959
New Zealand	93,460	64.9	..	..	..	..	4,078	1,718	221	12,382	819
Nicaragua	18,669	11.4	..	..	6	..	..	..	..	..	..
Niger	18,423	20.6	..	..	..	..	..	..	..	..	..
Nigeria	193,200	15.0	..	..	3,528	174	77	513	16	1,308	11
Norway	92,864	77.5	58,247	14,966	4,087	2,440	9,568	..	254	12,277	177
Oman	34,965	27.7	..	..	..	..	..	2,620	32	3,267	235
Pakistan	258,340	64.7	209,959	..	7,791	24,237	5,013	1,699	51	5,715	427
Panama	11,643	34.6	..	..	355	..	..	3,383	33	2,029	36
Papua New Guinea	19,600	3.5	..	..	..	..	..	..	22	919	22
Paraguay	29,500	50.8	..	..	441	..	..	..	10	433	0
Peru	78,829	14.4	..	..	..	..	..	1,085	56	4,218	112
Philippines	200,037	9.9	..	..	491	144	1	3,596	62	8,305	319
Poland	423,997	69.7	29,314	119,740	19,507	16,742	45,438	428	83	3,626	80
Portugal	78,470	86.0	..	23,187	2,839	3,412	2,422	1,012	120	9,441	294
Puerto Rico	25,645	95.0	..	10	96	..	..	1,729	..	..	..



5.9

Transport services

	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
	2000-05 ^a	2000-05 ^a	2000-05 ^a	2000-05 ^a	2000-06 ^a	2000-06 ^a	2000-06 ^a	2006	2006	2006	2006
Romania	198,817	30.2	9,438	37,220	10,844	7,960	16,032	1,018	43	2,047	5
Russian Federation	537,289	..	..	25,200	85,245	177,639	1,950,900	2,326	421	28,837	1,926
Rwanda	14,008	19.0	..	..	..	..	..	..	..	..	..
Saudi Arabia	152,044	29.9	..	..	1,020	393	1,192	3,919	132	16,831	1,066
Senegal	13,576	29.3	..	..	906	88	265	..	0	501	0
Serbia	45,290	62.4	3,865	3,100	3,809	852	3,482	..	20	1,042	4
Sierra Leone	11,300	8.0	..	..	..	..	..	..	0	19	10
Singapore	3,234	100.0	..	..	..	..	..	24,792	85	19,566	7,981
Slovak Republic	43,000	87.3	32,214	18,517	3,659	2,166	9,326	..	15	780	0
Slovenia	38,485	100.0	848	11,033	1,228	777	3,245	..	20	861	2
Somalia	22,100	11.8	..	..	..	..	..	..	..	..	..
South Africa	364,131	17.3	..	434	20,247	991	109,721	3,552	147	12,933	1,233
Spain	666,292	99.0	397,117	132,868	14,484	21,047	11,586	10,033	603	53,122	1,100
Sri Lanka	97,286	81.0	21,067	..	1,200	4,358	135	3,079	21	3,101	325
Sudan	11,900	36.3	..	..	5,478	40	766	..	9	563	51
Swaziland	3,594	30.0	..	..	301	..	11,394	..	..	..	..
Sweden	425,383	31.5	112,010	39,373	9,867	5,673	13,120	1,281	190	11,624	257
Switzerland	71,296	100.0	97,996	15,753	3,011	13,830	8,571	..	125	10,647	1,039
Syrian Arab Republic	94,890	20.1	589	..	1,888	607	2,256	..	17	1,252	16
Tajikistan	27,767	..	..	..	616	50	1,117	..	3	394	13
Tanzania	78,891	8.6	..	..	4,582 ^b	946 ^b	1,990 ^b	..	5	190	2
Thailand	57,403	98.5	..	..	4,044	9,195	4,037	5,574	127	20,102	2,107
Timor-Leste	..	..	..	..	..	..	..	..	..	..	..
Togo	7,520	31.6	..	..	568	..	..	..	..	..	..
Trinidad and Tobago	8,320	51.1	..	..	..	..	..	..	14	1,024	46
Tunisia	19,232	65.8	..	16,611	1,909	1,319	2,067	..	22	2,055	19
Turkey	426,914	..	182,152	166,831	8,697	6,183	9,078	3,648	177	19,361	464
Turkmenistan	24,000	81.2	..	..	2,529	1,286	8,670	..	16	1,843	10
Uganda	70,746	23.0	..	..	259	..	218	..	0	55	34
Ukraine	169,323	97.4	51,820	23,895	22,001	52,655	223,980	730	49	2,802	44
United Arab Emirates	4,030	100.0	..	..	..	..	..	10,967	87	14,314	3,734
United Kingdom	388,008	100.0	736,000	163,000	15,810	43,200	22,110	8,226	1,037	97,545	6,215
United States	6,544,257	65.3	7,814,575	2,116,532	153,787	47,717	2,589,349 ^c	40,875	9,739 ^d	725,531 ^d	39,882 ^d
Uruguay	77,732	10.0	..	..	3,003	12	331	..	9	569	4
Uzbekistan	81,600	87.3	..	1,200	4,014	2,012	18,007	..	22	1,665	68
Venezuela, RB	96,155	33.6	..	..	336	..	54	1,218	140	5,226	2
Vietnam	222,179	..	..	..	2,671	4,558	2,928	3,000	51	5,284	216
West Bank and Gaza	4,996	100.0	..	..	..	..	..	..	..	..	..
Yemen, Rep.	71,300	8.7	..	..	..	..	..	..	19	1,162	66
Zambia	91,440	22.0	..	..	1,273	183	..	..	6	59	0
Zimbabwe	97,267	19.0	..	..	..	..	..	..	7	239	9
World	35.9 m	.. m	.. m	.. s	2,278 m	7,751 m	414,087 s	24,843 s	2,072,237 s	143,212 s	
Low income	12.1	..	..	..	..	..	..	9,772	846	69,322	2,469
Middle income	44.0	..	..	..	1,286	5,542	158,956	5,580	467,938	23,065	
Lower middle income	65.8	..	..	..	1,286	3,449	114,068	3,034	285,540	13,248	
Upper middle income	34.1	..	..	..	1,716	9,202	44,888	2,546	182,398	9,817	
Low & middle income	26.8	..	..	..	..	..	170,749	6,426	537,260	25,535	
East Asia & Pacific	11.4	..	..	..	4,558	1,902	114,016	2,454	244,449	13,538	
Europe & Central Asia	..	9,859	13,124	196,529	1,286	8,874	5,530	1,032	73,664	2,700	
Latin America & Carib.	24.3	..	..	..	..	..	24,523	1,621	107,627	4,346	
Middle East & N. Africa	70.2	..	..	..	..	2,256	..	392	34,257	909	
South Asia	56.9	..	..	..	14,297	2,915	11,872	549	51,488	1,793	
Sub-Saharan Africa	11.9	..	..	..	..	..	..	378	25,776	2,249	
High income	90.9	..	51,147	..	6,152	10,311	243,338	18,417	1,534,977	117,678	
Euro area	100.0	126,680	51,147	120,827	8,810	9,706	64,550	4,314	371,383	29,254	

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.

Transport services | 5.9

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. Several new initiatives are under way to improve data availability and consistency. The IRF is collaborating with national and international development agencies to improve the quality and coverage of road statistics. To improve measures of progress and performance, the World Bank is also working on better measures of access, affordability, efficiency, quality, and fiscal and institutional aspects of infrastructure.

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 and Urban Development 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									
	Consumption per capita kWh	Transmission and distribution losses % of output	Access				Quality	Affordability and efficiency				
			per 100 people		Population covered by mobile telephony ^a %	Inter- national voice traffic ^a minutes per person	Faults per 100 mainlines ^a	\$ per month		Cost of call to U.S. ^a \$ per 3 minutes	Telecom- munications revenue ^a % of GDP	Subscrib- ers per employee ^a
			Fixed	Mobile				Price	Price			
			mainlines ^a	subscribers ^a				basket for residential fixed line ^b	basket for mobile ^a			
2005	2005	2006	2006	2006	2006	2006	2006	2006	2006	2005	2006	2006
Afghanistan	..	..	1	10	..	1	25.0	0.1	10.8	0.39	5.1	60
Albania	1,167	39	11	49	97	160	..	5.1	22.1	1.34	..	623
Algeria	899	13	9	63	75	17	0.8	6.3	7.5	2.08	4.7	302
Angola	141	14	1	14	..	..	..	..	12.2	3.23	2.0	586
Argentina	2,418	15	24	81	..	33	..	6.8	7.8	..	3.4	972
Armenia	1,503	16	20	11	88	128	64.4	2.4	8.7	2.42	3.0	173
Australia	11,481	7	48	95	98	..	12.0	30.5	18.2	..	3.6	317
Austria	7,889	5	43	112	99	..	5.7	29.0	23.2	0.71	2.3	642
Azerbaijan	2,407	10	14	39	99	33	48.1	5.3	15.1	4.18	1.3	229
Bangladesh	136	8	1	12	90	6	..	4.0	2.6	2.02	1.5	..
Belarus	3,209	12	35	61	93	64	23.1	1.6	11.8	1.90	2.1	280
Belgium	8,510	5	45	92	99	..	6.3	33.1	18.5	0.75	3.2	634
Benin	69	..	1	12	..	6	7.5	16.1	13.0	4.80	1.6	621
Bolivia	479	16	7	29	..	49	..	8.5	5.6	..	5.7	810
Bosnia and Herzegovina	2,316	18	25	48	97	208	..	6.3	6.6	3.62	5.5	366
Botswana	1,406	15	7	53	99	74	..	10.2	8.7	2.88	2.6	1,101
Brazil	2,008	17	20	53	88	..	1.6	15.6	26.2	0.71	3.4	1,545
Bulgaria	4,121	11	31	107	100	72	2.8	10.0	16.2	0.57	6.2	347
Burkina Faso	..	..	1	7	26	11	18.4	16.9	12.8	1.14	3.7	440
Burundi	..	..	0	2	..	..	..	2.6	12.2	2.45	..	234
Cambodia	..	..	0	8	..	10	..	..	5.1	2.94	..	..
Cameroon	196	16	1	13	73	9	..	9.3	16.3	..	3.1	730
Canada	17,285	7	64	53	97	..	..	..	6.9	..	2.5	425
Central African Republic	..	..	0	2	..	..	..	..	12.4	1.99	1.1	..
Chad	..	..	0	4	..	..	..	16.9	13.2	..	..	..
Chile	3,074	4	20	76	100	48	..	9.7	11.8	..	..	..
China	1,781	7	28	35	..	7	..	..	2.9	2.90	3.1	1,043
Hong Kong, China	5,878	13	56	136	100	1,179	1.3	12.6	2.2	0.77	3.7	657
Colombia	890	19	17	65	80	68	27.9	8.0	10.4	..	5.3	..
Congo, Dem. Rep.	91	4	0	7	50	5	..	..	11.0	..	6.4	1,428
Congo, Rep.	160	56	0	14	80	..	..	..	11.0	5.39	2.9	..
Costa Rica	1,719	10	31	33	86	127	3.8	6.0	1.9	..	2.4	459
Côte d'Ivoire	170	18	1	21	55	17	..	22.5	21.8	2.25	5.4	1,442
Croatia	3,475	17	41	101	100	231	12.0	13.1	14.5	..	5.5	540
Cuba	1,152	15	9	1	71	31	9.2	13.1	22.6	7.49	2.6	58
Czech Republic	6,343	6	31	118	100	95	6.1	24.1	17.2	1.06	3.9	768
Denmark	6,663	4	57	107	..	318	..	30.7	6.0	0.89	2.6	474
Dominican Republic	1,000	27	9	48	90	..	..	18.2	8.6	0.22	0.5	..
Ecuador	714	43	13	64	67	216	3.8	7.9	18.9	..	3.8	660
Egypt, Arab Rep.	1,245	16	15	24	98	30	0.1	4.0	5.8	1.45	3.8	443
El Salvador	666	13	15	57	95	410	1.7	2.0	8.5	2.40	4.6	1,182
Eritrea	..	..	1	1	..	9	73.7	6.2	..	3.59	2.4	80
Estonia	5,567	11	40	124	99	109	..	15.6	8.6	0.90	5.4	641
Ethiopia	34	10	1	1	..	3	..	2.2	3.1	4.01	2.4	142
Finland	16,120	4	36	108	99	..	..	28.7	6.7	1.80	2.7	451
France	7,938	6	55	84	99	183	..	29.0	29.4	0.84	2.3	582
Gabon	999	18	3	58	78	74	13.4	32.4	14.9	2.77	1.5	244
Gambia, The	..	..	3	24	..	..	..	..	..	1.81	..	..
Georgia	1,672	16	12	38	96	..	..	9.7	44.1	..	7.3	197
Germany	7,111	5	66	102	99	..	..	26.5	17.0	0.43	2.9	559
Ghana	266	14	2	23	69	20	5.6	9.8	7.0	0.39	..	563
Greece	5,242	9	55	100	100	182	12.8	21.1	23.1	1.09	3.4	632
Guatemala	522	8	10	55	..	195	..	9.8	6.1	1.21	..	..
Guinea	..	..	0	2	..	..	..	..	7.7	..	..	..
Guinea-Bissau	..	..	1	6	..	..	..	..	21.9	..	..	..
Haiti	37	38	2	5	..	..	..	..	4.5	2.15	..	..

Power and communications

5.10

	Electric power		Telephones									
	Consumption per capita kWh	Transmission and distribution losses % of output	Access				Quality	Affordability and efficiency				
			per 100 people		Population covered by mobile telephony ^a	Inter-national voice traffic ^a minutes per person		\$ per month	Cost of call to U.S. ^a	Telecom-munications revenue ^a % of GDP	Subscrib-ers per employee ^a	
			Fixed	Mobile			Price					Price	Cost of	Telecom-	Subscrib-
			2005	2005	2006	2006	2006	2006	2006	2006	2006	2005	2006	2006
Honduras	626	24	10	32	..	96	..	5.9	10.8	2.52	7.1	187
Hungary	3,771	11	33	99	99	105	8.2	23.6	12.1	1.01	4.4	780
India	480	25	4	15	61	..	..	3.3	2.5	1.19	2.0	..
Indonesia	509	12	7	29	90	5	..	5.8	4.3	2.79	2.2	1,084
Iran, Islamic Rep.	2,117	19	31	19	90	9	..	2.1	2.7	0.55	1.4	856
Iraq	1,188	6	4	2	72	..	..	..	2.6	..	..	..
Ireland	6,234	8	49	110	99	..	3.2	39.5	19.3	0.71	2.4	406
Israel	6,759	3	43	119	100	364	..	10.5	9.3	0.59	4.2	692
Italy	5,669	7	43	122	100	..	..	24.9	14.1	0.79	3.0	1,116
Jamaica	2,474	12	12	106	95	..	..	9.1	7.5	0.87	4.9	..
Japan	8,233	5	43	80	99	43	0.0	26.1	20.4	1.63	3.7	1,722
Jordan	1,676	14	11	78	99	139	7.9	10.0	6.9	1.44	7.8	707
Kazakhstan	3,206	10	19	51	..	..	..	..	11.4	..	2.6	98
Kenya	138	18	1	18	..	6	145.4	13.9	16.6	3.00	4.6	220
Korea, Dem. Rep.	817	16	..	..	..	..	..	..	..	..	..	..
Korea, Rep.	7,779	4	55	83	99	92	..	8.3	14.2	0.76	4.9	..
Kuwait	15,345	11	20	94	100	..	4.0	10.5	75.0	1.51	3.4	387
Kyrgyz Republic	1,842	26	9	11	90	30	..	4.7	6.4	5.40	4.5	134
Lao PDR	..	..	1	11	55	7	..	..	3.8	1.11	1.7	496
Latvia	2,702	17	29	95	98	67	1.1	13.3	9.3	1.63	3.9	731
Lebanon	2,242	16	17	27	100	279	..	15.0	20.1	2.19	5.0	..
Lesotho	..	..	2	13	29	18	60.0	18.4	14.8	3.28	..	1,111
Liberia	..	..	..	5	..	..	..	..	..	..	..	..
Libya	3,299	13	8	65	71	66	..	1.9	6.1	..	..	1,566
Lithuania	3,104	8	23	139	100	49	9.3	17.7	8.9	1.55	3.3	..
Macedonia, FYR	3,417	23	24	70	99	63	9.0	10.5	14.8	..	7.1	..
Madagascar	..	..	1	5	..	1	..	10.5	8.1	0.59	2.6	..
Malawi	..	..	1	3	..	..	..	5.8	10.2	..	3.3	..
Malaysia	3,262	4	17	75	..	..	22.5	8.7	5.0	0.71	4.6	770
Mali	..	..	1	13	..	..	..	16.1	13.5	..	5.2	..
Mauritania	..	..	1	35	..	..	5.5	11.6	..	..	5.9	1,003
Mauritius	..	..	29	62	100	150	23.0	7.9	4.2	1.59	3.7	492
Mexico	1,899	16	19	55	100	174	1.4	16.1	13.9	0.83	3.0	691
Moldova	1,428	38	27	35	97	110	5.1	5.3	17.1	1.46	10.2	250
Mongolia	..	..	6	22	..	5	18.5	1.6	5.4	..	3.6	147
Morocco	644	18	4	52	98	65	25.0	23.0	15.9	1.69	4.5	821
Mozambique	450	12	0	11	..	13	46.0	13.1	10.0	1.17	1.5	980
Myanmar	82	35	1	0	..	3	125.0	1.3	..	0.17	0.6	81
Namibia	1,428	18	7	25	88	..	35.0	9.1	14.2	..	4.8	470
Nepal	70	20	2	4	1	6	68.0	3.1	2.1	2.04	0.9	145
Netherlands	6,988	4	47	97	100	..	..	..	22.9	0.32	..	..
New Zealand	9,656	7	42	85	98	361	..	28.6	19.4	1.30	..	962
Nicaragua	414	22	4	33	60	62	4.8	9.2	15.1	3.15	..	..
Niger	..	..	0	2	15	..	..	9.5	16.5	..	2.2	..
Nigeria	127	24	1	22	58	..	..	..	10.7	1.49	3.5	..
Norway	25,137	7	44	108	..	193	..	37.9	19.8	..	1.4	445
Oman	3,757	26	11	71	92	189	89.7	12.1	5.5	1.87	2.4	583
Pakistan	456	24	3	22	36	10	..	4.1	2.4	1.03	2.5	433
Panama	1,500	16	13	52	89	..	12.2	10.3	16.7	..	3.9	330
Papua New Guinea	..	..	1	1	..	..	..	..	14.6	..	..	..
Paraguay	849	5	6	54	..	31	8.2	6.4	3.4	0.90	4.4	..
Peru	848	9	8	31	..	99	..	18.8	23.0	1.80	2.7	670
Philippines	588	12	4	50	99	28	4.5	11.6	5.3	1.20	4.4	1,555
Poland	3,437	9	30	96	99	..	5.0	..	7.6	1.35	3.8	..
Portugal	4,663	9	40	115	99	178	10.4	31.8	23.1	1.04	4.9	1,126
Puerto Rico	..	..	27	86	100	..	..	33.5	..	..	..	..



	Electric power		Telephones										
	Consumption per capita kWh	Transmission and distribution losses % of output	Access				Inter-national voice traffic ^a minutes per person	Quality	Affordability and efficiency				
			per 100 people		Population covered by mobile telephony ^a %	Price basket for residential fixed line ^b			Price basket for mobile ^a	Cost of call to U.S. ^a \$ per 3 minutes	Telecom-munications revenue ^a % of GDP	Subscrib-ers per employee ^a	
			Fixed mainlines ^a	Mobile subscribers ^a									
2005	2005	2006	2006	2006	2006	2006	2006	2006	2006	2005	2006	2006	
Romania	2,342	10	19	81	98	..	10.4	7.2	10.5	0.82	5.0	..	
Russian Federation	5,785	12	28	84	..	..	7.1	..	5.9	2.03	2.9	439
Rwanda	..	..	0	3	75	..	..	6.6	12.3	2.43	3.3	..
Saudi Arabia	6,813	11	17	83	96	216	..	11.7	9.7	..	3.1	927	
Senegal	151	30	2	25	85	39	2.0	15.4	9.4	1.02	9.1	1,100	
Serbia	..	..	36	70	99	..	..	..	5.8	..	0.0	605
Sierra Leone	..	..	..	..	..	..	..	..	70.9	..	..	..
Singapore	8,358	5	41	107	100	1,045	0.3	6.3	6.1	0.69	3.1	..	
Slovak Republic	4,920	5	22	91	100	90	7.9	19.8	12.2	1.06	3.6	559	
Slovenia	6,918	6	42	91	99	..	13.4	17.6	10.1	0.65	3.5	1,225	
Somalia	..	..	1	6	..	..	..	..	5.1	..	..	..
South Africa	4,847	6	10	72	96	..	..	22.7	13.8	0.79	6.4	1,145
Spain	6,147	9	42	105	99	173	..	25.8	21.7	0.60	4.3	656	
Sri Lanka	378	15	9	27	85	28	8.6	8.2	1.2	2.11	2.6	619	
Sudan	94	16	2	12	..	12	95.5	6.3	4.0	..	7.6	624	
Swaziland	..	..	4	22	..	..	90.0	8.3	13.5	2.97	12.3	..
Sweden	15,440	7	59	106	99	..	..	26.7	6.0	0.41	2.8	764
Switzerland	8,305	7	67	99	100	..	..	29.5	28.0	0.32	3.3	537
Syrian Arab Republic	1,411	24	17	24	99	44	50.0	2.7	10.0	..	3.0	221	
Tajikistan	2,267	15	4	4	4	..	..	..	23.3	7.84	2.9	114
Tanzania	61	27	0	15	..	..	26.0	14.0	10.0	3.17	..	..
Thailand	1,988	8	11	64	31	14	2.7	8.3	4.3	0.67	3.2	1,850	
Timor-Leste	..	..	..	..	..	..	..	..	..	..	..	..
Togo	94	46	1	11	85	21	..	15.4	12.1	3.98	6.3	432	
Trinidad and Tobago	5,038	6	25	125	..	376	..	7.0	6.7	2.19	2.4	..	
Tunisia	1,194	12	13	72	100	73	20.0	2.9	5.3	..	4.4	915	
Turkey	1,898	15	26	72	96	27	5.6	14.7	12.7	2.40	2.9	1,032	
Turkmenistan	1,731	12	8	2	14	..	..	..	17.2	..	0.7	72
Uganda	..	..	0	7	80	..	..	13.8	9.4	3.21	3.4	255
Ukraine	3,246	13	26	105	96	57	41.3	..	9.4	1.65	5.8	210	
United Arab Emirates	13,708	7	31	130	100	..	0.3	17.4	4.1	1.73	2.7	587	
United Kingdom	6,253	8	55	115	99	..	..	28.2	13.7	0.77	3.7	..
United States	13,648	6	57	78	99	279	13.8	25.0	5.2	..	3.0	389	
Uruguay	2,007	23	30	70	100	121	..	10.7	16.1	0.52	..	..
Uzbekistan	1,659	9	7	3	..	12	92.2	0.9	1.8	..	2.5	117	
Venezuela, RB	2,848	25	16	70	..	..	..	..	1.2	0.84	3.6	677
Vietnam	573	11	19	18	..	..	..	2.7	6.3	1.95	4.7	..
West Bank and Gaza	..	..	9	22	95	66	23.0	1.0	9.6	1.17	0.8	903
Yemen, Rep.	174	23	5	9	68	..	..	2.8	4.2	2.39	1.2	..
Zambia	721	5	1	14	65	..	108.0	7.7	14.2	1.41	2.5	175	
Zimbabwe	953	7	3	6	..	25	57.0	4.3	3.4	..	4.3	375	
World	2,678 w	9 w	20 w	40 w	.. w	.. w	.. m	10.0 m	10.4 m	1.42 m	2.9 w	572 m	
Low income	391	22	3	14	40	..	..	6.1	10.0	1.99	4.0	..
Middle income	1,928	11	22	44	..	31	8.2	9.2	10.2	1.65	2.1	586	
Lower middle income	1,502	9	22	38	..	21	22.0	8.2	9.8	2.08	2.1	599	
Upper middle income	3,131	13	22	66	95	..	7.5	11.4	10.9	1.06	3.6	594	
Low & middle income	1,290	12	13	31	..	..	..	8.7	10.0	1.81	2.5	492
East Asia & Pacific	1,492	7	23	35	..	8	..	5.8	5.0	1.16	2.7	849	
Europe & Central Asia	3,633	12	25	63	..	..	9.5	7.2	11.8	1.55	1.7	314
Latin America & Carib.	1,715	16	18	55	90	..	..	9.5	10.4	1.21	4.3	642
Middle East & N. Africa	1,358	17	17	36	84	36	23.5	5.2	6.5	1.66	1.5	466	
South Asia	432	24	3	15	60	..	..	4.0	2.4	2.02	2.1	433
Sub-Saharan Africa	542	9	1	14	..	..	..	11.6	12.3	2.43	3.2	586
High income	9,760	6	53	90	99	204	..	26.6	17.0	0.77	4.4	641	
Euro area	6,926	6	54	99	99	..	8.3	28.8	20.5	0.73	3.3	638	

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. Calculated by the World Bank based on ITU data.

Power and communications

5.10

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, quality, and affordability and efficiency.

Operators are the main source of telecommunications data, so information on subscribers is 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. 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.

Globally, there have been huge improvements in access to telecommunications, driven mainly by mobile telephony. By 2002 access to mobiles outpaced access to fixed-line telephones in developing countries, and rural areas are catching up with urban areas (although gaps are still large). By 2004 approximately 98 percent of the population in high-income countries and about 64 percent of the population in developing countries were covered by mobile telephony (within range of a mobile cellular signal). Indeed, in many developing countries, especially in Sub-Saharan Africa, the number of mobile phones has overtaken the number of fixed-line phones.

Telephone mainline faults are a measure of telecommunications quality. The definition varies among countries: some operators define faults as including malfunctioning customer equipment while others include only technical faults.

Although 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. Three indicators of telecommunications affordability are presented in the table: price basket for fixed-line telephone service, price basket for mobile service, and the cost of an international call. Telecommunications efficiency is measured by total telecommunications revenue divided by GDP and by total telephone subscribers per employee.

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 mainlines** are telephone lines connecting a subscriber to the telephone exchange equipment.
- **Mobile telephone subscribers** are subscribers to a public mobile telephone service using cellular technology.
- **Population covered by mobile telephony** is the percentage of people within range of a mobile cellular signal regardless of whether they are subscribers.
- **International voice traffic** is the sum of international incoming and outgoing telephone traffic (in minutes) divided by total population.
- **Telephone mainline faults** are the number of reported faults for the year per 100 telephone mainlines.
- **Price basket for residential fixed line** is calculated as one-fifth of the installation charge, the monthly subscription charge, and the cost of local calls (15 peak and 15 off-peak calls of three minutes each).
- **Price basket for mobile** is calculated as the prepaid price for 25 calls per month spread over the same mobile network, other mobile networks, and mobile to fixed calls and during peak, off-peak, and weekend times. It also includes 30 text messages per month.
- **Cost of call to U.S.** is the cost of a three-minute, peak rate, fixed-line call from the country to the United States.
- **Telecommunications revenue** is the revenue from the provision of telecommunications services such as fixed-line, mobile, and data divided by GDP.
- **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 2004–2005*, the IEA's *Energy Statistics of OECD Countries 2004–2005*, and the United Nations Statistics Division's *Energy Statistics Yearbook*. Data on telecommunications are from the International Telecommunication Union's World Telecommunication Development Report database and World Bank estimates.



	Daily newspapers per 1,000 people 2000–06 ^a	Households with television ^b %	Personal computers and the Internet						Information and communications technology expenditures	
			Access		Quality		Application	Affordability	% of GDP 2006	Per capita \$ 2006
			per 100 people Personal computers ^b	Internet users ^b	Broadband subscribers ^b per 100 people	International Internet bandwidth ^b bits per capita	Secure Internet servers per million people	Price basket for Internet ^b \$ per month		
			2006	2006	2006	2006	December 2007	2006		
Afghanistan	..	6	0.4	2.1	0.00	0	0	..	..	..
Albania	25	90	1.7	14.9	0.01	4	2	16.3	..	..
Algeria	..	90	1.1	7.4	0.59	5	0	9.3	2.4	84
Angola	2	9	0.7	0.5	0.00	12	0	0.2	..	..
Argentina	36	97	9.0	20.9	4.01	690	12	5.4	6.9	379
Armenia	8	91	9.8	5.7	0.07	22	3	56.6	..	..
Australia	156	99	75.7	73.9	18.84	11,593	579	22.5	6.4	2,413
Austria	315	98	60.7	50.7	17.24	6,634	284	15.7	5.5	2,137
Azerbaijan	16	99	2.3	9.8	0.03	36	0	10.0	..	..
Bangladesh	..	23	2.2	0.3	0.00	8	0	24.0	2.7	11
Belarus	82	97	0.8	56.3	0.12	192	1	10.5	..	..
Belgium	164	98	37.7	45.8	19.19	11,279	146	37.6	5.9	2,203
Benin	0	20	0.4	8.0	0.00	5	0	11.4	..	..
Bolivia	..	50	2.4	6.2	0.12	43	3	12.1	4.9	58
Bosnia and Herzegovina	..	87	5.4	24.2	1.02	40	4	7.6	..	..
Botswana	43	10	4.7	3.3	0.09	16	1	18.2	..	..
Brazil	36	91	16.1	22.5	3.13	150	16	10.1	6.4	363
Bulgaria	79	97	6.3	24.3	5.00	1,756	11	7.4	3.4	141
Burkina Faso	..	8	0.2	0.6	0.01	15	0	33.9	..	..
Burundi	..	14	0.7	0.7	0.00	1	0	40.0	..	..
Cambodia	..	43	0.3	0.3	0.01	1	0	9.9	..	..
Cameroon	..	26	1.1	2.0	0.00	9	0	17.6	5.1	52
Canada	175	99	87.6	68.1	23.51	6,732	644	9.5	5.7	2,201
Central African Republic	..	5	0.3	0.3	0.00	0	0	100.1	..	..
Chad	..	4	0.2	0.6	0.00	1	..	86.3	..	..
Chile	51	90	14.1	25.3	5.95	780	22	26.7	5.2	465
China	74	89	4.3	10.4	3.88	196	0	10.0	5.4	108
Hong Kong, China	223	99	61.2	55.0	26.20	13,439	194	3.9	8.8	2,428
Colombia	22	90	4.2	14.7	1.38	560	6	7.5	7.1	239
Congo, Dem. Rep.	..	4	0.0	0.3	0.00	0	0	14.0	..	..
Congo, Rep.	..	7	0.5	1.9	0.00	0	0	64.9	..	..
Costa Rica	65	89	23.1	27.6	1.34	176	67	18.3	7.3	368
Côte d'Ivoire	..	35	1.7	1.6	0.01	3	0	67.7	..	..
Croatia	..	98	19.9	35.5	5.67	1,074	48	16.5	0.0	0
Cuba	65	70	3.3	2.1	0.00	14	0	30.0	..	..
Czech Republic	182	..	27.4	34.5	10.58	2,170	64	19.9	7.3	1,020
Denmark	352	97	69.6	58.3	31.79	34,796	614	23.4	6.0	3,036
Dominican Republic	42	76	2.2	20.8	0.69	6	6	12.3	..	..
Ecuador	99	80	6.6	11.7	0.21	227	5	20.2	3.0	93
Egypt, Arab Rep.	..	88	3.7	8.1	0.28	126	1	5.0	1.4	20
El Salvador	37	83	5.2	9.6	0.63	23	6	22.6	..	..
Eritrea	..	16	0.6	2.1	0.00	2	..	13.0	..	..
Estonia	192	..	48.3	56.6	17.00	11,175	163	10.9	..	..
Ethiopia	5	4	0.4	0.2	0.00	0	0	6.7	..	..
Finland	431	94	50.0	55.5	27.12	4,311	380	22.5	6.7	2,689
France	165	97	57.5	49.1	20.73	3,286	96	12.6	6.3	2,324
Gabon	..	56	3.5	6.2	0.09	153	5	39.2	..	..
Gambia, The	..	12	1.5	3.6	0.00	6	1	6.8	..	..
Georgia	4	89	4.7	7.5	0.61	7	5	9.9	..	..
Germany	267	98	60.6	46.9	17.10	6,864	349	7.5	6.2	2,174
Ghana	..	26	0.6	2.7	0.06	9	0	11.9	..	..
Greece	..	100	9.2	18.4	4.38	587	40	10.2	3.2	875
Guatemala	..	50	2.1	10.1	0.21	56	6	54.3	..	..
Guinea	..	11	0.5	0.5	0.00	0	..	5.9	..	..
Guinea-Bissau	..	31	0.2	2.2	0.00	1	..	15.0	..	..
Haiti	..	27	0.2	6.9	0.00	17	1	12.0	..	..

	Daily newspapers	Households with television ^b	Personal computers and the Internet						Information and communications technology expenditures	
	per 1,000 people	%	Access		Quality		Application	Affordability	% of GDP	Per capita \$
			Personal computers ^b	Internet users ^b	Broadband subscribers ^b per 100 people	International Internet bandwidth ^b bits per capita	Secure Internet servers per million people	Price basket for Internet ^b \$ per month		
2000–06 ^a	2006	2006	2006	2006	2006	December 2007	2006	2006	2006	
Honduras	..	58	1.8	4.8	0.00	6	5	12.0	4.6	60
Hungary	217	96	14.9	34.8	9.70	993	36	10.5	6.0	669
India	73	32	1.6	5.5	0.21	24	1	6.6	6.1	50
Indonesia	..	65	1.5	7.3	0.05	7	1	6.6	3.1	51
Iran, Islamic Rep.	..	..	10.6	25.7	0.66	53	0	2.3	2.4	76
Iraq	..	..	..	0.1	0.00	..	0	..	..	..
Ireland	182	98	52.8	33.7	12.12	5,912	415	31.4	4.3	2,207
Israel	..	92	122.1	26.9	20.16	2,455	182	22.2	7.9	1,570
Italy	138	96	36.7	49.0	14.68	2,044	53	25.0	4.3	1,363
Jamaica	..	70	6.7	46.4	1.70	15,822	18	26.5	10.2	383
Japan	551	99	67.6	68.5	20.16	1,038	331	13.1	7.9	2,688
Jordan	..	96	6.6	14.4	0.88	57	4	10.9	8.0	204
Kazakhstan	..	..	..	8.1	0.20	63	1	15.8	..	..
Kenya	..	18	1.4	7.6	0.00	21	0	15.8	2.4	15
Korea, Dem. Rep.	..	..	..	..	0.00	..	..	..	..	..
Korea, Rep.	..	..	53.2	70.5	29.00	1,028	60	34.6	6.6	1,214
Kuwait	..	95	23.7	31.4	0.99	348	35	13.7	1.4	466
Kyrgyz Republic	1	..	1.9	5.7	0.05	39	1	12.0	..	..
Lao PDR	3	30	1.8	0.4	0.00	4	0	25.0	..	..
Latvia	154	98	24.6	46.8	4.79	3,230	46	12.6	..	..
Lebanon	61	96	10.2	23.4	4.19	111	10	10.0	..	..
Lesotho	..	2	0.1	2.6	0.00	2	0	38.6	..	..
Liberia	..	..	..	..	0.00	..	..	..	..	..
Libya	..	50	2.2	3.9	0.00	21	0	22.1	..	..
Lithuania	108	98	18.0	31.9	10.86	2,714	26	7.3	..	..
Macedonia, FYR	89	98	22.2	13.2	1.79	17	2	25.3	..	..
Madagascar	..	10	0.5	0.6	0.00	2	0	2.8	..	..
Malawi	..	3	0.2	0.4	0.00	1	0	22.5	..	..
Malaysia	111	95	21.8	43.2	3.44	124	17	2.7	6.7	388
Mali	..	17	0.4	0.6	0.02	26	0	28.7	..	..
Mauritania	..	25	2.6	3.3	0.02	30	1	16.0	..	..
Mauritius	77	93	16.9	14.5	1.75	153	18	16.2	..	..
Mexico	92	93	13.6	17.5	3.58	109	10	17.3	3.3	266
Moldova	..	82	9.0	19.0	0.57	147	4	13.3	..	..
Mongolia	19	63	13.3	10.5	0.07	13	4	10.7	..	..
Morocco	11	78	2.5	20.0	1.28	377	1	26.8	5.6	119
Mozambique	3	6	1.4	0.9	0.00	1	0	32.9	..	..
Myanmar	..	3	0.8	0.2	0.00	2	0	1.5	..	..
Namibia	28	39	12.3	4.0	0.00	18	8	48.7	..	..
Nepal	..	13	0.5	0.9	0.00	5	1	8.0	..	..
Netherlands	308	99	85.4	89.0	31.78	20,501	413	8.8	6.2	2,531
New Zealand	185	98	50.2	76.5	13.77	1,107	588	11.0	10.6	2,635
Nicaragua	..	60	4.0	2.8	0.34	1	3	10.0	..	..
Niger	0	7	0.1	0.3	0.00	2	0	101.8	..	..
Nigeria	..	32	0.8	5.5	0.00	1	0	11.3	3.4	27
Norway	517	100	59.4	87.4	27.43	9,305	389	29.8	4.9	3,556
Oman	..	79	5.2	12.5	0.60	174	4	5.2	..	..
Pakistan	51	46	0.5	7.5	0.04	5	0	9.5	6.9	55
Panama	65	79	4.6	6.7	0.54	287	57	38.5	8.2	425
Papua New Guinea	9	10	6.4	1.8	0.00	1	1	12.9	..	..
Paraguay	..	82	7.8	4.3	0.27	83	1	0.2	..	..
Peru	..	71	10.3	22.1	1.76	367	6	11.5	5.9	199
Philippines	80	63	5.3	5.5	0.15	38	3	2.0	6.7	91
Poland	113	91	24.2	28.8	6.92	560	38	11.7	4.2	369
Portugal	..	99	13.3	30.3	13.79	829	65	28.7	4.3	797
Puerto Rico	..	97	0.8	23.4	3.02	511	33	..	..	..



5.11

The information age

	Daily newspapers per 1,000 people 2000–06 ^a	Households with television ^b %	Personal computers and the Internet						Information and communications technology expenditures	
			Access		Quality		Application	Affordability	% of GDP	Per capita \$
			per 100 people	per 100 people	Broadband subscribers ^b	International Internet bandwidth ^b	Secure Internet servers	Price basket for Internet ^b		
			Personal computers ^b	Internet users ^b	per 100 people	bits per capita	per million people	\$ per month		
			2006	2006	2006	2006	December 2007	2006	2006	2006
Romania	70	94	12.9	32.4	8.19	1,503	7	6.0	3.2	180
Russian Federation	92	98	12.2	18.0	2.04	100	3	12.7	3.2	222
Rwanda	..	2	0.2	0.7	0.02	7	..	30.1	..	..
Saudi Arabia	..	99	13.6	19.8	0.92	126	5	5.3	2.1	308
Senegal	9	31	2.1	5.4	0.24	103	0	25.8	8.5	64
Serbia	..	..	5.2	20.3	..	95	3	6.9	..	..
Sierra Leone	..	..	..	0.2	0.00	..	0	10.6	..	..
Singapore	361	98	68.2	38.3	17.76	7,052	291	13.2	9.3	2,743
Slovak Republic	125	98	35.8	41.8	5.88	2,913	28	19.8	5.5	557
Slovenia	175	96	40.4	62.3	13.14	1,255	95	18.8	3.1	575
Somalia	..	8	0.9	1.1	0.00	0	0	..	..	..
South Africa	30	59	8.5	10.9	0.35	19	23	11.6	10.0	537
Spain	145	99	27.7	42.1	15.08	2,776	100	32.0	3.6	1,004
Sri Lanka	24	32	3.7	2.2	0.15	25	2	4.4	5.4	73
Sudan	..	16	11.2	9.3	0.01	5	0	52.5	..	..
Swaziland	26	18	3.7	3.7	0.00	1	4	15.1	..	..
Sweden	480	94	83.6	76.9	25.83	17,468	405	19.2	7.2	3,052
Switzerland	429	99	86.5	58.2	28.57	9,609	576	7.9	7.7	3,914
Syrian Arab Republic	..	95	4.2	7.7	0.03	8	0	9.2	..	..
Tajikistan	..	79	1.3	0.3	0.00	0	..	12.3	..	..
Tanzania	2	14	0.9	1.0	0.00	0	0	36.0	..	..
Thailand	..	92	7.0	13.3	0.17	156	6	5.8	4.0	129
Timor-Leste	..	..	..	..	0.00	..	1	5.0	..	..
Togo	2	16	3.0	5.0	0.00	16	0	10.7	..	..
Trinidad and Tobago	151	88	9.7	12.3	1.55	370	27	12.6	..	..
Tunisia	23	92	6.3	12.8	0.18	126	2	3.1	6.0	180
Turkey	..	92	5.7	16.8	3.80	631	25	6.7	8.2	452
Turkmenistan	9	..	7.2	1.3	0.00	16	..	23.1	..	..
Uganda	..	10	1.7	2.5	0.00	4	0	99.6	..	..
Ukraine	132	97	4.5	11.9	0.00	17	2	2.1	7.8	177
United Arab Emirates	..	86	25.6	40.2	5.66	2,371	59	5.4	3.6	1,201
United Kingdom	292	98	75.8	55.4	21.46	13,062	560	27.6	6.9	2,721
United States	194	99	76.2	69.5	19.42	3,307	868	15.0	8.7	3,846
Uruguay	..	92	13.6	22.8	3.23	484	30	23.9	7.8	454
Uzbekistan	..	..	3.1	6.4	0.03	9	0	5.7	..	..
Venezuela, RB	93	90	9.3	15.3	1.99	50	5	12.5	3.7	248
Vietnam	..	83	1.4	17.5	0.61	84	0	1.8	15.1	110
West Bank and Gaza	10	93	5.4	7.0	0.68	199	1	15.6	..	..
Yemen, Rep.	4	43	1.9	1.2	0.00	0	0	6.0	..	..
Zambia	5	..	1.1	4.3	0.02	11	0	33.3	..	..
Zimbabwe	..	34	6.5	9.2	0.08	4	0	1.3	12.7	17
World	105 w	83 m	10.6 w	21.4 w	5.46 w	529 w	74 w	12.1 m	6.7 w	564 w
Low income	..	16	1.4	4.2	0.18	22	0	12.0	6.1	47
Middle income	71	89	6.6	14.1	3.33	144	5	11.2	5.1	166
Lower middle income	73	80	4.3	11.4	3.23	189	1	10.0	5.0	103
Upper middle income	68	93	13.3	22.2	3.57	242	15	11.7	5.2	339
Low & middle income	67	60	4.3	8.0	2.04	143	3	11.7	5.2	121
East Asia & Pacific	74	63	4.1	11.1	3.56	182	1	5.8	5.3	105
Europe & Central Asia	99	97	10.2	19.2	3.64	268	11	11.1	4.6	291
Latin America & Carib.	64	79	11.3	18.4	2.95	269	12	12.2	5.3	304
Middle East & N. Africa	..	90	5.6	13.8	0.63	126	1	9.2	2.9	72
South Asia	70	32	1.4	4.9	0.18	22	1	6.6	6.0	47
Sub-Saharan Africa	..	14	1.8	3.8	0.03	5	2	15.9	..	..
High income	263	98	56.7	59.3	19.20	4,346	441	13.7	7.2	2,555
Euro area	203	98	47.6	47.9	17.33	4,830	185	20.7	5.4	1,813

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

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 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.

The table presents indicators of the penetration of the information economy (newspapers, television, personal computers, and Internet use), quality (broadband subscribers, international Internet bandwidth, and secure Internet servers), and some of the economics of the information age (Internet access charges and spending on information and communications technologies).

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

Data on the number of daily newspapers in circulation are from surveys by the United Nations Educational, Scientific, and Cultural Organization (UNESCO) Institute for Statistics that cover such areas as newspaper circulation, online newspaper titles, 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, and the like—so most estimates are derived from the number of

personal computers sold each year in a country. 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 Internet indicators are based on nationally reported data. Some countries derive these data from surveys, but since survey questions and definitions differ, the estimates may not be strictly comparable. For example, questions on the age of Internet users and frequency of use vary by country. Countries without surveys generally derive their estimates by multiplying subscriber counts reported by Internet service providers by a multiplier. This method may undercount the actual number of people using the Internet, 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 per second of upstream and downstream capacity. These technologies—including digital subscriber lines, cable modems, satellite broadband Internet, fiber-to-home Internet access, ethernet local access networks, and wireless area networks—improve the online experience. Bandwidth, another measure of quality, refers to the range of frequencies available to be occupied by 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, gives an indication of how many companies are conducting encrypted transactions over the Internet. The Netcraft survey examines the use of encrypted transactions on the Internet through extensive automated exploration, tallying the number of Web sites using a secure socket layer (SSL). Some countries, such as the Republic of Korea, establish the encryption channel by using application layers, which are SSL equivalent.

According to the World Information Technology and Services Alliance's (WITSA) *Digital Planet 2006*, the global marketplace for information and communications technologies was expected to top \$3 trillion in 2006 and to rise to almost \$4 trillion by 2009. The data on information and communications technology expenditures cover the world's 75 largest buyers among countries and regions.

Definitions

- **Daily newspapers** are newspapers that report mainly on events occurring in the 24-hour period before going to press and that are issued at least four times a week. 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.
- **Broadband subscribers** are the number of broadband subscribers with a digital subscriber line, cable modem, or other high-speed technologies.
- **International Internet bandwidth** is the contracted capacity of international connections between countries for transmitting Internet traffic.
- **Secure Internet servers** are servers using encryption technology in Internet transactions.
- **Price basket for Internet** is based on the cheapest available tariff for accessing the Internet 20 hours a month (10 hours peak and 10 hours off-peak). The basket does not include telephone line rental but does include any telephone usage charges.
- **Information and communications technology expenditures** include computer hardware (computers, storage devices, printers, and other peripherals); computer software (operating systems, programming tools, utilities, applications, and internal software development); computer services (information technology consulting, computer and network systems integration, Web hosting, data processing services, and other services); and communications services (voice and data communications services) and wired and wireless communications equipment.

Data sources

Data on newspapers are compiled by the UNESCO Institute for Statistics. Data on televisions, personal computers, Internet users, broadband subscribers, international Internet bandwidth, and price basket for Internet are from the ITU's World Telecommunication Development Report database. Data on secure Internet servers are from Netcraft (www.netcraft.com/) and official government sources. Data on information and communications technology expenditures are from WITSA's *Digital Planet 2006: The Global Information Economy* and from Global Insight, Inc.



5.12

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 ^{a,b}		Trademark applications filed ^{a,c}	
	per million people 2000–05 ^d	per million people 2000–05 ^d	2005	% of GDP 2000–05 ^d	\$ millions 2006	% of manu- factured exports 2006	Receipts \$ millions 2006	Payments \$ millions 2006	Residents 2005	Non- residents 2005	Residents 2005	Non- residents 2005
Afghanistan	..	..	..	..	..	..	..	..	..	..	..	..
Albania	..	..	..	..	8	13	1	7	..	..	..	..
Algeria	170	35	350	0.16	11	2	..	..	58	455	1,488	3,369
Angola	..	..	..	..	..	..	1,340	1	..	..	..	..
Argentina	768	338	3,058	0.44	994	7	71	807	..	..	61,953	19,139
Armenia	..	..	180	0.21	5	1	..	..	206	2	1,088	364
Australia	4,099	..	15,957	1.77	3,371	12	621	2,221	8,630	22,562	38,728	17,053
Austria	3,444	1,477	4,566	2.35	14,037	13	177	1,334	1,904	601	7,565	1,018
Azerbaijan	..	..	116	0.23	8	2	0	1	281	6	774	823
Bangladesh	..	..	193	..	21	0	0	5	..	..	..	..
Belarus	..	..	490	0.69	268	3	6	50	1,065	382	2,410	3,556
Belgium	3,067	1,473	6,841	1.82	22,644	8	1,544	1,075	533	175	20,831 ^e	30,665 ^e
Benin	..	..	..	..	0	0	..	2	..	..	..	..
Bolivia	120	6	..	0.28	13	4	2	14	..	..	..	..
Bosnia and Herzegovina	..	..	..	..	62	3	..	..	66	306	295	902
Botswana	..	..	..	0.39	..	..	0	7	..	..	..	..
Brazil	462	395	9,889	0.91	8,426	12	150	1,664	3,821	2,560	83,117	15,981
Bulgaria	1,301	478	764	0.50	486	6	11	69	261	52	6,731	1,252
Burkina Faso	19	17	..	0.18	3	10	..	..	..	..	..	..
Burundi	..	..	..	..	0	4	0	..	..	..	..	..
Cambodia	17	13	..	0.05	4	0	0	7	..	..	409	1,638
Cameroon	28	..	131	..	3	3	0	2	..	..	..	..
Canada	3,922	1,467	25,836	2.01	32,740	15	3,245	7,320	3,942	35,946	17,719	22,169
Central African Republic	..	..	..	..	0	0	..	..	..	..	..	..
Chad	..	..	..	..	..	..	..	..	..	..	..	..
Chile	833	302	1,559	0.68	401	7	55	381	361	2,646	..	..
China	708	..	41,596	1.34	271,170	30	205	6,634	93,172	80,155	593,382	63,902
Hong Kong, China	2,096	417	..	0.74	1,788	11	245	1,289	156	11,607	8,173	20,877
Colombia	125	95	400	0.17	349	4	11	127	..	..	..	..
Congo, Dem. Rep.	..	..	..	0.48	..	..	..	..	..	..	..	..
Congo, Rep.	30	32	..	..	..	..	..	..	..	..	..	..
Costa Rica	..	..	105	0.37	2,088	45	0	87	..	..	..	..
Côte d'Ivoire	..	..	..	..	521	42	0	10	..	..	..	..
Croatia	1,573	567	953	1.22	691	10	47	175	355	657	1,180	831
Cuba	..	..	261	0.56	59	12	..	..	94	191	301	482
Czech Republic	2,365	1,348	3,169	1.42	11,897	14	31	526	586	244	9,279	973
Denmark	5,190	..	5,040	2.45	11,455	20	..	..	1,655	168	4,585	1,289
Dominican Republic	..	..	..	..	..	..	0	32	..	..	..	..
Ecuador	50	..	..	0.06	96	8	0	44	11	580	5,907	2,148
Egypt, Arab Rep.	..	..	1,658	0.19	15	1	138	159	428	1,008	..	..
El Salvador	47	..	..	..	22	3	1	27	..	..	..	..
Eritrea	..	..	..	..	..	..	..	..	..	..	..	..
Estonia	2,505	490	439	0.99	771	13	6	29	23	15	1,241	1,737
Ethiopia	21	10	88	0.20	..	..	0	1	..	..	..	..
Finland	7,541	..	4,811	3.52	13,990	22	1,494	1,901	1,827	232	2,820	661
France	3,320	..	30,309	2.13	80,525	21	6,230	3,298	14,230	3,060	62,330	3,224
Gabon	..	..	..	..	71	32	..	..	..	..	..	..
Gambia, The	30	18	..	..	0	1	..	..	..	..	..	..
Georgia	..	..	145	0.18	74	16	13	5	225	22	507	518
Germany	3,242	1,056	44,145	2.51	154,757	17	5,888	7,843	47,537	12,685	67,208	3,718
Ghana	..	..	81	..	1	0	0	..	..	..	..	..
Greece	1,531	831	4,291	0.61	1,139	11	67	406	487	50	5,872	893
Guatemala	..	..	..	..	35	3	0	0	10	267	..	..
Guinea	..	..	..	..	..	..	..	0	..	..	..	..
Guinea-Bissau	..	..	..	..	..	..	..	0	..	..	..	..
Haiti	..	..	..	..	..	..	4	1	..	..	..	..

Science and technology

5.12

STATES AND MARKETS

	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 ^{a,b}		Trademark applications filed ^{a,c}	
	per million people 2000–05 ^d	per million people 2000–05 ^d	2005	% of GDP 2000–05 ^d	\$ millions 2006	% of manu- factured exports 2006	Receipts \$ millions 2006	Payments \$ millions 2006	Residents 2005	Non- residents 2005	Residents 2005	Non- residents 2005
Honduras	..	..	..	0.05	3	1	0	25	..	..	1,149	3,388
Hungary	1,572	466	2,614	0.95	14,915	24	627	1,056	697	505	3,515	659
India	..	..	14,608	0.61	3,511	5	112	949	6,795	10,671	..	..
Indonesia	202	..	205	0.05	5,900	13	14	870	234	4,069	..	..
Iran, Islamic Rep.	..	..	2,635	0.59	375	6	..	..	..	..	17,607	1,356
Iraq	..	..	..	..	..	..	..	..	..	..	..	..
Ireland	2,688	654	2,120	1.24	31,840	34	1,028	20,815	789	75	1,285	2,677
Israel	..	..	6,309	4.95	5,565	14	596	679	1,329	5,124	2,816	6,159
Italy	1,241	..	24,645	1.10	25,046	7	1,116	1,840	..	..	..	..
Jamaica	..	..	..	0.07	1	0	12	11	10	59	..	..
Japan	5,294	528	55,471	3.18	126,618	22	20,096	15,500	359,382	67,696	114,015	11,792
Jordan	..	..	275	0.34	35	1	..	..	..	..	..	..
Kazakhstan	803	86	96	0.28	987	21	0	48	1,696	102	2,908	1,070
Kenya	..	..	226	..	17	3	10	50	..	..	..	..
Korea, Dem. Rep.	..	..	..	..	..	..	..	..	..	..	..	..
Korea, Rep.	3,760	567	16,396	2.99	92,945	32	2,011	4,487	121,942	38,979	99,435	16,454
Kuwait	74	95	233	0.18	..	..	0	0	..	..	..	..
Kyrgyz Republic	..	..	..	0.20	6	3	2	19	179	1	133	345
Lao PDR	..	..	..	..	..	..	..	..	..	..	..	..
Latvia	1,423	460	134	0.57	242	7	11	20	112	57	1,367	487
Lebanon	..	..	234	..	26	2	0	0	..	..	..	..
Lesotho	..	..	..	0.06	..	..	18	..	..	..	..	..
Liberia	..	..	..	..	..	..	..	..	..	..	..	..
Libya	361	493	..	..	..	..	..	0	..	..	..	..
Lithuania	2,226	419	406	0.76	653	8	1	24	68	47	1,839	411
Macedonia, FYR	547	83	..	0.25	18	1	3	9	37	415	619	437
Madagascar	43	6	..	0.16	4	1	2	9	16	22	439	419
Malawi	..	..	..	..	9	11	..	..	..	..	..	..
Malaysia	509	64	615	0.63	63,411	54	26	1,052	..	..	10,479	11,668
Mali	..	..	..	..	2	4	0	1	..	..	..	..
Mauritania	..	..	..	..	..	..	..	..	..	..	..	..
Mauritius	..	..	..	0.38	360	24	0	4	..	..	..	..
Mexico	321	147	3,902	0.41	35,732	19	171	503	549	13,887	45,736	22,962
Moldova	..	..	89	..	10	5	2	4	377	11	1,941	474
Mongolia	..	..	..	0.32	3	2	..	..	100	87	369	1,854
Morocco	..	..	443	0.75	830	10	5	48	139	521	..	..
Mozambique	..	..	..	0.52	3	2	1	2	..	..	..	..
Myanmar	17	133	..	0.16	..	..	..	..	..	..	..	..
Namibia	..	..	..	..	102	7	..	3	..	..	..	..
Nepal	59	137	..	..	..	..	..	..	..	..	..	..
Netherlands	2,309	1,765	13,885	1.79	69,210	28	4,126	3,865	2,217	633	..	..
New Zealand	3,945	833	2,983	1.14	587	11	123	487	1,856	5,149	8,269	8,564
Nicaragua	..	..	..	0.05	5	7	0	..	..	..	..	..
Niger	7	10	..	..	5	11	0	1	..	..	..	..
Nigeria	..	..	362	..	..	..	..	45	..	..	..	..
Norway	4,729	..	3,644	1.51	3,577	19	760	553	1,143	4,843	..	5,996
Oman	..	..	111	..	4	1	..	..	..	..	..	..
Pakistan	80	41	492	0.43	197	1	53	106	..	1,081	8,319	5,117
Panama	97	387	..	0.24	0	0	0	50	..	..	..	..
Papua New Guinea	..	..	..	..	..	..	..	..	..	..	..	..
Paraguay	82	118	..	0.08	25	8	236	2	..	..	..	..
Peru	..	..	133	0.15	57	2	3	86	27	993	10,468	8,353
Philippines	..	..	178	0.14	27,626	68	6	349	157	1,731	7,031	5,526
Poland	1,613	232	6,844	0.57	3,284	4	38	1,313	2,028	4,555	13,828	984
Portugal	2,001	307	2,910	0.81	2,971	9	82	349	158	47	8,589	1,134
Puerto Rico	..	..	..	..	..	..	..	..	..	..	..	..



	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 ^{a,b}		Trademark applications filed ^{a,c}	
	per million people 2000–05 ^d	per million people 2000–05 ^d	2005	% of GDP 2000–05 ^d	\$ millions 2006	% of manu- factured exports 2006	Receipts \$ millions 2006	Payments \$ millions 2006	Residents 2005	Non- residents 2005	Residents 2005	Non- residents 2005
Romania	976	254	887	0.39	1,129	4	35	236	916	68	11,121	2,090
Russian Federation	3,244	553	14,412	1.07	4,755	9	299	2,002	23,588	8,665	26,460	7,926
Rwanda	..	..	..	..	..	..	0	1	..	..	..	..
Saudi Arabia	..	..	575	..	148	1	0	0	..	..	..	..
Senegal	..	..	83	0.09	17	6	..	7	..	..	..	..
Serbia	..	..	849	1.41	176	4	..	..	381	658	1,089	736
Sierra Leone	..	..	..	..	..	..	1	1	..	..	..	..
Singapore	5,500	381	3,609	2.36	124,133	58	730	10,470	435	8,170	4,839	26,986
Slovak Republic	2,022	416	919	0.52	2,196	6	..	..	154	96	2,740	1,146
Slovenia	1,949	1,264	1,035	1.22	941	5	17	154	323	27	1,399	417
Somalia	..	..	..	..	..	..	..	..	..	..	..	..
South Africa	379	110	2,392	0.87	1,799	6	46	1,282	..	5,554	..	28,331
Spain	2,549	888	18,336	1.12	10,037	6	922	2,504	3,027	326	54,268	2,541
Sri Lanka	130	72	136	0.19	99	2	..	..	95	189	3,989	1,773
Sudan	..	..	..	0.30	0	1	..	..	..	..	..	..
Swaziland	..	..	..	..	2	0	0	106	..	..	..	..
Sweden	5,977	..	10,012	3.86	18,078	16	3,964	1,618	2,512	448	..	9,864
Switzerland	3,508	2,366	8,749	2.94	29,261	22	..	..	1,643	455	9,393	4,479
Syrian Arab Republic	..	..	77	..	29	1	..	20	..	..	..	..
Tajikistan	..	..	..	0.10	..	..	1	0	32	2	63	277
Tanzania	..	..	107	..	1	0	0	1	..	..	..	..
Thailand	287	208	1,249	0.25	26,953	27	46	2,046	891	5,449	22,612	9,241
Timor-Leste	..	..	..	..	..	..	..	..	..	..	..	..
Togo	..	..	..	..	0	0	0	3	..	..	..	..
Trinidad and Tobago	..	..	..	0.12	30	1	..	..	..	205	..	..
Tunisia	1,450	41	571	1.03	344	4	14	11	56	282	..	..
Turkey	469	37	7,815	0.67	258	..	0	531	465	383	48,981	3,096
Turkmenistan	..	..	..	..	..	..	..	..	..	..	..	..
Uganda	..	..	93	1.25	60	34	2	11	..	..	..	..
Ukraine	..	..	2,105	1.07	926	3	32	428	3,535	2,057	13,184	3,182
United Arab Emirates	..	..	229	..	10	..	..	..	..	..	..	..
United Kingdom	..	..	45,572	1.75	115,464	34	13,588	9,962	17,488	10,500	24,163	4,529
United States	4,605	..	205,320	2.68	219,179	30	62,378	26,433	202,776	187,957	224,269	28,359
Uruguay	366	50	204	0.26	36	3	0	7	37	514	5,626	8,189
Uzbekistan	..	..	157	..	..	..	..	..	264	180	349	611
Venezuela, RB	..	..	534	0.25	80	2	0	257	..	..	..	..
Vietnam	115	..	221	0.19	869	5	..	..	..	..	..	..
West Bank and Gaza	..	..	..	..	..	..	..	..	..	..	..	..
Yemen, Rep.	..	..	..	..	3	5	149	9	..	..	..	..
Zambia	..	..	..	0.03	4	2	..	0	..	..	..	..
Zimbabwe	..	..	..	..	8	2	..	..	..	..	..	..
World	.. w	.. w	708,086 s	2.10 w	1,418,509 s	21 w	135,278 s	148,518 s	915,598 s	553,167 s	1,584,746 s	420,729 s
Low income	..	..	16,711	0.57	..	6	334	1,163	364	267	1,157	2,884
Middle income	803	..	112,719	0.85	478,215	20	3,743	22,719	132,662	137,246	898,687	200,348
Lower middle income	500	..	53,423	1.03	272,746	24	2,154	11,140	99,752	97,897	634,878	93,599
Upper middle income	1,285	372	59,296	0.72	143,179	16	1,589	11,579	32,910	39,349	263,809	106,749
Low & middle income	..	..	129,430	0.83	..	20	4,077	23,882	133,026	137,513	899,844	203,232
East Asia & Pacific	704	..	44,064	1.34	..	33	297	10,959	94,397	91,491	611,261	82,950
Europe & Central Asia	2,019	371	39,975	0.87	31,160	9	1,129	5,998	33,133	17,286	136,989	30,048
Latin America & Carib.	392	256	20,045	0.59	48,368	12	753	4,146	4,873	20,916	151,155	58,115
Middle East & N. Africa	..	..	6,354	..	1,263	5	306	247	623	2,266	17,607	3,369
South Asia	..	..	15,429	0.59	..	4	175	1,060	6,795	11,752	8,319	5,117
Sub-Saharan Africa	..	..	3,563	..	..	..	1,417	1,471	16	5,554	439	28,750
High income	3,731	..	578,656	2.38	1,322,714	21	131,201	124,636	782,572	415,654	684,902	217,497
Euro area	2,734	..	158,066	2.02	428,463	16	23,049	44,309	58,359	14,865	148,179	43,724

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 European Patent Office (33,410 by residents, 95,303 by nonresidents) and the Eurasian Patent Organization (1,940 by nonresidents). c. Excludes applications filed under the auspices of the EU Office for Harmonization in the Internal Market (64,798 by nonresidents). d. Data are for the most recent year available. e. Includes Luxembourg and the Netherlands.

About the data

Technological innovation, often fueled by government-led research and development (R&D), has been the driving force for industrial growth. The best opportunities to improve living standards, including new ways of reducing poverty, will come from science and technology. Science is playing a growing economic role: countries able to access, generate, and apply scientific knowledge will have a competitive edge. And there is greater appreciation of the need for high-quality scientific input into public policy issues such as regional and global environmental concerns.

Science and technology cover a range of issues too broad and complex to be quantified by a single set of indicators, but those in the table shed light on countries' technology base.

The United Nations Educational, Scientific, and Cultural Organization (UNESCO) Institute for Statistics collects data on researchers, technicians, and expenditure on R&D from around the world, through questionnaires and surveys and from other international sources. Data on researchers and technicians are normally calculated as full-time equivalents.

Scientific and technical article counts are from a set of journals classified and covered by the Institute for Scientific Information's Science Citation Index (SCI) and Social Sciences Citation Index (SSCI). Counts are based on fractional assignments; for example, an article with two authors from different countries is counted as one-half of an article for each country (see *Definitions* for fields covered). The SCI and SSCI databases cover the core set of scientific journals but may exclude some of regional or local importance. They may also reflect some bias toward English-language journals.

R&D expenditures include all expenditures for R&D performed within a country, including capital expenditures and current costs (annual wages and salaries and all 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, books, journals, reference materials, subscriptions to libraries and scientific societies, and materials for laboratories).

The method used for determining a country's high-technology exports was developed by the Organisation for Economic Co-operation and Development in collaboration with Eurostat. Termed the "product approach" to distinguish it from a "sectoral approach," the method is based on R&D intensity (R&D expenditure divided by total sales) for groups of products from six countries (Germany, Italy, Japan, the Netherlands, Sweden, and the United States). Because industrial sectors specializing in a few high-technology products may also produce many low-technology products, the product approach is

more appropriate than the sectoral approach for analyzing international trade. This method takes only R&D intensity into account, but other characteristics of high technology are also important, such as know-how, scientific and technical personnel, and technology embodied in patents. Considering these characteristics would yield a different list. (See Hatzichronoglou 1997 for further details.) Moreover, the R&D for high-technology exports may not have occurred in the reporting country.

A patent is an exclusive right granted for an invention (a product or process that provides a new way of doing something or a new technical solution to a problem). It must be of practical use and display a characteristic unknown in the body of existing knowledge in its technical field. A patent grants protection for the invention to the owner of the patent for a specified period, generally 20 years.

Most countries have systems to protect patentable inventions. The Patent Cooperation Treaty provides a system for filing patent applications. It consists of an international phase followed by a national or regional phase. An applicant files an international application and designates the countries in which patent protection is sought (since 2004 all eligible countries are automatically designated in every application under the treaty). The application is searched, published, and, optionally, an international preliminary examination is conducted. In the national (or regional) phase the applicant requests national processing of the application, pays additional fees, and initiates the national search and granting procedure. International applications under the treaty provide for a national patent grant only—there is no international patent. The national phase filing represents the applicant's seeking of patent protection for a given territory, whereas international filings, while they represent a legal right, do not accurately reflect where patent protection is eventually sought. Resident filings are those from residents of the country or region concerned. Nonresident filings are from applicants outside the country or region. For regional offices such as the European Patent Office, applications from residents of any member state of the regional patent convention are considered a resident filing. Some offices (notably the U.S. Patent and Trademark Office) use the residence of the inventor rather than the applicant to classify resident and nonresident filings. A trademark protects its owner by ensuring exclusive right to use it to identify goods or services or to authorize another to use it in return for payment. The period of protection varies, but a trademark can be renewed indefinitely for a fee. Trademarks help consumers identify a product or service whose nature and quality, indicated by its unique trademark, meet their needs.

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 students at the doctoral level (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 the supervision of researchers. • **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 systematically to increase the stock of knowledge, including knowledge of humanity, culture, and society, and the use of knowledge to devise new applications. R&D covers basic research, applied research, and experimental development. • **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, franchises, and industrial processes) and for the use, through licensing agreements, of produced originals of prototypes (such as films and manuscripts). • **Patent applications filed** are worldwide patent applications filed through the Patent Cooperation Treaty procedure or with a national patent office. • **Trademark applications filed** are applications to register a trademark with a national or regional trademark 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 Foundation's *Science and Engineering Indicators* 2008. 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 *WIPO Patent Report: Statistics on Worldwide Patent Activity* (2007 edition) and www.wipo.int.

GLOBAL LINKS

69



T

he world economy expands and economies grow closer

Economic integration is the widening and deepening of the ties that link national economies. Trade, finance, movement of people, and transportation and communication infrastructure are the mechanisms. But integration is not a simple or certain process. Political and cultural connections underpin economic alliances. Geography may pose obstacles to integration, while technology can overcome them.

The past two decades have seen an enormous increase in the size of the global economy and of the economic ties between countries. Between 1990 and 2006 East Asia and Pacific's trade increased from 47 percent of its gross domestic product (GDP) to 87 percent, and gross private capital flows from international sources increased from 7 percent of GDP to 11 percent. In Sub-Saharan Africa trade within the region and with the rest of the world increased from 52 percent of GDP to 72 percent, and gross private capital flows rose from 12 percent to 14 percent. Evidence of integration? Yes, but the two regions have had much different experiences. Each had about 3.5 percent of global exports in 1980, but by 2006 East Asia and Pacific's share had grown to 10.8 percent while Sub-Saharan Africa's had fallen to 1.9 percent.

As global integration proceeds, developing countries are likely to expand their share of the global economy, especially regional centers with large populations and a significant economic base, such as Brazil, China, India, the Russian Federation, and South Africa. But even small and remote economies can take part. Better air and ocean transport gets products to markets faster and with more precise timing. Better transportation has been complemented by improvements in technology and favorable regulatory environments, reducing the costs of global communication, information dissemination, and management of economic activities. But as Dollar (2005, p. 148) notes, "As in previous waves of integration . . . change is driven partly by technological advances in transport and communications and partly by deliberate policy choices." Integration does not happen automatically.

All developing countries have the potential to gain from an integrated global environment. Like all economic forces, global integration may produce winners and losers. To realize the benefits of integration, countries need the capacity to absorb new technologies, use capital productively, and increase their labor force's knowledge and skills. Countries do not start with the same endowments—and wars, political divisions, and plain bad luck may blight their opportunities. The challenge is to ensure sustainable and widely shared growth.

Monitoring the development of global links provides the underpinning for policies aimed at managing challenges and aiding integration that is inclusive for all. The data in this section provide a snapshot of the world's integration and a framework for measuring it.

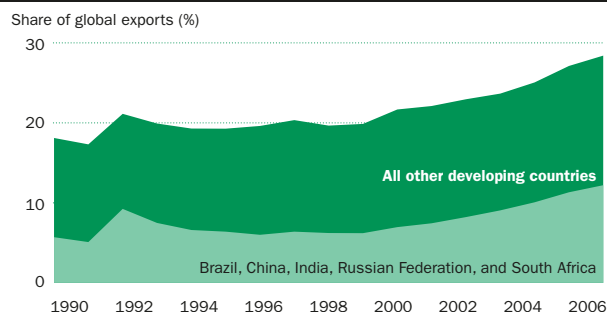
Developing countries' growing world trade

International trade is a critical channel for integration. It increases economic efficiency and brings producers and consumers together. Developing countries' share in world trade has been rising from 16 percent in 1990 to 30 percent in 2006, led by China, whose exports now rival those of the United States, and with Brazil and India not far behind (figure 6a). Projections of further increases in developing countries' share, to 45 percent by 2030 (*Global Economic Prospects 2007*), reflect increasing integration.

Developing country trade integration, measured by the share of imports plus exports in GDP, has been rising rapidly, increasing from 40 percent of GDP in 1990 to almost 67 percent in 2006, surpassing the share in high-income economies. Developing country exports are changing as well. The share of manufactured goods in exports is large and rising while that of food and commodities (excluding fuels) is small and falling (figure 6b). And despite the attention given to the spread of offshore services, trade in goods remains many times greater than trade in services. India is a notable exception: its service sector now produces almost 40 percent of its exports.

Developing countries' share of global trade is rising

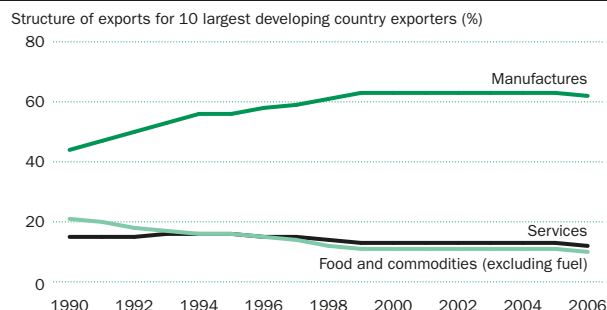
6a



Source: World Development Indicators data files.

Manufactured goods dominate the exports of developing countries

6b



Source: International Monetary Fund and United Nations Conference on Trade and Development data files.

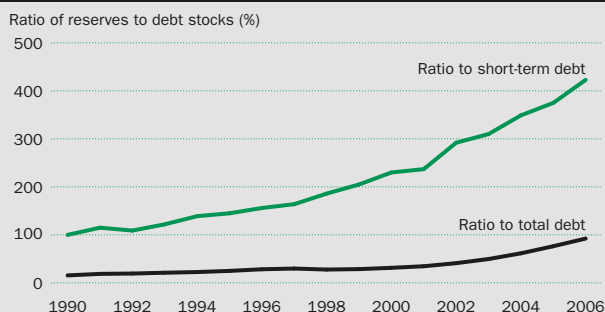
Financial integration: resilient and unabated

More access to international capital markets and foreign direct investment (FDI) has helped developing countries surmount their less developed capital markets. Developing countries have decreased their vulnerability to financial crises by reducing their external debt burden from 39 percent of gross national income in 1995 to 26 percent in 2006 and increasing foreign exchange reserves to 92 percent of long-term debt and 423 percent of more volatile, short-term debt in 2006 (figure 6c).

Private capital flows to developing countries increased more than 10-fold between 1990 and 2006. In 2006 developing countries received almost one-third of global FDI, though just over one-tenth of that went to low-income economies. Sub-Saharan Africa's 34 low-income economies received only 1 percent. The main source of external financing for low-income countries remains official development assistance (ODA). ODA, however, includes debt relief, technical assistance, and emergency relief, which do not provide the long-term investment needed to raise productive capacity. In constant prices ODA has risen more than 50 percent since 2000, but excluding debt, technical assistance, and emergency relief, it has risen only 25 percent (figure 6d).

Rising reserves and falling debt make developing countries less vulnerable to crises

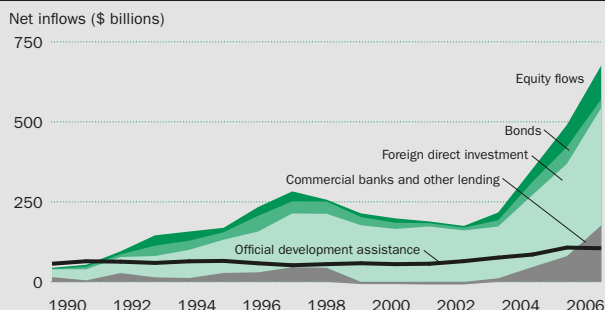
6c



Source: World Development Indicators and Global Development Finance data files.

Private financing has long exceeded official development assistance to developing countries

6d



Source: Organisation for Economic Co-operation and Development *International Development Statistics* and *Global Development Finance* data files.

Movement of people facilitates common economic and social goals

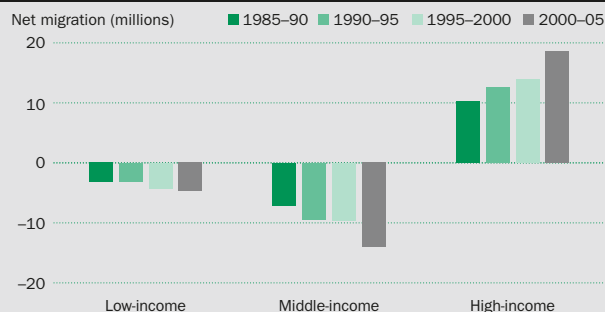
Movement of people as tourists, migrants, or business travelers raises awareness and spreads knowledge, important elements of globalization. These movements link diverse populations with common economic and social goals. Global tourism increased 5.6 percent in 2006, a pace well above its long-term average. Tourist departures from developing economies have risen 43 percent since 2000, and 7 of the top 15 tourist destinations are in developing economies.

Migration increased sharply over the past two decades. Like other elements of globalization, migration patterns are shaped by market forces and official policies. Opportunities in high-income economies are a strong lure (figure 6e), and a need for workers has led many countries to relax entry barriers. Successful migration requires resources, skills, and adaptation to a new culture. So, the largest net flows of migrants are from middle-income economies.

Migration facilitates cross-border remittances, a major source of foreign earnings for many developing countries. Remittances to developing countries almost quadrupled between 1995 and 2006, to more than \$220 billion (figure 6f), rivaling other forms of private financing.

More migrants in high-income economies . . .

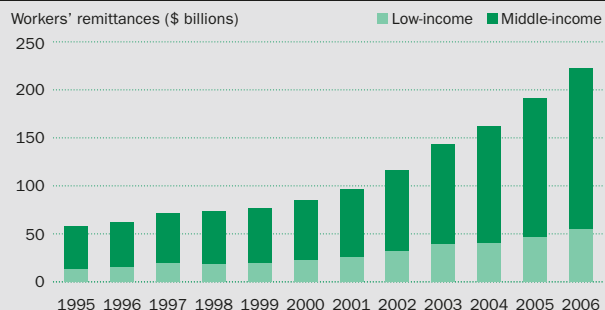
6e



Source: United Nations Population Division and World Development Indicators data files.

. . . are sending more remittances to developing countries

6f



Source: World Development Indicators data files.

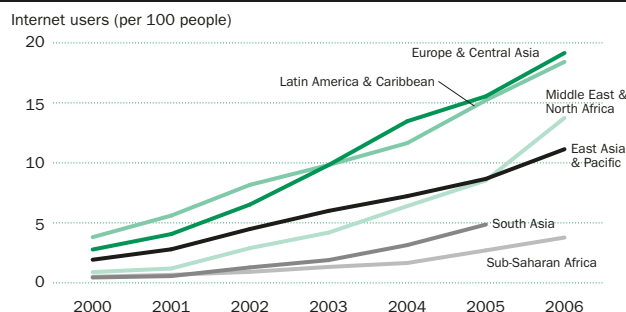
The role of information and communication technologies is expanding

Communication and information networks are crucial for overcoming geographic barriers, bringing people and markets closer. These networks enable effective management of enterprises across borders and participation in global production and service supply chains. Deregulation and competition have reduced communication costs. The average cost of a three-minute call to the United States fell from \$4.00 in 1999 to \$1.40 in 2004.

Over that period the share of people with access to the Internet tripled. The Internet promises to be an even greater force for globalization and development. But diffusion of technology around the world and within countries is unequal (figures 6g and 6h). Average contracted capacity for international Internet connections in developing economies grew from 3 bits per second per person in 2000 to 140 in 2006, still far short of the estimated 5,000 high-income average. Low-income economies' Internet capacity was still less than 20 bits per second per person in 2006, and international voice traffic less than 5 percent of the high-income average. Capital, policies, and infrastructure are needed to develop, adapt, and diffuse communication networks to accelerate development.

Europe and Central Asia and Latin America and the Caribbean lead other developing regions in access to the Internet . . .

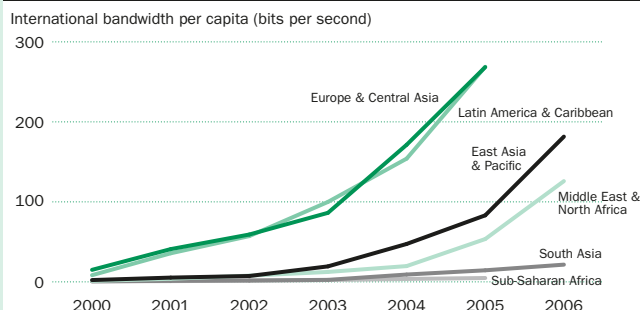
6g



Source: International Telecommunication Union and World Development Indicators data files.

. . . and in international bandwidth per capita

6h



Source: International Telecommunication Union and World Development Indicators data files.



	Trade		International finance				Movement of people			International communication		
	% of GDP		Financing through international capital markets Gross inflows	% of GDP		Workers' remittances and compensation of employees received	Net migration	International tourists		Cost of call to U.S. ^a \$ per 3 minutes	Voice traffic ^a minutes per person	Internet bandwidth ^a bits per capita
	Merchandise	Services		Foreign direct investment Net inflows	Net outflows			Inbound	Outbound			
	2006	2006	2006	2006	2006	2006	2000-05	2006	2006	2005	2006	2006
Afghanistan	40.4	..	0.0	..	..	..	1,112	..	..	0.4	1	0
Albania	42.3	34.0	0.2	3.6	0.1	14.9	-110	60 ^b	2,616	1.3	160	4
Algeria	66.3	..	0.9	1.6	..	2.2 ^c	-140	1,443 ^{d,e}	1,513	2.1	17	5
Angola	103.2	19.9	3.6	-0.1	0.4	..	175	121	..	3.2	..	12
Argentina	37.7	7.5	1.5	2.3	1.0	0.3	-100	4,156	4,009	..	33	690
Armenia	50.1	17.2	0.4	5.4	0.0	18.4 ^c	-100	381	329	2.4	128	22
Australia	33.6	8.4	..	3.4	3.0	0.4	593	5,064 ^f	4,941	..	..	11,593
Austria	87.2	24.1	..	0.0	1.2	0.6	180	20,261 ^g	10,042	0.7	..	6,634
Azerbaijan	58.6	19.2	28.2	-2.9	3.6	4.1	-100	1,194	1,836	4.2	33	36
Bangladesh	45.1	5.9	0.2	1.1	0.0	8.8	-500	200	1,819	2.0	6	8
Belarus	113.8	10.2	0.9	1.0	0.0	0.9	0	89	525	1.9	64	192
Belgium	183.5	28.6	..	15.7	14.0	1.9	180	6,995 ^g	7,852	0.8	..	11,279
Benin	32.5	11.0	2.1	1.3	0.0	3.6 ^c	99	180	..	4.8	6	5
Bolivia	59.9	11.1	0.0	2.2	0.0	5.5	-100	515	466	..	49	43
Bosnia and Herzegovina	86.6	13.2	0.8	3.5	0.0	16.9	115	256 ^g	..	3.6	208	40
Botswana	73.9	15.2	0.0	4.6	-0.5	1.1	20	1,675	..	2.9	74	16
Brazil	21.9	4.6	6.0	1.8	2.6	0.4	-229	5,019	4,825	0.7	..	150
Bulgaria	121.3	29.1	9.0	16.4	0.5	5.4	-43	5,158	4,180	0.6	72	1,756
Burkina Faso	30.6	..	0.6	0.4	..	0.8 ^c	100	264 ^h	..	1.1	11	15
Burundi	54.2	25.8	0.0	0.0	..	0.0	192	201 ^e	..	2.5	..	1
Cambodia	119.9	28.7	1.5	6.7	0.1	4.1	10	1,700	427	2.9	10	1
Cameroon	35.8	15.3	0.0	1.7	0.0	0.6 ^c	6	176 ^h	..	..	9	9
Canada	58.8	10.4	..	5.4	3.6	..	1,041	18,265	22,732	..	..	6,732
Central African Republic	24.1	..	0.0	1.6	..	..	-45	12 ^f	7	2.0	..	0
Chad	76.4	..	0.0	10.7	..	..	219	29 ^h	..	..	..	1
Chile	66.2	10.9	6.2	5.5	2.0	0.0	30	2,027	2,651	..	48	780
China	66.6	7.3	2.6	3.0	0.7	0.9 ^c	-1,900	49,913	34,524	2.9	7	196
Hong Kong, China	346.9	57.3	..	22.6	22.9	0.2	300	15,821	75,812	0.8	1,179	13,439
Colombia	32.9	5.8	3.4	4.2	0.7	2.6	-120	1,053 ^d	1,553	..	68	560
Congo, Dem. Rep.	59.7	..	0.0	2.1	..	..	-237	61 ^f	..	..	5	0
Congo, Rep.	109.7	30.1	0.0	4.7	0.1	0.2 ^c	-10	..	..	5.4	..	0
Costa Rica	88.8	20.5	1.1	6.6	0.4	2.3	84	1,725	485	..	127	176
Côte d'Ivoire	78.2	17.3	0.0	1.8	..	0.9	-339	..	..	2.2	17	3
Croatia	74.2	33.4	6.1	7.9	0.5	2.9	100	8,659 ^g	..	..	231	1,074
Cuba	..	..	..	..	..	..	-129	2,150 ^f	199	7.5	31	14
Czech Republic	131.7	17.6	..	4.2	0.9	0.8	67	6,435 ^g	..	1.1	95	2,170
Denmark	65.0	35.9	..	1.2	3.0	0.3	46	4,699 ^g	5,469	0.9	318	34,796
Dominican Republic	55.4	18.2	4.3	3.7	0.0	9.6	-148	3,965 ^{e,f}	420	0.2	..	6
Ecuador	59.7	8.1	0.2	0.7	0.0	7.1	-400	841 ^{d,i}	733	..	216	227
Egypt, Arab Rep.	31.9	25.8	5.3	9.3	0.1	5.0	-525	8,646	4,531	1.5	30	126
El Salvador	59.7	16.0	7.7	1.1	-0.3	17.8	-143	1,138	1,382	2.4	410	23
Eritrea	50.7	..	0.0	0.3	..	..	229	78 ^{d,e}	..	3.6	9	2
Estonia	138.6	36.3	3.6	9.7	6.3	2.4	1	1,940	..	0.9	109	11,175
Ethiopia	42.1	17.6	0.0	2.7	0.0	1.3	-140	290 ^e	..	4.0	3	0
Finland	69.3	15.1	..	2.5	0.8	0.3	33	3,375	5,756	1.8	..	4,311
France	45.6	10.1	..	3.6	5.2	0.6	722	79,083	22,466	0.8	183	3,286
Gabon	76.8	15.3	0.6	2.8	-0.3	0.1 ^c	10	..	..	2.8	74	153
Gambia, The	51.9	36.4	0.0	16.1	..	12.5	31	125	..	1.8	..	6
Georgia	60.3	21.0	2.1	13.7	-0.2	6.3	-248	983 ^d	..	..	..	7
Germany	69.8	13.4	..	1.5	2.7	0.2	1,000	23,569 ^g	71,200	0.4	..	6,864
Ghana	71.3	22.7	7.1	3.4	0.0	0.8	12	429 ^e	..	0.4	20	9
Greece	27.3	16.9	..	1.8	1.4	0.5	154	16,039	..	1.1	182	587
Guatemala	50.8	8.7	0.0	1.0	0.0	10.3	-300	1,502	1,055	1.2	195	56
Guinea	57.3	9.1	0.0	3.3	..	1.3 ^c	-425	46 ^f	..	..	..	0
Guinea-Bissau	60.8	19.3	0.0	13.8	-2.8	9.2 ^c	1	12 ^f	..	..	..	1
Haiti	44.5	14.9	2.7	3.2	..	21.5	-140	112	..	2.2	..	17

Integration with the global economy

6.1

GLOBAL LINKS

	Trade		International finance				Movement of people			International communication				
	% of GDP		Financing through international capital markets Gross inflows	% of GDP		Workers' remittances and compensation of employees received	Net migration			International tourists Inbound	International tourists Outbound	Cost of call to U.S. ^a \$ per 3 minutes	Voice traffic ^a minutes per person	Internet bandwidth ^a bits per capita
	Merchandise	Services	Net inflows	Net outflows	2000-05	2006	2006	2005	2006	2006				
2006	2006	2006	2006	2006	2006	2006	2006	2006	2006	2006	2006	2006	2006	
Honduras	79.6	19.2	0.0	4.2	0.0	25.6	-150	739	308	2.5	96	6		
Hungary	134.1	22.1	10.3	5.4	14.5	0.3	65	9,259	17,612	1.0	105	993		
India	32.4	15.2	4.2	1.9	1.1	2.8	-1,350	4,447 ⁱ	8,340	1.2	..	24		
Indonesia	50.4	9.1	3.7	1.5	0.7	1.6	-1,000	4,871	4,106	2.8	5	7		
Iran, Islamic Rep.	57.3	..	0.5	0.4	..	0.5 ^c	-1,250	1,659	..	0.5	9	53		
Iraq	..	..	..	..	..	..	-375	..	..	..	..	..
Ireland	83.5	67.1	..	-0.4	6.7	0.2	188	8,001	6,848	0.7	..	5,912		
Israel	68.7	24.3	..	10.2	10.3	0.8	115	1,825 ⁱ	3,713	0.6	364	2,455		
Italy	45.8	10.8	..	2.1	2.3	0.1	1,125	41,058	25,697	0.8	..	2,044		
Jamaica	76.1	46.6	11.0	8.8	0.9	19.4	-100	1,679 ^{e,f}	..	0.9	..	15,822		
Japan	28.1	5.8	..	-0.2	1.1	0.0	270	7,334 ^{d,i}	17,535	1.6	43	1,038		
Jordan	117.9	36.9	0.4	22.8	-1.0	20.4	130	3,225 ^e	1,628	1.4	139	57		
Kazakhstan	80.8	14.2	25.3	7.6	-0.5	0.2	-200	3,143	3,004	..	..	63
Kenya	47.2	17.1	1.4	0.2	0.1	5.0 ^c	25	1,536	..	3.0	6	21		
Korea, Dem. Rep.	..	..	..	..	..	..	0	..	..	..	..	..
Korea, Rep.	71.5	13.8	..	0.4	0.8	0.1	-80	6,155 ^{d,e}	11,610	0.8	92	1,028		
Kuwait	75.1	16.5	..	0.3	6.4	..	264	91 ^h	1,928	1.5	..	348		
Kyrgyz Republic	89.2	29.6	0.0	6.5	2.0	17.1	-75	766	454	5.4	30	39		
Lao PDR	56.3	..	0.0	5.5	..	0.0 ^c	-115	842	..	1.1	7	4		
Latvia	87.8	23.0	7.5	8.3	0.9	2.4	-20	1,535	3,151	1.6	67	3,230		
Lebanon	54.8	89.5	18.3	12.3	0.3	22.9	0	1,063	..	2.2	279	111		
Lesotho	144.5	10.4	0.0	5.2	0.0	24.2	-36	347	..	3.3	18	2		
Liberia	99.0	..	246.8	-13.0	..	..	-119	..	..	..	..	..
Libya	92.3	6.1	0.0	..	0.9	0.0	10	149	..	..	66	21
Lithuania	112.3	20.7	4.3	6.1	1.0	3.3	-30	2,000	..	1.6	49	2,714		
Macedonia, FYR	99.1	18.9	1.1	5.6	0.0	4.3	-10	202 ^g	..	..	63	17
Madagascar	44.4	22.1	0.0	4.2	..	0.2 ^c	-5	312 ^f	..	0.6	1	2		
Malawi	55.3	..	0.0	0.9	..	0.0 ^c	-30	438	..	..	..	1
Malaysia	193.7	30.2	7.0	4.0	4.0	1.0	150	17,547	30,761	0.7	..	124		
Mali	54.7	16.3	0.0	3.2	0.0	3.0 ^c	-134	153 ^{f,h}	..	..	..	26
Mauritania	85.0	..	0.0	-0.1	..	0.1 ^c	30	..	..	..	..	30
Mauritius	91.4	47.2	2.8	1.7	0.2	3.4 ^c	0	788	186	1.6	150	153		
Mexico	61.8	4.7	4.6	2.3	0.7	3.0	-3,983	21,353 ^e	14,002	0.8	174	109		
Moldova	111.6	29.0	0.0	7.2	0.0	35.2	-250	13	68	1.5	110	147		
Mongolia	96.7	32.2	0.0	11.0	0.0	5.8	-50	386	..	..	5	13
Morocco	55.5	21.9	1.4	4.1	0.7	8.3	-550	6,558 ^e	2,247	1.7	65	377		
Mozambique	76.2	16.7	0.6	2.2	0.0	1.2	-20	578	..	1.2	13	1		
Myanmar	..	..	..	..	..	..	-99	264	..	0.2	3	2
Namibia	84.8	14.6	0.0	..	-0.2	0.3	-1	833	..	..	..	18
Nepal	32.0	9.8	0.0	-0.1	..	16.3	-100	375	373	2.0	6	5		
Netherlands	132.7	24.4	..	1.1	7.0	0.4	110	10,739 ^g	16,695	0.3	..	20,501		
New Zealand	46.8	15.0	..	7.6	0.7	0.6	102	2,409 ^d	1,861	1.3	361	1,107		
Nicaragua	75.8	15.6	1.6	5.3	0.0	12.4	-210	773 ^e	788	3.2	62	1		
Niger	40.7	10.7	0.0	0.6	0.3	1.8 ^c	-28	60	..	..	..	2
Nigeria	64.0	11.7	1.0	4.7	..	2.9 ^c	-170	1,010	..	1.5	..	1		
Norway	55.4	19.2	..	1.4	4.6	0.2	84	3,945	3,193	..	193	9,305		
Oman	89.2	12.3	22.8	2.9	0.4	0.1	-150	1,306 ^h	..	1.9	189	174		
Pakistan	36.9	9.4	3.0	3.4	0.1	4.0	-1,239	898	..	1.0	10	5		
Panama	34.6	33.1	7.6	15.1	0.0	0.9	8	843	284	..	..	287
Papua New Guinea	112.7	29.7	1.4	0.6	0.1	0.2 ^c	0	78	..	..	..	1
Paraguay	83.9	13.3	0.0	2.0	0.0	4.7	-45	388 ⁱ	210	0.9	31	83		
Peru	41.9	6.3	3.6	3.8	..	2.0	-510	1,635	1,857	1.8	99	367		
Philippines	83.8	10.7	8.6	2.0	0.1	13.0	-900	2,843 ^e	2,144	1.2	28	38		
Poland	69.8	11.5	3.6	5.7	2.7	1.3	-200	15,670	44,696	1.4	..	560		
Portugal	56.5	15.1	..	3.8	1.8	1.7	276	11,282 ^e	18,378	1.0	178	829		
Puerto Rico	..	..	..	..	..	..	-10	3,722 ^f	1,468	..	..	511



6.1

Integration with the global economy

	Trade		International finance				Movement of people			International communication		
	% of GDP		Financing through international capital markets Gross inflows	% of GDP		Workers' remittances and compensation of employees received	Net migration	International tourists		Cost of call to U.S. ^a \$ per 3 minutes	Voice traffic ^a minutes per person	Internet bandwidth ^a bits per capita
	Merchandise	Services		Foreign direct investment Net inflows	Net outflows			Inbound	Outbound			
	2006	2006	2006	2006	2006	2006	2000-05	2006	2006	2005	2006	2006
Romania	68.6	11.6	1.2	9.4	0.3	5.5	-270	6,037 ^d	8,906	0.8	..	1,503
Russian Federation	47.5	7.7	7.9	3.1	2.3	0.3	917	22,486	29,107	2.0	..	100
Rwanda	25.6	15.0	0.0	0.5	-0.6	0.8	43	..	..	2.4	..	7
Saudi Arabia	79.0	13.7	..	0.2	0.0	..	285	8,620	2,000	..	216	126
Senegal	54.3	17.2	1.0	0.6	0.2	6.9 ^c	-100	769	..	1.0	39	103
Serbia	61.3	..	0.0	16.0	..	14.7 ^{c,j}	-339	469 ^g	..	..	..	95
Sierra Leone	41.7	8.5	0.0	4.1	0.0	2.3	472	34 ^f	67	..	..	..
Singapore	386.2	91.6	..	18.3	6.5	..	200	7,588	5,533	0.7	1,045	7,052
Slovak Republic	159.1	..	2.4	7.6	..	0.8 ^c	3	1,612 ^g	22,688	1.1	90	2,913
Slovenia	127.0	20.4	..	1.7	2.4	0.8	22	1,617 ^g	2,680	0.7	..	1,255
Somalia	..	..	..	..	..	..	100	..	..	..	..	0
South Africa	53.2	10.3	10.3	0.0	2.6	0.3	75	8,396	..	0.8	..	19
Spain	42.6	15.1	..	1.6	7.2	0.7	2,846	58,451	10,676	0.6	173	2,776
Sri Lanka	63.6	14.9	0.1	1.8	0.1	8.7	-442	560 ⁱ	757	2.1	28	25
Sudan	36.7	8.0	0.2	9.4	0.0	3.1	-532	328 ^e	..	..	12	5
Swaziland	160.9	24.6	0.0	1.4	0.1	3.7	-6	873 ^h	1,072	3.0	..	1
Sweden	71.4	23.5	..	7.1	6.2	0.1	152	3,270 ^g	12,591	0.4	..	17,468
Switzerland	75.9	21.2	..	7.1	18.6	0.5	100	7,863 ^h	..	0.3	..	9,609
Syrian Arab Republic	55.1	16.3	0.0	1.8	0.0	2.4	200	4,422	4,042	..	44	8
Tajikistan	111.0	18.8	0.0	12.0	0.0	36.2	-345	..	..	7.8	..	0
Tanzania	46.5	21.4	0.0	3.7	0.0	0.1	-345	622	..	3.2	..	0
Thailand	125.7	27.4	3.2	4.4	0.5	0.6	231	13,822 ⁱ	3,382	0.7	14	156
Timor-Leste	..	..	0.0	..	..	..	100	..	..	..	..	..
Togo	77.8	21.6	0.0	2.6	-0.6	8.7 ^c	-4	81 ^h	..	4.0	21	16
Trinidad and Tobago	113.8	9.5	13.5	6.2	-2.3	0.5 ^c	-20	463 ^f	..	2.2	376	370
Tunisia	87.1	22.3	1.6	10.8	0.1	5.0	-29	6,549 ⁱ	2,241	..	73	126
Turkey	55.6	8.9	9.1	5.0	0.2	0.3	-30	18,916	8,275	2.4	27	631
Turkmenistan	88.8	..	0.0	7.0	..	..	-10	12	33	..	..	16
Uganda	37.2	15.7	0.0	4.2	0.0	8.6	-5	539	254	3.2	..	4
Ukraine	78.3	19.2	5.3	5.3	-0.1	0.8	-173	18,900	16,875	1.6	57	17
United Arab Emirates	155.7	..	..	..	..	..	577	7,126 ^{b,e}	..	1.7	..	2,371
United Kingdom	44.9	17.1	..	5.9	5.4	0.3	948	30,654	69,536	0.8	..	13,062
United States	22.5	5.8	..	1.4	1.8	0.0	6,493	50,978	63,662	..	279	3,307
Uruguay	45.1	11.3	13.0	7.0	0.0	0.5	-104	1,749	666	0.5	121	484
Uzbekistan	56.0	..	0.2	1.0	..	..	-300	262	455	..	12	9
Venezuela, RB	54.3	4.2	0.3	-0.3	1.1	0.1	40	748	1,095	0.8	..	50
Vietnam	137.7	17.8	2.7	3.8	0.1	7.9 ^c	-200	3,583 ^d	..	1.9	..	84
West Bank and Gaza	..	..	0.0	..	..	14.7 ^c	11	123 ^h	..	1.2	66	199
Yemen, Rep.	64.1	12.6	0.3	5.9	..	6.7	-100	382 ^h	..	2.4	..	0
Zambia	61.6	8.3	8.5	5.4	..	0.5	-82	669	..	1.4	..	11
Zimbabwe	121.4	..	0.0	3.0	..	..	-75	2,287 ^d	..	..	25	4
World	49.9 w	11.3 w	.. w	2.8 w	3.0 w	0.6 w	..^k s 850,778 t	1,030,976 t	1.4 m	.. w	529 w	22
Low income	44.1	14.3	3.1	2.6	0.9	3.6	-4,690	27,246	..	2.0	..	22
Middle income	61.8	9.8	4.7	3.3	1.4	1.7	-14,021	301,883	344,318	1.6	31	144
Lower middle income	66.5	10.5	2.9	3.0	0.6	2.2	-9,750	148,352	107,329	2.1	21	189
Upper middle income	57.6	9.2	6.3	3.5	2.0	1.2	-4,271	155,980	222,638	1.1	..	242
Low & middle income	59.4	10.3	4.5	3.2	1.3	1.9	-18,711	332,275	419,006	1.8	..	143
East Asia & Pacific	75.7	9.9	3.1	2.9	0.8	1.5	-3,847	98,476	81,142	1.2	8	182
Europe & Central Asia	66.2	11.5	7.3	5.0	2.1	1.4	-1,730	108,942	176,948	1.6	..	268
Latin America & Carib.	43.1	6.2	4.5	2.4	1.6	1.9	-6,811	55,387	38,100	1.2	..	269
Middle East & N. Africa	59.8	..	2.0	4.2	..	3.9	-2,768	36,214	26,968	1.7	36	126
South Asia	34.4	14.1	3.7	2.0	0.9	3.5	-2,484	7,296	12,998	2.0	..	22
Sub-Saharan Africa	60.8	13.7	4.8	2.4	0.4	1.6	-1,070	27,486	..	2.4	..	5
High income	46.9	11.6	..	2.7	3.5	0.2	18,604	510,271	533,390	0.8	204	4,346
Euro area	65.2	16.1	..	3.8	5.3	0.5	6,887	284,903	194,611	0.7	..	4,830

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. Arrivals in hotels only. c. World Bank estimates. d. Refers to arrivals of nonresident visitors at national borders. e. Includes nationals residing abroad. f. Arrivals by air only. g. Arrivals in all types of accommodation establishments. h. Arrivals in hotels and similar establishments. i. Excludes nationals residing abroad. j. Includes Montenegro. k. 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 quarter century. Growth of cross-border economic activity has changed the structure of economies and the political and social organization of countries. 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. Globalization has created opportunities and challenges for developing countries, but many poor people and countries have been unable to take full advantage of globalization's opportunities and benefits.

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. 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 data on the main trade components of 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 given 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) has 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. FDI may be understated in many developing countries because some countries fail to report reinvested earnings and because the definition of long-term loans differs across countries. However, the quality and coverage of the data are improving as a result of continuous efforts by international and national statistics agencies. See *About the data* for table 6.10 for more information.

Workers' remittances comprise workers' remittances, compensation of employees, and migrants' transfers. Migration and tourism have increased in importance over time, now accounting for a substantial part of global integration. See *About the data* and *Definitions* for tables 6.16 and 6.17 for information on migration and tourism.

Well developed communications infrastructure attracts investments and allows investors to capitalize on benefits offered by the digital age. See *About the data* for tables 5.10 and 5.11 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** are net inflows of investment in the reporting economy. FDI is the sum of equity capital, reinvestment of earnings, and other short- and long-term capital.
- **Foreign direct investment net outflows** are net outflows of investment from the reporting economy to the rest of the world.
- **Workers' remittances and compensation of employees**

received are current transfers by migrant workers and wages and salaries earned by nonresident workers. Workers' remittances are current private transfers from migrant workers resident in the host country for more than a year, irrespective of their immigration status, to recipients in their country of origin. Compensation of employees is the income of migrants who have lived in the host country for less than a year.

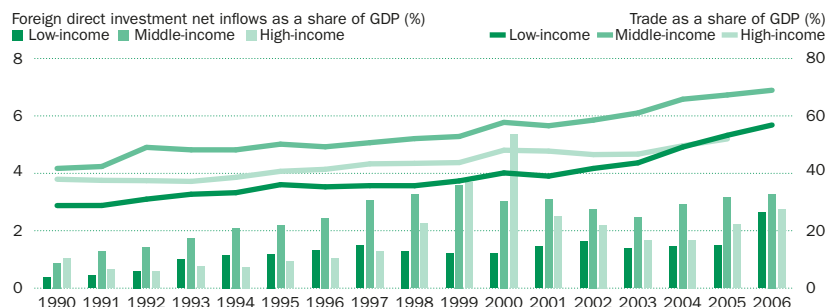
- **Net migration** is the total number of immigrants minus the total number of emigrants, including citizens and noncitizens, for the five-year period.
- **International inbound tourists** (overnight visitors) are the number of tourists who travel to a country other than that in which they have their usual residence, but outside their usual environment, for less than 12 months whose main purpose in visiting is not for paid work. When data on the number of tourists are not available, the number of day visitors, which includes tourists, cruise passengers, and crew members, is shown instead.
- **International outbound tourists** are the number of departures that people make from their country of usual residence to any other country for any purpose other than paid work.
- **Cost of call to U.S.** is the cost of a three-minute, peak rate, fixed-line call from the country to the United States.
- **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 World Trade Organization's (WTO) *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 reported by Dealogic. Data on FDI are based on balance of payments data reported by the IMF, supplemented by staff estimates using data reported by 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 2006 Revision*. Data on international tourism are from the WTO's *Yearbook of Tourism Statistics and Compendium of Tourism Statistics 2008* and electronic updates. Data on cost of call to U.S., international voice traffic, and international Internet bandwidth are from the International Telecommunication Union's *International Development Report* database.

Trade and international finance are leading globalization

6.1a



Trade in low- and middle-income economies has grown faster than trade in high-income economies since 2000. FDI net inflows in low-income economies soared in 2006.

Source: World Development Indicators data files.



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	
	1985-95	1995-2006	1985-95	1995-2006	1985-95	1995-2006	1985-95	1995-2006	1995	2006
Afghanistan	..	..	..	..	..	..	..	..	..	..
Albania	..	..	..	..	..	..	..	..	..	..
Algeria	2.5	2.6	1.4	5.8	1.3	14.2	4.4	6.1	57.9	178.9
Angola	8.1	7.7	-1.4	15.7	6.9	19.8	2.3	17.5	80.8	196.6
Argentina	6.9	5.4	17.8	0.4	10.4	5.9	20.3	-0.7	91.6	112.9
Armenia	..	..	..	..	..	..	..	..	..	..
Australia ^a	6.9	4.9	6.9	6.9	9.1	7.9	10.0	7.0	99.4	145.5
Austria ^a	5.1	6.1	3.6	4.8	..	..	..	..	..	..
Azerbaijan	..	..	..	..	..	..	..	..	..	..
Bangladesh	13.4	8.3	4.9	2.9	14.1	9.3	8.1	7.9	111.8	73.2
Belarus	..	..	..	..	..	..	..	..	..	..
Belgium ^a	2.9	5.6	2.4	5.4	3.4	7.7	3.3	8.1	104.3	99.1
Benin	13.0	3.8	3.5	1.9	17.4	2.7	6.8	2.6	106.6	80.8
Bolivia	8.9	8.1	4.4	2.8	5.5	10.9	8.5	3.4	89.4	134.6
Bosnia and Herzegovina	..	..	..	..	..	..	..	..	..	..
Botswana	0.1	4.9	3.0	4.1	6.3	5.4	9.3	4.5	89.3	94.5
Brazil	4.5	9.8	15.0	1.6	6.4	9.8	11.9	2.8	110.4	103.8
Bulgaria	..	..	..	..	..	..	..	..	..	..
Burkina Faso	0.6	10.0	1.6	8.4	3.7	7.3	1.7	9.7	131.0	89.8
Burundi	4.2	6.2	2.4	13.5	-3.1	-4.1	1.7	5.2	163.6	125.5
Cambodia	..	16.4	..	11.9	50.3	17.0	25.4	14.9	..	88.7
Cameroon	9.7	-0.4	-4.5	8.9	10.4	4.8	-3.4	9.4	90.4	136.1
Canada ^a	6.3	4.3	6.5	5.7	7.9	5.5	8.2	6.0	103.2	115.8
Central African Republic	9.2	4.9	1.9	0.5	5.1	-1.7	-0.4	0.4	193.0	90.2
Chad	..	..	..	..	..	..	..	..	..	..
Chile	11.0	7.7	9.4	5.2	13.3	10.5	17.1	5.7	135.6	183.7
China [†]	15.1	19.5	11.8	17.6	17.7	18.8	12.7	19.3	101.9	82.1
Hong Kong, China	16.1	6.9	17.1	6.0	19.1	5.4	20.2	4.7	99.1	96.8
Colombia	8.7	4.2	9.5	4.0	8.9	7.0	13.1	4.2	86.8	115.2
Congo, Dem. Rep.	-9.9	10.6	-13.4	28.3	-4.7	2.8	-7.1	12.7	79.8	125.9
Congo, Rep.	1.5	3.3	-7.6	9.9	1.6	15.0	-2.8	9.3	52.0	184.4
Costa Rica	11.3	8.4	13.3	8.9	13.0	6.3	15.0	8.7	104.6	85.8
Côte d'Ivoire	1.7	2.6	-5.0	1.0	-0.2	6.4	2.2	3.2	122.0	135.4
Croatia	..	..	..	..	..	..	..	..	..	..
Cuba	..	-3.0	..	5.5	-18.9	2.8	-15.0	8.7	..	148.8
Czech Republic	..	..	..	..	..	..	..	..	..	..
Denmark ^a	5.0	4.3	3.3	4.3	4.8	5.9	2.4	5.7	102.1	105.0
Dominican Republic	0.3	1.1	7.7	4.9	-1.6	1.2	11.9	5.3	98.1	94.9
Ecuador	9.0	5.6	5.4	9.1	5.9	8.5	7.9	10.1	80.6	109.9
Egypt, Arab Rep.	-5.7	7.9	-9.3	-1.6	-3.1	12.6	-4.6	1.9	116.3	127.0
El Salvador	1.0	4.4	11.0	5.6	2.9	3.7	11.7	7.2	121.1	95.5
Eritrea	..	..	..	..	..	..	..	..	..	..
Estonia	..	..	..	..	..	..	..	..	..	..
Ethiopia	9.8	8.6	6.7	10.9	17.5	6.3	8.0	12.9	151.0	98.9
Finland	..	..	..	..	..	..	..	..	..	..
France ^a	5.1	7.5	5.0	8.6	2.9	5.8	1.8	7.1	106.4	102.2
Gabon	7.4	4.7	-3.1	3.4	6.9	5.9	-0.1	3.7	125.4	179.1
Gambia, The	-8.5	-6.9	4.1	-1.3	-3.4	-7.6	9.0	-0.6	100.0	80.5
Georgia	..	..	..	..	..	..	..	..	..	..
Germany ^a	..	..	..	..	..	..	..	..	107.5	96.6
Ghana	6.8	3.6	7.8	8.4	6.6	6.8	11.5	9.8	106.7	132.0
Greece ^a	6.4	..	9.6	..	15.1	..	17.2	..	112.1	..
Guatemala	4.6	5.6	9.3	8.6	6.1	4.3	11.8	9.9	117.9	89.6
Guinea	5.6	-2.3	5.3	4.8	3.8	1.7	8.2	1.9	89.6	204.0
Guinea-Bissau	..	..	..	..	..	..	..	..	..	..
Haiti	-3.4	12.3	-2.3	6.8	-8.6	13.0	0.1	9.4	113.2	88.9
[†] Data for Taiwan, China	17.0	3.7	21.3	2.9	11.5	5.9	16.2	5.8	89.9	84.4

Growth of merchandise trade

6.2

GLOBAL LINKS

	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	
	1985-95	1995-2006	1985-95	1995-2006	1985-95	1995-2006	1985-95	1995-2006	1995	2006
Honduras	3.7	4.9	4.3	10.4	1.9	2.6	4.6	10.0	96.3	83.2
Hungary ^a	-0.1	14.5	2.6	13.0	2.7	15.4	6.0	14.6	104.3	95.5
India ^a	..	..	..	..	..	..	..	..	107.7	105.2
Indonesia	10.4	1.8	10.1	1.1	11.7	5.6	15.3	3.2	90.4	100.9
Iran, Islamic Rep.	7.4	2.3	..	14.3	7.7	12.7	4.3	13.1	..	155.3
Iraq	..	..	..	..	..	..	..	..	..	..
Ireland ^a	10.5	8.9	6.9	6.6	10.8	9.0	8.2	7.0	98.9	94.4
Israel ^a	6.2	7.1	8.6	3.7	21.6	12.3	22.8	8.7	92.1	93.8
Italy ^a	5.6	0.7	4.8	2.8	9.7	4.5	7.1	6.7	95.9	97.5
Jamaica	7.2	-5.5	..	0.6	8.7	1.0	9.4	4.8	..	192.0
Japan ^a	2.4	3.5	7.3	3.9	1.5	4.2	2.1	4.9	105.5	91.8
Jordan	5.1	10.8	3.8	7.6	7.5	10.7	3.8	10.4	115.6	84.3
Kazakhstan	..	..	..	..	..	..	..	..	..	..
Kenya	7.7	4.6	9.0	4.8	5.8	5.1	4.2	7.2	103.9	91.3
Korea, Dem. Rep.	..	..	..	..	..	..	..	..	..	..
Korea, Rep.	10.6	14.2	13.3	6.9	13.0	8.8	15.0	7.6	138.5	73.2
Kuwait	9.7	5.5	..	13.7	0.6	13.3	2.5	7.0	..	195.2
Kyrgyz Republic	..	..	..	..	..	..	..	..	..	..
Lao PDR	..	9.0	..	7.7	21.7	5.7	12.7	2.6	..	117.6
Latvia ^a	-6.8	8.9	..	..	-1.7	9.9	..	..	..	..
Lebanon	..	17.8	..	2.1	1.7	15.9	13.9	2.7	..	101.1
Lesotho	12.1	19.2	5.3	4.3	21.0	17.1	12.1	4.2	100.0	81.1
Liberia	..	..	..	..	..	..	..	..	..	..
Libya	..	4.7	1.6	5.3	-0.2	12.8	1.7	7.9	..	171.7
Lithuania	..	..	..	..	..	..	..	..	..	..
Macedonia, FYR	..	..	..	..	..	..	..	..	..	..
Madagascar	2.5	11.0	1.6	9.2	4.6	12.4	7.3	11.4	79.6	76.5
Malawi	2.6	3.3	0.8	5.4	5.1	1.8	7.8	7.1	105.7	84.4
Malaysia	10.3	8.7	18.8	5.6	18.0	6.8	22.3	4.8	108.5	98.7
Mali	10.5	10.5	4.8	8.1	11.8	11.1	7.7	8.5	109.6	107.2
Mauritania	-0.9	-0.7	7.3	7.6	2.9	0.9	9.2	5.5	102.2	169.7
Mauritius	5.6	0.7	7.9	5.6	10.4	1.2	12.5	3.5	88.5	115.2
Mexico	12.2	7.7	14.7	9.6	12.0	9.4	18.6	10.4	92.5	104.0
Moldova	..	..	..	..	..	..	..	..	..	..
Mongolia	..	4.1	..	9.1	-7.7	10.1	-14.9	11.7	..	162.4
Morocco	6.7	4.4	7.9	7.9	9.3	3.9	9.9	8.0	89.1	86.2
Mozambique	10.0	28.6	3.2	11.7	8.1	29.1	6.2	14.1	151.1	130.6
Myanmar	14.3	18.6	11.8	-1.1	14.8	18.0	18.3	2.6	214.3	111.1
Namibia	5.9	3.4	4.2	5.8	3.5	4.3	3.8	4.2	82.6	127.3
Nepal	..	-1.9	..	-1.8	11.7	7.8	10.4	3.5	..	79.0
Netherlands ^a	5.8	5.3	5.1	4.5	4.0	6.4	3.4	6.0	103.2	100.5
New Zealand ^a	4.1	3.5	5.4	6.1	8.2	4.8	7.7	6.3	101.8	111.5
Nicaragua	2.6	7.8	-1.4	5.8	2.9	5.9	0.1	8.6	128.9	79.4
Niger	1.7	-0.5	-3.9	5.6	-0.5	4.9	0.5	8.5	121.4	163.7
Nigeria	-2.0	-1.6	-9.1	10.5	5.3	10.2	3.3	13.2	55.6	160.6
Norway ^a	6.8	2.6	2.5	5.8	5.4	9.4	3.6	5.1	60.3	139.2
Oman	12.4	-0.4	..	8.9	10.2	11.6	6.9	8.0	..	182.3
Pakistan	9.8	7.5	4.1	4.4	10.7	6.5	7.2	8.0	119.2	76.2
Panama	3.2	3.4	6.6	2.4	7.1	4.0	9.2	3.9	100.0	90.9
Papua New Guinea	6.3	-6.4	..	5.2	11.4	3.2	3.6	1.8	..	160.4
Paraguay	5.5	6.7	19.4	0.7	12.4	6.2	19.9	2.2	118.3	95.5
Peru	4.4	10.5	8.5	1.1	6.1	12.1	13.2	2.3	123.4	151.1
Philippines	12.8	7.2	16.0	4.7	13.1	7.7	18.0	4.3	80.2	84.1
Poland ^a	4.8	13.0	7.9	10.5	4.6	15.3	7.1	12.1	101.7	107.1
Portugal ^a	6.8	-0.5	8.8	-1.0	11.0	-4.7	10.2	-5.1	104.7	101.6
Puerto Rico	..	..	..	..	..	..	..	..	..	..



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	
	1985-95	1995-2006	1985-95	1995-2006	1985-95	1995-2006	1985-95	1995-2006	1995	2006
Romania	..	..	..	..	..	..	..	..	..	..
Russian Federation	..	..	..	..	..	..	..	..	..	..
Rwanda	-13.2	3.8	0.1	2.2	-12.6	6.3	-5.4	4.5	110.1	128.7
Saudi Arabia	12.7	0.2	..	11.5	9.3	13.5	3.6	7.6	..	205.1
Senegal	2.0	6.9	-0.5	6.9	4.2	4.8	2.7	9.7	156.3	101.8
Serbia	..	..	..	..	..	..	..	..	..	..
Sierra Leone	..	..	..	..	..	..	..	..	..	..
Singapore	16.0	9.1	13.5	4.7	17.9	7.0	17.3	4.8	104.3	86.1
Slovak Republic	..	..	..	..	..	..	..	..	..	..
Slovenia	..	..	..	..	..	..	..	..	..	..
Somalia	..	..	..	..	..	..	..	..	..	..
South Africa	2.2	4.6	5.2	7.1	4.2	6.5	7.7	8.0	106.0	125.3
Spain ^a	8.7	6.7	12.1	8.5	11.0	8.0	12.0	10.2	104.3	103.5
Sri Lanka	6.3	4.5	6.8	3.2	12.1	4.4	11.6	5.3	99.0	80.0
Sudan	14.9	19.2	16.7	15.4	1.2	26.3	3.1	17.0	100.0	189.5
Swaziland	7.9	9.3	5.9	6.6	13.9	9.3	11.8	7.4	100.0	93.3
Sweden ^a	3.8	6.3	3.1	4.8	8.0	3.9	6.4	4.5	109.5	88.1
Switzerland ^a	2.3	4.5	1.2	4.1	..	..	..	..	..	..
Syrian Arab Republic	24.4	1.2	..	10.1	11.1	7.2	5.9	6.1	..	133.0
Tajikistan	..	..	..	..	..	..	..	..	..	..
Tanzania	6.0	7.6	-0.4	8.0	8.2	10.0	7.9	9.2	98.0	115.7
Thailand	17.3	7.1	17.3	3.3	22.2	7.8	23.1	6.3	116.0	92.3
Timor-Leste	..	..	..	..	..	..	..	..	..	..
Togo	4.0	4.6	-4.2	3.9	3.6	4.5	-0.7	5.9	99.1	78.0
Trinidad and Tobago	1.4	8.7	-5.8	3.1	2.6	16.2	0.6	10.3	..	122.7
Tunisia	9.5	7.4	6.2	6.2	12.1	7.3	11.5	6.1	95.8	94.3
Turkey	11.6	12.6	14.0	9.2	9.9	12.8	11.6	10.6	105.7	96.2
Turkmenistan	..	..	..	..	..	..	..	..	..	..
Uganda	7.2	9.7	8.7	3.7	-2.5	4.8	6.7	5.6	197.2	102.0
Ukraine	..	..	..	..	..	..	..	..	..	..
United Arab Emirates	8.2	7.9	..	17.6	10.5	15.1	14.7	15.1	..	152.7
United Kingdom ^a	4.6	4.0	4.5	6.7	8.8	4.7	8.3	7.1	100.1	104.3
United States ^a	8.2	3.6	5.0	7.1	10.3	4.0	7.3	8.1	103.3	96.0
Uruguay	5.9	4.6	12.9	-0.4	7.4	3.1	14.9	0.4	116.2	88.7
Uzbekistan	..	..	..	..	..	..	..	..	..	..
Venezuela, RB	6.7	0.1	-0.2	5.9	5.1	9.9	3.6	6.2	63.4	184.4
Vietnam	..	13.2	..	13.9	22.7	18.1	12.1	15.8	..	96.8
West Bank and Gaza	..	..	..	..	..	..	..	..	..	..
Yemen, Rep.	..	-3.2	2.3	13.3	8.1	12.1	4.3	11.4	..	150.3
Zambia	-3.1	9.1	-9.7	12.5	2.3	8.1	-0.1	13.5	189.7	187.0
Zimbabwe	6.5	0.1	13.8	-1.4	4.4	-1.3	11.5	-2.8	96.8	93.4

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

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 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 over-invoicing 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 United Nations Statistics Division's Monthly Bulletin of Statistics database, the World Bank Africa Database, the U.S. Bureau of Labor Statistics, Japan Customs, 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 quantum 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. 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 (f.o.b.) or imports (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.



Direction of trade

High-income importers

Source of exports	% of world trade, 2006				
	European Union	Japan	United States	Other high-income	Total
High-income economies	29.1	2.6	8.7	10.3	50.8
European Union	22.8	0.5	2.8	2.5	28.6
Japan	0.8	..	1.2	1.6	3.6
United States	1.9	0.5	..	3.3	5.7
Other high-income economies	3.6	1.7	4.7	2.9	12.9
Low- and middle-income economies	8.2	1.8	6.3	5.1	21.4
East Asia & Pacific	2.0	1.3	2.4	3.7	9.5
China	1.5	0.8	1.7	2.5	6.4
Europe & Central Asia	3.7	0.1	0.2	0.2	4.2
Russian Federation	1.3	0.0	0.1	0.1	1.5
Latin America & Caribbean	0.8	0.1	2.7	0.4	4.1
Brazil	0.3	0.0	0.2	0.1	0.6
Middle East & N. Africa	0.9	0.1	0.3	0.3	1.6
Algeria	0.2	0.0	0.1	0.0	0.4
South Asia	0.3	0.0	0.2	0.3	0.9
India	0.2	0.0	0.2	0.3	0.7
Sub-Saharan Africa	0.5	0.1	0.5	0.1	1.2
South Africa	0.2	0.1	0.1	0.0	0.3
World	37.3	4.4	15.1	15.4	72.2

Low- and middle-income importers

	% of world trade, 2006						
	East Asia & Pacific	Europe & Central Asia	Latin America & Caribbean	Middle East & N. Africa	South Asia	Sub-Saharan Africa	Total
Source of exports							
High-income economies	7.3	4.0	3.1	1.1	1.0	0.9	17.4
European Union	1.0	3.4	0.7	0.7	0.3	0.5	6.5
Japan	1.3	0.1	0.2	0.0	0.1	0.1	1.8
United States	0.7	0.2	1.8	0.1	0.1	0.1	3.0
Other high-income economies	4.4	0.4	0.5	0.3	0.5	0.3	6.2
Low- and middle-income economies	2.3	2.6	1.5	0.7	0.6	0.6	8.3
East Asia & Pacific	1.2	0.5	0.4	0.2	0.3	0.2	2.8
China	0.4	0.4	0.3	0.1	0.2	0.2	1.6
Europe & Central Asia	0.2	1.8	0.0	0.2	0.1	0.0	2.4
Russian Federation	0.1	0.7	0.0	0.0	0.0	0.0	0.9
Latin America & Caribbean	0.3	0.1	1.0	0.1	0.0	0.1	1.5
Brazil	0.1	0.0	0.3	0.0	0.0	0.0	0.5
Middle East & N. Africa	0.2	0.1	0.0	0.2	0.0	0.1	0.6
Algeria	0.0	0.0	0.0	0.0	0.0	0.0	0.0
South Asia	0.1	0.0	0.0	0.0	0.1	0.1	0.4
India	0.1	0.0	0.0	0.0	0.1	0.1	0.3
Sub-Saharan Africa	0.2	0.0	0.1	0.0	0.0	0.2	0.5
South Africa	0.0	0.0	0.0	0.0	0.0	0.1	0.1
World	9.7	6.6	4.7	1.7	1.6	1.5	25.7

Direction and growth of merchandise trade

6.3

GLOBAL LINKS

Nominal growth of trade

High-income importers

Source of exports	annual % growth, 1996–2006				Total
	European Union	Japan	United States	Other high-income	
High-income economies	6.8	3.7	6.2	5.7	6.3
European Union	7.0	2.1	8.6	5.7	6.9
Japan	3.5	..	2.7	4.4	3.6
United States	5.0	–1.2	..	4.8	4.2
Other high-income economies	7.4	6.6	6.0	7.4	6.8
Low- and middle-income economies	14.1	8.5	13.1	13.6	13.1
East Asia & Pacific	16.2	8.5	15.9	13.8	13.8
China	23.8	11.5	22.5	18.8	19.3
Europe & Central Asia	16.3	6.3	9.2	13.4	15.4
Russian Federation	16.3	4.9	3.3	7.5	14.1
Latin America & Caribbean	9.1	5.2	10.6	11.8	10.2
Brazil	8.7	2.5	10.2	14.0	9.5
Middle East & N. Africa	11.8	8.5	28.5	13.4	13.4
Algeria	15.2	6.9	24.0	25.4	18.1
South Asia	9.9	3.4	11.3	13.9	11.1
India	11.3	6.1	13.0	16.2	13.0
Sub-Saharan Africa	10.7	25.3	15.9	15.4	13.7
South Africa	6.9	7.1	4.7	1.3	5.6
World	7.9	5.3	8.5	7.6	7.8

Low- and middle-income importers

Source of exports	annual % growth, 1996–2006						Total
	East Asia & Pacific	Europe & Central Asia	Latin America & Caribbean	Middle East & N. Africa	South Asia	Sub-Saharan Africa	
High-income economies	10.0	11.9	6.8	7.9	9.3	7.5	9.4
European Union	7.8	12.3	5.8	7.0	8.5	6.6	9.4
Japan	7.2	16.7	5.5	5.5	5.0	4.9	7.2
United States	8.6	6.5	7.3	6.0	10.0	7.0	7.6
Other high-income economies	11.8	10.5	6.7	12.1	10.6	10.5	11.1
Low- and middle-income economies	17.8	14.1	12.2	16.1	17.0	17.9	15.2
East Asia & Pacific	17.1	27.5	22.8	20.1	20.1	22.2	20.0
China	21.5	31.6	27.7	26.8	26.5	26.0	26.2
Europe & Central Asia	11.1	12.4	10.7	15.0	15.7	14.8	12.6
Russian Federation	11.3	11.8	9.5	17.7	15.1	15.0	12.0
Latin America & Caribbean	19.0	13.1	9.3	9.9	18.7	15.6	11.2
Brazil	16.3	16.3	11.4	16.2	14.4	18.6	13.4
Middle East & N. Africa	22.8	11.1	13.9	18.7	12.2	23.2	17.5
Algeria	43.3	4.3	13.2	18.1	8.0	23.1	11.3
South Asia	19.0	11.2	21.9	15.6	17.0	16.3	17.0
India	20.5	12.1	25.9	19.0	14.9	17.0	18.0
Sub-Saharan Africa	30.1	17.2	22.7	8.8	2.9	15.3	18.6
South Africa	6.7	8.1	10.5	11.7	7.1	4.1	5.7
World	11.4	12.8	8.2	10.3	11.6	10.1	10.9



6.3

Direction and growth of merchandise trade

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 developed and 23 developing countries report trade on a timely basis, covering about 80 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.)

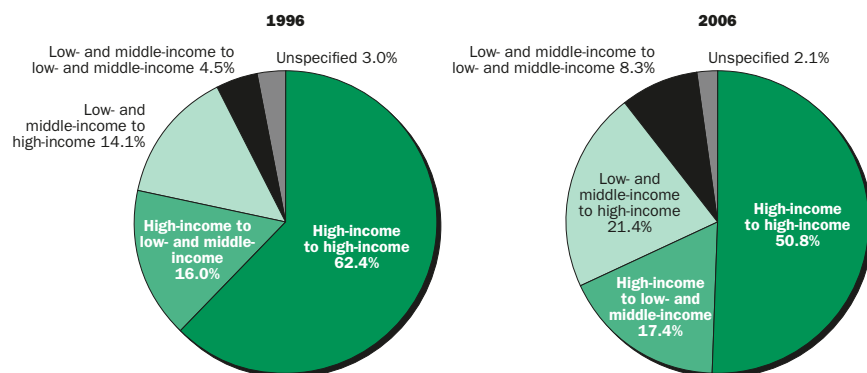
The regional trade flows in the table are calculated from current price values. The growth rates are in nominal terms; that is, they include the effects of changes in both volumes and prices.

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 inside front cover).
- **European Union** is defined as all high-income EU members: Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Malta, the Netherlands, Portugal, 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 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 integration of low- and middle-income economies in global merchandise trade increased substantially during 1996–2006

6.3a



Trade between low- and middle-income economies accounted for about 8.3 percent of world merchandise trade in 2006, compared with 4.5 percent in 1996. The share of trade from low- and middle-income economies to high-income economies increased 7.3 percentage points between 1996 and 2006.

Source: 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.

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

6.4

GLOBAL LINKS

Exports to low-income economies

	High-income economies		European Union ^a		Japan		United States	
	1996	2006	1996	2006	1996	2006	1996	2006
Total (\$ billions)	73.8	165.0	34.5	68.7	8.3	14.5	8.9	18.8
% of total exports								
Food	8.3	5.7	8.8	6.3	0.5	0.4	16.5	10.6
Cereals	3.2	1.8	3.0	1.7	0.2	0.1	12.8	6.1
Agricultural raw materials	2.1	1.9	1.2	1.4	1.5	1.4	3.9	4.1
Ores and nonferrous metals	2.2	3.3	1.6	2.2	0.8	1.5	1.8	2.5
Fuels	5.2	9.5	3.3	5.5	1.2	0.9	1.4	2.9
Crude petroleum	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
Petroleum products	3.9	6.7	3.2	5.3	1.1	0.5	1.3	2.3
Manufactured goods	80.4	75.9	83.2	81.6	94.8	92.6	72.7	72.1
Chemical products	12.0	11.9	12.1	11.0	7.2	7.2	11.7	10.7
Iron and steel	3.8	3.3	4.3	3.0	6.7	9.4	1.6	1.4
Machinery and transport equipment	43.9	42.1	43.3	44.4	66.6	61.8	49.7	47.6
Furniture	0.2	0.2	0.3	0.4	0.1	0.2	0.1	0.2
Textiles	4.3	3.1	1.7	1.3	3.7	3.3	1.5	1.6
Footwear	0.1	0.1	0.2	0.1	0.0	0.0	0.1	0.1
Other	16.0	15.2	21.2	21.6	10.5	10.6	7.9	10.6
Miscellaneous goods	1.8	3.7	1.9	3.1	1.1	3.2	3.7	7.8

Imports from low-income economies

Total (\$ billions)	81.4	217.1	38.1	81.2	8.5	15.7	18.3	77.2
% of total imports								
Food	18.9	9.7	23.6	13.8	25.9	14.1	8.9	4.6
Cereals	0.9	0.5	0.4	0.4	0.1	0.3	0.2	0.2
Agricultural raw materials	6.2	1.9	6.9	3.1	8.0	1.6	2.6	0.9
Ores and nonferrous metals	4.7	4.8	4.1	6.3	13.6	9.0	1.8	0.7
Fuels	21.1	31.7	15.5	18.6	16.5	39.8	36.0	43.2
Crude petroleum	19.6	25.0	15.0	13.0	13.4	29.3	33.5	39.6
Petroleum products	1.3	4.8	0.4	2.3	2.1	8.4	2.4	2.4
Manufactured goods	48.7	51.4	49.6	57.8	35.8	35.0	50.2	50.0
Chemical products	2.7	3.9	2.3	4.1	1.3	2.8	2.3	3.0
Iron and steel	1.1	2.0	0.7	2.3	2.0	1.0	1.1	1.7
Machinery and transport equipment	3.6	5.9	3.7	6.0	1.4	10.7	2.2	4.4
Furniture	0.4	1.5	0.3	1.5	0.8	1.6	0.2	1.9
Textiles	24.1	22.2	25.0	27.2	17.7	8.6	27.4	25.5
Footwear	1.7	2.9	2.8	5.2	0.6	2.1	0.7	1.6
Other	15.2	13.0	14.7	11.6	12.0	8.2	16.2	12.0
Miscellaneous goods	0.3	0.6	0.3	0.4	0.2	0.5	0.5	0.7

Simple applied tariff rates on imports from low-income economies (%)^b

Food	9.2	5.9	9.7	6.5	13.0	5.6	4.6	3.1
Cereals	14.9	7.4	42.7	20.6	14.4	13.4	6.5	1.3
Agricultural raw materials	2.4	1.8	0.3	0.3	1.1	0.5	1.1	0.3
Ores and nonferrous metals	1.8	1.6	0.6	0.5	2.7	0.0	0.3	0.3
Fuels	3.8	1.8	0.0	0.1	1.3	0.3	2.5	1.4
Crude petroleum	7.8	1.0	0.0	0.0	0.0	0.0	0.0	0.0
Petroleum products	3.7	2.1	0.0	0.2	1.7	0.6	2.5	2.1
Manufactured goods	5.0	3.7	1.6	1.1	4.2	2.2	6.9	4.1
Chemical products	3.1	2.5	1.4	1.8	1.1	0.1	2.4	0.9
Iron and steel	3.2	2.2	0.4	0.3	0.3	0.2	3.6	0.2
Machinery and transport equipment	2.4	2.0	0.4	0.4	0.0	0.0	1.6	0.4
Furniture	3.7	3.4	0.2	0.0	0.2	0.0	4.6	0.8
Textiles	8.8	6.4	4.2	2.6	6.9	4.9	13.7	9.5
Footwear	11.9	6.7	4.1	2.5	11.0	9.1	19.6	9.9
Other	3.0	2.5	0.6	0.4	1.4	0.9	3.2	0.9
Miscellaneous goods	5.3	1.3	0.9	0.4	0.0	0.0	3.5	0.1
Average	5.4	3.9	2.5	1.7	5.3	2.4	6.2	3.8



6.4

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

Exports to middle-income economies

	High-income economies		European Union ^a		Japan		United States	
	1996	2006	1996	2006	1996	2006	1996	2006
Total (\$ billions)	693.4	1,698.0	292.9	760.2	98.3	199.6	157.2	305.0
% of total exports								
Food	7.9	4.8	8.4	5.0	0.3	0.4	11.9	8.6
Cereals	2.2	0.9	1.5	0.6	0.0	0.0	5.0	2.5
Agricultural raw materials	2.0	1.9	1.4	1.4	1.1	0.9	3.1	3.8
Ores and nonferrous metals	1.9	3.8	1.6	2.7	1.4	3.4	1.7	4.3
Fuels	2.5	4.4	1.8	2.6	0.7	0.9	2.6	4.9
Crude petroleum	0.1	0.3	0.2	0.1	0.0	0.0	0.0	0.0
Petroleum products	1.8	3.5	1.4	2.2	0.6	0.9	1.8	4.4
Manufactured goods	83.4	82.2	84.4	85.3	95.1	90.7	76.9	74.5
Chemical products	10.8	12.8	12.2	13.0	6.6	9.0	11.0	12.7
Iron and steel	2.8	3.4	3.0	3.7	5.7	6.1	1.1	1.2
Machinery and transport equipment	48.5	48.1	46.0	47.9	67.7	61.7	45.8	45.0
Furniture	0.6	0.5	1.0	0.8	0.1	0.2	0.6	0.4
Textiles	5.7	3.5	5.8	4.2	3.0	1.9	4.8	3.0
Footwear	0.3	0.2	0.5	0.4	0.0	0.0	0.1	0.0
Other	14.6	13.7	16.1	15.3	11.9	11.8	13.7	12.3
Miscellaneous goods	2.3	3.0	2.4	3.1	1.5	3.8	3.8	3.8

Imports from middle-income economies

	848.3	2,679.3	281.6	1,006.7	107.2	234.9	247.2	826.2
Total (\$ billions)								
% of total imports								
Food	10.9	5.9	14.0	7.1	15.4	8.3	7.8	4.6
Cereals	0.3	0.3	0.3	0.3	0.4	0.3	0.2	0.1
Agricultural raw materials	3.1	1.4	3.9	1.8	5.1	2.3	1.7	1.0
Ores and nonferrous metals	5.2	5.4	6.5	5.9	8.7	11.0	2.9	2.9
Fuels	14.6	18.8	18.8	22.8	18.1	16.4	13.4	18.9
Crude petroleum	9.4	12.7	12.2	15.3	9.5	7.9	10.1	15.1
Petroleum products	2.5	3.4	3.4	4.4	1.4	1.5	3.0	3.2
Manufactured goods	64.3	67.0	54.1	60.8	51.5	60.8	72.1	70.6
Chemical products	3.6	3.4	4.7	3.4	2.8	3.8	2.3	2.5
Iron and steel	2.7	2.8	2.7	3.4	1.7	1.4	2.1	2.3
Machinery and transport equipment	24.1	33.2	16.0	28.3	15.1	26.8	32.9	35.7
Furniture	1.5	2.1	1.7	2.0	1.5	1.6	1.7	3.1
Textiles	13.2	8.5	13.5	8.5	14.9	10.5	11.9	8.1
Footwear	2.8	1.5	1.6	1.3	1.7	1.1	4.0	2.0
Other	16.5	15.4	13.9	14.0	13.9	15.6	17.2	16.8
Miscellaneous goods	1.8	1.4	2.8	1.5	1.2	1.3	2.0	2.0

Simple applied tariff rates on imports from middle-income economies^b (%)

Food	12.5	7.3	20.3	11.9	14.4	7.7	2.9	2.4
Cereals	16.9	10.2	42.2	28.5	22.8	12.0	1.6	0.8
Agricultural raw materials	2.4	1.9	1.1	0.4	0.6	0.6	0.5	0.4
Ores and nonferrous metals	1.4	1.1	1.1	0.7	0.5	0.1	0.5	0.5
Fuels	3.5	1.7	0.1	0.1	0.6	0.3	0.9	1.4
Crude petroleum	13.4	1.2	0.0	0.0	0.0	0.0	0.0	0.0
Petroleum products	3.6	2.2	0.1	0.2	1.1	0.6	1.2	2.1
Manufactured goods	4.6	3.5	2.3	1.1	1.9	2.2	3.7	2.8
Chemical products	3.1	2.4	1.7	1.8	1.4	0.3	1.4	1.0
Iron and steel	2.7	1.5	0.8	0.2	0.6	0.2	3.2	0.2
Machinery and transport equipment	2.7	2.1	0.8	0.4	0.0	0.0	0.6	0.3
Furniture	4.5	3.9	0.4	0.0	0.0	0.0	0.5	0.3
Textiles	9.0	6.9	6.2	3.0	4.9	6.8	10.6	8.5
Footwear	10.4	7.0	6.1	3.0	15.4	17.9	13.0	8.3
Other	3.2	2.7	1.1	0.4	0.5	0.7	1.0	0.7
Miscellaneous goods	4.0	1.2	2.2	0.4	0.0	0.0	0.7	0.3
Average	5.3	3.8	3.9	2.1	3.2	2.6	3.4	2.6

a. Tariff data are from the Trade Analysis and Information System (TRAIS) database and may have a different country coverage than that for the 20 EU members whose trade values are reported. b. Includes ad valorem equivalents of specific rates.

About the data

Developing countries 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, China, in December 2005, achieving a more pro-development outcome from trade remains a challenge. Meeting it 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, 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.

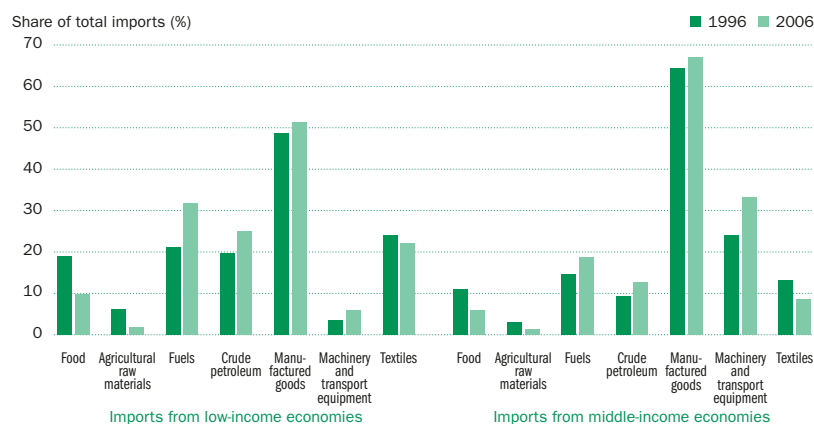
The data are from the United Nations Conference on Trade and Development (UNCTAD). Partner country reports by high-income economies were used for both exports and imports. Because of differences in sources of data, timing, and treatment of missing data, the numbers in the table may not be fully comparable with those used to calculate the direction of trade statistics in table 6.3 or the aggregate flows in tables 4.4, 4.5, and 6.2. Tariff line data were matched to Standard International Trade Classification (SITC) revision 1 codes to define commodity groups. For further discussion of merchandise trade statistics, see *About the data* for tables 4.4, 4.5, 6.2, and 6.3, and for information about tariff barriers, see table 6.7.

Definitions

The product groups in the table are defined in accordance with the SITC revision 1: **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** (331), and **petroleum products** (332); **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 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 (see inside front cover). • **European Union** is defined as all high-income EU members: Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Malta, the Netherlands, Portugal, Slovenia, Spain, Sweden, and the United Kingdom.

The composition of high-income economies' imports from low- and middle-income economies has changed over the last decade

6.4a



The shares of high-income economies' imports of food, agricultural raw materials, and textiles from low- and middle-income economies dropped noticeably between 1996 and 2006, while the shares of fuels (especially crude petroleum) and machinery and transport equipment have increased considerably.

Source: 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 Trade Analysis and Information System database and are calculated by World Bank staff using the World Integrated Trade Solution system.



	1970	1980	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007
World Bank commodity price index (1990 = 100)												
Nonenergy commodities	156	159	100	104	89	84	89	91	100	114	140	158
Agriculture	163	175	100	112	90	84	93	95	98	106	116	131
Beverages	203	230	100	129	91	76	91	87	88	109	113	125
Food	166	177	100	100	87	91	97	96	103	103	111	131
Raw materials	130	133	100	116	93	81	89	98	99	107	126	134
Fertilizers	108	164	100	88	109	105	108	106	118	126	126	204
Metals and minerals	144	120	100	87	85	80	78	82	105	133	198	220
Petroleum	19	204	100	64	127	113	117	126	154	218	258	279
Steel products ^a	111	100	100	91	79	71	73	79	114	129	124	121
MUV G-5 index	28	79	100	117	97	94	93	100	107	107	109	111

Commodity prices (1990 prices)

Agricultural raw materials												
Cotton (cents/kg)	225	260	182	182	134	112	109	140	128	114	116	125
Logs, Cameroon (\$/cu. m) ^a	153	319	344	290	283	282	253	279	310	312	293	343
Logs, Malaysian (\$/cu. m)	154	248	177	218	195	169	175	187	184	190	220	241
Rubber (cents/kg)	145	181	86	135	69	61	82	108	122	140	194	206
Sawnwood, Malaysian (\$/cu. m)	625	503	533	632	612	510	565	550	543	616	689	725
Tobacco (\$/mt)	3,836	2,887	3,392	2,258	3,063	3,185	2,947	2,643	2,560	2,606	2,730	2,966

Beverages (cents/kg)

Cocoa	240	330	127	122	93	113	191	175	145	144	146	176
Coffee, robustas	330	411	118	237	94	64	71	81	74	104	137	172
Coffee, Arabica	409	440	197	285	198	146	146	141	166	237	232	245
Tea, avg., 3 auctions	298	211	206	127	193	169	162	151	157	154	172	183

Energy

Coal, Australian (\$/mt)	0	51	40	34	27	34	27	26	49	44	45	59
Coal, U.S. (\$/mt)	0	55	42	33	34	48	43	..	..	..	..	..
Natural gas, Europe (\$/mmbtu)	0	4	3	2	4	4	3	4	4	6	8	8
Natural gas, U.S. (\$/mmbtu)	1	2	2	1	4	4	4	5	6	8	6	6
Petroleum (\$/bbl)	4	47	23	15	29	26	27	29	35	50	59	64

About the data

Primary commodities—raw or partially processed materials that will be transformed into finished goods—are often the most significant exports of developing countries, and revenues obtained from them have an important effect on living standards. Price data for primary commodities are collected from a variety of sources, including trade journals, international study groups, government market surveys, newspaper and wire service reports, and commodity exchange spot and near-term forward prices.

The table is based on frequently updated price reports. When available, the prices received by exporters are used; otherwise, the prices paid by

importers are used. Annual price series are generally simple averages based on higher frequency data. The constant price series in the table is deflated using the manufactures unit value (MUV) index for the Group of Five (G-5) countries (see below).

The commodity price indexes are calculated as Laspeyres index numbers, in which the fixed weights are the 1987–89 export values for low- and middle-income economies rebased to 1990. Each index represents a fixed basket of primary commodity exports. The nonenergy commodity price index contains 37 price series for 31 nonenergy commodities.

Separate indexes are compiled for petroleum 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 the Standard International Trade Classification revision 1. To construct the MUV G-5 index, unit value indexes for each country are combined using weights determined by each country's export share.

Primary commodity prices

6.5

GLOBAL LINKS

	1970	1980	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007
Commodity prices (continued)												
(1990 prices)												
Fertilizers (\$/mt)												
Phosphate rock	39	59	41	30	45	44	43	38	38	39	41	64
Triple superphosphate	152	229	132	128	142	135	143	149	174	188	185	305
Food												
Fats and oils (\$/mt)												
Coconut oil	1,417	855	337	572	463	337	452	467	617	576	558	826
Groundnut oil	1,350	1,090	964	846	734	721	738	1,242	1,085	991	892	1,216
Palm oil	927	740	290	536	319	303	419	443	440	394	440	701
Soybeans	417	376	247	221	218	208	228	264	286	257	247	345
Soybean meal	367	332	200	168	195	192	188	211	225	200	192	276
Soybean oil	1,021	758	447	534	348	375	488	553	576	509	550	792
Grains (\$/mt)												
Sorghum	185	164	104	102	91	101	109	106	103	90	113	146
Maize	208	159	109	105	91	95	107	105	104	92	112	147
Rice	450	521	271	274	208	183	206	197	222	267	280	293
Wheat	196	219	136	151	117	134	159	146	147	142	177	229
Other food												
Bananas (\$/mt)	590	481	541	380	436	618	568	374	490	563	623	608
Beef (cents/kg)	465	350	256	163	199	226	226	198	235	245	234	234
Oranges (\$/mt)	599	496	531	454	374	631	606	680	803	817	763	860
Sugar, EU domestic (cents/kg)	40	62	58	59	57	56	59	60	63	62	59	61
Sugar, U.S. domestic (cents/kg)	59	84	51	43	44	50	50	47	42	44	45	41
Sugar, world (cents/kg)	29	80	28	25	19	20	16	16	15	20	30	20
Metals and minerals												
Aluminum (\$/mt)	1,982	1,847	1,639	1,542	1,594	1,531	1,449	1,430	1,603	1,774	2,363	2,372
Copper (\$/mt)	5,038	2,768	2,662	2,508	1,866	1,673	1,674	1,777	2,678	3,437	6,182	6,399
Iron ore (cents/dmtu)	35	36	33	24	30	32	31	32	35	61	71	76
Lead (cents/kg)	108	115	81	54	47	50	49	51	83	91	119	232
Nickel (\$/mt)	10,148	8,270	8,864	7,028	8,888	6,303	7,271	9,617	12,915	13,776	22,305	33,462
Tin (cents/kg)	1,310	2,128	609	531	559	475	436	489	795	690	807	1,307
Zinc (cents/kg)	105	97	151	88	116	94	84	83	98	129	301	291

a. Series not included in the nonenergy index.

Definitions

• **Nonenergy commodity price index** covers the 31 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 rice, wheat, maize, sorghum, soybeans, soybean oil, soybean meal, palm oil, coconut oil, groundnut oil, bananas, beef, oranges, and sugar. • **Agricultural raw materials** include cotton, timber (logs and sawnwood), natural rubber, and tobacco. • **Fertilizers** include phosphate rock and triple superphosphate. • **Metals and minerals** include aluminum, copper, iron ore,

lead, nickel, tin, and zinc. • **Petroleum price index** refers to the average spot price of Brent, Dubai, and West Texas Intermediate crude oils, equally weighted.

• **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 China and the United States, weighted by product shares of apparent combined consumption (volume of deliveries) for Germany, Japan, and the United States. • **MUV G-5 index** is the manufactures unit value index for G-5 country exports to low- and middle-income economies. • **Commodity prices**—for definitions and sources, see “Commodity price

data” (also known as the “Pink Sheet”) at the Global Prospects Web site (www.worldbank.org/prospects, click on Products).

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 on the Web at www.worldbank.org/prospects.



Merchandise exports within bloc

	Year of creation	Year of entry into force of the most recent agreement	Type of the most recent agreement ^a	\$ millions						
				1990	1995	2000	2003	2004	2005	2006
High-income and low- and middle-income economies										
APEC ^b	1989		None	901,560	1,688,708	2,261,791	2,436,516	2,924,291	3,309,117	3,763,569
CEFTA ^c	1992	1994	FTA	322	2,886	2,136	3,147	3,915	5,382	6,474
CIS	1991	1994	FTA	..	31,529	28,753	38,576	43,446	59,423	66,583
EEA	1994	1994	EIA	1,070,201	1,444,732	1,680,468	2,175,403	2,589,764	2,780,586	3,142,002
EFTA	1960	2002	EIA	782	925	831	967	1,128	1,252	1,524
European Union ^c	1957	1958	EIA, CU	1,022,933	1,385,805	1,608,174	2,087,311	2,482,418	2,649,078	2,987,188
NAFTA	1994	1994	FTA	226,273	394,472	676,141	651,060	737,591	824,550	902,085
SPARTECA	1981	1981	PS	4,737	8,535	8,139	10,864	13,047	14,413	14,531
Trans-Pacific SEP	2006	2006	EIA, FTA	1,110	2,614	1,438	1,621	2,096	2,345	2,927
Latin America and the Caribbean										
Andean Community	1969	1988	CU	1,312	4,812	5,293	5,064	7,619	8,676	11,300
CACM	1961	1961	CU	667	1,594	2,586	3,156	3,574	4,064	5,022
CARICOM	1973	1997	EIA	456	877	1,078	1,419	1,746	2,090	2,429
LAIA (ALADI)	1980	1981	PS	13,350	35,986	44,252	40,425	57,732	71,711	91,651
MERCOSUR	1991	2005	EIA	4,909	16,811	20,082	13,765	19,675	24,211	30,902
OECS	1981 ^d	1981 ^d	NNA	29	39	38	48	60	68	84
Middle East and Asia										
ASEAN	1967	1992	FTA	27,365	79,544	98,060	116,831	141,934	165,169	194,321
Bangkok Agreement	1975	1976	PS	2,429	21,728	37,895	70,845	99,369	127,277	150,545
EAEC	1997	1997	CU	..	13,556	15,467	19,933	17,291	27,297	27,930
ECO	1985	2003 ^d	PS	1,243	4,746	4,518	7,468	9,989	13,936	19,053
GCC	1981	2003	CU	6,906	6,832	7,954	9,915	12,532	16,507	20,050
PAFTA (GAFTA)	1997	1998	FTA	13,204	12,948	16,140	21,918	35,328	44,468	54,862
SAARC ^e	1985	1995	PS	863	2,024	2,680	4,954	5,830	7,266	9,109
UMA	1989	1994 ^d	NNA	958	1,109	1,094	1,338	1,375	1,926	2,400
Sub-Saharan Africa										
CEMAC	1994	1999	CU	139	120	96	146	174	198	245
COMESA	1994	1994	FTA	1,164	1,390	1,448	2,041	2,427	2,869	3,546
EAC	1996	2000	CU	230	530	595	706	750	857	1,059
ECCAS	1983	2004 ^d	NNA	163	163	191	198	240	271	334
ECOWAS	1975	1993	PS	1,532	1,875	2,715	3,037	4,366	5,497	5,957
Indian Ocean Commission	1984	2005 ^d	NNA	73	127	106	179	155	159	172
SADC	1992	2000	FTA	677	1,015	4,383	5,609	6,590	7,668	8,571
UEMOA	1994	2000	CU	621	560	741	1,076	1,233	1,390	1,545

Note: Regional bloc memberships are as follows: **Andean Community**, Bolivia, Colombia, Ecuador, Peru, and Bolivarian Republic of Venezuela; **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 (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; **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; **Bangkok Agreement**, Bangladesh, China, India, the Republic of Korea, the Lao People's Democratic Republic, and Sri Lanka; **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)**, Bulgaria, Croatia, Macedonia, Romania, and Slovenia; **Common Market for Eastern and Southern Africa (COMESA)**, Angola, 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, Russian Federation, Tajikistan, Turkmenistan, Ukraine, and Uzbekistan; **East African Community (EAC)**, Kenya, Tanzania, and Uganda; **Economic and Monetary Community of Central Africa (CEMAC; formerly Union Douanière et Economique de l'Afrique Centrale [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, Rwanda, and São Tomé and Príncipe; **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

Merchandise exports within bloc

		Year of entry into force of the most recent agreement	Type of agreement ^a	% of total bloc exports						
	Year of creation			1990	1995	2000	2003	2004	2005	2006
High-income and low- and middle-income economies										
APEC ^b	1989		None	68.3	71.7	73.1	72.7	72.2	70.8	69.4
CEFTA ^c	1992	1994	FTA	4.1	10.5	7.3	7.0	6.8	7.8	7.9
CIS	1991	1994	FTA	..	28.6	20.0	20.3	17.6	18.0	16.5
EEA	1994	1994	EIA	68.6	67.5	68.1	68.4	68.1	67.5	67.7
EFTA	1960	2002	EIA	0.8	0.7	0.6	0.6	0.5	0.5	0.6
European Union ^c	1957	1958	EIA, CU	67.1	66.1	66.8	67.2	66.8	66.0	66.2
NAFTA	1994	1994	FTA	41.4	46.2	55.7	56.1	55.9	55.8	53.8
SPARTECA	1981	1981	PS	9.4	12.1	10.2	11.8	11.6	10.8	9.6
Trans-Pacific SEP	2006	2006	EIA, FTA	1.5	1.7	0.8	0.8	0.8	0.8	0.8
Latin America and the Caribbean										
Andean Community	1969	1988	CU	4.1	12.0	8.9	8.9	9.7	8.2	8.1
CACM	1961	1961	CU	15.3	21.8	19.1	20.2	20.9	18.9	16.2
CARICOM	1973	1997	EIA	8.0	12.1	14.4	12.0	12.2	11.5	11.1
LAIA (ALADI)	1980	1981	PS	11.6	17.3	13.2	11.5	13.2	13.6	14.3
MERCOSUR	1991	2005	EIA	7.6	18.9	16.4	10.3	11.1	11.0	11.6
OECS	1981 ^a	1981	NNA	8.1	12.6	10.0	7.6	11.7	11.4	8.0
Middle East and Asia										
ASEAN	1967	1992	FTA	18.9	24.5	23.0	24.7	24.9	25.3	24.9
Bangkok Agreement	1975	1976	NNA	1.6	6.8	8.0	10.0	10.6	11.0	10.7
EAEC	1997	1997	CU	..	14.8	12.5	12.6	8.5	9.6	8.0
ECO	1985	2003 ^d	PS	3.2	7.9	5.6	6.6	6.7	7.6	8.5
GCC	1981	2003	CU	8.0	6.8	4.8	5.2	5.0	4.8	4.8
PAFTA (GAFTA)	1997	1998	FTA	10.2	9.8	7.2	8.7	10.0	9.8	9.7
SAARC ^e	1985	1995	PS	3.2	4.4	4.2	5.8	5.7	5.6	5.6
UMA	1989	1994 ^d	NNA	2.9	3.8	2.3	2.4	1.9	2.0	2.0
Sub-Saharan Africa										
CEMAC	1994	1999	CU	2.3	2.1	1.0	1.4	1.2	0.9	0.9
COMESA	1994	1994	FTA	4.2	5.4	3.7	4.4	4.1	3.4	3.2
EAC	1996	2000	CU	13.4	17.4	20.5	18.3	16.7	15.1	16.5
ECCAS	1983	2004 ^d	NNA	1.4	1.5	1.1	1.0	0.9	0.6	0.6
ECOWAS	1975	1993	PS	8.0	9.0	7.6	8.5	9.3	9.3	8.3
Indian Ocean Commission	1984	2005 ^d	NNA	4.1	6.0	4.4	6.2	4.3	4.6	4.7
SADC	1992	2000	FTA	6.8	9.2	9.4	10.1	9.7	9.2	9.1
UEMOA	1994	2000	CU	13.0	10.3	13.1	13.3	12.9	13.4	13.1

Kyrgyz Republic, Pakistan, Tajikistan, Turkey, Turkmenistan, and Uzbekistan; **Eurasian Economic Community (EAEC)**, Belarus, Kazakhstan, Kyrgyz Republic, 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, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, the Netherlands, Malta, Poland, Portugal, 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; **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; **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)**, 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, Micronesia (Federated States of), 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, Malawi, Madagascar, Mauritius, Mozambique, Namibia, 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 (UEMOA)**, Benin, Burkina Faso, Côte d'Ivoire, Guinea-Bissau, Mali, Niger, Senegal, and Togo.



Merchandise exports by bloc

	Year of creation	Year of entry into force of the most recent agreement	Type of agreement ^a	1990	1995	2000	2003	2004	2005	2006
% of world exports										
High-income and low- and middle-income economies										
APEC ^b	1989		None	39.0	46.3	48.5	44.6	44.4	45.1	45.3
CEFTA ^c	1992	1994	FTA	0.2	0.5	0.5	0.6	0.6	0.7	0.7
CIS	1991	1994	FTA	0.0	2.2	2.2	2.5	2.7	3.2	3.4
EEA	1994	1994	EIA	46.1	42.1	38.7	42.3	41.6	39.7	38.8
EFTA	1960	2002	EIA	2.9	2.4	2.2	2.3	2.3	2.3	2.3
European Union ^c	1957	1958	EIA, CU	45.1	41.3	37.7	41.4	40.7	38.7	37.7
NAFTA	1994	1994	FTA	16.2	16.8	19.0	15.4	14.5	14.3	14.0
SPARTECA	1981	1981	PS	1.5	1.4	1.3	1.2	1.2	1.3	1.3
Trans-Pacific SEP	2006	2006	EIA, FTA	2.2	3.0	2.7	2.7	2.8	2.9	3.0
Latin America and the Caribbean										
Andean Community	1969	1988	CU	0.9	0.8	0.9	0.8	0.9	1.0	1.2
CACM	1961	1961	CU	0.1	0.1	0.2	0.2	0.2	0.2	0.3
CARICOM	1973	1997	EIA	0.2	0.1	0.1	0.2	0.2	0.2	0.2
LAIA (ALADI)	1980	1981	PS	3.4	4.1	5.3	4.7	4.8	5.1	5.4
MERCOSUR	1991	2005	EIA	1.9	1.8	1.9	1.8	1.9	2.1	2.2
OECS	1981	1981 ^d	NNA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Middle East and Asia										
ASEAN	1967	1992	FTA	4.3	6.4	6.7	6.3	6.2	6.3	6.5
Bangkok Agreement	1975	1976	NNA	4.5	6.3	7.4	9.4	10.3	11.2	11.8
EAEC	1997	1997	CU	0.0	1.8	1.9	2.1	2.2	2.7	2.9
ECO	1985	2003 ^d	PS	1.1	1.2	1.3	1.5	1.6	1.8	1.9
GCC	1981	2003	CU	2.6	2.0	2.6	2.5	2.7	3.3	3.5
PAFTA (GAFTA)	1997	1998	FTA	3.8	2.6	3.5	3.4	3.9	4.4	4.7
SAARC ^e	1985	1995	PS	0.8	0.9	1.0	1.1	1.1	1.3	1.3
UMA	1989	1994 ^d	NNA	1.0	0.6	0.8	0.7	0.8	0.9	1.0
Sub-Saharan Africa										
CEMAC	1994	1999	CU	0.2	0.1	0.1	0.1	0.2	0.2	0.2
COMESA	1994	1994	FTA	0.8	0.5	0.6	0.6	0.7	0.8	0.9
EAC	1996	2000	CU	0.1	0.1	0.0	0.1	0.0	0.1	0.1
ECCAS	1983	2004 ^d	NNA	0.3	0.2	0.3	0.3	0.3	0.4	0.5
ECOWAS	1975	1993	PS	0.6	0.4	0.6	0.5	0.5	0.6	0.6
Indian Ocean Commission	1984	2005 ^d	NNA	0.1	0.0	0.0	0.0	0.0	0.0	0.0
SADC	1992	2000	FTA	0.3	0.2	0.7	0.7	0.7	0.8	0.8
UEMOA	1994	2000	CU	0.1	0.1	0.1	0.1	0.1	0.1	0.1

a. FTA is free trade agreement, CU is customs union, EIA is economic integration agreement, PS is partial scope 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. Members changed and new agreements entered into force in 2007, but are not reflected in the data shown. d. Years of the most recent agreement are collected from official trade bloc website. e. Free trade agreement was signed in 2006 but has not entered into force yet.

About the data

Trade blocs are groups of countries that have established special 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. However, trade flows between many developing countries, particularly in Sub-Saharan Africa, are not well recorded, so the value of intratrade for certain groups may be understated. Data on trade between developing and high-income countries are generally complete.

Membership in the trade blocs shown is based on the most recent information available (see *Data sources*). The table includes the date of each bloc's creation, the date of entry into force of the most recent preferential trade agreement, and the type of the agreement. Other types of preferential trade agreements may have entered into force earlier than those shown in the table and are still effective.

Under a free trade agreement members substantially eliminate all tariff and nontariff barriers but set tariffs on imports from nonmembers. Under a customs union members substantially eliminate all tariff and nontariff barriers among themselves and establish a common external tariff for nonmembers.

An economic integration agreement 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). Partial scope agreements are preferential trade agreements notified to the World Trade Organization (WTO) that are not a free trade agreement, a customs union, or an economic integration agreement. Unless otherwise indicated in the footnotes, information on the type of agreement and date of enforcement are based on the WTO's list of regional trade agreements.

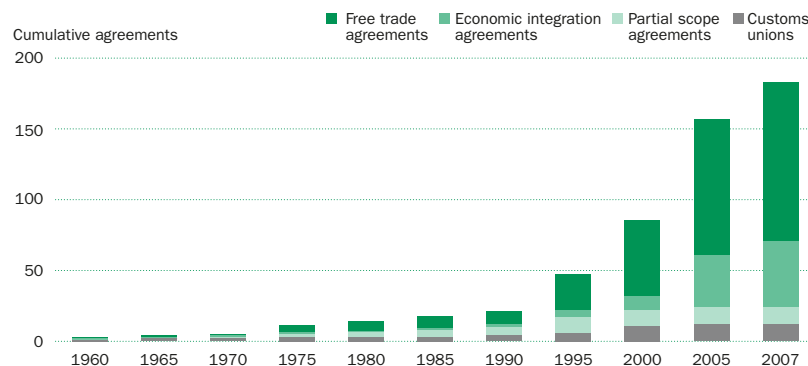
Although bloc exports have been calculated back to 1990 on the basis of current membership, several blocs came into existence after that and membership may have changed over time. For this reason, and because systems of preferences also change over time, intratrade in earlier years may not have been 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 of blocs 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.

The number of trade agreements has increased rapidly since 1990, especially free trade agreements

6.6a



Note: Data are the cumulative number of bilateral and multilateral trade agreements notified to the General Agreement on Tariffs and Trade/World Trade Organization at the time they entered into force. Agreements on accessions of new members to existing agreement are not included. Movements from one kind of agreement to another are taken into account.

Source: World Bank staff calculations based on World Trade Organization's Web portal on regional trade agreements.

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* (2000a), UNCTAD's *Trade and Development Report 2007*, WTO's Web portal on regional trade agreements, and the World Bank's International Trade Unit.



	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		..	..	..	..	..	..	..	..	..	..
Albania	2005	100.0	7.0	6.3	7.1	0.0	6.0	7.3	6.5	6.1	7.3
Algeria	2006	..	..	15.8	10.7	38.7	0.0	15.5	9.3	15.8	11.1
Angola	2006 ^a	100.0	59.2	7.6	6.5	10.4	0.8	11.5	13.1	6.9	5.0
Antigua and Barbuda	2006	97.9	58.7	11.6	12.5	39.7	0.0	13.6	12.0	11.1	12.7
Argentina	2006	100.0	31.9	10.1	5.0	22.1	0.0	7.4	1.4	10.4	5.6
Armenia	2006	100.0	8.5	3.6	1.8	0.0	0.5	5.1	1.5	3.4	2.0
Australia	2006	97.1	10.0	3.9	2.6	5.6	0.3	1.3	0.4	4.3	3.0
Azerbaijan	2005 ^a	..	..	10.4	5.8	0.0	2.8	12.0	5.4	10.2	6.0
Bahamas, The	2006 ^a	..	..	28.5	17.0	77.1	1.4	22.2	20.1	29.8	15.0
Bahrain	2006	72.5	35.8	4.4	5.0	0.2	0.6	5.2	5.5	4.2	4.0
Bangladesh	2006	15.1	161.7	15.5	19.9	41.5	0.1	15.6	8.8	15.5	26.1
Barbados	2006	97.8	78.2	15.0	12.7	45.3	1.0	23.6	10.0	13.8	14.2
Belarus	2002 ^a	..	..	11.3	8.9	16.4	2.2	11.1	7.1	11.3	10.3
Belize	2006	97.9	58.2	11.9	10.2	36.0	1.4	15.7	6.7	11.4	12.4
Benin	2006	39.1	28.6	13.4	11.3	53.4	0.0	13.2	10.9	13.4	11.7
Bermuda	2005 ^a	..	..	17.3	27.0	61.5	2.2	9.0	14.0	18.8	28.2
Bhutan	2005	..	..	22.2	21.5	61.6	0.0	42.6	37.7	17.5	14.5
Bolivia	2006	100.0	40.0	6.5	4.1	0.0	0.0	6.4	3.4	6.5	4.3
Bosnia and Herzegovina	2006 ^a	..	..	7.7	6.4	0.0	5.4	4.0	4.0	8.1	7.5
Botswana	2006	96.3	19.0	8.7	10.5	20.9	1.3	3.6	0.8	9.2	12.4
Brazil	2006	100.0	31.4	12.1	6.7	25.6	0.0	7.7	1.2	12.6	9.0
Brunei	2006	95.3	24.3	2.9	4.0	23.2	1.5	0.1	0.0	3.5	5.0
Bulgaria	2006	100.0	24.7	4.0	1.9	11.6	2.4	8.6	4.2	3.5	1.3
Burkina Faso	2006	38.9	42.2	12.2	9.8	43.5	0.0	11.3	7.8	12.4	11.0
Burundi	2006 ^a	21.2	66.7	14.7	13.5	27.9	0.0	15.1	11.7	14.6	13.8
Cambodia	2005	100.0	19.1	14.1	10.8	20.8	0.0	16.2	11.2	13.8	10.6
Cameroon	2005 ^a	12.6	79.9	19.2	14.5	55.9	0.0	23.0	14.0	18.7	14.8
Canada	2006	99.7	5.1	3.7	0.9	6.5	3.5	1.8	0.3	4.0	1.0
Central African Republic	2005 ^a	62.2	36.2	18.8	17.3	58.3	0.0	23.1	20.2	18.2	15.2
Chad	2005 ^a	12.7	79.9	17.9	13.3	52.5	0.0	23.0	21.7	17.3	11.4
Chile	2006	100.0	25.1	2.3	2.1	0.0	0.0	2.1	1.8	2.3	2.3
China [†]	2006	100.0	10.0	8.9	4.3	12.2	0.2	8.9	3.5	8.9	4.5
Hong Kong, China	2006 ^a	45.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Colombia	2006	100.0	42.8	11.2	8.8	19.2	0.0	10.0	7.9	11.3	8.9
Congo, Dem. Rep.	2006 ^a	100.0	96.2	13.1	11.4	43.3	0.2	14.2	11.3	12.8	11.5
Congo, Rep.	2005 ^a	15.2	27.5	19.3	17.3	57.1	0.0	23.3	21.4	18.7	15.9
Costa Rica	2005 ^a	100.0	42.9	7.0	4.1	0.5	0.0	10.4	6.1	6.6	3.7
Côte d'Ivoire	2006	33.0	11.1	13.5	7.3	49.9	0.0	15.4	4.2	13.1	9.5
Croatia	2006	100.0	5.9	2.4	1.2	3.1	4.0	4.8	2.2	2.1	0.8
Cuba	2006	31.0	21.3	11.3	7.8	11.9	0.0	11.2	5.2	11.3	10.1
Cyprus	2002 ^a	86.2	40.4	9.0	10.4	12.2	4.5	40.4	27.2	5.1	5.1
Czech Republic	2003 ^a	100.0	5.0	5.0	4.4	4.8	0.0	5.6	4.1	5.0	4.4
Djibouti	2006	100.0	41.0	30.2	29.1	87.9	6.3	23.1	23.2	31.3	31.0
Dominica	2006	94.7	58.7	12.3	7.8	38.9	0.0	19.3	5.6	10.9	9.1
Dominican Republic	2006	100.0	34.9	9.3	8.5	28.6	0.2	12.7	7.3	8.8	9.0
Ecuador	2006	99.9	21.8	9.8	6.2	17.7	0.0	9.1	4.4	9.9	6.8
Egypt, Arab Rep.	2005	99.1	36.5	19.1	13.3	23.0	0.1	84.8	17.8	12.0	11.9
El Salvador	2006	99.9	36.6	5.0	4.1	6.6	0.8	5.7	2.5	4.9	5.2
Equatorial Guinea	2005 ^a	..	..	19.0	15.3	56.1	0.0	23.4	18.5	18.3	14.3
Estonia	2003 ^a	100.0	8.6	1.0	0.9	5.4	0.0	8.1	4.0	0.0	0.0
Ethiopia ^b	2006 ^a	..	..	16.4	10.7	49.2	0.1	18.1	12.6	16.3	10.4
European Union ^c	2005	100.0	4.2	2.8	2.1	6.8	9.0	8.2	2.5	1.7	1.8
Gabon	2005 ^a	100.0	21.4	20.1	16.5	61.3	0.0	23.2	19.4	19.6	15.6
Gambia	2003	13.0	101.8	..	..	..	..	..	..	..	..
Georgia	2006	100.0	7.2	5.6	4.7	3.3	0.0	8.6	4.4	5.3	4.8
Ghana	2004 ^a	13.5	92.1	13.2	11.0	45.3	0.3	17.4	17.1	12.4	8.8
Grenada	2006	100.0	56.8	10.7	9.5	35.3	0.0	13.9	9.7	10.2	9.4
Guatemala	2005 ^a	100.0	42.2	6.7	5.8	1.0	0.0	8.8	5.5	6.5	6.0
[†] Data for Taiwan, China	2006	100.0	5.9	5.4	2.4	7.7	1.5	8.3	2.2	5.0	2.4

	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
Guinea	2005 ^a	38.6	20.3	14.2	12.7	58.6	0.7	16.3	14.3	13.9	11.2
Guinea-Bissau	2006	97.7	48.7	12.7	9.1	50.1	0.0	14.3	9.0	12.4	9.2
Guyana	2006	100.0	56.6	11.4	6.2	34.5	0.0	17.8	4.1	10.6	7.9
Honduras	2005 ^a	100.0	32.5	6.7	6.0	0.2	0.0	9.7	7.2	6.4	5.3
Hungary	2002 ^a	96.2	9.8	8.9	7.9	10.9	0.0	17.9	6.7	7.8	8.1
Iceland	2006	95.0	13.5	2.6	1.0	2.0	2.9	2.9	1.4	2.5	0.9
India	2005	73.8	49.6	16.8	14.5	15.7	0.0	24.4	16.5	15.7	12.7
Indonesia	2006	96.6	37.1	6.0	4.3	7.9	0.3	6.6	3.3	5.9	4.6
Iran, Islamic Rep.	2004 ^a	..	..	18.7	13.8	43.4	0.5	14.9	11.2	19.1	14.6
Israel	2006	76.3	20.9	4.5	2.0	1.0	3.5	5.1	1.8	4.4	2.1
Jamaica	2006	100.0	49.6	9.2	9.7	36.1	0.2	16.0	10.1	8.5	9.2
Japan	2006	99.7	3.0	2.7	1.5	7.0	5.8	5.0	1.6	2.3	1.5
Jordan	2006	100.0	16.3	10.9	5.6	31.8	0.1	14.3	3.4	10.4	7.1
Kazakhstan	2004 ^a	..	..	2.4	1.9	0.0	1.5	3.4	3.4	2.3	1.5
Kenya	2006	14.0	95.1	11.9	6.6	36.2	0.4	14.8	6.4	11.6	6.6
Korea, Rep.	2006	94.5	15.7	9.1	7.4	5.5	0.0	21.2	11.4	7.3	4.5
Kuwait	2006	99.9	100.0	4.6	4.5	0.0	0.7	3.7	3.2	4.7	4.7
Kyrgyz Republic	2006	99.9	7.4	3.0	1.2	0.1	1.2	4.5	0.9	2.8	1.4
Lao PDR	2006	..	..	6.5	9.3	16.4	0.0	10.7	11.7	5.9	8.0
Latvia	2001 ^a	100.0	12.7	3.3	2.6	3.0	0.0	8.1	5.4	2.5	1.6
Lebanon	2006	..	..	6.1	4.6	10.0	0.3	10.5	3.6	5.5	5.4
Lesotho	2006	100.0	78.4	9.9	16.5	24.2	1.9	7.5	3.2	10.0	17.3
Libya	2006 ^a	..	..	0.0	0.0	0.0	0.0	0.0	15.1	0.0	0.0
Lithuania	2003	100.0	9.2	1.3	0.7	3.3	0.0	3.6	1.3	1.0	0.4
Macedonia, FYR	2006	100.0	6.9	5.5	4.2	11.7	2.5	8.8	5.6	5.1	3.4
Madagascar	2006	29.7	27.4	13.3	8.7	43.5	0.0	14.2	3.0	13.2	12.2
Malawi	2006	30.2	74.9	12.9	8.1	40.3	0.0	12.8	6.1	12.9	8.9
Malaysia	2006	84.2	14.6	6.2	3.4	22.9	0.8	3.0	2.4	6.8	3.7
Maldives	2006	97.1	37.0	21.3	20.5	72.3	0.0	17.8	18.0	22.2	22.0
Mali	2006	40.7	29.3	12.6	8.5	46.3	0.0	11.5	8.6	12.7	8.5
Malta	2003 ^a	97.1	48.3	6.7	5.7	7.5	0.0	5.8	4.6	6.9	6.0
Mauritania	2006 ^a	39.4	19.6	11.6	7.2	44.3	3.9	11.5	9.3	11.6	6.6
Mauritius	2006	18.0	94.0	4.2	1.6	8.5	8.1	6.1	1.5	3.9	1.7
Mexico	2006	100.0	35.0	8.0	2.4	10.7	0.3	6.8	1.7	8.1	2.5
Moldova	2006	99.9	6.7	4.4	1.7	16.0	2.1	7.3	1.4	4.0	1.9
Mongolia	2006 ^a	100.0	17.5	4.2	4.4	0.0	0.0	5.0	5.1	4.1	3.9
Montserrat	1999 ^a	..	..	18.2	13.3	41.2	31.0	22.3	15.5	16.4	12.2
Morocco	2006	100.0	41.3	15.5	11.0	45.3	2.0	21.9	11.7	14.9	10.6
Mozambique	2006	12.9	97.4	12.7	8.3	38.2	0.0	15.4	8.9	12.3	8.0
Myanmar	2006	16.8	83.4	4.4	3.9	4.0	0.0	6.5	4.2	4.1	3.7
Namibia	2006	96.3	19.4	5.8	0.8	15.7	2.6	3.5	0.6	6.2	0.9
Nepal	2006	99.4	26.0	12.5	13.4	16.8	0.6	12.5	9.9	12.5	15.2
New Zealand	2006	99.9	10.3	3.7	2.7	8.0	2.4	1.8	0.5	4.0	3.3
Nicaragua	2005 ^a	100.0	41.7	6.8	5.4	0.5	0.0	10.6	5.4	6.4	5.4
Niger	2006	96.8	44.6	13.1	9.8	50.3	0.0	13.1	10.0	13.1	9.7
Nigeria	2006 ^a	18.1	118.5	11.7	11.6	41.5	0.0	14.8	15.1	11.4	10.2
Norway	2006	100.0	3.0	0.5	0.4	0.6	5.8	1.9	1.3	0.3	0.2
Oman	2006	100.0	13.7	3.8	3.2	0.1	0.6	4.1	2.9	3.8	3.3
Pakistan	2006	44.8	52.2	14.8	12.2	43.2	0.5	14.1	8.8	14.9	14.6
Panama	2006	99.9	23.4	7.4	6.9	1.8	0.0	11.2	7.9	7.0	6.5
Papua New Guinea	2006	100.0	31.7	4.8	1.7	14.1	0.7	12.1	2.6	3.9	1.3
Paraguay	2006	100.0	33.6	7.2	3.2	15.7	0.0	5.4	1.1	7.3	3.8
Peru	2006	100.0	30.1	8.6	5.3	10.0	0.0	9.2	2.5	8.5	6.6
Philippines	2006	67.0	25.6	5.4	3.2	4.8	0.0	6.9	5.3	5.2	2.8
Poland	2003	96.2	11.9	7.6	4.4	10.2	3.5	45.7	18.2	2.5	1.2
Qatar	2006	100.0	15.9	4.0	4.2	0.1	0.8	3.7	3.7	4.1	4.3
Romania	2005	100.0	39.8	6.6	3.1	21.0	0.0	13.3	7.2	5.7	1.8
Russian Federation	2005 ^a	..	..	11.4	9.6	17.9	2.6	10.7	12.2	11.5	8.9
Rwanda	2006	100.0	89.4	19.7	14.4	52.2	0.1	17.4	14.0	20.0	14.5



	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
Saudi Arabia	2006	..	..	4.1	4.1	0.0	0.5	3.2	2.7	4.3	4.4
Senegal	2006	100.0	30.0	13.5	9.4	51.3	0.0	14.4	8.5	13.4	10.3
Serbia ^d	2005 ^a	..	..	8.1	6.0	17.8	0.0	10.9	4.5	7.8	6.8
Seychelles	2006 ^a	..	..	6.3	30.7	12.2	1.6	12.8	49.6	4.9	6.7
Sierra Leone	2004	100.0	47.4	..	..	..	..	..	..	..	..
Singapore	2006	69.8	7.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Slovak Republic	2002 ^a	100.0	5.0	5.0	4.6	4.3	0.0	5.5	3.7	4.9	4.9
Slovenia	2003	100.0	23.7	4.4	1.8	11.4	1.5	7.0	4.0	4.0	1.2
Solomon Islands	2006	100.0	78.7	14.6	11.7	53.1	1.6	16.8	10.4	14.2	12.8
South Africa	2006	96.3	19.4	8.3	5.1	19.3	2.1	5.5	1.7	8.6	6.4
Sri Lanka	2006	36.8	29.6	11.0	7.0	23.1	1.5	15.2	9.5	10.5	5.9
St. Kitts and Nevis	2006	97.9	75.9	12.8	12.4	39.0	0.8	14.1	11.6	12.5	12.7
St. Lucia	2006	99.6	62.0	10.5	9.9	37.2	0.0	12.9	6.0	10.1	12.3
St. Vincent & Grenadines	2006	99.7	62.5	3.8	3.8	14.3	0.0	13.6	6.4	1.9	2.7
Sudan	2006	..	..	17.1	15.3	38.1	0.0	22.9	19.7	16.6	14.6
Suriname	2000 ^a	25.0	18.5	14.8	12.9	6.6	70.5	23.8	13.7	11.7	11.6
Swaziland	2006	96.3	19.4	10.3	9.2	25.0	2.4	8.0	3.8	10.5	9.6
Switzerland	2005	99.8	0.0	4.7	2.3	13.3	35.1	23.1	12.7	1.4	0.2
Syrian Arab Republic	2002 ^a	..	..	14.7	15.5	23.3	0.1	14.4	11.7	14.7	17.1
Tajikistan	2006	..	..	4.7	3.7	0.0	1.4	5.1	2.5	4.7	4.3
Tanzania	2006	13.4	120.0	12.5	7.2	37.6	0.4	16.9	7.7	12.0	7.0
Thailand	2006	75.1	25.7	10.8	4.7	22.8	1.1	13.5	2.3	10.4	5.8
Timor-Leste	..	..	..	..	..	..	..	..	..	..	..
Togo	2006	13.2	80.0	14.0	9.7	52.3	0.0	13.9	8.7	14.0	10.7
Trinidad and Tobago	2006	100.0	55.8	9.4	5.1	35.2	0.6	13.1	3.5	8.9	6.7
Tunisia	2006	57.9	57.7	22.9	18.5	55.5	0.0	33.1	14.7	22.0	20.0
Turkey	2006	47.7	29.6	1.8	1.7	2.6	0.6	11.3	3.4	1.1	1.1
Turkmenistan	2002 ^a	..	..	5.4	2.9	14.8	0.3	14.8	12.6	3.8	1.1
Uganda	2006	14.9	73.5	12.0	7.4	37.1	0.5	14.6	7.0	11.7	7.6
Ukraine	2006	..	..	4.8	3.0	4.5	3.9	4.7	0.7	4.8	4.5
United Arab Emirates	2006	100.0	14.7	4.7	4.6	0.2	0.8	4.8	4.7	4.7	4.6
United States	2006	100.0	3.6	3.0	1.6	3.7	6.4	2.4	1.0	3.1	1.8
Uruguay	2006	100.0	31.6	9.6	3.3	26.0	0.0	5.6	1.2	10.0	4.7
Uzbekistan	2006	..	..	11.3	7.3	20.9	5.7	10.8	4.8	11.3	7.8
Vanuatu	2006	..	..	16.7	8.2	45.0	5.0	19.9	18.0	16.1	7.0
Venezuela, RB	2006	99.9	36.8	11.1	10.2	16.8	0.0	10.5	8.9	11.2	10.5
Vietnam	2006	..	..	13.1	13.3	33.5	0.0	17.8	14.6	12.4	12.8
Yemen	2006 ^a	..	..	6.7	6.9	1.8	0.5	9.6	8.6	6.3	5.6
Zambia	2005	16.0	105.8	14.6	9.4	34.5	0.0	14.9	9.3	14.6	9.4
Zimbabwe	2003 ^a	20.8	90.7	16.7	17.3	38.8	6.5	19.5	19.8	16.3	15.3
World		77.3	31.5	7.5	3.1	13.7	0.5	9.3	3.1	7.3	3.2
Low income		48.2	47.1	12.7	12.4	29.5	0.6	15.0	13.0	12.3	12.1
Middle income		86.6	30.9	8.5	4.9	16.2	0.7	11.3	4.4	8.1	5.0
Lower middle-income		83.8	31.6	10.1	5.3	19.6	0.0	13.2	4.4	9.7	5.6
Upper middle income		90.2	30.0	6.9	4.3	13.2	1.3	9.5	4.4	6.6	4.2
Low & middle income		74.4	34.9	9.2	5.6	17.9	0.6	11.8	5.6	8.9	5.5
East Asia & Pacific		79.0	32.4	8.4	4.4	16.7	0.0	9.4	3.7	8.2	4.7
Europe & Central Asia		74.8	10.9	6.0	4.6	8.9	2.0	8.3	5.3	5.7	4.4
Latin America & Carib.		97.0	41.5	8.6	4.5	15.1	0.0	9.7	2.9	8.5	4.9
Middle East & N. Africa		93.4	34.8	11.3	8.9	28.4	0.0	16.3	8.4	10.7	9.2
South Asia		61.1	42.7	14.9	13.9	32.0	1.5	17.8	14.2	14.5	13.7
Sub-Saharan Africa		47.6	42.8	12.1	7.9	34.8	0.0	13.5	7.5	11.9	8.0
High-income		87.7	22.6	3.8	1.9	5.3	0.2	5.3	2.0	3.6	1.8
OECD		98.6	7.4	3.8	2.1	4.8	0.0	3.8	2.0	3.8	2.1
Non-OECD		78.1	34.1	4.6	1.2	7.3	0.6	7.2	1.8	4.1	1.1

Note: Tariff rates include ad valorem equivalents of specific rates whenever available.

a. Rates are most favored nation rates. b. Excludes Eritrea. c. Refers to all member states of the European Union except Bulgaria and Romania. d. Includes Montenegro.

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 (retailing, business, financial, and telecommunications services) were also liberalized.

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. In some developing regions new trade policies could make the difference between achieving important Millennium Development Goals—reducing poverty, lowering maternal and child mortality rates, improving educational attainment—and falling far short.

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. As more countries report their free trade agreements, suspensions of tariffs, or other special preferences, *World Development Indicators* will include their effectively applied rates. 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 of trade at the six- or eight-digit level. Tariff line data were matched to Standard International Trade Classification (SITC) revision 1 codes to define commodity groups and import weights. Import weights were calculated using the United Nations Statistics Division's Commodity Trade (Comtrade) database. Data are shown only for the last year for which complete data are available.

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. Data on tariffs were provided by the United Nations Conference on Trade and Development and the World Trade Organization. Data on global imports are from the United Nations Statistics Division's Comtrade database.



6.8

External debt

	Total external debt		Long-term debt						Short-term debt		Use of IMF credit	
			\$ millions									
			Public and publicly guaranteed									
	\$ millions		Total		IBRD loans and IDA credits		Private nonguaranteed		\$ millions		\$ millions	
	1995	2006	1995	2006	1995	2006	1995	2006	1995	2006	1995	2006
Afghanistan	..	1,771	..	1,761	..	358	..	0	..	11	..	0
Albania	456	2,340	330	1,588	109	729	0	84	62	575	65	93
Algeria	33,042	5,583	31,303	3,738	2,049	119	0	1,304	261	541	1,478	0
Angola	11,500	9,563	9,543	7,398	81	347	0	0	1,958	2,165	0	0
Argentina	98,465	122,190	54,913	64,711	4,913	6,206	16,066	22,441	21,355	35,039	6,131	0
Armenia	371	2,073	298	1,037	96	847	0	574	2	298	70	164
Australia	..	..	..	..	..	..	..	..	..	..	..	..
Austria	..	..	..	..	..	..	..	..	..	..	..	..
Azerbaijan	321	1,900	206	1,359	30	588	0	104	14	302	101	134
Bangladesh	15,927	20,521	15,106	18,866	5,692	9,297	0	0	199	1,178	622	476
Belarus	1,694	6,124	1,301	846	116	50	0	855	110	4,423	283	0
Belgium	..	..	..	..	..	..	..	..	..	..	..	..
Benin	1,614	824	1,483	782	498	126	0	0	47	39	84	3
Bolivia	5,272	5,292	4,459	3,203	865	233	239	1,855	307	220	268	15
Bosnia and Herzegovina	..	5,669	..	2,830	472	1,449	..	1,675	..	1,144	48	20
Botswana	717	408	707	384	108	7	0	0	10	24	0	0
Brazil	160,469	194,150	98,260	84,936	6,038	9,694	30,830	88,889	31,238	20,325	142	0
Bulgaria	10,379	20,925	8,808	5,001	444	1,331	342	7,543	512	8,040	717	341
Burkina Faso	1,271	1,142	1,140	1,022	608	361	0	0	56	85	75	35
Burundi	1,162	1,411	1,099	1,291	591	797	0	0	15	38	48	83
Cambodia	2,284	3,527	2,110	3,318	65	500	0	0	102	209	72	0
Cameroon	10,632	3,171	9,301	2,078	1,067	216	288	489	991	596	51	8
Canada	..	..	..	..	..	..	..	..	..	..	..	..
Central African Republic	946	1,020	854	863	414	395	0	0	57	115	35	42
Chad	912	1,772	843	1,686	379	956	0	0	20	18	49	68
Chile	22,038	47,977	7,178	9,454	1,383	349	11,429	29,112	3,431	9,411	0	0
China	118,090	322,845	94,674	85,802	14,248	21,412	1,090	63,666	22,325	173,377	0	0
Hong Kong, China	..	..	..	..	..	..	..	..	..	..	..	..
Colombia	25,044	39,698	13,946	25,764	2,559	4,566	5,553	9,112	5,545	4,822	0	0
Congo, Dem. Rep.	13,239	11,201	9,636	9,848	1,413	2,251	0	0	3,118	520	485	833
Congo, Rep.	5,982	6,130	4,942	5,328	279	295	0	0	1,022	767	19	35
Costa Rica	3,802	6,832	3,133	3,669	303	54	214	837	430	2,326	24	0
Côte d'Ivoire	18,899	13,840	11,902	10,830	2,386	2,303	2,660	847	3,910	2,013	427	150
Croatia	3,830	37,480	1,860	10,235	117	1,028	1,257	21,674	492	5,571	221	0
Cuba	..	..	..	..	..	..	..	..	..	..	..	..
Czech Republic	..	..	..	..	..	..	..	..	..	..	..	..
Denmark	..	..	..	..	..	..	..	..	..	..	..	..
Dominican Republic	4,447	8,905	3,653	6,571	300	448	19	414	616	1,461	160	459
Ecuador	13,994	16,536	12,068	10,108	1,108	760	440	4,981	1,312	1,424	173	23
Egypt, Arab Rep.	33,499	29,339	30,710	26,072	2,356	2,024	313	1,633	2,372	1,635	103	0
El Salvador	2,509	9,136	1,979	5,504	327	428	5	2,401	525	1,230	0	0
Eritrea	37	800	37	781	24	419	0	0	0	19	0	0
Estonia	..	..	..	..	..	..	..	..	..	..	..	..
Ethiopia	10,308	2,326	9,774	2,212	1,470	553	0	0	460	114	73	0
Finland	..	..	..	..	..	..	..	..	..	..	..	..
France	..	..	..	..	..	..	..	..	..	..	..	..
Gabon	4,360	4,350	3,976	3,860	110	19	0	0	287	434	97	57
Gambia, The	426	725	385	689	162	263	0	0	15	18	26	18
Georgia	1,240	1,964	1,039	1,457	84	785	0	159	85	111	116	236
Germany	..	..	..	..	..	..	..	..	..	..	..	..
Ghana	5,495	3,192	4,200	1,891	2,434	810	27	0	620	1,143	648	159
Greece	..	..	..	..	..	..	..	..	..	..	..	..
Guatemala	3,282	5,496	2,328	3,921	158	642	142	91	812	1,484	0	0
Guinea	3,242	3,281	2,987	2,980	847	1,259	0	0	161	229	94	72
Guinea-Bissau	898	711	798	695	210	297	0	0	95	8	6	8
Haiti	738	1,189	683	1,034	307	238	0	0	27	123	29	32

External debt

6.8

GLOBAL LINKS

	Total external debt		Long-term debt						Short-term debt		Use of IMF credit	
			\$ millions									
			Public and publicly guaranteed		IBRD loans and IDA credits		Private nonguaranteed					
	\$ millions 1995	2006	Total 1995	2006	1995	2006	1995	2006	\$ millions 1995	2006	\$ millions 1995	2006
Honduras	4,797	4,076	4,193	2,986	828	349	123	527	382	533	99	31
Hungary	31,650	107,677	23,974	28,017	2,218	137	4,089	64,681	3,203	14,979	385	0
India	94,464	153,075	80,422	59,570	27,348	30,236	6,618	81,535	5,049	11,971	2,374	0
Indonesia	124,398	130,956	65,309	67,273	13,259	8,741	33,123	30,683	25,966	33,000	0	0
Iran, Islamic Rep.	21,879	20,113	15,116	11,090	316	559	314	59	6,449	8,964	0	0
Iraq	..	..	..	..	..	..	..	..	..	..	..	..
Ireland	..	..	..	..	..	..	..	..	..	..	..	..
Israel	..	..	..	..	..	..	..	..	..	..	..	..
Italy	..	..	..	..	..	..	..	..	..	..	..	..
Jamaica	4,577	7,994	3,716	6,010	595	387	128	811	492	1,173	240	0
Japan	..	..	..	..	..	..	..	..	..	..	..	..
Jordan	7,661	8,000	6,624	7,143	806	939	0	0	785	699	251	158
Kazakhstan	3,750	74,148	2,834	2,136	295	502	103	59,433	381	12,579	432	0
Kenya	7,309	6,534	5,857	5,807	2,412	2,764	445	0	634	574	374	153
Korea, Dem. Rep.	..	..	..	..	..	..	..	..	..	..	..	..
Korea, Rep.	..	..	..	..	..	..	..	..	..	..	..	..
Kuwait	..	..	..	..	..	..	..	..	..	..	..	..
Kyrgyz Republic	609	2,382	472	1,860	141	612	0	251	13	108	124	163
Lao PDR	2,165	2,985	2,091	2,191	285	643	0	762	10	5	64	27
Latvia	463	22,795	271	1,555	55	100	0	10,764	31	10,476	160	0
Lebanon	2,966	23,963	1,550	18,958	113	314	50	805	1,365	4,200	0	0
Lesotho	684	670	642	633	207	284	0	0	4	0	38	36
Liberia	2,154	2,674	1,161	1,115	269	256	0	0	657	1,223	336	336
Libya	..	..	..	..	..	..	..	..	..	..	..	..
Lithuania	769	18,955	430	3,244	62	81	29	8,011	49	7,700	262	0
Macedonia, FYR	1,277	2,661	788	1,498	181	642	289	805	143	303	57	56
Madagascar	4,302	1,453	3,687	1,236	1,121	636	0	0	542	189	73	29
Malawi	2,239	850	2,079	767	1,306	157	0	0	44	64	116	19
Malaysia	34,343	52,526	16,023	21,899	1,059	437	11,046	18,824	7,274	11,803	0	0
Mali	2,958	1,436	2,739	1,411	863	282	0	0	72	17	147	8
Mauritania	2,396	1,630	2,127	1,401	347	130	0	0	169	229	100	0
Mauritius	1,757	1,997	1,148	585	157	71	267	49	342	1,363	0	0
Mexico	165,379	160,700	93,902	96,304	13,823	4,418	18,348	57,050	37,300	7,346	15,828	0
Moldova	695	2,416	450	735	152	393	9	718	6	822	230	141
Mongolia	531	1,444	472	1,361	59	301	0	3	12	50	47	31
Morocco	23,771	18,493	23,190	14,108	3,999	2,285	331	2,588	198	1,797	52	0
Mozambique	7,458	3,265	5,209	2,511	890	655	1,769	0	279	744	202	10
Myanmar	5,771	6,828	5,378	5,234	777	776	0	0	393	1,595	0	0
Namibia	..	..	..	..	..	..	..	..	..	..	..	..
Nepal	2,410	3,409	2,339	3,285	1,023	1,468	0	0	23	81	48	43
Netherlands	..	..	..	..	..	..	..	..	..	..	..	..
New Zealand	..	..	..	..	..	..	..	..	..	..	..	..
Nicaragua	10,390	4,391	8,566	3,425	341	256	0	288	1,785	615	39	63
Niger	1,572	805	1,315	703	598	189	133	26	72	49	52	27
Nigeria	34,092	7,693	28,140	3,800	3,489	2,074	301	0	5,651	3,893	0	0
Norway	..	..	..	..	..	..	..	..	..	..	..	..
Oman	5,776	4,819	2,637	819	25	0	2,598	2,047	541	1,953	0	0
Pakistan	30,229	35,909	23,788	32,309	6,403	10,015	1,593	907	3,235	1,230	1,613	1,462
Panama	6,099	9,989	3,782	7,774	175	185	0	1,694	2,207	505	111	15
Papua New Guinea	2,506	1,675	1,668	1,225	407	322	711	283	78	167	50	0
Paraguay	2,574	3,426	1,453	2,235	189	254	338	480	784	711	0	0
Peru	30,833	28,174	18,931	21,825	1,729	2,633	1,288	3,318	9,659	3,011	955	20
Philippines	39,379	60,324	28,525	36,793	5,185	2,886	4,847	18,522	5,279	5,009	728	0
Poland	44,080	125,831	40,890	39,248	2,067	1,961	1,012	65,228	2,178	21,355	0	0
Portugal	..	..	..	..	..	..	..	..	..	..	..	..
Puerto Rico	..	..	..	..	..	..	..	..	..	..	..	..



6.8

External debt

	Total external debt		Long-term debt						Short-term debt		Use of IMF credit	
			\$ millions									
			Public and publicly guaranteed		IBRD loans and IDA credits		Private nonguaranteed					
	1995	2006	1995	2006	1995	2006	1995	2006	1995	2006	1995	2006
Romania	6,832	55,114	3,957	14,204	844	2,481	534	23,081	1,303	17,725	1,038	104
Russian Federation	121,401	251,067	101,582	50,254	1,524	4,759	0	160,364	10,201	40,448	9,617	0
Rwanda	1,029	419	971	390	512	169	0	0	32	25	26	4
Saudi Arabia	..	..	..	..	..	..	..	..	..	..	..	..
Senegal	3,906	1,984	3,256	1,712	1,160	495	44	151	260	95	347	26
Serbia	10,785 ^a	13,831	6,788 ^a	7,686	1,252 ^a	3,072	1,773 ^a	4,105	2,139 ^a	1,796	84 ^a	244
Sierra Leone	1,250	1,428	1,058	1,323	234	533	0	0	27	70	165	35
Singapore	..	..	..	..	..	..	..	..	..	..	..	..
Slovak Republic	5,744	27,085	3,488	4,508	263	298	85	6,994	1,714	15,584	457	0
Slovenia	..	..	..	..	..	..	..	..	..	..	..	..
Somalia	2,678	2,836	1,961	1,923	432	435	0	0	551	745	166	168
South Africa	25,358	35,549	9,837	13,940	0	29	4,935	6,349	9,673	15,260	913	0
Spain	..	..	..	..	..	..	..	..	..	..	..	..
Sri Lanka	8,395	11,446	7,175	10,140	1,512	2,245	90	206	535	855	595	244
Sudan	17,603	19,158	9,779	11,609	1,279	1,271	496	496	6,368	6,535	960	518
Swaziland	291	544	279	494	25	26	0	0	11	51	0	0
Sweden	..	..	..	..	..	..	..	..	..	..	..	..
Switzerland	..	..	..	..	..	..	..	..	..	..	..	..
Syrian Arab Republic	21,415	6,502	16,853	5,576	471	21	0	0	4,562	925	0	0
Tajikistan	634	1,154	590	982	0	339	0	33	43	95	0	44
Tanzania	7,421	4,240	6,217	2,929	2,269	1,056	44	6	963	1,293	197	13
Thailand	100,039	55,233	16,826	11,914	1,906	405	39,117	25,507	44,095	17,812	0	0
Timor-Leste	..	..	..	..	..	..	..	..	..	..	..	..
Togo	1,476	1,806	1,286	1,565	541	696	0	0	85	233	105	8
Trinidad and Tobago	..	..	..	..	..	..	..	..	..	..	..	..
Tunisia	10,818	18,480	9,215	15,144	1,766	1,470	0	0	1,310	3,336	293	0
Turkey	73,781	207,854	50,317	67,214	5,069	6,919	7,079	87,563	15,701	42,315	685	10,762
Turkmenistan	402	881	385	725	1	21	0	4	17	152	0	0
Uganda	3,609	1,264	3,089	1,107	1,792	436	0	0	103	148	417	9
Ukraine	8,429	49,887	6,581	9,538	491	2,362	84	24,158	223	15,361	1,542	830
United Arab Emirates	..	..	..	..	..	..	..	..	..	..	..	..
United Kingdom	..	..	..	..	..	..	..	..	..	..	..	..
United States	..	..	..	..	..	..	..	..	..	..	..	..
Uruguay	5,318	9,804	3,833	7,211	513	653	127	385	1,336	2,208	21	0
Uzbekistan	1,799	3,892	1,415	3,322	157	342	15	403	212	166	157	0
Venezuela, RB	35,538	44,635	28,223	27,180	1,639	51	2,013	5,606	3,063	11,848	2,239	0
Vietnam	25,428	20,202	21,778	17,518	231	3,663	0	0	3,272	2,504	377	181
West Bank and Gaza	..	..	..	..	..	..	..	..	..	..	..	..
Yemen, Rep.	6,217	5,563	5,528	5,000	827	1,894	0	0	689	318	0	246
Zambia	6,958	2,325	5,291	1,003	1,434	260	13	826	415	455	1,239	41
Zimbabwe	4,989	4,677	3,462	3,452	896	946	381	19	685	1,093	461	113
World	.. \$.. \$.. \$.. \$.. \$.. \$.. \$.. \$.. \$.. \$.. \$.. \$
Low income	366,231	375,060	298,243	240,914	77,144	85,474	15,299	86,554	39,576	41,895	13,113	5,697
Middle income	1,585,166	2,608,599	1,035,719	1,026,218	105,438	109,106	202,465	951,635	299,174	616,340	47,809	14,406
Lower middle income	698,032	921,093	460,313	427,332	60,740	63,722	88,238	198,074	141,256	292,828	8,226	2,860
Upper middle income	887,133	1,687,506	575,406	598,886	44,697	45,384	114,226	753,561	157,918	323,512	39,583	11,547
Low & middle income	1,951,397	2,983,659	1,333,962	1,267,133	182,582	194,579	217,764	1,038,189	338,750	658,235	60,922	20,103
East Asia & Pacific	455,619	659,985	255,393	255,163	37,604	40,233	90,050	158,260	108,839	246,324	1,337	239
Europe & Central Asia	331,945	1,047,027	259,527	261,993	16,242	31,826	16,699	549,276	38,868	222,425	16,851	13,333
Latin America & Carib.	608,475	734,499	371,682	397,231	38,402	32,992	87,303	230,312	122,859	106,219	26,632	737
Middle East & N. Africa	167,325	141,318	142,996	108,074	12,776	9,759	3,606	8,435	18,546	24,386	2,177	423
South Asia	151,740	227,303	129,135	126,989	42,036	53,764	8,301	82,647	9,051	15,435	5,252	2,232
Sub-Saharan Africa	236,293	173,526	175,229	117,683	35,521	26,005	11,804	9,258	40,587	43,445	8,673	3,140
High income												
Euro area												

a. Includes Montenegro.

About the data

A country's external indebtedness plays an important role in its creditworthiness and in perceptions by investors. Data on the external debt of developing countries are gathered by the World Bank through its Debtor Reporting System. Indebtedness is calculated using loan-by-loan reports submitted by countries on long-term public and publicly guaranteed borrowing, along with information on short-term debt collected by the countries or collected from creditors through the reporting systems of the Bank for International Settlements and the Organisation for Economic Co-operation and Development. These data are supplemented by information from major multilateral banks and official lending agencies in major creditor countries as well as estimates by World Bank and International Monetary Fund (IMF) staff. In addition, the table includes data on long-term private nonguaranteed debt that is either reported to the World Bank or estimated by its staff.

The coverage, quality, and timeliness of data vary across countries. Coverage varies for both 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 accuracy in reporting—again because of monitoring capacity and sometimes because of an unwillingness to provide information. A key part often underreported is military debt.

Because debt data are normally reported in the currency of repayment, they have to be converted into

a single currency (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.

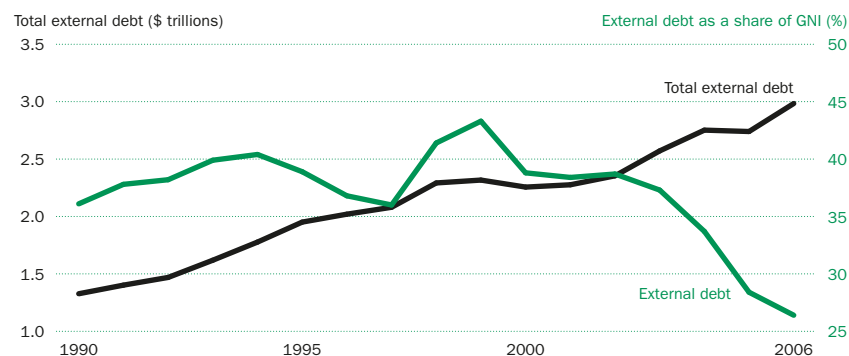
Variations in reporting rescheduled debt also affect cross-country comparability. For example, rescheduling under the auspices of the Paris Club of official creditors may be subject to lags between the completion of the general rescheduling agreement and the completion of the specific bilateral agreements 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.

Definitions

- **Total external debt** is debt owed to nonresidents repayable in foreign currency, goods, or services. It is the sum of public, publicly guaranteed, and private nonguaranteed long-term debt, short-term debt, and use of IMF credit.
- **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.
- **Use of IMF credit** denotes repurchase obligations to the IMF for all uses of IMF resources (excluding those resulting from drawings on the reserve tranche). These obligations, shown for the end of the year specified, comprise purchases outstanding under the credit tranches (including enlarged access resources) and all special facilities (the Buffer Stock, Compensatory and Contingency Financing, Extended Fund, Supplemental Reserve, Oil, Supplementary Financing, Policy on Enlarged Access, and Systemic Transformation), trust fund loans, and operations under the structural adjustment and poverty reduction and growth facilities.

Financial integration has complemented growth

6.8a



For developing countries economic growth has exceeded debt accumulation since 1999.

Source: World Development Indicators data files.

Data sources

Data on external debt are mainly 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* and on its *Global Development Finance* CD-ROM.



	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 ^a		% of public and publicly guaranteed debt service		% of total debt		% of total reserves		% of exports of goods and services and income ^a	
	1995	2006	1995	2006	1995	2006	1995	2006	1995	2006	2006 ^b	2006 ^b
Afghanistan	..	21.1	..	..	..	100.0	..	0.6	..	..	5 ^c	22 ^c
Albania	18.4	25.2	1.4	3.5	11.4	44.6	13.7	24.6	23.5	31.7	21	55
Algeria	83.5	5.2	..	..	17.7	18.7	0.8	9.7	6.3	0.7	5	10
Angola	311.9	24.1	12.0	12.8	0.6	0.5	17.0	22.6	919.7	25.2	33	39
Argentina	38.9	58.6	30.1	31.6	21.6	80.5	21.7	28.7	133.6	109.4	68	230
Armenia	25.3	32.0	3.1	7.6	69.8	87.5	0.6	14.4	1.9	27.8	29	78
Australia	..	..	..	..	..	..	..	..	..	..	..	..
Austria	..	..	..	..	..	..	..	..	..	..	..	..
Azerbaijan	10.6	11.1	1.3	1.6	21.8	39.2	4.4	15.9	11.6	12.1	12	15
Bangladesh	40.7	31.1	13.2	3.7	27.1	74.7	1.3	5.7	8.4	30.4	22	91
Belarus	12.2	16.6	3.4	3.3	55.4	12.8	6.5	72.2	29.2	312.2	17	28
Belgium	..	..	..	..	..	..	..	..	..	..	..	..
Benin	82.1	17.5	6.8	..	54.8	47.9	2.9	4.8	23.7	4.3	14 ^c	70 ^c
Bolivia	81.2	49.0	29.4	8.5	75.5	91.1	5.8	4.2	30.5	6.9	51 ^c	123 ^c
Bosnia and Herzegovina	..	44.2	..	8.7	..	52.4	..	20.2	..	33.9	43	84
Botswana	15.1	4.1	3.1	0.9	76.0	70.7	1.4	5.9	0.2	0.3	4	6
Brazil	21.2	18.7	36.6	37.3	18.5	7.8	19.5	10.5	60.7	23.7	26	158
Bulgaria	81.8	66.5	16.5	12.4	10.5	59.3	4.9	38.4	31.3	68.4	74	110
Burkina Faso	53.6	18.5	..	..	76.7	77.6	4.4	7.5	16.1	15.4	13 ^c	110 ^c
Burundi	117.6	162.2	27.6	40.4	70.6	88.3	1.3	2.7	6.9	28.7	119 ^c	1,061 ^c
Cambodia	67.5	50.6	0.7	0.6	11.9	67.7	4.5	5.9	53.1	14.8	48	66
Cameroon	129.6	17.5	20.8	..	60.8	39.3	9.3	18.8	6,444.5	34.3	18 ^c	70 ^c
Canada	..	..	..	..	..	..	..	..	..	..	..	..
Central African Republic	85.9	68.4	..	..	100.0	100.0	6.0	11.2	24.0	86.6	57 ^c	597 ^c
Chad	63.3	34.2	..	..	87.1	76.9	2.2	1.0	13.7	2.9	24 ^c	36 ^c
Chile	32.1	37.9	24.5	20.0	76.2	5.0	15.6	19.6	23.1	48.5	42	86
China	16.5	12.2	9.9	2.5	7.6	26.0	18.9	53.7	27.8	16.0	14	35
Hong Kong, China	..	..	..	..	..	..	..	..	..	..	..	..
Colombia	27.5	26.9	31.5	31.3	32.7	27.0	22.1	12.1	65.6	31.2	32	143
Congo, Dem. Rep.	271.4	137.5	..	..	..	38.1	23.6	4.6	1,980.9	..	130 ^c	388 ^c
Congo, Rep.	487.1	..	13.1	..	21.0	60.6	17.1	12.5	1,606.5	41.5	104 ^c	104 ^c
Costa Rica	33.1	31.9	13.8	5.0	50.7	66.0	11.3	34.0	40.6	74.6	35	66
Côte d'Ivoire	188.7	82.6	23.1	1.4	59.3	71.8	20.7	14.5	739.1	112.0	82 ^c	150 ^c
Croatia	20.4	90.2	4.8	33.1	73.1	10.9	12.8	14.9	25.9	48.5	93	168
Cuba	..	..	..	..	..	..	..	..	..	..	..	..
Czech Republic	..	..	..	..	..	..	..	..	..	..	..	..
Denmark	..	..	..	..	..	..	..	..	..	..	..	..
Dominican Republic	37.8	29.6	6.1	9.6	39.8	17.1	13.8	16.4	165.3	68.7	35	66
Ecuador	72.6	41.9	24.9	24.1	31.7	30.7	9.4	8.6	73.4	70.3	52	129
Egypt, Arab Rep.	55.8	27.4	13.2	4.9	26.3	17.2	7.1	5.6	13.9	6.3	28	69
El Salvador	26.7	50.4	8.9	13.1	55.1	50.8	20.9	13.5	55.9	62.7	55	119
Eritrea	6.3	74.1	0.1	..	100.0	75.8	0.0	2.3	0.0	73.2	52 ^c	742 ^c
Estonia	..	..	..	..	..	..	..	..	..	..	..	..
Ethiopia	136.6	17.5	18.4	6.8	41.7	55.0	4.5	4.9	56.5	13.7	16 ^c	84 ^c
Finland	..	..	..	..	..	..	..	..	..	..	..	..
France	..	..	..	..	..	..	..	..	..	..	..	..
Gabon	101.6	57.9	15.3	..	17.9	100.0	6.6	10.0	187.8	38.7	64	79
Gambia, The	113.0	145.2	15.5	12.4	49.1	59.2	3.5	2.5	14.0	15.3	108 ^c	191 ^c
Georgia	48.2	26.2	..	8.8	0.4	30.2	6.9	5.7	43.0	12.0	22	57
Germany	..	..	..	..	..	..	..	..	..	..	..	..
Ghana	86.9	24.9	24.0	4.9	48.4	44.6	11.3	35.8	77.1	50.4	24 ^c	59 ^c
Greece	..	..	..	..	..	..	..	..	..	..	..	..
Guatemala	22.6	15.7	11.1	4.8	47.7	58.6	24.7	27.0	103.7	36.6	18	59
Guinea	89.8	100.2	25.0	..	30.4	55.8	5.0	7.0	185.6	..	71 ^c	261 ^c
Guinea-Bissau	380.7	241.2	51.9	..	88.3	45.2	10.5	1.1	467.0	9.9	169 ^c	360 ^c
Haiti	25.3	27.5	50.4	3.2	92.0	83.0	3.6	10.4	13.4	48.5	24 ^c	64 ^c

Ratios for external debt

6.9

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 ^a		% of public and publicly guaranteed debt service		% of total debt		% of total reserves		% of exports of goods and services and income ^a	
	1995	2006	1995	2006	1995	2006	1995	2006	1995	2006	2006 ^b	2006 ^b
Honduras	131.5	45.7	34.0	5.1	52.6	63.9	8.0	13.1	141.7	20.2	41 ^c	61 ^c
Hungary	73.7	102.7	33.8	33.1	20.1	8.8	10.1	13.9	26.7	69.4	100	127
India	26.8	16.9	29.7	7.7	24.3	24.6	5.3	8.9	22.1	6.7	15	63
Indonesia	63.4	37.5	29.9	16.6	28.4	48.3	20.9	25.2	174.2	77.5	45	122
Iran, Islamic Rep.	24.3	9.3	30.2	..	1.3	4.5	29.5	44.6	..	..	10	27
Iraq	..	..	..	..	..	..	..	..	..	..	..	..
Ireland	..	..	..	..	..	..	..	..	..	..	..	..
Israel	..	..	..	..	..	..	..	..	..	..	..	..
Italy	..	..	..	..	..	..	..	..	..	..	..	..
Jamaica	82.2	85.6	16.2	11.9	40.6	28.2	10.7	14.7	72.2	50.6	99	144
Japan	..	..	..	..	..	..	..	..	..	..	..	..
Jordan	118.8	54.5	12.4	6.1	33.5	47.0	10.2	8.7	34.4	10.0	58	77
Kazakhstan	18.6	103.4	3.9	33.7	7.8	60.8	10.2	17.0	23.0	65.8	132	222
Kenya	83.8	28.6	30.4	6.5	32.5	64.5	8.7	8.8	164.9	23.7	26	87
Korea, Dem. Rep.	..	..	..	..	..	..	..	..	..	..	..	..
Korea, Rep.	..	..	..	..	..	..	..	..	..	..	..	..
Kuwait	..	..	..	..	..	..	..	..	..	..	..	..
Kyrgyz Republic	37.5	85.6	13.2	5.7	59.0	93.5	2.1	4.5	9.7	13.2	71 ^c	126 ^c
Lao PDR	123.2	98.6	6.3	..	37.4	65.7	0.5	0.2	10.2	1.1	87	245
Latvia	8.8	117.2	1.6	33.3	60.3	45.0	6.7	46.0	5.2	232.2	135	266
Lebanon	24.3	107.0	..	21.0	13.2	3.8	46.0	17.5	16.9	21.8	116	128
Lesotho	51.9	35.8	6.1	4.0	60.3	54.7	0.6	0.0	0.9	0.0	25	38
Liberia	..	541.3	..	..	..	100.0	30.5	45.7	2,340.6	1,699.1	674 ^c	2,030 ^c
Libya	..	..	..	..	..	..	..	..	..	..	..	..
Lithuania	10.2	68.9	1.3	22.1	31.8	14.5	6.4	40.6	6.0	133.4	79	121
Macedonia, FYR	29.0	42.8	..	15.7	99.9	16.5	11.2	11.4	51.9	16.0	50	102
Madagascar	143.3	26.8	7.6	..	74.3	66.4	12.6	13.0	497.1	32.4	20 ^c	65 ^c
Malawi	165.8	27.2	24.9	..	51.4	89.6	1.9	7.5	37.8	45.1	21 ^c	79 ^c
Malaysia	40.6	36.0	7.0	4.0	15.5	5.7	21.2	22.5	29.5	14.2	39	31
Mali	122.3	26.0	13.4	..	45.5	76.4	2.4	1.2	22.2	1.8	20 ^c	63 ^c
Mauritania	175.3	58.9	22.9	..	49.6	88.1	7.1	14.0	187.9	..	60 ^c	121 ^c
Mauritius	46.2	31.2	9.4	7.1	34.5	25.6	19.5	68.2	38.5	104.1	31	50
Mexico	60.5	19.5	27.0	18.9	19.5	29.6	22.6	4.6	218.8	9.6	21	62
Moldova	40.3	64.3	7.9	12.2	79.1	48.7	0.9	34.0	2.3	105.9	65	90
Mongolia	44.2	47.4	10.2	2.2	2.8	38.6	2.2	3.5	7.4	4.7	43	57
Morocco	75.1	28.7	33.4	12.2	30.3	40.6	0.8	9.7	5.1	8.6	30	72
Mozambique	360.6	53.2	34.5	1.9	17.4	69.6	3.7	22.8	142.8	61.1	45 ^c	115 ^c
Myanmar	..	..	17.8	1.7	15.0	3.4	6.8	23.4	60.4	115.3	70	202
Namibia	..	..	..	..	..	..	..	..	..	..	..	..
Nepal	54.7	37.8	7.5	5.1	54.2	68.8	0.9	2.4	3.5	..	28 ^c	93 ^c
Netherlands	..	..	..	..	..	..	..	..	..	..	..	..
New Zealand	..	..	..	..	..	..	..	..	..	..	..	..
Nicaragua	368.3	84.8	38.7	4.1	30.3	59.5	17.2	14.0	1,256.8	66.7	72 ^c	131 ^c
Niger	85.9	22.1	16.7	..	95.5	76.0	4.6	6.1	75.6	13.3	17 ^c	93 ^c
Nigeria	131.7	7.6	13.8	..	45.4	6.9	16.6	50.6	330.7	9.1	9	13
Norway	..	..	..	..	..	..	..	..	..	..	..	..
Oman	43.1	..	14.8	1.3	7.3	58.6	9.4	40.5	27.9	38.9	16	25
Pakistan	49.5	27.8	26.5	8.6	43.2	60.5	10.7	3.4	128.0	9.6	26	123
Panama	80.9	62.2	3.4	24.7	52.7	7.0	36.2	5.1	282.4	37.9	77	94
Papua New Guinea	56.5	33.0	20.8	..	31.7	68.7	3.1	10.0	29.1	11.6	35	42
Paraguay	31.5	36.9	5.6	6.8	48.0	47.5	30.4	20.8	70.8	41.8	43	69
Peru	60.3	33.3	15.9	12.9	49.9	41.3	31.3	10.7	111.6	17.3	42	140
Philippines	51.7	47.1	16.1	19.6	29.2	12.6	13.4	8.3	67.8	21.8	57	101
Poland	32.2	38.7	11.0	24.7	13.5	4.8	4.9	17.0	14.6	44.1	41	97
Portugal	..	..	..	..	..	..	..	..	..	..	..	..
Puerto Rico	..	..	..	..	..	..	..	..	..	..	..	..



	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 ^a		% of public and publicly guaranteed debt service		% of total debt		% of total reserves		% of exports of goods and services and income ^a	
	1995	2006	1995	2006	1995	2006	1995	2006	1995	2006	2006 ^b	2006 ^b
Romania	19.4	46.6	10.5	18.4	21.3	32.4	19.1	32.2	49.7	58.7	58	148
Russian Federation	31.0	26.2	6.3	13.8	9.7	3.0	8.4	16.1	56.6	13.3	34	88
Rwanda	79.2	16.9	20.5	9.6	99.0	86.1	3.1	6.0	32.3	5.7	13 ^c	100 ^c
Saudi Arabia	..	..	..	..	..	..	..	..	..	..	..	..
Senegal	82.7	22.0	16.8	..	62.2	64.2	6.7	4.8	95.6	7.1	17 ^c	46 ^c
Serbia	..	43.8	..	..	100.0 ^d	76.0	19.8 ^d	13.0	..	15.1	52	127
Sierra Leone	152.7	100.9	54.3	9.6	8.3	84.0	2.2	4.9	77.8	37.8	83 ^c	349 ^c
Singapore	..	..	..	..	..	..	..	..	..	..	..	..
Slovak Republic	29.2	51.1	11.3	..	7.5	17.1	29.8	57.5	44.4	116.6	58	67
Slovenia	..	..	..	..	..	..	..	..	..	..	..	..
Somalia	..	..	..	..	..	..	20.6	26.3	..	..	..	..
South Africa	17.1	14.2	9.5	6.7	0.0	1.6	38.1	42.9	216.7	59.6	15	51
Spain	..	..	..	..	..	..	..	..	..	..	..	..
Sri Lanka	65.3	42.6	8.0	8.6	14.0	22.6	6.4	7.5	25.3	29.1	40	92
Sudan	276.2	55.5	6.7	4.1	100.0	10.2	36.2	34.1	..	393.7	69 ^c	304 ^c
Swaziland	20.1	20.4	1.8	1.8	55.0	62.1	3.9	9.3	3.8	13.6	21	23
Sweden	..	..	..	..	..	..	..	..	..	..	..	..
Switzerland	..	..	..	..	..	..	..	..	..	..	..	..
Syrian Arab Republic	184.8	20.0	4.3	1.3	66.6	30.1	21.3	14.2	..	..	23	51
Tajikistan	53.6	42.5	..	5.1	..	18.1	6.8	8.2	..	46.4	36	42
Tanzania	144.6	33.6	17.9	3.4	66.7	79.2	13.0	30.5	356.6	57.2	29 ^c	116 ^c
Thailand	60.6	27.3	11.6	9.4	20.9	8.0	44.1	32.2	119.4	26.6	30	40
Timor-Leste	..	..	..	..	..	..	..	..	..	..	..	..
Togo	116.7	82.8	6.0	..	75.5	60.5	5.8	12.9	65.1	62.2	74 ^c	154 ^c
Trinidad and Tobago	..	..	..	..	..	..	..	..	..	..	..	..
Tunisia	63.0	64.5	16.9	14.4	43.8	48.1	12.1	18.1	77.6	48.3	66	112
Turkey	43.0	51.7	27.7	33.2	20.7	13.3	21.3	20.4	113.0	66.9	61	200
Turkmenistan	16.1	8.9	..	..	1.9	6.0	4.3	17.2	1.5	..	11	15
Uganda	63.3	13.6	19.8	4.8	69.7	68.6	2.8	11.7	22.4	8.2	11 ^c	46 ^c
Ukraine	17.6	47.6	6.6	18.1	13.6	22.2	2.6	30.8	20.9	68.7	58	106
United Arab Emirates	..	..	..	..	..	..	..	..	..	..	..	..
United Kingdom	..	..	..	..	..	..	..	..	..	..	..	..
United States	..	..	..	..	..	..	..	..	..	..	..	..
Uruguay	29.4	52.1	22.1	87.8	27.3	31.7	25.1	22.5	73.7	71.4	66	185
Uzbekistan	13.5	22.7	..	..	1.9	17.1	11.8	4.3	..	..	26	67
Venezuela, RB	48.7	24.7	22.9	13.3	11.5	9.2	8.6	26.5	28.6	32.3	34	83
Vietnam	124.0	33.9	..	..	2.9	12.9	12.9	12.4	247.2	18.7	33	45
West Bank and Gaza	..	..	..	..	..	..	..	..	..	..	..	..
Yemen, Rep.	169.0	31.6	3.1	2.4	78.3	56.1	11.1	5.7	107.9	4.2	25	46
Zambia	215.1	23.9	..	3.6	50.6	69.0	6.0	19.6	186.2	63.2	29 ^c	70 ^c
Zimbabwe	73.5	..	..	..	33.6	0.0	13.7	23.4	77.2	..	110	248
World	.. W	.. W	.. W	.. W	.. W	.. W	.. W	.. W	.. W	.. W	.. W	.. W
Low income	56.3	23.7	22.9	6.6	32.9	28.4	10.8	11.2	78.5	13.5		
Middle income	36.3	26.8	16.7	13.4	21.0	18.5	18.9	23.6	66.2	25.1		
Lower middle income	39.9	19.9	15.3	7.0	22.0	24.7	20.2	31.8	64.7	19.3		
Upper middle income	33.9	33.0	17.8	20.1	20.2	15.7	17.8	19.2	67.5	34.0		
Low & middle income	38.9	26.4	17.3	12.6	22.7	19.4	17.4	22.1	67.2	23.9		
East Asia & Pacific	35.5	18.4	12.7	5.0	18.2	22.3	23.9	37.3	64.9	18.7		
Europe & Central Asia	33.9	43.2	12.2	20.0	16.9	9.8	11.7	21.2	48.0	38.1		
Latin America & Carib.	35.9	25.8	26.2	23.0	26.2	23.2	20.2	14.5	88.6	34.0		
Middle East & N. Africa	58.4	21.9	19.0	10.4	19.4	20.5	11.1	17.3	18.9	8.3		
South Asia	32.0	19.8	25.5	7.5	27.4	33.9	6.0	6.8	29.5	7.7		
Sub-Saharan Africa	77.9	26.2	15.9	..	35.0	15.1	17.2	25.0	164.3	34.6		
High income												
Euro area												

a. Includes workers' remittances. b. The numerator refers to 2006, whereas the denominator is a three-year average of 2004–06 data. c. Data are from debt sustainability analyses undertaken as part of the Heavily Indebted Poor Countries Initiative. Present value estimates for these countries are for public and publicly guaranteed debt only. d. Includes Montenegro.

About the data

A country's external debt burden, both debt outstanding and debt service, affects a country's 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. The ratios shown here may differ from those published elsewhere because estimates of exports and GNI have been revised to incorporate data available as of February 15, 2008.

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 6.8). 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.

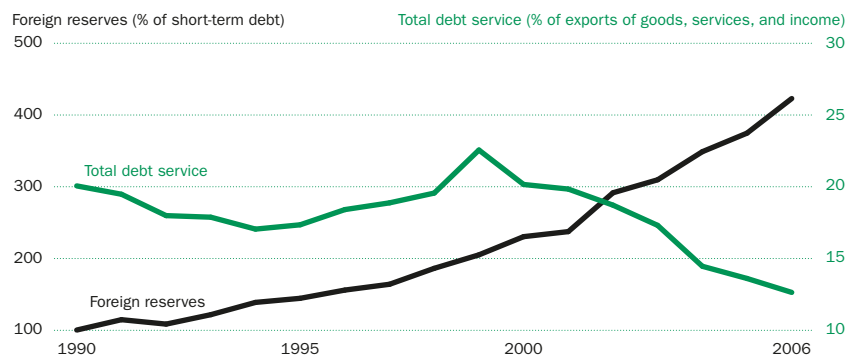
Debt ratios are used to assess the sustainability of a country's debt service obligations, but no absolute rules determine what values are too high. Empirical analysis of developing countries' experience and debt service performance shows that debt service difficulties become increasingly likely when 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 gross national income (GNI).
- **Total debt service** is the sum of principal repayments and interest actually paid on total long-term debt (public and publicly guaranteed and private nonguaranteed), use of IMF credit, and interest on short-term debt.
- **Exports of goods, services, and income** refer to international transactions involving a change in ownership of general merchandise, goods sent for processing and repairs, nonmonetary gold, services, receipts of employee compensation for nonresident workers, investment income, and workers' remittances.
- **Multilateral debt service** is the repayment of principal and interest to the World Bank, regional development banks, and other multilateral and intergovernmental 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.

Developing countries have reduced financial vulnerability

6.9a



Since 1990 developing countries have increased their buffer for external debt and its service. Total debt services have decreased significantly since 1999, due largely to debt relief initiatives by multilateral and bilateral donors.

Source: World Bank's *Global Development Finance*.

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* and on its *Global Development Finance* CD-ROM.

	Equity flows				Debt flows			
	\$ millions				\$ millions			
	Foreign direct investment		Portfolio equity		Bonds		Commercial bank and other lending	
	1995	2006	1995	2006	1995	2006	1995	2006
Afghanistan	..	..	..	0	..	0	..	0
Albania	70	325	0	0	0	0	0	-11
Algeria	0	1,795	0	0	-278	0	788	-1,348
Angola	472	-38	0	0	0	0	123	-1,517
Argentina	5,609	4,840	1,552	662	3,705	1,690	754	825
Armenia	25	343	0	-1	0	0	0	108
Australia	12,026	26,599	..	..	..	..	..	..
Austria	1,901	157	..	..	..	..	..	..
Azerbaijan	330	-584	0	1	0	0	0	-100
Bangladesh	2	697	-15	31	0	0	-21	-24
Belarus	15	354	0	-1	0	0	103	264
Belgium	10,689 ^a	61,990	..	..	..	..	..	..
Benin	13	63	0	2	0	0	0	0
Bolivia	393	240	0	0	0	0	41	93
Bosnia and Herzegovina	0	423	0	0	..	0	..	-185
Botswana	70	486	6	36	0	0	-6	-2
Brazil	4,859	18,782	2,775	7,716	2,636	-7,136	8,283	13,333
Bulgaria	90	5,172	0	95	-6	166	-93	2,062
Burkina Faso	10	26	0	0	0	0	0	0
Burundi	2	0	0	0	0	0	-1	-2
Cambodia	151	483	0	0	0	0	13	0
Cameroon	7	309	0	0	0	0	-65	-122
Canada	9,319	69,068	..	..	..	..	..	..
Central African Republic	6	24	0	0	0	0	0	0
Chad	33	700	0	0	0	0	0	-1
Chile	2,957	7,952	-249	63	489	580	1,773	-278
China	35,849	78,095	0	42,861	317	1,705	4,696	5,795
Hong Kong, China	..	42,891	..	..	..	..	..	..
Colombia	968	6,463	165	-30	1,008	642	1,250	-789
Congo, Dem. Rep.	122	180	0	0	0	0	0	-6
Congo, Rep.	125	344	0	0	0	0	-50	0
Costa Rica	337	1,469	0	0	-4	-25	-9	251
Côte d'Ivoire	211	315	1	48	0	0	14	0
Croatia	114	3,376	4	411	0	-280	265	3,745
Cuba	..	..	..	..	..	..	..	..
Czech Republic	2,568	6,021	..	..	..	..	..	..
Denmark	4,139	3,343	..	..	..	..	..	..
Dominican Republic	414	1,183	0	0	0	716	-31	-429
Ecuador	452	271	13	0	0	-740	63	434
Egypt, Arab Rep.	598	10,043	0	502	0	0	-311	-250
El Salvador	38	204	0	0	0	504	-31	290
Eritrea	37	4	0	0	0	0	0	0
Estonia	201	1,600	..	..	..	..	..	..
Ethiopia	14	364	0	0	0	0	-48	-45
Finland	1,044	5,311	..	..	..	..	..	..
France	23,736	81,045	..	..	..	..	..	..
Gabon	-315	268	0	0	0	0	-75	21
Gambia, The	8	82	0	0	0	0	0	0
Georgia	6	1,060	0	118	0	0	0	37
Germany	11,985	43,410	..	..	..	..	..	..
Ghana	107	435	0	0	0	0	38	9
Greece	1,053	5,401	..	..	..	..	..	..
Guatemala	75	354	0	0	44	0	-32	-25
Guinea	1	108	0	0	0	0	-15	0
Guinea-Bissau	0	42	0	0	0	0	0	0
Haiti	7	160	0	0	0	0	0	0

Global private financial flows

	Equity flows				Debt flows			
	\$ millions				\$ millions			
	Foreign direct investment		Portfolio equity		Bonds		Commercial bank and other lending	
	1995	2006	1995	2006	1995	2006	1995	2006
Honduras	50	385	0	0	-13	0	38	17
Hungary	4,804	6,098	-62	917	2,120	6,315	781	30,327
India	2,144	17,453	1,591	9,549	286	3,206	967	12,892
Indonesia	4,346	5,580	1,493	1,898	2,248	3,784	55	992
Iran, Islamic Rep.	17	901	0	0	0	0	-115	-158
Iraq	..	..	..	..	..	..	..	..
Ireland	1,447	-882	..	..	..	..	..	..
Israel	1,351	14,302	..	..	..	..	..	..
Italy	4,842	38,884	..	..	..	..	..	..
Jamaica	147	882	0	0	13	880	15	27
Japan	39	-6,784	..	..	..	..	..	..
Jordan	13	3,219	0	144	0	-1	-201	-11
Kazakhstan	964	6,143	0	2,797	0	6,219	240	19,549
Kenya	32	51	6	2	0	0	-163	-69
Korea, Dem. Rep.	..	..	..	..	..	..	..	..
Korea, Rep.	1,776	3,645	..	..	..	..	..	..
Kuwait	7	110	..	..	..	..	..	..
Kyrgyz Republic	96	182	0	0	0	0	0	82
Lao PDR	95	187	0	0	0	0	0	15
Latvia	180	1,664	0	22	43	240	3	3,987
Lebanon	35	2,794	0	551	350	834	333	-36
Lesotho	275	78	0	0	0	0	12	-8
Liberia	5	-82	0	0	0	0	0	0
Libya	..	..	..	..	..	..	..	..
Lithuania	73	1,812	6	72	0	1,256	55	3,222
Macedonia, FYR	9	351	0	77	0	0	0	-61
Madagascar	10	230	0	0	0	0	-4	-3
Malawi	6	30	0	0	0	0	-23	-2
Malaysia	4,178	6,064	0	2,392	2,440	363	1,231	1,822
Mali	111	185	0	6	0	0	0	1
Mauritania	7	-3	0	0	0	0	0	-2
Mauritius	19	107	22	32	150	0	126	-102
Mexico	9,526	19,222	519	2,805	3,758	-9,727	1,401	5,747
Moldova	26	242	-1	2	0	-6	24	137
Mongolia	10	344	0	0	0	0	-14	15
Morocco	92	2,699	20	-309	0	0	158	-825
Mozambique	45	154	0	0	0	0	24	0
Myanmar	280	279	0	0	0	0	36	-8
Namibia	..	..	..	..	..	..	..	..
Nepal	19	-7	0	0	0	0	-5	0
Netherlands	12,206	7,197	..	..	..	..	..	..
New Zealand	3,316	7,941	..	..	..	..	..	..
Nicaragua	89	282	0	0	0	0	-81	-9
Niger	7	20	0	1	0	0	-24	-7
Nigeria	1,079	5,445	0	0	0	-1,442	-448	-60
Norway	2,393	4,653	..	..	..	..	..	..
Oman	46	952	0	1,020	0	25	-15	505
Pakistan	723	4,273	10	1,152	0	1,050	317	-233
Panama	223	2,574	0	0	0	186	-12	-10
Papua New Guinea	455	32	0	0	-32	0	-311	-110
Paraguay	103	189	0	0	0	0	-16	-18
Peru	2,557	3,467	171	182	0	-90	43	151
Philippines	1,478	2,345	0	2,388	1,110	1,734	-215	-2,725
Poland	3,659	19,198	219	-2,134	250	3,036	228	13,987
Portugal	685	7,366	..	..	..	..	..	..
Puerto Rico	..	..	..	..	..	..	..	..

	Equity flows				Debt flows			
	\$ millions				\$ millions			
	Foreign direct investment		Portfolio equity		Bonds		Commercial bank and other lending	
	1995	2006	1995	2006	1995	2006	1995	2006
Romania	419	11,394	0	301	0	0	413	4,800
Russian Federation	2,065	30,827	46	6,149	-810	12,175	444	14,591
Rwanda	2	11	0	0	0	0	0	0
Saudi Arabia	-1,875	660	..	..	..	..	..	..
Senegal	32	58	4	0	0	0	-25	18
Serbia	45 ^b	5,128	0 ^b	0	0 ^b	0	0 ^b	3,786
Sierra Leone	7	59	0	0	0	0	-28	0
Singapore	11,566	24,191	..	..	..	..	..	..
Slovak Republic	236	4,165	-16	0	0	-351	245	2,271
Slovenia	150	649	..	..	..	..	..	..
Somalia	1	96	0	0	0	0	0	0
South Africa	1,248	-120	2,914	14,959	731	1,576	748	-553
Spain	8,086	20,167	..	..	..	..	..	..
Sri Lanka	56	480	0	-304	0	0	103	-83
Sudan	12	3,534	0	-35	0	0	0	0
Swaziland	52	36	1	0	0	0	0	6
Sweden	14,939	27,299	..	..	..	..	..	..
Switzerland	4,158	27,185	..	..	..	..	..	..
Syrian Arab Republic	100	600	0	0	0	0	-5	-1
Tajikistan	10	339	0	0	0	0	0	3
Tanzania	120	474	0	3	0	0	15	1
Thailand	2,068	9,010	2,123	5,300	2,123	-2,036	3,702	3,729
Timor-Leste	..	..	..	..	..	..	..	..
Togo	26	57	0	14	0	0	0	0
Trinidad and Tobago	299	940	..	..	..	..	..	..
Tunisia	264	3,270	12	65	588	-301	-96	36
Turkey	885	20,070	195	1,939	627	4,773	174	28,627
Turkmenistan	233	731	0	0	0	0	20	-76
Uganda	121	392	0	19	0	0	-9	-1
Ukraine	267	5,604	0	322	-200	360	-19	9,118
United Arab Emirates	..	..	..	..	..	..	..	..
United Kingdom	21,731	139,745	..	..	..	..	..	..
United States	57,800	180,580	..	..	..	..	..	..
Uruguay	157	1,346	0	-2	144	320	39	-233
Uzbekistan	-24	164	0	0	0	0	201	-460
Venezuela, RB	985	-543	270	41	-468	-4,738	-247	-355
Vietnam	1,780	2,315	0	0	0	-26	356	-41
West Bank and Gaza	..	..	..	..	..	..	..	..
Yemen, Rep.	-218	1,121	0	0	0	0	-2	7
Zambia	97	575	0	2	0	0	-37	221
Zimbabwe	118	40	0	0	-30	0	140	-10
World	328,368 s	1,352,442 s	.. s	.. s	.. s	.. s	.. s	.. s
Low income	7,878	41,711	1,597	10,793	224	2,788	944	12,182
Middle income	96,122	325,781	12,198	94,056	23,114	24,633	27,003	164,242
Lower middle income	52,300	142,109	3,997	53,211	6,959	7,151	9,938	12,478
Upper middle income	43,822	183,673	8,201	40,845	16,155	17,482	17,066	151,765
Low & middle income	104,001	367,492	13,794	104,849	23,338	27,421	27,947	176,424
East Asia & Pacific	50,798	104,972	3,616	54,837	8,206	5,525	9,529	9,482
Europe & Central Asia	14,598	124,581	392	11,085	1,958	33,902	3,084	139,815
Latin America & Carib.	30,202	70,457	5,216	11,440	11,311	-16,952	13,225	18,969
Middle East & N. Africa	952	27,503	32	1,971	660	557	534	-2,080
South Asia	2,931	22,916	1,585	10,428	286	4,256	1,362	12,556
Sub-Saharan Africa	4,520	17,063	2,954	15,088	851	5,802	213	-2,316
High income	224,367	984,950	..	..	..	..	..	..
Euro area	78,196	400,472	..	..	..	..	..	..

a. Includes Luxembourg. b. Includes Montenegro.

About the data

Private financial flows account for the bulk of development finance and are split into two broad categories—equity and debt. Equity flows comprise foreign direct investment (FDI) and portfolio equity. Debt flows are financing raised through bond issuance, bank lending, and supplier credits.

The data on FDI and portfolio equity are based on balance of payments data reported by the International Monetary Fund (IMF). These data are supplemented by staff estimates using data from the United Nations Conference on Trade and Development and official national sources for FDI data and from market sources for portfolio equity data.

Under the internationally accepted definition of FDI, provided in the fifth edition of the IMF's *Balance of Payments Manual* (1993), FDI has 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. As a guideline 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. Also, 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, which has become an important source of financing for investment projects in some developing

countries. In addition, FDI data capture only cross-border investment flows involving equity participation and thus omit nonequity crossborder 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 individual 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 either loans from the International Bank for Reconstruction and Development or credits from the International Development Association. These reports are cross-checked with data reported from market sources that also provide transactional data. Information on private nonguaranteed bonds and bank lending is collected from market sources, because official national sources reporting to the Debtor Reporting System are not asked to report the breakdown between private nonguaranteed bonds and private nonguaranteed loans.

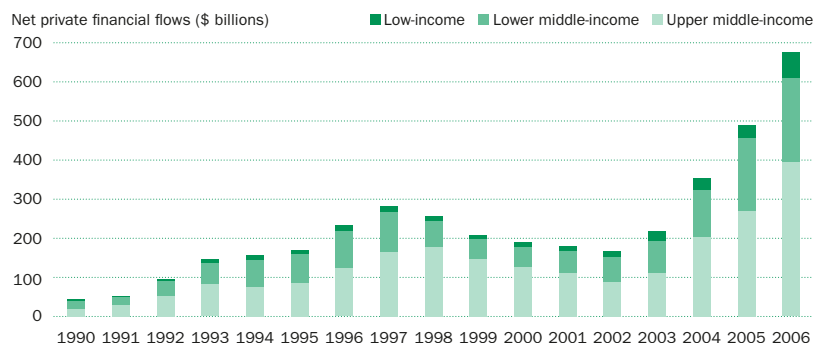
The volume of global private financial flows reported by the World Bank generally differs from that reported by other sources because of differences in sources, classification of economies, and method used to adjust and disaggregate reported information. In addition, particularly for debt financing, differences may also result based on whether particular installments of the transactions are included and how 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, reinvestment of earnings, other long-term capital, and short-term capital, as shown in the balance of payments.
- **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.

Financial integration of low-income economies remains marginal

6.10a



Since 2002 net private financial flows to developing countries have risen sharply, driven by increased foreign direct investment. However, financial integration of low-income economies remains marginal.

Note: Net private financial flows are the sum of net flows of foreign direct investment, portfolio equity, bonds, and commercial bank and other lending.

Source: World Bank Debtor Reporting System.

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 in the World Bank's *Global Development Finance 2008*.



6.11

Net official financial flows

	Total		International financial institutions							United Nations ^a			
	\$ millions		\$ millions							\$ millions			
	From bilateral sources	From multilateral sources ^{a,b}	World Bank	IMF	Conces-sional	Non-concessional	Regional development banks ^a	Other institutions		UNICEF	UNRWA	WFP	Others
	2006	2006	2006	2006	2006	2006	2006	2006		2006	2006	2006	2006
Afghanistan	39.7	163.1	37.0	0.0	0.0	0.0	66.2	0.0	0.1	18.5	0.0	1.5	39.8
Albania	25.6	97.3	40.9	0.0	-7.6	3.6	0.0	17.2	37.5	1.1	0.0	0.0	4.6
Algeria	-8,452.4	-2,262.6	0.0	-661.0	0.0	0.0	0.0	-234.1	-1,377.7	1.3	0.0	2.2	6.7
Angola	-685.3	42.1	12.4	0.0	0.0	0.0	1.7	-1.6	-6.0	10.2	0.0	1.8	23.6
Argentina	-1.2	-10,548.3	0.0	-674.6	0.0	-9,793.3	0.0	-85.0	0.0	0.6	0.0	0.0	4.0
Armenia	9.1	49.1	57.7	-0.7	-21.5	0.0	0.0	-7.9	7.6	0.8	0.0	1.2	11.9
Australia													
Austria													
Azerbaijan	-18.6	48.2	56.3	5.4	-24.1	-13.1	4.0	7.2	-1.3	1.5	0.0	1.7	10.6
Bangladesh	115.6	639.9	225.7	0.0	150.0	0.0	106.1	81.8	23.9	11.8	0.0	5.1	35.5
Belarus	19.3	-14.1	0.0	-10.3	0.0	0.0	0.0	-7.9	0.0	0.6	0.0	0.0	3.5
Belgium													
Benin	-16.5	52.2	24.2	0.0	1.3	0.0	17.5	-0.2	-9.2	4.3	0.0	2.5	11.8
Bolivia	57.4	9.1	22.4	0.0	0.0	0.0	42.0	-54.7	-11.0	1.5	0.0	2.9	6.0
Bosnia and Herzegovina	-26.4	11.1	22.9	-23.6	0.0	-43.9	0.0	2.5	38.7	1.1	0.0	0.0	13.4
Botswana	-7.4	-23.8	-0.5	-1.1	0.0	0.0	-2.2	-8.9	-17.2	1.0	0.0	0.0	5.1
Brazil	-2,658.8	2,255.6	0.0	1,460.1	0.0	0.0	0.0	794.0	-9.7	2.2	0.0	0.0	9.0
Bulgaria	20.0	-686.1	0.0	-237.3	0.0	-346.1	0.0	-7.1	-95.6	..	..	..	0.0
Burkina Faso	29.1	170.4	28.1	0.0	19.0	0.0	48.2	0.0	43.6	7.3	0.0	2.4	21.8
Burundi	0.0	69.1	12.5	0.0	21.0	0.0	9.3	0.0	1.2	8.0	0.0	1.5	15.6
Cambodia	67.6	94.9	15.1	0.0	0.0	0.0	51.0	0.0	4.3	5.0	0.0	2.7	16.8
Cameroon	-84.6	1.2	20.7	-38.7	-17.3	0.0	19.5	-15.4	10.5	3.6	0.0	1.8	16.5
Canada													
Central African Republic	0.0	-24.8	-46.7	0.0	-6.0	10.2	0.0	0.0	0.0	2.7	0.0	3.7	11.3
Chad	23.6	65.7	20.5	-4.7	-15.6	0.0	27.7	0.0	16.3	5.8	0.0	3.4	12.3
Chile	-19.6	70.8	-0.7	56.8	0.0	0.0	-1.0	13.7	0.0	0.4	0.0	0.0	1.6
China	81.0	868.6	-208.2	233.2	0.0	0.0	0.0	800.5	-5.3	11.1	0.0	0.0	37.3
Hong Kong, China	..	..	..	..	..	..	..	..	..	..	..	..	..
Colombia	-101.2	1,224.1	-0.7	683.9	0.0	0.0	-14.3	698.2	-151.9	1.1	0.0	1.7	6.1
Congo, Dem. Rep.	-114.6	163.1	106.4	0.0	0.0	0.0	3.1	0.0	-13.8	26.1	0.0	2.0	39.3
Congo, Rep.	-18.3	1.5	3.1	0.0	7.5	0.0	-0.9	-17.2	-2.3	1.7	0.0	0.6	9.0
Costa Rica	0.1	-114.9	-0.2	-5.7	0.0	0.0	-11.6	-44.2	-57.5	0.6	0.0	0.0	3.7
Côte d'Ivoire	12.5	-12.6	0.0	0.0	-57.5	0.0	0.0	-1.4	19.1	6.4	0.0	3.3	17.5
Croatia	-134.4	454.2	0.0	169.5	0.0	0.0	0.0	94.5	185.1	0.3	0.0	0.0	4.8
Cuba	..	8.3	..	..	..	..	..	..	..	0.7	0.0	3.4	4.2
Czech Republic	..	..	..	..	..	..	..	..	..	..	..	..	..
Denmark													
Dominican Republic	244.3	111.6	-0.7	32.7	0.0	37.0	-21.0	59.1	-0.6	1.0	0.0	0.0	4.1
Ecuador	-247.0	284.1	-1.1	-53.5	0.0	-58.3	-26.5	26.4	391.3	1.0	0.0	1.0	3.8
Egypt, Arab Rep.	-954.3	-62.9	14.4	42.0	0.0	0.0	1.5	-34.2	-109.5	3.0	0.0	1.1	18.8
El Salvador	-37.7	50.7	-0.8	-19.1	0.0	0.0	-23.1	24.5	61.5	0.8	0.0	1.0	5.9
Eritrea	2.4	48.6	19.5	0.0	0.0	0.0	5.1	0.0	4.3	3.9	0.0	0.7	15.1
Estonia	..	..	..	..	..	..	..	..	..	..	..	..	..
Ethiopia	74.1	327.6	156.5	0.0	0.0	0.0	35.2	-18.5	59.0	25.8	0.0	16.0	53.6
Finland													
France													
Gabon	14.4	-0.8	0.0	-11.8	0.0	-14.4	-0.2	-1.1	20.9	0.6	0.0	0.0	5.2
Gambia, The	0.8	43.9	7.7	0.0	-4.0	0.0	6.7	0.0	24.9	1.2	0.0	1.4	6.0
Georgia	-66.0	42.4	72.3	0.0	-8.0	0.0	0.0	3.1	-35.0	1.0	0.0	1.2	7.8
Germany													
Ghana	-66.2	413.9	231.6	0.0	116.4	0.0	47.8	-16.7	6.4	4.5	0.0	2.4	21.5
Greece													
Guatemala	-62.1	427.8	0.0	162.6	0.0	0.0	-18.6	83.9	181.6	1.0	0.0	4.9	12.4
Guinea	-40.6	-15.7	-1.8	0.0	-19.4	0.0	9.5	-7.3	-24.2	4.4	0.0	4.3	18.8
Guinea-Bissau	-10.5	9.1	-0.3	0.0	-3.8	0.0	0.8	0.0	1.9	2.0	0.0	1.7	6.8
Haiti	-4.3	65.8	-9.1	0.0	-4.4	14.9	43.5	0.0	-1.3	2.8	0.0	2.8	16.6

Net official financial flows

	Total		International financial institutions							United Nations ^a			
	\$ millions		\$ millions										
	From bilateral sources	From multilateral sources ^{a,b}	World Bank		Conces-sional	IMF	Non-concessional	Regional development banks ^a		Other institutions	\$ millions		
2006	2006	IDA	IBRD	2006		2006		Conces-sional	Non-concessional		2006	2006	2006
Honduras	-13.4	156.3	49.9	0.0	15.0	0.0	76.5	-19.0	24.1	1.0	0.0	0.6	8.2
Hungary	-33.2	134.2	0.0	-39.0	0.0	0.0	0.0	162.4	10.8	..	..	..	0.0
India	703.1	1,553.5	239.2	606.2	0.0	0.0	0.0	564.0	31.1	38.0	0.0	9.6	65.4
Indonesia	154.3	-8,026.3	288.3	-706.4	0.0	-8,037.1	75.8	242.0	0.0	7.7	0.0	67.1	36.3
Iran, Islamic Rep.	-36.4	190.0	0.0	181.2	0.0	0.0	0.0	0.0	-9.0	2.1	0.0	0.2	15.5
Iraq	..	12.6	..	..	..	..	..	..	..	2.2	0.0	0.6	9.8
Ireland													
Israel	..	..	..	..	..	..	..	..	..	..	..	..	..
Italy													
Jamaica	-87.4	-52.9	0.0	-25.3	0.0	0.0	-5.3	-34.7	10.1	0.8	0.0	0.0	1.5
Japan													
Jordan	-89.1	42.9	-2.6	-35.1	0.0	-88.4	0.0	0.0	63.5	0.8	100.8	0.4	3.5
Kazakhstan	30.6	-47.9	0.0	-101.1	0.0	0.0	-0.9	-3.6	51.8	1.1	0.0	0.0	4.8
Kenya	12.0	-102.4	-18.4	0.0	-13.6	0.0	9.8	-8.4	-126.4	6.9	0.0	14.0	33.7
Korea, Dem. Rep.	..	13.9	..	..	..	..	..	..	..	1.7	0.0	1.8	10.4
Korea, Rep.	..	..	..	..	..	..	..	..	..	..	..	..	..
Kuwait	..	..	..	..	..	..	..	..	..	..	..	..	..
Kyrgyz Republic	8.8	35.6	19.4	0.0	-23.7	0.0	40.5	-8.8	-0.2	1.1	0.0	0.0	7.3
Lao PDR	-20.4	92.5	16.9	0.0	-3.3	0.0	57.9	5.0	-2.7	2.0	0.0	3.0	13.7
Latvia	-0.5	95.2	0.0	-19.0	0.0	0.0	0.0	-0.8	115.0	..	..	..	0.0
Lebanon	-54.1	0.5	0.0	-52.5	0.0	0.0	0.0	0.0	-15.6	2.0	62.0	0.0	4.6
Lesotho	-8.6	16.8	5.6	-3.6	-0.5	0.0	8.2	-1.0	-1.2	1.1	0.0	2.5	5.7
Liberia	0.0	27.2	0.0	0.0	0.0	-0.7	0.0	0.0	0.0	4.1	0.0	3.1	20.7
Libya	..	2.0	..	..	..	..	..	..	..	0.0	0.0	0.4	1.6
Lithuania	-158.4	-26.0	0.0	-8.6	0.0	0.0	0.0	-2.8	-14.6	..	..	..	0.0
Macedonia, FYR	-30.0	28.7	1.8	-0.3	-8.5	-1.0	0.0	12.7	16.5	0.6	0.0	0.0	6.9
Madagascar	8.4	266.1	162.2	0.0	11.6	0.0	60.1	0.0	4.2	6.0	0.0	2.9	19.1
Malawi	-0.9	64.0	20.3	0.0	3.7	-6.4	16.9	-1.8	-0.7	7.8	0.0	4.4	19.8
Malaysia	-278.3	-131.3	0.0	-96.3	0.0	0.0	0.0	-54.6	14.1	0.6	0.0	0.0	4.9
Mali	20.6	155.4	93.4	0.0	5.9	0.0	22.6	0.0	4.0	9.5	0.0	2.5	17.5
Mauritania	3.6	118.7	42.0	0.0	-23.0	0.0	6.9	-7.6	82.9	1.8	0.0	4.7	11.0
Mauritius	-50.3	-35.3	-0.6	-7.3	0.0	0.0	-0.1	-29.1	-1.0	0.0	0.0	0.0	2.8
Mexico	-272.7	-8,302.2	0.0	-4,671.1	0.0	0.0	0.0	-3,641.6	0.0	0.8	0.0	0.0	9.7
Moldova	-19.4	53.2	22.6	-13.9	59.8	-20.1	0.0	-5.4	1.2	0.8	0.0	0.0	8.2
Mongolia	10.5	45.8	10.4	0.0	-6.0	0.0	23.3	0.0	7.3	0.9	0.0	0.0	9.9
Morocco	23.2	448.7	-1.4	-154.0	0.0	0.0	-0.8	364.0	231.0	1.6	0.0	0.0	8.3
Mozambique	-5.7	411.3	215.3	0.0	4.8	0.0	102.4	20.0	11.0	9.5	0.0	8.5	39.8
Myanmar	-51.1	33.9	0.0	0.0	0.0	0.0	0.0	0.0	-2.2	9.9	0.0	1.1	25.1
Namibia	..	8.4	..	..	..	..	..	..	..	1.5	0.0	1.0	5.9
Nepal	-31.2	150.8	12.4	0.0	21.2	0.0	75.2	0.0	1.2	6.3	0.0	7.5	27.0
Netherlands													
New Zealand													
Nicaragua	8.4	295.3	56.3	0.0	61.5	0.0	111.9	-8.8	61.0	1.3	0.0	0.6	11.5
Niger	-10.4	3.1	46.6	0.0	-105.5	0.0	21.6	-2.5	6.1	12.2	0.0	7.3	17.3
Nigeria	-4,336.1	133.8	342.7	-210.8	0.0	0.0	7.3	-78.8	0.0	31.1	0.0	0.0	42.3
Norway													
Oman	14.6	-39.6	0.0	0.0	0.0	0.0	0.0	0.0	-41.3	0.1	0.0	0.0	1.6
Pakistan	-49.7	1,274.8	688.3	-128.6	-78.9	-28.2	105.8	448.3	172.8	14.9	0.0	10.9	69.5
Panama	-11.2	44.0	0.0	-26.2	0.0	-9.8	-7.9	70.0	13.4	0.4	0.0	0.3	3.8
Papua New Guinea	-15.8	-27.2	-3.6	-5.6	0.0	0.0	6.1	-29.3	-2.6	1.9	0.0	0.0	5.9
Paraguay	-20.8	14.5	-1.5	5.8	0.0	0.0	-15.1	21.2	-0.4	1.0	0.0	0.0	3.5
Peru	-305.3	-144.1	0.0	-182.5	0.0	-39.4	-8.2	202.3	-144.7	1.5	0.0	0.6	26.3
Philippines	-213.0	-192.4	-6.8	-250.8	0.0	-400.3	-25.0	468.3	-2.4	3.3	0.0	1.7	19.6
Poland	-1,991.5	15.3	0.0	15.3	0.0	0.0	0.0	0.0	0.0	..	..	..	0.0
Portugal													
Puerto Rico													



6.11

Net official financial flows

	Total		International financial institutions							United Nations ^a			
	\$ millions		\$ millions							\$ millions			
	From bilateral sources	From multilateral sources ^{a,b}	World Bank		Conces-sional	IMF Non-concessional	Regional development banks ^a		Other institutions	UNICEF	UNRWA	WFP	Others
	2006	2006	IDA 2006	IBRD 2006			Conces-sional 2006	Non-concessional 2006					
Romania	17.9	-44.6	0.0	-54.3	0.0	-167.3	6.8	-32.9	203.1	..	..	..	0.0
Russian Federation	-25,232.5	-221.1	0.0	-369.6	0.0	0.0	0.0	119.9	28.6	..	..	..	0.0
Rwanda	-3.9	85.5	28.6	0.0	2.5	0.0	24.3	0.0	-3.3	6.1	0.0	5.4	21.9
Saudi Arabia	..	2.8	..	..	..	..	..	..	..	0.0	0.0	0.0	2.8
Senegal	-19.5	183.9	115.8	0.0	20.4	0.0	21.3	-12.5	9.6	4.0	0.0	3.9	21.4
Serbia	7.5	-651.5	56.5	-250.2	0.0	-652.9	0.0	53.9	118.2	1.0	0.0	0.0	22.0
Sierra Leone	0.0	69.3	7.2	0.0	8.9	0.0	16.7	0.0	6.4	5.3	0.0	4.8	20.0
Singapore	..	..	..	..	..	..	..	..	..	..	..	..	..
Slovak Republic	-63.9	-42.8	0.0	-32.9	0.0	0.0	0.0	-3.9	-6.0	..	..	..	0.0
Slovenia	..	..	..	..	..	..	..	..	..	..	..	..	..
Somalia	0.0	24.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.4	0.0	4.4	12.8
South Africa	0.0	31.7	0.0	-1.8	0.0	0.0	0.0	24.5	0.0	1.2	0.0	0.0	7.8
Spain	..	..	..	..	..	..	..	..	..	..	..	..	..
Sri Lanka	86.8	70.3	57.1	0.0	0.0	-153.6	88.4	39.1	14.4	0.9	0.0	0.8	23.2
Sudan	-41.7	229.5	-2.0	0.0	0.0	-27.0	0.0	0.0	136.9	17.4	0.0	55.9	48.3
Swaziland	-5.4	45.6	-0.3	-1.2	0.0	0.0	-1.0	11.5	30.6	1.0	0.0	0.0	5.0
Sweden	..	..	..	..	..	..	..	..	..	..	..	..	..
Switzerland	..	..	..	..	..	..	..	..	..	..	..	..	..
Syrian Arab Republic	-92.5	6.1	-1.5	0.0	0.0	0.0	0.0	0.0	-34.8	1.6	35.2	0.9	4.7
Tajikistan	46.8	97.1	16.2	0.0	14.4	0.0	35.2	-1.4	20.6	2.6	0.0	1.2	8.3
Tanzania	54.1	522.4	384.9	0.0	4.1	0.0	44.4	-0.9	42.0	12.9	0.0	5.5	29.5
Thailand	-512.6	-171.2	-3.4	-50.2	0.0	0.0	-2.9	-117.1	-14.0	1.8	0.0	0.0	14.6
Timor-Leste	..	9.1	..	..	..	..	..	..	..	1.6	0.0	0.2	7.3
Togo	-1.8	13.0	0.0	0.0	-6.4	0.0	0.1	-1.4	9.8	2.2	0.0	0.4	8.3
Trinidad and Tobago	..	0.7	..	..	..	..	..	..	..	0.0	0.0	0.0	0.7
Tunisia	-29.4	-174.0	-2.1	-254.6	0.0	0.0	0.0	-124.9	203.2	1.0	0.0	0.0	3.4
Turkey	-323.1	-3,496.3	-5.9	989.1	0.0	-4,552.0	0.0	0.0	60.0	2.0	0.0	0.0	10.5
Turkmenistan	-125.5	-6.3	0.0	-8.2	0.0	0.0	0.0	0.0	-2.8	1.1	0.0	0.0	3.6
Uganda	-32.5	266.8	131.4	0.0	2.9	0.0	50.6	-2.4	29.3	11.7	0.0	9.7	33.6
Ukraine	-279.8	-546.7	0.0	-85.8	0.0	-410.5	0.0	-48.2	-13.0	1.4	0.0	0.0	9.4
United Arab Emirates	..	..	..	..	..	..	..	..	..	..	..	..	..
United Kingdom	..	..	..	..	..	..	..	..	..	..	..	..	..
United States	..	..	..	..	..	..	..	..	..	..	..	..	..
Uruguay	-9.8	-2,934.8	0.0	-162.8	0.0	-2,372.1	-2.4	-401.7	0.5	0.5	0.0	0.0	3.2
Uzbekistan	-106.4	71.1	13.4	11.2	0.0	0.0	0.2	22.8	13.3	2.5	0.0	0.0	7.7
Venezuela, RB	226.0	179.5	0.0	-149.7	0.0	0.0	0.0	-164.3	484.1	0.8	0.0	0.0	8.6
Vietnam	357.4	500.1	317.4	0.0	-32.8	0.0	159.0	10.1	19.0	3.9	0.0	0.0	23.5
West Bank and Gaza	..	408.0	..	..	..	..	..	..	..	5.0	402.0	0.9	0.1
Yemen, Rep.	45.1	172.8	129.2	0.0	-47.1	-13.0	0.0	0.0	71.1	5.2	0.0	6.6	20.8
Zambia	-24.6	120.2	23.1	0.0	24.3	0.0	27.9	-14.8	11.6	5.8	0.0	16.4	25.9
Zimbabwe	12.4	22.8	0.0	0.0	-0.4	-3.1	0.0	0.0	1.6	2.5	0.0	8.3	13.9
World	.. \$	.. \$	.. \$	.. \$	.. \$	.. \$	.. \$	.. \$	.. \$	740.1 \$	599.9 \$	473.5 \$	2,099.4 \$
Low income	-3,358.6	8,923.0	3,879.8	267.8	-18.0	-53.1	1,415.6	937.2	708.1	398.4	0.0	261.8	1,125.4
Middle income	-42,730.3	-30,303.7	679.4	-5,522.5	87.5	-27,136.2	287.0	-798.2	643.9	114.5	599.9	108.3	632.7
Lower middle income	-11,843.3	-6,312.8	616.3	-1,234.0	81.8	-9,225.0	314.2	2,362.3	-441.3	91.8	538.0	107.6	475.5
Upper middle income	-30,887.0	-24,025.7	63.1	-4,288.4	5.7	-17,911.2	-27.2	-3,160.4	1,085.1	17.7	62.0	0.7	127.2
Low & middle income	-46,088.9	-20,714.6	4,559.2	-5,254.7	69.5	-27,189.3	1,702.6	139.0	1,352.0	738.2	599.9	473.3	2,095.7
East Asia & Pacific	-421.0	-6,844.8	430.3	-878.3	-42.0	-8,437.4	345.4	1,330.9	34.7	54.7	0.0	77.5	239.4
Europe & Central Asia	-28,383.9	-4,526.2	374.0	-64.4	-19.2	-6,203.2	85.7	367.1	758.1	24.2	0.0	5.3	146.2
Latin America & Carib.	-3,235.8	-16,719.7	127.3	-3,572.8	105.0	-12,224.2	161.0	-2,454.8	896.7	23.7	0.0	20.2	198.2
Middle East & N. Africa	-9,625.6	-1,168.0	143.8	-934.0	-48.7	-101.4	1.0	-21.4	-997.7	27.4	599.9	14.4	148.7
South Asia	893.5	3,917.0	1,271.4	477.7	92.3	-181.7	449.3	1,133.1	271.3	92.6	0.0	36.7	274.3
Sub-Saharan Africa	-5,316.0	4,063.2	2,212.3	-282.9	-17.9	-41.3	660.2	-216.0	389.0	293.3	0.0	217.4	849.1
High income	..	5.7	..	..	..	..	..	..	..	1.8	0.0	0.2	3.7
Euro area	..	..	..	..	..	..	..	..	..	..	..	..	..

a. Aggregates include amounts for economies not specified elsewhere. b. World and income group aggregates include flows not allocated by country or region.

About the data

The table shows financing from official bilateral and multilateral sources. It shows concessional and nonconcessional financial flows from the major multilateral institutions—the World Bank, the International Monetary Fund (IMF), regional development banks, other international financial institutions, and UN agencies.

The multilateral development banks fund their non-concessional lending operations primarily by selling low-interest, highly rated bonds backed by prudent lending and financial policies and the strong financial support of their members. Funds are then on-lent at slightly higher interest rates with 15- to 20-year maturities to developing countries. Lending terms vary with market conditions and bank policies.

Concessional flows from multilateral development banks are credits provided through their concessional lending facilities. The cost of these loans is reduced through subsidies from donors or other resources. Grants from multilateral agencies are not included in the net flows. Concessional flows from bilateral donors are defined by the Organisation for Economic Co-operation and Development's (OECD) Development Assistance Committee (DAC) as financial flows with a grant element of at least 25 percent. The grant element is evaluated assuming a 10 percent nominal discount rate. The grant element is nil for a loan with a 10 percent interest rate and 100 percent for a grant, which requires no repayment.

All World Bank concessional lending is carried out by the International Development Association (IDA). Eligibility for IDA resources is based on gross national

income (GNI) per capita and performance standards assessed by World Bank staff. The cutoff for IDA eligibility is set at the beginning of the World Bank's fiscal year. Since July 1, 2007, the GNI per capita cutoff has been \$1,065, measured in 2006 U.S. dollars using the *World Bank Atlas* method (see *Users guide*). In exceptional circumstances IDA extends temporary eligibility to countries above the cutoff and that are undertaking major adjustment efforts but are not creditworthy for International Bank for Reconstruction and Development (IBRD) lending. Exceptions are also made for small island economies. The IBRD lends to creditworthy countries at an initial interest rate that consists of a variable base rate of six-month LIBOR, and a spread, either variable or fixed, for the life of the loan. The lending rate is reset every six months on the interest payment dates for the loan and applies to the interest period beginning on that date. Although some outstanding IBRD loans have a low enough interest rate to be classified as concessional under the DAC definition, all IBRD loans in the table are classified as nonconcessional. Lending by the International Finance Corporation is not included in the table.

The IMF makes concessional funds available through its Poverty Reduction and Growth Facility and the IMF Trust Fund. Eligibility is based principally on a country's per capita income and eligibility under IDA.

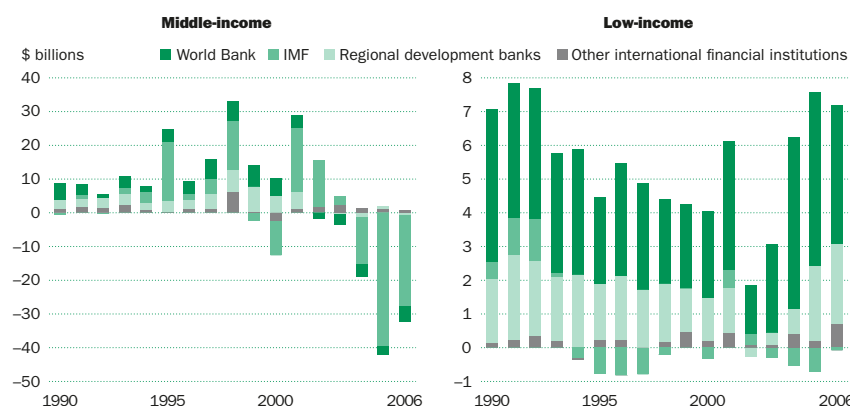
Regional development banks also maintain concessional windows. Loans from the major regional development banks are recorded in the table according to each institution's classification and not according to the DAC definition.

Definitions

- **Total net official financial flows** are disbursements of public or publicly guaranteed loans and credits, less repayments of principal.
- **IDA** is the International Development Association, the concessional loan window of the World Bank Group.
- **IBRD** is the International Bank for Reconstruction and Development, the founding and largest member of the World Bank Group.
- **IMF** is the International Monetary Fund, which provides concessional lending through the Poverty Reduction and Growth Facility and the IMF Trust Fund and nonconcessional lending through the credit it provides to its members, mainly to meet balance of payments needs.
- **Regional development banks** are the African Development Bank, in Tunis, Tunisia, which serves all of Africa, including North Africa; the Asian Development Bank, in Manila, Philippines, which serves South and Central Asia and East Asia and Pacific; the European Bank for Reconstruction and Development, in London, United Kingdom, which serves Europe and Central Asia; and the Inter-American Development Bank, in Washington, D.C., which serves the Americas.
- **Concessional financial flows** are disbursements made through concessional lending facilities.
- **Nonconcessional financial flows** are all disbursements that are not concessional.
- **Other institutions** is a residual category in the World Bank's Debtor Reporting System that includes other multilateral institutions such as the Caribbean Development Fund, Council of Europe, European Development Fund, Islamic Development Bank, Nordic Development Fund, and the like.
- **United Nations** includes the United Nations Children's Fund (UNICEF), United Nations Relief and Works Agency for Palestine Refugees in the Near East (UNRWA), World Food Programme (WFP), and other UN agencies, such as the International Fund for Agricultural Development, United Nations Development Programme, United Nations Population Fund, United Nations Refugee Agency, and United Nations Regular Programme for Technical Assistance.

While net financial flows to middle-income economies are falling, low-income economies are still borrowing from international financial institutions

6.11a



In recent years, as many middle-income economies paid off loans from international financial institutions, net disbursement fell sharply. But international financial institutions still maintain a positive flow of net disbursement to low-income economies.

Source: World Bank Debtor Reporting System.

Data sources

Data on net financial flows from international financial institutions are from the World Bank's Debtor Reporting System and published in the World Bank's *Global Development Finance 2008* and electronically as *GDF Online*. Data on aid from UN agencies are from the DAC annual *Development Cooperation Report* and are available electronically on the OECD's *International Development Statistics* CD-ROM and at www.oecd.org/dac/stats/idsonline.



6.12

Financial flows from Development Assistance Committee members

Net disbursements

	Total net flows ^a	Official development assistance ^a				Other official flows ^a	Private flows ^a					Net grants by NGOs ^a
		Total	Bilateral grants	Bilateral loans	Contributions to multilateral institutions		Total	Foreign direct investment	Bilateral portfolio investment	Multilateral portfolio investment	Private export credits	
\$ millions	2006	2006	2006	2006	2006	2006	2006	2006	2006	2006	2006	2006
Australia	9,120	2,123	1,773	23	327	308	6,074	4,968	978	..	129	615
Austria	3,215	1,498	1,101	-9	407	-448	2,045	1,613	0	..	433	119
Belgium	5,309	1,978	1,365	-7	620	-434	3,514	3,533	0	..	-19	251
Canada	14,234	3,684	2,573	-42	1,153	356	9,093	7,717	427	..	950	1,100
Denmark	2,686	2,236	1,525	-61	772	-77	454	454	0	..	..	73
Finland	1,413	834	442	13	380	..	553	402	137	..	14	25
France	22,329	10,601	8,422	-503	2,681	-1,388	13,116	10,589	3,983	..	-1,456	..
Germany	27,203	10,435	7,576	-542	3,401	-5,728	21,149	12,401	7,672	1,057	19	1,348
Greece	2,896	424	189	..	235	8	2,454	2,454	0	..	..	10
Ireland	5,237	1,022	632	..	389	..	3,877	..	3,877	..	..	339
Italy	5,512	3,641	2,147	-146	1,640	-957	2,705	1,151	-1,049	..	2,602	123
Japan	26,230	11,187	7,660	-347	3,874	2,438	12,290	14,144	-1,201	-928	275	315
Luxembourg	299	291	205	..	86	..	..	..	..	..	..	8
Netherlands	28,616	5,452	4,415	-133	1,169	343	22,544	6,351	10,728	-248	5,713	277
New Zealand	338	259	203	..	56	7	24	24	0	..	..	48
Norway	4,304	2,954	2,119	79	756	5	1,345	1,351	0	..	-6	..
Portugal	666	396	198	14	185	-20	286	44	0	..	243	4
Spain	11,146	3,814	2,012	80	1,722	..	7,333	7,608	0	..	-275	..
Sweden	4,175	3,955	2,838	14	1,103	-2	210	333	0	..	-123	12
Switzerland	11,306	1,646	1,241	13	392	17	9,241	10,001	0	-239	-521	402
United Kingdom	26,941	12,459	8,809	-92	3,741	-187	14,127	7,530	11,292	..	-4,696	543
United States	90,897	23,532	22,005	-843	2,370	-4,017	62,345	36,624	23,662	3,156	-1,097	9,037
Total	304,074	104,421	79,450	-2,490	27,461	-9,774	194,779	129,291	60,507	2,798	2,183	14,648

Official development assistance

	Commitments ^b		Gross disbursements ^b		Net disbursements							
							per capita ^b		% of GNI ^a		% of general government disbursements ^a	
	\$ millions	\$ millions	\$ millions	\$ millions	\$ millions ^b	\$ millions ^b	\$	\$				
	2000	2006	2000	2006	2000	2006	2000	2006	2000	2006	2000	2006
Australia	1,793	2,058	1,545	2,058	1,545	2,058	80	100	0.27	0.30	0.72	0.82
Austria	841	1,485	649	1,476	645	1,465	80	177	0.23	0.47	0.44	0.94
Belgium	1,253	2,343	1,253	1,988	1,219	1,921	119	182	0.36	0.50	0.72	1.03
Canada	2,746	3,520	2,434	3,426	2,400	3,385	78	103	0.25	0.29	0.59	0.74
Denmark	2,390	2,051	2,549	2,249	2,523	2,173	472	399	1.06	0.80	1.93	1.58
Finland	502	947	537	824	527	820	102	156	0.31	0.40	0.63	0.81
France	6,960	14,617	7,422	12,417	6,094	10,313	103	163	0.30	0.47	0.60	0.88
Germany	8,119	13,005	8,241	11,844	7,140	10,257	87	124	0.27	0.36	0.59	0.79
Greece	354	407	354	407	354	407	32	37	0.20	0.17	0.39	0.37
Ireland	378	984	378	984	378	984	100	232	0.29	0.54	0.77	1.36
Italy	2,512	4,015	2,485	3,884	2,139	3,533	37	60	0.13	0.20	0.27	0.39
Japan	15,627	18,520	14,885	18,276	12,335	11,946	97	94	0.28	0.25	0.74	0.70
Luxembourg	191	269	191	269	191	269	433	584	0.71	0.89	1.61	1.75
Netherlands	5,305	12,343	4,975	5,757	4,833	5,329	303	326	0.84	0.81	1.84	1.76
New Zealand	212	378	200	275	200	275	52	66	0.25	0.27	0.55	0.60
Norway	1,798	3,148	2,029	2,732	2,020	2,732	450	584	0.76	0.89	1.77	2.16
Portugal	655	390	655	390	426	385	42	37	0.26	0.21	0.56	0.44
Spain	2,293	3,974	2,293	3,974	1,974	3,643	49	81	0.22	0.32	0.53	0.80
Sweden	1,907	4,141	2,386	3,854	2,386	3,854	269	423	0.80	1.02	1.30	1.85
Switzerland	1,276	1,874	1,257	1,652	1,254	1,641	175	219	0.34	0.39	1.07	1.24
United Kingdom	6,225	12,630	6,225	12,630	6,156	12,034	105	200	0.32	0.51	0.84	1.16
United States	14,215	25,920	12,246	23,834	11,223	22,863	41	76	0.10	0.18	0.30	0.49
Total	77,553	129,018	75,187	115,201	67,961	102,287	81	115	0.22	0.31	0.57	0.75

Note: Components may not sum to totals because of gaps in reporting.

a. At current prices and exchange rates. b. At 2005 prices and exchange rates.

About the data

The flows of official and private financial resources from the members of the Development Assistance Committee (DAC) of the Organisation for Economic Co-operation and Development (OECD) to developing economies are compiled by DAC, based principally on reporting by DAC members using standard questionnaires issued by the DAC Secretariat.

The table shows data reported by DAC member economies and does not include aid provided by the Commission of the European Communities—a multilateral member of DAC.

DAC exists to help its members coordinate their development assistance and to encourage the expansion and improve the effectiveness of the aggregate resources flowing to recipient economies. In this capacity DAC monitors the flow of all financial resources, but its main concern is official development assistance (ODA). Grants or loans to countries and territories on the DAC list of aid recipients have to meet three criteria to be counted as ODA. They are undertaken by the official sector. They promote economic development and welfare as the main objective. And they are provided at concessional financial terms (loans must have a grant element of at least 25 percent, calculated at a discount rate of 10 percent). The DAC Statistical Reporting Directives provide the most detailed explanation of this definition and all ODA-related rules.

This definition excludes nonconcessional flows from official creditors, which are classified as “other official flows,” and aid for military purposes. Transfer payments to private individuals, such as pensions, reparations, and insurance payouts, are in general not counted. In addition to financial flows, technical cooperation is included in ODA. Most expenditures for peacekeeping under UN mandates and assistance to refugees are counted in ODA. Also included are contributions to multilateral institutions, such as the United Nations and its specialized agencies, and concessional funding to multilateral development banks.

DAC has revised the list of countries and territories that are counted as aid recipients. These revisions will govern aid reporting for three years, starting with 2005 flows. In the past DAC distinguished aid going to Part I and Part II countries. Part I countries, the recipients of ODA, comprised many of the countries classified by the World Bank as low- and middle-income economies. Part II countries, whose assistance was designated official aid, included the more advanced countries of Central and Eastern Europe, countries of the former Soviet Union, and certain

advanced developing countries and territories. This distinction has been dropped. ODA recipients now comprise all low- and middle-income countries except those that are members of the Group of Eight or the European Union (including countries with a firm date for EU accession). The content and structure of tables 6.12 through 6.15 have been revised to reflect this change. Because official aid flows are quite small relative to ODA, the net effect of these changes is believed to be minor.

Flows are transfers of resources, either in cash or in the form of commodities or services measured on a cash basis. Short-term capital transactions (with one year or less maturity) are not counted. Repayments of the principal (but not interest) of ODA loans are recorded as negative flows. Proceeds from official equity investments in a developing country are reported as ODA, while proceeds from their later sale are recorded as negative flows.

Because the table is based on donor country reports, it does not provide a complete picture of the resources received by developing economies for two reasons. First, flows from DAC members are only part of the aggregate resource flows to these economies. Second, the data that record contributions to multilateral institutions measure the flow of resources made available to those institutions by DAC members, not the flow of resources from those institutions to developing and transition economies.

Aid as a share of gross national income (GNI), aid per capita, and ODA as a share of the general government disbursements of the donor are calculated by the OECD. The denominators used in calculating these ratios may differ from corresponding values elsewhere in this book because of differences in timing or definitions.

Definitions

- **Net disbursements** are gross disbursements of grants and loans minus repayments of principal on earlier loans.
- **Total net flows** comprise ODA or official aid flows, other official flows, private flows, and net grants by nongovernmental organizations.
- **Official development assistance** comprises flows that meet the DAC definition of ODA and are made to countries and territories on the DAC list of aid recipients.
- **Bilateral grants** are transfers of money or in kind for which no repayment is required.
- **Bilateral loans** are loans extended by governments or official agencies that have a grant element of at least 25 percent (calculated at a 10 percent discount rate).
- **Contributions to multilateral institutions**

are concessional funding received by multilateral institutions from DAC members as grants or capital subscriptions.

- **Other official flows** are transactions by the official sector whose main objective is other than development or whose grant element is less than 25 percent.
- **Private flows** are flows at market terms financed from private sector resources in donor countries. They include changes in holdings of private long-term assets by reporting country residents.
- **Foreign direct investment** is investment by residents of DAC member countries to acquire a lasting management interest (at least 10 percent of voting stock) in an enterprise operating in the recipient country. The data reflect changes in the net worth of subsidiaries in recipient countries whose parent company is in the DAC source country.
- **Bilateral portfolio investment** covers bank lending and the purchase of bonds, shares, and real estate by residents of DAC member countries in recipient countries.
- **Multilateral portfolio investment** are transactions of private banks and nonbanks in DAC member countries in the securities issued by multilateral institutions.
- **Private export credits** are loans extended to recipient countries by the private sector in DAC member countries to promote trade; they may be supported by an official guarantee.
- **Net grants by nongovernmental organizations (NGOs)** are private grants by NGOs, net of subsidies from the official sector.
- **Commitments** are obligations, expressed in writing and backed by funds, undertaken by an official donor to provide specified assistance to a recipient country or multilateral organization.
- **Gross disbursements** are the international transfer of financial resources and goods and services, valued at the cost to the donor.

Data sources

Data on financial flows are compiled by OECD-DAC and published in its annual statistical report, *Geographical Distribution of Financial Flows to Aid Recipients*, and its annual *Development Cooperation Report*. Data are available electronically on the OECD's *International Development Statistics* CD-ROM and at www.oecd.org/dac/stats/idsonline.



6.13a Aid by purpose

	Net disbursements		Share of bilateral ODA net disbursements									
	\$ millions ^a		Development projects, programs, and other resource provisions		Technical cooperation ^b		% Debt-related aid		Humanitarian assistance		Administrative costs	
	2000	2006					2000	2006	2000	2006	2000	2006
Australia	758	1,796	27.8	21.6	55.1	48.0	1.1	15.4	9.7	10.6	6.2	4.3
Austria	273	1,092	28.7	6.8	41.8	19.4	20.4	69.3	2.7	1.5	6.4	2.9
Belgium	477	1,357	33.6	10.0	46.9	50.3	6.6	29.3	5.4	6.4	7.5	4.0
Canada	1,160	2,531	39.6	44.2	43.0	27.3	1.1	10.3	5.0	9.1	11.4	9.0
Denmark	1,024	1,464	65.8	63.3	25.3	11.1	1.0	7.7	0.0	10.3	8.0	7.6
Finland	217	455	40.8	54.6	41.4	22.6	0.0	0.0	10.5	15.5	7.2	7.4
France	2,829	7,919	25.4	9.5	50.6	41.4	17.0	44.2	0.4	0.6	6.7	4.3
Germany	2,687	7,034	16.8	8.9	63.8	44.9	6.6	37.8	4.1	5.1	8.7	3.2
Greece	99	189	69.6	29.8	23.8	49.9	0.0	0.0	6.4	10.2	0.2	10.1
Ireland	154	632	79.1	75.8	0.4	4.9	0.0	0.0	15.5	13.8	5.1	5.4
Italy	377	2,001	10.2	4.8	8.1	8.6	57.5	80.2	18.3	3.7	5.9	2.8
Japan	9,768	7,313	60.4	19.2	24.9	25.4	4.2	43.8	0.9	2.5	9.5	9.1
Luxembourg	99	205	84.4	71.9	3.2	3.6	0.8	0.0	10.4	18.1	1.2	6.4
Netherlands	2,243	4,282	41.1	62.8	33.7	14.7	6.8	7.3	9.1	9.3	9.4	5.9
New Zealand	85	203	39.7	51.7	48.1	29.7	0.0	0.0	3.4	10.6	8.8	8.0
Norway	934	2,198	57.9	57.1	23.0	20.4	1.0	1.0	11.3	14.1	6.9	7.5
Portugal	179	211	30.4	34.5	50.4	55.9	14.6	0.2	1.9	3.3	2.7	6.1
Spain	720	2,092	69.3	39.7	17.9	24.3	2.3	24.6	3.7	6.6	6.8	4.8
Sweden	1,242	2,852	60.9	61.6	13.6	11.0	3.1	10.3	14.6	10.3	7.7	6.8
Switzerland	627	1,254	58.6	49.8	19.4	24.2	0.9	7.8	20.2	14.0	0.9	4.1
United Kingdom	2,710	8,718	47.7	34.7	25.5	10.0	5.7	40.2	12.7	9.6	8.4	5.5
United States	7,405	21,162	14.6	26.5	64.4	46.2	1.7	8.0	9.6	14.3	9.7	5.1
Total	36,064	76,960	40.5	29.1	39.4	31.6	5.4	25.0	6.1	8.8	8.6	5.5

a. At current exchange rates and prices. b. Includes aid for promoting development awareness and aid provided to refugees in donor economies.

About the data

Aid can be used in many ways. The sector to which aid goes, the form it takes, and the procurement restrictions attached to it are important influences on aid effectiveness. The data on allocation of official development assistance (ODA) in the table are based principally on reporting by members of the Organisation for Economic Co-operation and Development (OECD) Development Assistance Committee (DAC). For more detailed explanation of ODA, see *About the data* for table 6.12.

The form in which an ODA contribution reaches the benefiting sector or the economy is important. A distinction is made between resource provision and technical cooperation. Resource provision involves mainly cash or in-kind transfers and financing of capital projects, with the deliverables being financial support and the provision of commodities and supplies. Technical cooperation includes grants to nationals of aid-recipient countries receiving education or training at home or abroad, and payments to consultants, advisers, and similar personnel and to teachers and administrators serving in recipient countries. Technical cooperation is spent mostly in the donor economy.

Two other types of aid are presented because they serve distinctive purposes. Debt-related aid aims to

provide debt relief on liabilities that recipient countries have difficulty servicing. Thus, this type of aid may not provide a full value of new resource flows for development, in particular for heavily indebted poor countries. Humanitarian assistance provides relief following sudden disasters and supports food programs in emergency situations. This type of aid does not generally contribute to financing long-term development.

Definitions

• **Net disbursements** are gross disbursements of grants and loans minus repayments of principal on earlier loans • **Development projects, programs, and other resource provisions** are aid provided as cash transfers, aid in kind, development food aid, and the financing of capital projects, intended to increase or improve the recipient's stock of physical capital and to support recipient's development plans and other activities with finance and commodity supply. • **Technical cooperation** is the provision of resources whose main aim is to augment the stock of human intellectual capital, such as the level of knowledge, skills, and technical know-how in the recipient country (including the cost of associated equipment). Contributions take the form mainly of the supply of

human resources from donors or action directed to human resources (such as training or advice). Also included are aid for promoting development awareness and aid provided to refugees in the donor economy. Assistance specifically to facilitate a capital project is not included. • **Debt-related aid** groups all actions relating to debt, including forgiveness, swaps, buybacks, rescheduling, and refinancing. • **Humanitarian assistance** is emergency and distress relief (including aid to refugees and assistance for disaster preparedness). • **Administrative costs** are the total current budget outlays of institutions responsible for the formulation and implementation of donor's aid programs and other administrative costs incurred by donors in aid delivery.

Data sources

Data on aid flows are published by OECD-DAC in its annual statistical report, *Geographical Distribution of Financial Flows to Aid Recipients*, and its annual *Development Cooperation Report*. Data are available electronically on the OECD's *International Development Statistics* CD-ROM and at www.oecd.org/dac/stats/idsonline.

Allocation of bilateral aid from Development Assistance Committee members

6.13

GLOBAL LINKS

6.13b Aid by sector

Share of bilateral ODA commitment (%)	Total sector-allocable aid 2006	Social infrastructure and services						Economic infrastructure, services, and production sector			Multi-sector or cross-cutting 2006	Untied aid ^a 2006
		Total 2006	Education 2006	Health 2006	Population 2006	Water supply and sanitation 2006	Government and civil society 2006	Total 2006	Transport and communication 2006	Agriculture 2006		
Australia	68.7	53.2	8.6	11.5	2.5	0.4	24.8	8.0	1.8	4.1	7.5	..
Austria	24.8	19.8	9.8	1.7	0.4	1.9	5.3	3.0	0.2	0.9	2.0	89.5
Belgium	53.6	39.0	11.0	6.7	1.7	4.0	10.4	11.4	2.1	4.5	3.1	90.7
Canada	61.5	44.6	11.9	8.0	1.9	0.7	18.3	9.6	1.0	5.5	7.3	62.9
Denmark	55.2	32.4	1.2	7.8	2.2	10.8	9.0	17.6	4.5	5.3	5.2	95.3
Finland	67.7	39.5	5.7	8.3	1.4	7.6	14.8	14.2	1.6	4.1	14.0	86.5
France	47.4	29.5	18.0	2.7	0.0	2.4	1.4	8.4	4.3	1.7	9.5	95.6
Germany	60.1	34.5	14.5	2.6	2.4	5.3	7.2	19.9	3.2	3.8	5.7	93.3
Greece	75.0	59.1	12.5	12.7	4.2	0.5	24.7	10.1	7.6	1.2	5.7	39.1
Ireland	67.2	56.2	10.1	12.1	12.6	2.7	13.2	5.9	0.6	4.3	5.0	100.0
Italy	29.0	12.1	1.7	3.8	0.2	2.2	1.6	12.2	5.9	1.2	4.7	77.0
Japan	61.1	22.6	6.8	2.3	0.1	9.4	2.8	34.5	16.4	4.5	4.0	95.6
Luxembourg	67.4	50.2	16.0	15.9	6.3	5.4	3.1	8.0	1.2	2.9	9.2	100.0
Netherlands	47.1	35.7	17.5	5.3	1.8	4.3	6.0	8.1	0.2	1.2	3.3	100.0
New Zealand	59.6	45.1	20.5	5.5	3.3	1.4	12.8	10.8	2.8	3.0	3.7	90.2
Norway	69.6	45.6	9.2	8.6	2.5	1.3	20.1	13.8	1.2	4.0	10.3	99.8
Portugal	85.5	65.1	30.3	4.8	0.0	0.3	20.6	13.7	11.8	0.7	6.7	61.3
Spain	61.1	33.2	9.6	4.6	1.8	3.0	8.1	20.2	8.4	3.2	7.6	82.8
Sweden	54.1	35.2	4.6	5.8	3.5	2.4	15.5	11.2	1.6	3.8	7.8	100.0
Switzerland	52.3	22.1	3.8	3.3	0.2	2.5	11.4	15.5	1.0	4.7	14.7	96.3
United Kingdom	37.5	30.5	4.9	4.6	3.3	0.6	15.8	5.3	0.8	1.6	1.7	100.0
United States	69.4	44.1	2.0	5.6	11.7	3.4	11.1	18.6	3.8	2.6	6.7	..
Total	56.9	34.9	8.7	4.7	4.1	4.0	8.9	16.2	4.7	2.9	5.8	94.5

a. Excludes technical cooperation and administrative costs.

About the data

The Development Assistance Committee (DAC) records the sector classification of aid using a three-level hierarchy. The top level is grouped by themes, such as social infrastructure and services; economic infrastructure, services, and production; and multisector or cross-cutting areas. The second level is more specific. Education and health and transport and storage are examples. The third level comprises subsectors such as basic education and basic health. Some contributions are reported as non-sector-allocable aid.

Reporting on the sectoral destination and the form of aid by donors may not be complete. Also, measures of aid allocation may differ from the perspectives of donors and recipients because of difference in classification, available information, and recording time.

The proportion of untied aid is reported because tying arrangements may prevent recipients from obtaining the best value for their money. Tying requires recipients to purchase goods and services from the donor country or from a specified group of countries. Such arrangements prevent a recipient from misappropriating or mismanaging aid receipts, but they may also be motivated by a desire to benefit donor country suppliers.

Definitions

• **Bilateral official development assistance (ODA) commitments** are firm obligations, expressed in writing and backed by the necessary funds, undertaken by official bilateral donors to provide specified assistance to a recipient country or a multilateral organization. Bilateral commitments are recorded in the full amount of expected transfer, irrespective of the time required for completing disbursements.

• **Total sector-allocable aid** is the sum of aid that can be assigned to specific sectors or multisector activities. • **Social infrastructure and services** refer to efforts to develop the human resources potential of aid recipients. • **Education** includes general teaching and instruction at all levels, as well as construction to improve or adapt educational establishments. Training in a particular field is reported for the sector concerned. • **Health** covers assistance to hospitals, clinics, other medical and dental services, public health administration, and medical insurance programs. • **Population** covers all activities related to family planning and research into population problems. • **Water supply and sanitation** cover assistance for water supply and use, sanitation, and water resources development (including rivers). • **Government and civil society** include assistance to strengthen government administrative apparatus

and planning and activities promoting good governance and civil society. • **Economic infrastructure, services, and production sector** group assistance for networks, utilities, services that facilitate economic activity, and contributions to all directly productive sectors. • **Transport and communication** cover road, rail, water, and air transport; post and telecommunications; and radio, television, and print media. • **Agriculture** includes sector policy, development, and inputs; crop and livestock production; and agricultural credit, cooperatives, and research. • **Multisector or cross-cutting** includes support for projects that straddle several sectors. • **Untied aid** is ODA not subject to restrictions by donors on procurement sources.

Data sources

Data on aid flows are published annually by the Organisation for Economic Co-operation and Development (OECD) DAC in *Geographical Distribution of Financial Flows to Aid Recipients and Development Cooperation Report*. Data are available electronically on the OECD's *International Development Statistics* CD-ROM and at www.oecd.org/dac/stats/idsonline.



6.14

Aid dependency

	Net official development assistance ^a		Aid per capita		Aid dependency ratios							
	\$ millions		\$		Aid as % of GNI		Aid as % of gross capital formation		Aid as % of imports of goods, services, and income		Aid as % of central government expense	
	2000	2006	2000	2006	2000	2006	2000	2006	2000	2006	2000	2006
Afghanistan	136	3,000	..	..	..	35.7	..	..	..	..	..	..
Albania	317	321	103	101	8.4	3.5	34.8	14.1	21.0	7.0	..	..
Algeria	201	209	7	6	0.4	0.2	1.5	..	..	..	1.8	1.0
Angola	302	171	22	10	4.1	0.4	22.0	2.8	4.1	0.8	..	..
Argentina	53	114	1	3	0.0	0.1	0.1	0.2	0.1	0.2	..	..
Armenia	216	213	70	71	11.0	3.3	60.6	9.9	21.2	7.2	..	20.7
Australia												
Austria												
Azerbaijan	139	206	17	24	2.8	1.2	12.8	3.3	5.8	1.9	..	..
Bangladesh	1,168	1,223	8	8	2.4	1.9	10.8	8.0	11.7	6.9	..	..
Belarus	40	73	4	7	0.3	0.2	1.2	0.6	0.5	0.3	1.5	0.6
Belgium												
Benin	238	375	33	43	10.6	8.0	55.9	..	32.1	..	..	58.4
Bolivia	472	581	57	62	5.8	5.4	31.0	43.1	19.3	14.5	..	21.2
Bosnia and Herzegovina	737	494	195	126	12.4	3.9	65.1	24.9	17.4	5.8	..	11.3
Botswana	31	65	18	35	0.5	0.7	1.4	2.4	1.0	1.4	..	..
Brazil	232	82	1	0	0.0	0.0	0.2	0.0	0.2	0.1	..	..
Bulgaria ^b	311	..	39	..	2.5	..	13.5	..	3.7	..	7.6	..
Burkina Faso	335	871	28	61	12.9	14.1	76.6	83.3	48.5	..	..	117.5
Burundi	93	415	14	51	12.8	47.7	212.6	275.7	56.1	89.9	..	..
Cambodia	396	529	31	37	11.2	7.6	61.8	33.9	16.1	8.9	..	84.7
Cameroon	379	1,684	24	93	4.0	9.3	22.5	51.0	12.8	..	..	..
Canada												
Central African Republic	75	134	19	31	8.0	9.0	82.4	101.3	..	..	..	..
Chad	130	284	15	27	9.5	5.5	40.4	20.2	..	..	..	..
Chile	49	83	3	5	0.1	0.1	0.3	0.3	0.2	0.1	0.3	0.3
China	1,728	1,245	1	1	0.1	0.0	0.4	0.1	0.6	0.1	..	..
Hong Kong, China ^b	4	..	1	..	0.0	..	0.0	..	0.0	..	..	..
Colombia	187	988	4	22	0.2	0.7	1.6	2.7	1.1	2.6	..	2.5
Congo, Dem. Rep.	177	2,056	3	34	4.5	25.2	119.1	148.8	..	..	15.2	..
Congo, Rep.	33	254	10	69	1.5	..	4.6	14.4	1.6	..	..	..
Costa Rica	11	24	3	5	0.1	0.1	0.4	0.4	0.1	0.2	..	0.5
Côte d'Ivoire	351	251	21	13	3.6	1.5	31.2	14.7	7.9	3.1	..	7.5
Croatia	66	200	15	45	0.4	0.5	1.8	1.4	0.6	0.7	0.8	1.2
Cuba	44	78	4	7	..	..	..	..	..	..	..	..
Czech Republic ^b	438	..	43	..	0.8	..	2.6	..	1.1	..	2.3	..
Denmark												
Dominican Republic	56	53	6	6	0.3	0.2	1.2	0.8	0.5	0.4	..	1.0
Ecuador	146	189	12	14	1.0	0.5	4.6	2.0	2.3	1.2	..	..
Egypt, Arab Rep.	1,328	873	20	12	1.3	0.8	6.8	4.3	5.6	2.1	6.6	3.0
El Salvador	180	157	29	23	1.4	0.9	8.1	5.2	3.0	1.7	..	38.2
Eritrea	176	129	48	28	27.7	12.0	86.9	63.6	34.5	..	..	..
Estonia ^b	64	..	47	..	1.2	..	4.0	..	1.2	..	3.8	..
Ethiopia	686	1,947	10	25	8.7	14.7	45.3	74.0	41.0	36.6	..	..
Finland												
France												
Gabon	12	31	10	24	0.3	0.4	1.1	1.4	0.5	..	..	..
Gambia, The	49	74	35	45	12.2	14.8	66.9	59.7	..	20.7	..	..
Georgia	169	361	36	81	5.3	4.8	20.8	17.4	13.6	7.9	47.9	22.9
Germany												
Ghana	600	1,176	30	51	12.4	9.2	50.2	28.1	17.3	13.9	..	..
Greece												
Guatemala	263	487	23	37	1.4	1.4	7.7	7.4	4.4	3.6	12.5	11.9
Guinea	153	164	19	18	5.0	5.0	24.9	38.3	15.7	..	..	..
Guinea-Bissau	80	82	59	50	39.5	27.9	329.8	157.2	..	..	..	..
Haiti	208	581	24	62	5.4	13.4	20.8	40.6	15.1	27.7	..	..

Aid dependency

	Net official development assistance ^a		Aid per capita		Aid dependency ratios							
	\$ millions		\$		Aid as % of GNI		Aid as % of gross capital formation		Aid as % of imports of goods, services, and income		Aid as % of central government expense	
	2000	2006	2000	2006	2000	2006	2000	2006	2000	2006	2000	2006
Honduras	449	587	72	84	7.7	6.6	24.5	19.3	12.7	9.0	..	30.3
Hungary ^b	252	..	25	..	0.6	..	1.7	..	0.6	..	1.3	..
India	1,463	1,379	1	1	0.3	0.2	1.3	0.4	1.8	0.6	2.0	1.0
Indonesia	1,654	1,405	8	6	1.1	0.4	4.5	1.6	2.5	1.2	..	..
Iran, Islamic Rep.	130	121	2	2	0.1	0.1	0.4	0.2	0.7	..	0.2	0.2
Iraq	100	8,661	..	..	..	..	..	..	..	..	..	..
Ireland												
Israel ^b	800	..	127	..	0.7	..	3.2	..	1.4	..	1.5	..
Italy												
Jamaica	10	37	4	14	0.1	0.4	0.5	1.1	0.2	0.5	0.4	0.9
Japan	..	..								
Jordan	552	580	115	105	6.4	3.9	29.2	15.4	8.7	4.3	24.1	11.8
Kazakhstan	189	172	13	11	1.1	0.2	5.7	0.6	1.8	0.4	7.5	1.4
Kenya	510	943	16	26	4.1	4.1	23.0	21.4	12.9	11.3	23.9	..
Korea, Dem. Rep.	73	55	3	2	..	..	..	..	..	..	..	..
Korea, Rep. ^b	-198	..	-4	..	0.0	..	-0.1	..	-0.1	..	-0.2	..
Kuwait	3	..	1	..	0.0	..	0.1	..	0.0	..	..	..
Kyrgyz Republic	215	311	44	60	16.7	11.2	78.3	63.4	28.5	13.4	..	62.9
Lao PDR	282	364	54	63	16.9	12.0	77.7	32.6	44.1	..	..	..
Latvia ^b	91	..	38	..	1.2	..	4.9	..	2.3	..	4.1	..
Lebanon	199	707	53	174	1.2	3.2	5.9	25.5	..	3.7	3.8	..
Lesotho	37	72	19	36	3.4	3.8	10.1	14.5	4.4	4.8	..	..
Liberia	67	269	22	75	17.4	54.4	..	..	..	..	..	..
Libya	14	37	3	6	..	0.1	0.3	..	0.2	0.2	..	..
Lithuania ^b	99	..	28	..	0.9	..	4.4	..	1.6	..	3.2	..
Macedonia, FYR	251	200	125	98	7.1	3.2	31.5	15.4	10.6	4.5	..	..
Madagascar	322	754	20	39	8.4	13.9	55.1	55.3	20.3	..	78.1	117.9
Malawi	446	669	38	49	26.1	21.4	188.7	89.1	65.7	..	..	..
Malaysia	45	240	2	9	0.1	0.2	0.2	0.8	0.0	0.1	0.3	..
Mali	359	825	36	69	15.0	14.9	60.4	61.5	34.4	..	127.7	89.7
Mauritania	211	188	82	62	19.4	6.8	101.0	30.3	..	..	..	..
Mauritius	20	19	17	15	0.5	0.3	1.8	1.2	0.7	0.4	2.2	1.4
Mexico	-56	247	-1	2	0.0	0.0	0.0	0.1	0.0	0.1	-0.1	..
Moldova	123	228	30	60	9.4	6.1	39.7	19.8	11.3	6.8	32.9	21.0
Mongolia	217	203	91	78	20.1	6.7	68.8	18.4	27.5	9.9	..	..
Morocco	419	1,046	15	34	1.2	1.6	4.4	5.1	3.1	3.9	..	6.2
Mozambique	876	1,611	48	77	21.8	26.2	66.6	122.0	49.7	39.7	..	..
Myanmar	106	147	2	3	..	..	..	..	4.0	3.4	..	..
Namibia	152	145	81	71	4.4	2.2	22.8	7.5	8.2	4.4	14.1	..
Nepal	387	514	16	19	7.0	5.7	29.0	22.1	21.2	17.0	..	39.4
Netherlands												
New Zealand												
Nicaragua	561	733	110	132	15.0	14.2	47.2	47.0	23.5	18.0	86.5	71.8
Niger	208	401	19	29	11.7	11.0	101.4	..	43.0	..	..	..
Nigeria	174	11,434	1	79	0.4	11.3	1.9	45.1	1.1	..	..	..
Norway												
Oman	45	35	19	14	0.2	..	1.9	..	0.6	0.2	0.9	..
Pakistan	692	2,147	5	14	0.9	1.7	5.4	7.8	4.8	5.5	5.6	11.1
Panama	16	30	5	9	0.1	0.2	0.6	0.9	0.2	0.2	0.6	..
Papua New Guinea	275	279	51	45	8.4	5.5	..	..	13.7	..	26.2	..
Paraguay	82	56	15	9	1.1	0.6	6.1	2.9	2.3	0.9	..	3.6
Peru	398	468	15	17	0.8	0.6	3.7	2.5	3.4	1.7	4.2	..
Philippines	575	562	8	7	0.7	0.4	3.6	3.3	1.1	0.9	4.3	2.7
Poland ^b	1,396	..	36	..	0.8	..	3.3	..	2.3	..	..	..
Portugal												
Puerto Rico												



	Net official development assistance ^a		Aid per capita		Aid dependency ratios							
	\$ millions		\$		Aid as % of GNI		Aid as % of gross capital formation		Aid as % of imports of goods, services, and income		Aid as % of central government expense	
	2000	2006	2000	2006	2000	2006	2000	2006	2000	2006	2000	2006
Romania ^b	432	..	19	..	1.2	..	6.0	..	2.9	..	..	..
Russian Federation ^b	1,561	..	11	..	0.6	..	3.2	..	2.2	..	2.8	..
Rwanda	321	585	39	62	17.9	23.6	101.3	109.4	71.2	75.1	..	..
Saudi Arabia	22	25	1	1	0.0	0.0	0.1	0.0	0.0	0.0	..	..
Senegal	423	825	41	68	9.2	9.1	44.1	30.8	21.9	..	70.9	..
Serbia	1,134 ^c	1,586	151 ^c	213	12.6 ^c	5.0	150.1 ^c	23.4	..	..	..	..
Sierra Leone	181	364	40	63	29.4	25.7	356.3	163.6	68.8	74.8	98.8	..
Singapore ^b	1	..	0	..	0.0	..	0.0	..	0.0	..	0.0	..
Slovak Republic ^b	113	..	21	..	0.6	..	2.1	..	0.7	..	..	..
Slovenia ^b	61	..	31	..	0.3	..	1.2	..	0.5	..	0.8	..
Somalia	101	392	14	46	..	..	..	..	..	..	..	..
South Africa	487	718	11	15	0.4	0.3	2.3	1.4	1.3	0.8	1.3	0.9
Spain												
Sri Lanka	276	796	14	40	1.7	3.0	6.0	10.3	3.2	6.5	7.3	13.3
Sudan	220	2,058	7	55	2.1	6.0	9.7	22.3	8.5	17.2	..	..
Swaziland	13	35	13	30	0.9	1.3	5.1	7.6	0.9	1.4	..	..
Sweden												
Switzerland												
Syrian Arab Republic	158	27	10	1	0.9	0.1	4.7	0.5	2.4	0.2	..	..
Tajikistan	124	240	20	36	13.7	8.8	109.9	58.8	..	9.9	160.3	..
Tanzania	1,019	1,825	30	46	11.4	14.5	63.7	77.0	45.7	34.6	..	..
Thailand	698	-216	12	-3	0.6	-0.1	2.5	-0.4	0.9	-0.1	..	-0.6
Timor-Leste	231	210	295	204	71.6	24.7	285.9	310.3	..	..	..	..
Togo	70	79	13	12	5.4	3.6	29.4	..	10.5	..	..	20.1
Trinidad and Tobago	-2	13	-1	10	0.0	0.1	-0.1	..	0.0	..	..	..
Tunisia	222	432	23	43	1.2	1.5	4.2	5.9	2.1	2.4	4.1	4.8
Turkey	327	570	5	8	0.2	0.1	0.7	0.6	0.5	0.4	..	0.5
Turkmenistan	31	26	7	5	1.2	0.3	3.1	..	..	..	..	..
Uganda	817	1,551	33	52	14.0	16.7	69.1	70.3	51.9	44.0	92.4	95.0
Ukraine	541	484	11	10	1.8	0.5	8.8	1.9	2.8	0.9	6.4	1.2
United Arab Emirates ^b	3	..	1	..	0.0	..	0.0	..	..	..	..	..
United Kingdom												
United States												
Uruguay	17	21	5	6	0.1	0.1	0.6	0.7	0.3	0.3	0.3	0.4
Uzbekistan	186	149	8	6	1.4	0.9	8.3	3.9	..	..	..	..
Venezuela, RB	76	58	3	2	0.1	0.0	0.3	0.1	0.3	0.1	0.3	..
Vietnam	1,681	1,846	22	22	5.5	3.1	18.2	8.5	9.3	..	..	..
West Bank and Gaza	637	1,449	215	384	13.3	34.6	47.4	132.6	..	..	..	..
Yemen, Rep.	263	284	14	13	3.0	1.6	14.3	..	6.2	3.0	..	..
Zambia	795	1,425	76	122	25.8	14.6	140.8	55.4	53.1	42.0	..	66.5
Zimbabwe	176	280	14	21	2.5	..	17.5	..	..	..	..	..
World	57,760 s	105,292 s	10 w	16 w	0.2 w	0.2 w	0.8 w	.. w	0.6 w	0.6 w	.. w	.. w
Low income	18,665	48,150	9	20	2.3	3.0	9.8	10.1	9.2	8.8	..	..
Middle income	24,441	34,522	8	11	0.5	0.3	1.9	1.2	1.5	0.9	..	..
Lower middle income	15,763	27,649	7	12	0.7	0.6	2.3	1.6	2.1	1.5	..	..
Upper middle income	7,518	5,722	10	7	0.3	0.1	1.3	0.5	0.8	0.3	..	..
Low & middle income	55,463	105,252	11	19	0.9	0.9	3.8	3.2	3.0	2.5	..	..
East Asia & Pacific	8,589	7,888	5	4	0.5	0.2	1.6	0.6	1.4	0.5	..	..
Europe & Central Asia	10,327	6,224	22	14	1.2	0.3	5.2	1.1	2.8	0.6	..	..
Latin America & Carib.	4,835	6,923	9	12	0.2	0.2	1.2	1.2	0.9	0.8	..	..
Middle East & N. Africa	4,534	16,778	16	54	1.0	2.1	4.0	7.9	3.3	6.1	..	..
South Asia	4,194	9,277	3	6	0.7	0.8	2.9	2.5	3.6	2.9	..	..
Sub-Saharan Africa	13,194	40,516	20	52	4.1	6.0	21.5	27.1	10.9	13.9	..	..
High income	2,297	40	2	0	0.0	0.0	0.0	..	0.0	0.0	..	..
Euro area												

Note: Regional aggregates include data for economies not listed in the table. World and income group totals include aid not allocated by country or region—including administrative costs, research on development issues, and aid to nongovernmental organizations. Thus regional and income group totals do not sum to the world total.

a. The distinction between official aid, for countries on the Part II list of the Organisation for Economic Co-operation and Development Development Assistance Committee (DAC), and official development assistance was dropped in 2005. b. No longer on the DAC list of eligible official development assistance recipients. Data for 2000 are official aid. c. Includes Montenegro.

About the data

Unless otherwise noted, aid includes official development assistance (ODA; see *About the data* for table 6.12). The data cover loans and grants from Development Assistance Committee (DAC) member countries, multilateral organizations, and non-DAC donors. They do not reflect aid given by recipient countries to other developing countries. As a result, some countries that are net donors (such as Saudi Arabia) are shown in the table as aid recipients (see table 6.14a). Data before 2005 for countries that were Part II recipients (see *About the data* for table 6.12 for more information) are defined as official aid.

The table does not distinguish types of aid (program, project, or food aid; emergency assistance; postconflict peacekeeping assistance; or technical cooperation), which may have different effects on the economy. Expenditures on technical cooperation do not always directly benefit the economy to the extent that they defray costs incurred outside the country on salaries and benefits of technical experts and overhead costs of firms supplying technical services.

Ratios of aid to gross national income (GNI), gross capital formation, imports, and government spending provide measures of recipient country dependency on aid. But care must be taken in drawing policy conclusions. For foreign policy reasons some countries have traditionally received large amounts of aid. Thus aid dependency ratios may reveal as much about a donor's interest as about a recipient's needs. Ratios are generally much higher in Sub-Saharan Africa than in other regions, and they increased in the 1980s. High ratios are due only in part to aid flows. Many African countries saw severe erosion in their terms of trade in the 1980s, which, along with weak policies, contributed to falling incomes, imports, and investment. Thus the increase in aid dependency ratios reflects events affecting both the numerator (aid) and the denominator (GNI).

Because the table relies on information from donors, it is not necessarily consistent with information recorded by recipients in the balance of payments, which often excludes all or some technical assistance—particularly payments to expatriates

made directly by the donor. Similarly, grant commodity aid may not always be recorded in trade data or in the balance of payments. Moreover, DAC statistics exclude purely military aid.

The nominal values used here may overstate the real value of aid to recipients. Changes in international prices and exchange rates can reduce the purchasing power of aid. Tying aid, still prevalent though declining in importance, also tends to reduce its purchasing power (see *About the data* for table 6.13).

The aggregates refer to World Bank definitions. Therefore the ratios shown may differ from those of the Organisation for Economic Co-operation and Development (OECD).

Definitions

• **Net official development assistance** is flows (net of repayment of principal) that meet the DAC definition of ODA and are made to countries and territories on the DAC list of aid recipients. See *About the data* for table 6.12. • **Aid per capita** is ODA divided by midyear population. • **Aid dependency ratios** are calculated using values in U.S. dollars converted at official exchange rates. Imports of goods, services, and income refer to international transactions involving a change in ownership of general merchandise, goods sent for processing and repairs, nonmonetary gold, services, receipts of employee compensation for nonresident workers, and investment income. For definitions of GNI, gross capital formation, and central government expense, see *Definitions* for tables 1.1, 4.8, and 4.10.

Official development assistance from non-DAC donors, 2002–06

6.14a

Net disbursements (\$ millions)

	2002	2003	2004	2005	2006
OECD members (non-DAC)					
Czech Republic	45	91	108	135	161
Hungary	..	21	70	100	149
Iceland	13	18	21	27	41
Korea, Rep.	279	366	423	752	455
Poland	14	27	118	205	297
Slovak Republic	7	15	28	56	55
Turkey	73	67	339	601	714
Arab countries					
Kuwait	20	138	161	218	158
Saudi Arabia	2,478	2,391	1,734	1,005	2,095
United Arab Emirates	156	188	181	141	249
Other donors					
Israel ^a	131	112	84	95	90
Taiwan, China	..	..	421	483	513
Thailand	..	..	..	..	74
Other donors	3	4	22	86	121
Total	3,218	3,436	3,712	3,905	5,172

Note: The table does not reflect aid provided by several major emerging non–Organisation for Economic Co-operation and Development donors because information on their aid has not been disclosed.

a. Includes \$87.8 million in 2002, \$68.8 million in 2003, \$47.9 million in 2004, \$49.2 million in 2005, and \$45.5 million in 2006 for first-year sustenance expenses for people arriving from developing countries (many of which are experiencing civil war or severe unrest) or people who have left their country for humanitarian or political reasons.

Source: Organisation for Economic Co-operation and Development.

Data sources

Data on financial flows are compiled by DAC and published in its annual statistical report, *Geographical Distribution of Financial Flows to Aid Recipients*, and in its annual *Development Cooperation Report*. Data are available electronically on the OECD's *International Development Statistics* CD-ROM and at www.oecd.org/dac/stats/ idsonline. Data on population, GNI, gross capital formation, imports of goods and services, and central government expense used in computing the ratios are from World Bank and International Monetary Fund databases.



6.15

Distribution of net aid by Development Assistance Committee members

	Ten major DAC donors											
		\$ millions										
	Total \$ millions 2006	United States 2006	European Commission 2006	United Kingdom 2006	France 2006	Japan 2006	Germany 2006	Netherlands 2006	Sweden 2006	Canada 2006	Norway 2006	Other DAC donors \$ millions 2006
Afghanistan	2,625.5	1,403.7	220.9	246.5	14.6	107.4	118.0	87.3	46.4	140.3	69.7	167.3
Albania	248.3	40.6	71.4	3.6	4.5	1.9	29.6	5.3	12.5	0.6	5.7	72.5
Algeria	190.8	0.8	-13.8	0.0	173.4	-11.7	-25.5	0.1	0.5	-3.5	1.0	69.4
Angola	-6.6	32.9	48.6	12.6	-97.1	12.4	11.4	2.1	7.2	1.4	23.4	-61.5
Argentina	105.6	2.0	24.6	0.0	15.9	8.0	10.9	0.1	0.4	1.5	0.0	42.1
Armenia	156.1	64.9	21.1	8.4	14.1	7.7	16.7	8.5	2.3	0.1	5.2	7.2
Australia												
Austria												
Azerbaijan	113.9	56.5	18.7	0.0	10.7	4.1	12.0	0.1	0.6	0.1	5.6	5.6
Bangladesh	557.3	41.8	100.9	139.1	-2.2	-7.3	29.1	67.5	38.4	56.7	21.4	71.3
Belarus	53.6	4.4	15.5	0.0	5.1	0.2	16.0	0.0	7.8	0.1	0.2	4.4
Belgium												
Benin	263.5	20.3	35.1	2.3	73.8	10.1	26.5	24.5	0.2	6.0	0.0	64.9
Bolivia	621.7	193.1	52.0	8.7	39.8	100.4	47.0	34.4	17.9	17.0	3.6	107.7
Bosnia and Herzegovina	409.5	66.0	89.3	5.9	2.9	16.1	26.7	18.9	40.2	7.6	19.0	116.8
Botswana	63.8	24.8	27.5	0.1	1.5	0.3	2.7	0.6	1.6	1.7	2.0	1.1
Brazil	83.4	-67.9	8.6	1.6	30.9	-13.0	65.6	2.0	3.2	7.1	2.8	42.3
Bulgaria												
Burkina Faso	519.5	21.9	133.7	2.8	131.4	18.5	29.5	55.1	15.0	17.1	0.4	94.1
Burundi	269.5	46.6	47.1	26.9	13.9	15.4	14.5	17.0	8.2	4.5	13.1	62.3
Cambodia	376.3	57.9	28.8	22.3	29.8	106.3	27.6	2.0	17.1	8.1	3.1	70.0
Cameroon	1,549.0	13.6	43.7	169.6	243.6	18.8	228.1	19.0	12.9	206.9	0.7	592.2
Canada												
Central African Republic	79.2	21.0	13.9	0.9	26.8	0.1	4.9	0.0	1.8	0.6	5.6	3.6
Chad	210.2	37.2	57.7	2.4	42.1	8.7	26.7	6.1	3.6	2.2	1.6	21.9
Chile	76.6	-0.3	12.3	0.9	9.9	8.1	36.3	0.1	0.3	2.5	0.0	6.3
China	1,215.8	18.9	42.1	52.3	142.8	569.4	244.9	30.5	11.9	29.6	14.4	57.4
Hong Kong, China												
Colombia	986.9	719.8	69.8	0.6	24.4	-5.8	22.4	33.5	18.3	10.6	9.9	83.3
Congo, Dem. Rep.	1,722.6	838.5	222.2	139.9	57.2	23.2	35.7	29.9	40.0	28.1	20.7	287.2
Congo, Rep.	225.0	9.0	55.9	0.6	123.4	0.4	3.8	0.1	3.2	3.7	1.0	23.9
Costa Rica	27.4	-9.6	7.3	-0.5	5.4	6.1	7.4	1.0	0.9	2.8	0.1	6.5
Côte d'Ivoire	275.4	30.9	76.5	1.9	106.8	13.0	12.5	1.0	7.8	3.4	3.8	17.8
Croatia	189.9	30.9	121.7	0.3	3.4	-0.1	6.9	0.0	5.1	0.4	14.9	6.2
Cuba	59.7	14.0	2.8	-2.9	3.2	3.4	3.8	0.4	0.9	7.6	1.0	25.5
Czech Republic												
Denmark												
Dominican Republic	61.9	30.3	48.9	-71.9	7.3	6.2	23.2	0.1	0.0	1.7	0.8	15.4
Ecuador	199.0	70.1	28.5	-2.0	1.8	4.5	16.5	1.9	0.6	2.2	1.9	72.8
Egypt, Arab Rep.	765.2	195.6	228.5	18.8	62.7	-5.2	140.6	13.1	2.0	15.9	0.5	92.8
El Salvador	167.6	24.5	17.0	11.3	3.3	29.8	9.2	0.9	4.3	3.0	0.5	63.8
Eritrea	78.1	6.6	14.9	5.5	0.9	9.9	4.8	3.3	2.1	0.8	17.9	11.5
Estonia												
Ethiopia	1,218.5	315.8	194.4	164.6	17.4	57.9	56.8	49.8	41.5	62.5	41.8	216.0
Finland												
France												
Gabon	34.6	1.1	2.7	0.0	30.1	-0.3	-0.2	0.0	0.0	1.3	0.0	-0.2
Gambia, The	26.5	4.7	1.5	4.1	0.6	11.0	1.3	0.1	0.8	1.2	0.3	1.1
Georgia	265.5	103.2	55.1	4.9	4.4	11.6	46.4	11.1	9.4	0.8	7.4	11.1
Germany												
Ghana	656.5	68.4	61.9	167.2	23.2	43.7	59.8	97.0	0.8	53.9	1.0	79.7
Greece												
Guatemala	476.8	67.3	31.7	-4.7	3.6	38.9	17.9	20.0	32.6	10.2	14.9	243.6
Guinea	124.2	34.9	21.3	1.0	20.6	17.1	14.0	0.1	1.5	7.2	0.6	6.1
Guinea-Bissau	72.6	5.5	33.3	0.0	9.9	0.0	0.3	0.0	0.0	0.7	0.4	22.5
Haiti	445.7	190.7	82.4	2.0	26.9	5.5	3.3	0.2	2.9	97.5	8.0	26.3

Distribution of net aid by Development Assistance Committee members

6.15 GLOBAL LINKS

	Ten major DAC donors											



6.15

Distribution of net aid by Development Assistance Committee members

	Ten major DAC donors											
	\$ millions											
Total \$ millions 2006	United States 2006	European Commission 2006	United Kingdom 2006	France 2006	Japan 2006	Germany 2006	Netherlands 2006	Sweden 2006	Canada 2006	Norway 2006	Other DAC donors \$ millions 2006	
Romania												
Russian Federation												
Rwanda	386.1	77.6	65.0	95.4	10.6	12.7	19.4	24.7	17.5	6.2	4.0	53.0
Saudi Arabia	11.2	0.7	0.0	0.0	4.5	4.6	1.1	0.0	0.0	0.0	0.0	0.3
Senegal	542.8	37.7	33.7	10.1	287.5	34.5	34.8	19.5	0.6	17.1	0.6	66.7
Serbia	1,503.7	147.0	334.5	180.5	109.8	8.4	202.5	21.3	44.3	49.9	32.6	373.0
Sierra Leone	258.4	21.0	59.3	65.6	1.9	62.7	10.8	5.8	3.9	5.2	2.7	19.5
Singapore												
Slovak Republic												
Slovenia												
Somalia	351.7	95.2	88.5	53.2	1.7	0.2	7.0	14.1	13.3	7.1	33.8	37.4
South Africa	697.3	140.5	136.7	1.5	158.8	15.9	40.5	53.2	22.1	11.1	14.1	101.5
Spain												
Sri Lanka	509.8	29.2	24.5	6.9	-0.7	202.7	63.9	15.0	20.6	15.4	37.3	93.6
Sudan	1,817.6	738.8	299.4	215.6	14.7	42.7	50.7	96.1	47.5	79.3	106.9	123.9
Swaziland	22.7	1.9	10.4	0.2	0.2	11.6	-3.0	0.0	0.0	1.0	0.4	0.0
Sweden												
Switzerland												
Syrian Arab Republic	17.2	0.6	28.6	0.0	27.4	-41.5	-9.4	0.1	0.8	0.1	0.9	9.6
Tajikistan	125.3	43.6	33.5	7.0	0.6	8.0	8.7	0.0	8.9	0.4	1.7	13.0
Tanzania	1,180.5	121.6	188.8	218.9	2.0	39.4	49.3	114.6	111.7	41.7	75.4	215.6
Thailand	-262.2	25.0	30.6	-2.3	64.9	-453.3	26.8	9.3	7.9	2.6	6.4	19.9
Timor-Leste	199.3	20.6	25.6	4.2	0.1	21.8	5.4	0.2	1.6	1.8	14.5	98.2
Togo	65.1	2.0	10.4	0.7	33.3	0.4	8.0	0.0	0.7	2.0	0.1	7.5
Trinidad and Tobago	11.4	0.2	7.3	0.1	1.2	1.3	0.3	0.0	0.0	0.7	0.0	0.2
Tunisia	436.3	-12.8	149.3	16.5	176.3	18.6	39.6	-2.1	0.7	0.7	0.0	49.4
Turkey	530.5	-20.1	383.3	-1.4	32.9	62.3	-52.8	5.0	3.2	-2.3	1.8	118.5
Turkmenistan	7.2	3.1	1.8	0.0	0.8	0.6	0.8	0.0	0.0	0.0	0.0	0.0
Uganda	1,093.7	246.2	155.5	214.4	5.4	21.8	54.6	82.4	62.6	14.1	50.5	186.1
Ukraine	414.0	130.2	133.4	12.0	14.3	6.6	58.7	0.3	18.4	15.8	0.5	23.7
United Arab Emirates												
United Kingdom												
United States												
Uruguay	17.6	0.4	6.8	0.0	6.3	2.3	0.3	0.0	0.4	1.1	0.0	0.1
Uzbekistan	105.1	49.2	12.6	0.1	2.7	18.6	15.8	0.0	1.4	0.0	0.5	4.2
Venezuela, RB	48.5	9.8	15.6	0.0	6.1	2.8	6.0	0.1	0.0	0.6	0.2	7.4
Vietnam	1,348.3	45.2	41.8	82.2	159.4	562.9	86.8	61.1	42.8	34.4	15.2	213.9
West Bank and Gaza	1,012.3	205.5	257.9	35.1	40.0	78.2	67.7	32.2	51.0	34.6	87.8	121.8
Yemen, Rep.	157.6	31.8	22.7	15.0	6.1	5.6	41.4	28.7	0.6	1.5	0.3	4.0
Zambia	1,213.5	309.9	98.3	86.8	63.7	31.5	287.5	55.7	48.3	10.6	66.2	154.2
Zimbabwe	254.5	36.4	54.7	69.9	3.6	6.5	9.9	7.4	17.8	6.8	11.2	29.5
World	86,449.2 s	21,162.1 s	9,489.1 s	8,717.6 s	7,919.4 s	7,313.1 s	7,034.0 s	4,282.2 s	2,851.9 s	2,531.0 s	2,197.6 s	12,748.4 s
Low income	37,148.5	7,237.9	3,827.2	6,316.1	3,619.5	3,751.0	3,319.1	1,397.0	895.2	946.0	856.8	4,921.8
Middle income	30,193.8	9,045.4	4,136.1	903.3	3,381.0	2,325.8	2,462.0	559.2	801.0	676.5	483.6	5,310.3
Lower middle income	23,889.9	8,184.8	2,515.9	680.7	2,383.5	1,939.1	1,889.8	454.4	693.6	533.2	344.6	4,216.7
Upper middle income	5,237.0	636.7	1,415.6	215.6	861.9	383.8	405.3	97.1	95.0	104.0	101.1	898.0
Low & middle income	86,425.0	21,159.1	9,485.2	8,717.4	7,913.5	7,305.0	7,032.6	4,282.2	2,851.9	2,530.1	2,197.6	12,747.7
East Asia & Pacific	6,195.1	725.1	459.8	289.0	473.5	1,420.4	580.8	207.6	161.9	140.4	99.6	1,490.1
Europe & Central Asia	5,017.7	1,034.8	1,465.5	236.6	224.7	204.1	471.8	90.5	190.1	83.3	131.8	884.5
Latin America & Carib.	6,076.9	1,952.9	827.3	58.7	303.8	428.1	446.7	167.8	187.4	368.7	94.5	1,236.0
Middle East & N. Africa	13,614.2	5,740.8	1,486.2	304.5	1,759.5	878.6	860.4	91.2	354.8	102.3	151.4	1,880.5
South Asia	6,264.8	2,165.9	650.9	1,019.7	32.2	624.8	377.4	212.5	143.7	297.3	192.6	539.0
Sub-Saharan Africa	33,091.4	5,592.7	3,370.5	5,404.0	4,362.1	2,553.6	3,191.7	1,330.3	881.6	1,041.6	773.8	4,579.5
High income	24.2	3.1	3.9	0.2	5.9	8.1	1.4	0.0	0.0	1.0	0.0	0.7
Euro area												

Note: Regional aggregates include data for economies not specified elsewhere. World and income group totals include aid not allocated by country or region.

About the data

The table shows net bilateral aid to low- and middle-income economies from members of the Development Assistance Committee (DAC) of the Organisation for Economic Co-operation and Development (OECD). The data include aid to some countries and territories not shown in the table and aid to unspecified economies recorded only at the regional or global level. Aid to countries and territories not shown in the table has been assigned to regional totals based on the World Bank's regional classification system. Aid to unspecified economies is included in regional totals and, when possible, income group totals. Aid not allocated by country or region—including administrative costs, research on development, and aid to nongovernmental organizations—is included in the world total. Thus regional and income group totals do not sum to the world total.

The table is based on donor country reports of bilateral programs, which may differ from reports by recipient countries. Recipients may lack access to

information on such aid expenditures as development-oriented research, stipends and tuition costs for aid-financed students in donor countries, and payment of experts hired by donor countries. Moreover, a full accounting would include donor country contributions to multilateral institutions, the flow of resources from multilateral institutions to recipient countries, and flows from countries that are not members of DAC. Previous editions of the table included only DAC member economies. This year's edition includes net aid from the European Commission—a multilateral member of DAC.

The expenditures that countries report as official development assistance (ODA) have changed. For example, some DAC members have reported as ODA the aid provided to refugees during the first 12 months of their stay within the donor's borders.

Some of the aid recipients shown in the table are also aid donors. See table 6.14a for a summary of ODA from non-DAC countries.

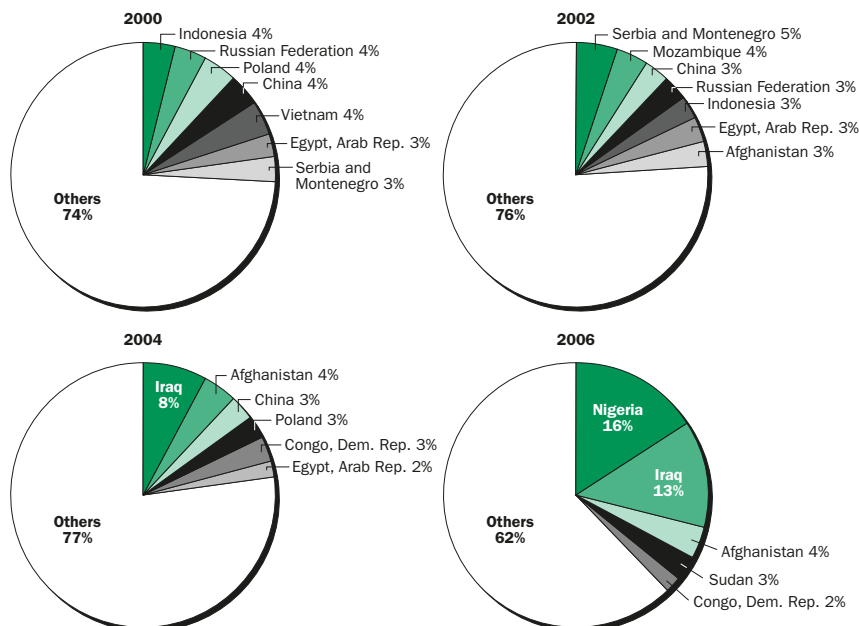
Definitions

• **Net aid** comprises net bilateral official development assistance that meets the DAC definition of official development assistance and are made to countries and territories on the DAC list of aid recipients. See *About the data* for table 6.12 • **Other DAC donors** are Australia, Austria, Belgium, Denmark, Finland, Greece, Ireland, Italy, Luxembourg, New Zealand, Portugal, Spain, and Switzerland.

Debt relief and political interests have shaped the allocation of official development assistance

6.15a

Share of official development assistance (ODA) net disbursements received



One-time disbursements of debt relief to Iraq and Nigeria increased their share of ODA in 2006. Large aid flows also went to fragile states and international hot spots. Some changes reflect administrative decisions: since 2005 aid to the Russian Federation and the new member states of the European Union are no longer counted as ODA.

Note: Only ODA allocated to specific economies are included in the denominators.

Source: Organisation for Economic Co-operation and Development Development Assistance Committee.

Data sources

Data on financial flows are compiled by DAC and published in its annual statistical report, *Geographical Distribution of Financial Flows to Aid Recipients*, and its annual *Development Cooperation Report*. Data are available electronically on the OECD's *International Development Statistics* CD-ROM and at www.oecd.org/dac/stats/idsonline.



	Net migration		International migrant stock		Refugees				Workers' remittances and compensation of employees			
	thousands		thousands		thousands				\$ millions			
	1990-95	2000-05	1995	2005	By country of origin		By country of asylum		Received		Paid	
					1995	2006	1995	2006	1995	2006	1995	2006
Afghanistan	3,313	1,112	35	43	2,679.1	2,107.5	19.6	..	..	..	..	..
Albania	-409	-110	71	83	5.8	14.1	4.7	0.1	427	1,359	..	27
Algeria	-50	-140	299	242	1.5	8.4	192.5	94.2	1,120 ^a	2,527 ^a	..	..
Angola	143	175	38	56	246.7	206.5	10.9	13.1	5	..	210	413
Argentina	50	-100	1,590	1,500	0.3	0.9	10.3	3.2	56	541	190	366
Armenia	-500	-100	455	235	201.4	14.9	219.0	113.7	65 ^a	1,175 ^a	17	154
Australia	519	593	4,068	4,097	..	..	62.2	68.9	1,651	3,133	700	2,815
Austria	262	180	717	1,234	..	..	34.4	25.5	1,012	1,989	346	1,533
Azerbaijan	-116	-100	292	182	200.5	126.1	233.7	2.6	3	813	9	301
Bangladesh	-260	-500	1,006	1,032	..	..	51.1	26.3	1,202	5,428	1	3
Belarus	0	0	1,269	1,191	0.1	9.4	29.0	0.7	29	334	12	93
Belgium	85	180	909	719	..	0.1	31.7	16.8	4,937	7,476	3,252	2,669
Benin	105	99	146	175	..	..	23.8	10.8	100 ^a	173 ^a	26 ^a	40 ^a
Bolivia	-100	-100	70	116	0.2	0.4	0.7	0.6	7	612	9	73
Bosnia and Herzegovina	-1,000	115	73	41	..	..	..	10.3	..	2,068	..	55
Botswana	14	20	39	80	..	..	0.3	3.2	59	117	200	118
Brazil	-184	-229	730	641	0.1	0.7	2.1	3.5	3,315	4,253	347	691
Bulgaria	-349	-43	47	104	4.2	3.4	1.3	4.5	42	1,695	34	47
Burkina Faso	-128	100	464	773	0.1	0.4	29.8	0.5	80 ^a	50 ^a	51 ^a	44 ^a
Burundi	-250	192	295	100	350.6	396.5	173.0	13.2	..	0	5	0
Cambodia	150	10	116	304	61.2	18.0	..	0.1	12	297	52	158
Cameroon	-5	6	159	137	2.0	10.4	45.8	35.1	11 ^a	103 ^a	22 ^a	42 ^a
Canada	643	1,041	5,003	6,106	..	0.1	152.1	151.8	..	..	..	..
Central African Republic	37	-45	67	76	57.0	7.8	33.9	12.4	0	..	27	..
Chad	-10	219	78	437	59.7	36.3	0.1	286.7	1	..	15	..
Chile	90	30	136	231	14.3	0.8	0.3	1.1	..	3	7	6
China	-1,281	-1,900	441	596	104.7	140.6	288.3	301.0	1,053 ^a	23,319 ^a	19	3,025
Hong Kong, China	300	300	2,432	2,999	0.2	..	1.5	1.9	..	297	..	365
Colombia	-250	-120	108	123	..	..	0.2	0.1	815	3,928	150	66
Congo, Dem. Rep.	1,208	-237	2,049	539	..	..	1,433.8	208.4	..	..	..	..
Congo, Rep.	14	-10	169	288	0.1	0.2	19.4	55.8	4 ^a	11 ^a	27 ^a	45 ^a
Costa Rica	62	84	228	441	0.2	0.3	24.2	11.5	123	513	36	246
Côte d'Ivoire	214	-339	2,314	2,371	..	..	297.9	27.3	151	164	457	17
Croatia	153	100	721	661	..	..	198.7	2.4	544	1,234	17	274
Cuba	-98	-129	90	74	24.9	33.6	1.8	0.7	..	..	..	..
Czech Republic	8	67	454	453	769.8	199.9	2.7	1.9	191	1,186	101	2,831
Denmark	58	46	250	389	..	..	64.8	36.7	523	869	209	1,763
Dominican Republic	-129	-148	118	156	..	0.2	1.0	..	839	3,044	7	27
Ecuador	-50	-400	88	114	0.2	0.9	0.2	11.8	386	2,922	4	62
Egypt, Arab Rep.	-600	-525	172	166	..	..	5.4	88.0	3,226	5,330	223	135
El Salvador	-90	-143	26	24	..	..	0.2	..	1,064	3,329	1	29
Eritrea	-359	229	12	15	286.7	193.7	1.1	4.6	..	..	..	..
Estonia	-108	1	309	202	0.4	0.6	..	..	1	402	3	75
Ethiopia	868	-140	795	555	101.0	74.0	393.5	97.0	27	172	1	14
Finland	43	33	103	156	..	..	10.2	11.8	74	698	54	251
France	424	722	6,089	6,471	..	0.1	155.3	146.0	4,640	12,479	4,935	4,330
Gabon	20	10	164	245	..	0.1	0.8	8.4	4 ^a	7 ^a	99 ^a	110 ^a
Gambia, The	45	31	148	232	0.2	1.3	6.6	13.8	19	64	..	1
Georgia	-560	-248	250	191	0.3	6.3	0.1	1.4	284	485	12	24
Germany	2,688	1,000	9,092	10,144	0.4	0.1	1,267.9	605.4	4,523	6,667	11,270	12,344
Ghana	40	12	1,038	1,669	13.6	10.0	83.2	44.9	17	105	5 ^a	6 ^a
Greece	470	154	549	974	..	..	4.4	2.3	3,286	1,543	300	982
Guatemala	-360	-300	45	53	..	..	1.5	0.4	358	3,626	8	35
Guinea	350	-425	870	406	0.4	6.8	672.3	31.5	1 ^a	42 ^a	10 ^a	48 ^a
Guinea-Bissau	20	1	32	19	0.8	1.0	15.4	7.8	2 ^a	28 ^a	3 ^a	5 ^a
Haiti	-133	-140	22	30	13.9	20.8	..	..	109	1,070	..	68

Movement of people

	Net migration		International migrant stock		Refugees				Workers' remittances and compensation of employees			
	thousands		thousands		thousands				\$ millions			
					By country of origin		By country of asylum		Received		Paid	
	1990-95	2000-05	1995	2005	1995	2006	1995	2006	1995	2006	1995	2006
Honduras	-120	-150	31	26	1.2	1.0	0.1	..	124	2,367	8	1
Hungary	101	65	293	316	..	..	11.4	8.1	152	363	146	190
India	-960	-1,350	6,951	5,700	5.0	17.8	227.5	158.4	6,223	25,426	419	1,580
Indonesia	-725	-1,000	219	160	9.8	34.7	..	0.3	651	5,722	..	1,359
Iran, Islamic Rep.	-1,587	-1,250	2,478	1,959	..	0.1	2,072.0	968.4	1,600 ^a	1,032 ^a	..	..
Iraq	170	-375	134	28	1.9	72.8	116.7	44.4	..	..	..	..
Ireland	-1	188	264	585	..	..	0.4	7.9	347	532	173	1,947
Israel	484	115	1,919	2,661	0.9	0.9	..	0.8	702	1,063	1,408	2,428
Italy	573	1,125	1,483	2,519	0.1	0.1	74.3	26.9	2,364	2,626	1,824	8,216
Jamaica	-100	-100	20	18	..	0.7	..	..	653	1,946	74	385
Japan	248	270	1,261	2,048	..	0.2	5.4	1.8	1,151	1,380	1,820	3,476
Jordan	509	130	1,618	2,225	0.5	1.6	1,288.9 ^b	2,358.6 ^b	1,441	2,883	107	402
Kazakhstan	-1,509	-200	3,295	2,502	0.1	7.4	15.6	4.4	116	187	503	3,036
Kenya	222	25	366	345	9.3	5.4	234.7	272.5	298 ^a	1,128 ^a	4	25
Korea, Dem. Rep.	0	0	35	37	..	0.4	..	..	..	..	..	..
Korea, Rep.	-115	-80	584	551	..	1.3	..	0.1	1,080	917	634	4,245
Kuwait	-598	264	996	1,669	0.8	0.6	3.3	0.1	..	..	1,354	3,021
Kyrgyz Republic	-273	-75	482	288	0.2	26.3	13.4	0.4	1	481	41	145
Lao PDR	-30	-115	23	25	245.6	93.8	..	..	22 ^a	1 ^a	9 ^a	1 ^a
Latvia	-134	-20	713	449	0.2	1.4	..	..	41	482	1	30
Lebanon	230	0	594	657	13.5	12.3	348.1 ^b	428.6 ^b	1,225	5,202	..	4,134
Lesotho	-84	-36	5	6	..	..	..	..	411	361	75	11
Liberia	-283	-119	199	50	744.6	160.5	120.1	16.2	..	..	..	..
Libya	10	10	506	618	0.6	1.6	4.0	2.8	..	16	222	945
Lithuania	-99	-30	272	165	0.1	0.9	..	0.5	1	994	1	426
Macedonia, FYR	-27	-10	114	121	42.9	6.5	9.1	1.2	68	267	1	18
Madagascar	-7	-5	60	63	0.1	0.3	..	..	14 ^a	11 ^a	11 ^a	21 ^a
Malawi	-920	-30	325	279	..	0.1	1.0	3.9	1 ^a	1 ^a	1 ^a	1 ^a
Malaysia	287	150	1,135	1,639	0.1	0.6	5.3	37.2	716	1,535	1,329	5,560
Mali	-260	-134	63	46	77.2	0.6	17.9	10.6	112 ^a	177 ^a	42 ^a	69 ^a
Mauritania	-15	30	118	66	84.3	33.4	34.4	0.8	5 ^a	2 ^a	14	..
Mauritius	-7	0	12	21	..	0.1	..	..	132 ^a	215 ^a	1	13
Mexico	-1,792	-3,983	467	644	0.4	3.3	38.7	3.3	4,368	25,052	..	..
Moldova	-121	-250	473	440	0.5	11.7	..	0.2	1	1,182	1	86
Mongolia	-59	-50	7	9	..	0.9	..	..	..	181	..	77
Morocco	-450	-550	103	132	0.3	4.7	0.1	0.5	1,970	5,454	20	41
Mozambique	650	-20	246	406	125.6	0.2	0.1	2.6	59	80	21	26
Myanmar	-126	-99	112	117	152.3	202.8	..	..	81	116	..	32
Namibia	3	-1	124	143	..	1.2	1.7	5.5	16	17	11	20
Nepal	-101	-100	625	819	..	2.6	124.8	128.2	57	1,453	9	79
Netherlands	190	110	1,387	1,638	0.1	..	80.0	100.6	1,359	2,412	2,802 ^a	6,802 ^a
New Zealand	94	102	732	642	..	..	3.8	4.9	1,858	650	584	865
Nicaragua	-115	-210	27	28	23.9	1.8	0.6	0.2	75	656	..	..
Niger	-3	-28	139	124	10.3	0.8	27.6	0.3	8 ^a	66 ^a	29 ^a	29 ^a
Nigeria	-96	-170	582	971	1.9	13.3	8.1	8.8	804 ^a	3,329 ^a	5 ^a	18 ^a
Norway	42	84	231	344	..	..	47.6	43.3	239	524	603	2,620
Oman	23	-150	573	628	..	..	..	..	39	39	1,537	2,788
Pakistan	-2,611	-1,239	4,077	3,254	5.3	25.6	1,202.5	1,044.5	1,712	5,121	4	2
Panama	8	8	73	102	0.2	0.1	0.9	1.8	112	149	20	121
Papua New Guinea	0	0	32	25	2.0	..	9.6	10.2	16 ^a	13 ^a	16 ^a	135 ^a
Paraguay	-30	-45	183	168	0.1	0.1	0.1	0.1	287	432	..	..
Peru	-441	-510	51	42	5.9	7.0	0.6	0.9	599	1,837	34	133
Philippines	-900	-900	214	374	0.5	0.9	0.8	0.1	5,360	15,251	151	20
Poland	-77	-200	963	703	19.7	13.5	0.6	6.8	724	4,370	262	800
Portugal	-7	276	528	764	..	..	0.3	0.3	3,953	3,328	527	1,386
Puerto Rico	-4	-10	351	418	..	..	..	..	..	..	..	..



	Net migration		International migrant stock		Refugees				Workers' remittances and compensation of employees			
	thousands		thousands		thousands				\$ millions			
	1990-95	2000-05	1995	2005	By country of origin		By country of asylum		Received		Paid	
					1995	2006	1995	2006	1995	2006	1995	2006
Romania	-529	-270	135	133	17.0	7.2	0.2	1.7	9	6,718	2	57
Russian Federation	2,263	917	11,707	12,080	207.0	159.4	..	1.4	2,503	3,091	3,939	11,438
Rwanda	-1,714	43	60	121	1,819.4	93.0	7.8	49.2	21	21	1	47
Saudi Arabia	-500	285	4,611	6,361	0.3	0.6	13.2	240.8	..	..	16,594	15,611
Senegal	-100	-100	320	326	17.6	15.2	66.8	20.6	146 ^a	633 ^a	76 ^a	77 ^a
Serbia	451	-339	..	..	86.1 ^c	174.0	650.7 ^c	99.0	1,295 ^{a,c}	4,703 ^{a,c}	..	..
Sierra Leone	-380	472	55	119	379.5	42.9	4.7	27.4	24	33	..	35
Singapore	250	200	992	1,843	..	0.1	0.1	..	..	..	..	..
Slovak Republic	9	3	114	124	..	0.7	2.3	0.2	26 ^a	424 ^a	3 ^a	16 ^a
Slovenia	38	22	200	167	12.9	1.8	22.3	0.3	272	282	31	129
Somalia	-1,193	100	18	282	638.7	464.0	0.6	0.7	..	..	..	..
South Africa	1,125	75	1,098	1,106	0.5	0.5	101.4	35.1	105	734	629	1,068
Spain	292	2,846	1,009	4,790	..	2.4	5.9	5.3	3,235	8,863	868	11,005
Sri Lanka	-256	-442	428	368	107.6	117.0	..	0.2	809	2,349	16	283
Sudan	-168	-532	1,111	639	445.3	686.3	674.1	196.2	346	1,156	1	2
Swaziland	-38	-6	38	45	..	..	0.7	0.8	83	99	4	17
Sweden	151	152	906	1,117	..	..	199.2	79.9	288	336	336	589
Switzerland	200	100	1,471	1,660	..	..	82.9	48.5	1,473	1,859	10,114	13,805
Syrian Arab Republic	-70	200	801	985	0.2	0.1	373.5 ^b	1,144.6 ^b	339	795	15	235
Tajikistan	-313	-345	305	306	59.0	0.6	0.6	0.9	..	1,019	..	395
Tanzania	591	-345	1,130	792	0.1	1.7	829.7	485.3	1	15	1	30
Thailand	172	231	568	1,050	0.2	3.3	106.6	133.1	1,695	1,333	..	..
Timor-Leste	0	100	6	6	..	0.3	..	..	..	..	..	..
Togo	-122	-4	169	183	93.2	27.3	10.9	6.3	15 ^a	193 ^a	5 ^a	35 ^a
Trinidad and Tobago	-24	-20	46	38	..	0.2	..	..	32 ^a	92 ^a	14	..
Tunisia	-22	-29	38	38	0.3	2.8	0.2	0.1	680	1,510	36	16
Turkey	109	-30	1,210	1,328	44.9	227.2	12.8	2.6	3,327	1,111	..	107
Turkmenistan	50	-10	260	224	..	0.7	23.3	0.8	4	..	7	..
Uganda	120	-5	610	518	24.2	21.8	229.4	272.0	..	814	..	322
Ukraine	100	-173	7,063	6,833	1.7	63.7	5.2	2.3	6	829	1	30
United Arab Emirates	340	577	1,716	3,212	..	0.3	0.4	0.2	..	..	..	..
United Kingdom	167	948	4,198	5,408	0.1	0.2	90.9	301.6	2,469	6,954	2,581	4,525
United States	5,200	6,493	28,522	38,355	0.2	1.4	623.3	843.5	2,179	2,880	22,181	42,222
Uruguay	-20	-104	93	84	0.3	0.2	0.1	0.1	..	89	..	3
Uzbekistan	-340	-300	1,474	1,268	0.1	9.1	2.6	1.4	..	..	..	..
Venezuela, RB	40	40	1,019	1,010	0.5	3.8	1.6	0.7	2	165	203	253
Vietnam	-256	-200	27	21	2.3	3.1	34.4	2.4	..	4,800 ^a	..	..
West Bank and Gaza	1	11	1,201	1,680	23.5	6.4	1,201.0 ^b	1,739.3 ^b	626 ^a	598 ^a	..	16 ^a
Yemen, Rep.	650	-100	228	265	0.4	1.4	53.5	95.8	1,080	1,283	61	120
Zambia	-11	-82	271	275	..	0.2	130.0	120.3	..	58	59	115
Zimbabwe	-192	-75	638	511	..	12.8	0.5	3.5	44	..	7	..
World	..^d \$	..^d \$	164,017 \$	189,693 \$	18,068.7^{b,e} \$	14,326.1^{b,e} \$	18,068.7^{b,f} \$	14,326.1^{b,f} \$	101,562 \$	296,757 \$	98,648 \$	207,865 \$
Low income	-3,098	-4,690	30,412	27,110	8,567.8	4,838.6	7,304.4	3,724.7	12,776	55,239	1,342	3,828
Middle income	-9,432	-14,021	48,539	49,582	1,544.3	1,643.6	7,723.3	7,819.9	44,744	166,674	11,029	40,774
Lower middle income	-9,775	-9,750	20,522	21,249	1,133.4	1,021.7	6,282.9	7,140.4	27,044	102,551	1,341	7,884
Upper middle income	344	-4,271	28,017	28,333	410.9	621.9	1,440.5	679.5	17,700	64,123	9,688	32,890
Low & middle income	-12,529	-18,711	78,951	76,692	10,112.1	6,482.2	15,027.7	11,544.6	57,520	221,912	12,371	44,602
East Asia & Pacific	-2,828	-3,847	3,001	4,432	578.9	501.1	447.0	484.4	9,701	52,847	1,618	10,431
Europe & Central Asia	-3,106	-1,730	32,049	29,970	891.8	884.6	1,434.3	274.5	7,928	35,385	4,920	17,747
Latin America & Carib.	-3,847	-6,811	5,280	5,713	87.5	78.0	94.0	40.5	13,335	56,860	1,114	2,646
Middle East & N. Africa	-1,201	-2,768	8,780	9,642	60.8	112.7	5,683.1	6,974.5	13,358	26,697	2,239	8,837
South Asia	-976	-2,484	13,133	11,229	2,901.8	2,378.6	1,625.5	1,357.6	10,005	39,779	475	2,031
Sub-Saharan Africa	-572	-1,070	16,707	15,706	5,591.3	2,527.2	5,743.8	2,413.1	3,193	10,344	2,005	2,911
High income	12,513	18,604	85,065	113,001	786.3	211.2	3,041.9	2,781.9	44,042	74,844	86,277	163,263
Euro area	5,078	6,849	22,466	30,335	13.5	4.6	1,688.3	954.6	30,071	50,391	26,443	59,452

a. World Bank estimates. b. 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 Refugee Agency (UNHCR). c. Includes Montenegro. d. World totals computed by the United Nations sum to zero, but because the aggregates refer to World Bank definitions, regional and income group totals do not. e. Includes refugees without specified country of origin. f. Regional and income group totals do not sum to the world total because of rounding.

About the data

Movement of people, most often through migration, is a significant part of global integration. Migrants contribute to the economies of both their host country and their country of origin. Yet reliable statistics on migration are difficult to collect and are often incomplete, making international comparisons a challenge.

The United Nations Population Division provides data on net migration and migration stock. To derive estimates of net migration, the organization takes into account the past migration history of a country or area, the migration policy of a country, and the influx of refugees in recent periods. The data to calculate these official estimates come from a variety of sources, including border statistics, administrative records, surveys, and censuses. When no official estimates can be made because of insufficient data, net migration is derived through the balance equation, which is the difference between overall population growth and the natural increase during the 1990–2000 intercensal period.

The data used to estimate the international migrant stock at a particular time are obtained mainly from population censuses. The estimates are derived from the data on foreign-born population—people who have residence in one country but were born in another country. When data on the foreign-born population are not available, data on foreign population—that is, people who are citizens of a country other than the country in which they reside—are used as estimates.

After the breakup of the Soviet Union in 1991 people living in one of the newly independent countries who were born in another were classified as international migrants. Estimates of migration stock in the newly independent states from 1990 on are based on the 1989 census of the Soviet Union.

For countries with information on the international migrant stock for at least two points in time, interpolation or extrapolation was used to estimate the international migrant stock on July 1 of the reference years. For countries with only one observation, estimates for the reference years were derived using rates of change in the migrant stock in the years preceding or following the single observation available. A model was used to estimate migration for countries that had no data.

Registrations, together with other sources—including estimates and surveys—are the main sources of refugee data. But there are difficulties in collecting accurate statistics. Although refugees are often registered individually, the accuracy of

registrations varies greatly. Many refugees may not be aware of the need to register or may choose not to do so. And administrative records tend to overestimate the number of refugees because it is easier to register than to de-register. The UN Refugee Agency (UNHCR) collects and maintains data on refugees, except for Palestinian refugees residing in areas under the mandate of the United Nations Relief and Works Agency for Palestine Refugees in the Near East (UNRWA). The UNRWA provides services to Palestinian refugees who live in certain areas and who register with the agency. Registration is voluntary, and estimates by the UNRWA are not an accurate count of the Palestinian refugee population. The table shows estimates of refugees collected by the UNHCR, complemented by estimates of Palestinian refugees under the UNRWA mandate. Thus, the aggregates differ from those published by the UNHCR.

Workers' remittances and compensation of employees are World Bank staff estimates based on data from the International Monetary Fund's (IMF) *Balance of Payments Yearbook*. The IMF data are supplemented by World Bank staff estimates for missing data for countries where workers' remittances are important. The data reported here are the sum of three items defined in the IMF's *Balance of Payments Manual* (fifth edition): workers' remittances, compensation of employees, and migrants' transfers.

The distinction between 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 workers' 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.

Definitions

• **Net migration** is the net total of migrants during the period. It is the total number of immigrants less the total number of emigrants, including both citizens and noncitizens. Data are five-year estimates. • **International migrant stock** is the number of people born in a country other than that in which they live. It includes refugees. • **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 UNHCR statute, people granted refugee-like humanitarian status, and people provided temporary protection. Asylum seekers are people who have applied for asylum or refugee status and who have not yet received a decision or who are registered as asylum seekers. 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. • **Workers' remittances and compensation of employees** received and paid comprise current transfers by migrant workers and wages and salaries earned by nonresident workers. Remittances are classified as current private transfers from migrant workers resident in the host country for more than a year, irrespective of their immigration status, to recipients in their country of origin. Migrants' transfers are defined as the net worth of migrants who are expected to remain in the host country for more than one year that is transferred to another country at the time of migration. Compensation of employees is the income of migrants who have lived in the host country for less than a year.

Data sources

Data on net migration are from the United Nations Population Division's *World Population Prospects: The 2006 Revision*. Data on migration stock come from the United Nations Population Division's *Trends in Total Migrant Stock: The 2005 Revision*. Data on refugees are from the UNHCR's *Statistical Yearbook 2006*, complemented by statistics on Palestinian refugees under the mandate of the UNRWA as published on its website. Data on remittances are World Bank staff estimates based on IMF balance of payments data.



6.17

Travel and tourism

	International tourists				Inbound tourism expenditure				Outbound tourism expenditure			
	thousands				\$ millions				\$ millions			
	Inbound 1995	Inbound 2006	Outbound 1995	Outbound 2006	1995	2006	% of exports 1995	% of exports 2006	1995	2006	% of imports 1995	% of imports 2006
Afghanistan	..	..	..	..	..	..	..	..	1	..	..	..
Albania	40 ^a	60 ^a	12	2,616	70	1,057	23.2	46.0	19	989	2.3	22.0
Algeria	520 ^{b,c}	1,443 ^{b,c}	1,090	1,513	32 ^d	184 ^d	..	..	186 ^d	370 ^d	..	..
Angola	9	121	3	..	27	91	0.7	0.3	113	393	3.2	2.4
Argentina	2,289	4,156	3,815	4,009	2,550	3,914	10.2	7.2	4,013	4,143	15.4	10.1
Armenia	12	381	..	329	14	193	4.7	12.8	12	133	1.7	5.2
Australia	3,726 ^e	5,064 ^e	2,519	4,941	11,915	23,732	17.1	15.0	7,260	16,382	9.7	9.8
Austria	17,173 ^f	20,261 ^f	3,713	10,042	14,529	19,310	16.2	11.3	11,686	12,755	12.7	7.8
Azerbaijan	93	1,194	432	1,836	88	201	11.2	1.4	165	256	12.8	3.1
Bangladesh	156	200	830	1,819	25	80	0.6	0.6	234	444	3.1	2.6
Belarus	161	89	626	525	28	386	0.5	1.7	101	823	1.8	3.5
Belgium	5,560 ^f	6,995 ^f	5,645	7,852	4,548	12,680	2.4	3.7	8,115	19,557	4.5	5.9
Benin	138	180	..	..	85	108	13.8	14.0	48	58	5.4	5.1
Bolivia	284	515	249	466	92	287	7.5	6.7	72	328	4.6	9.5
Bosnia and Herzegovina	115 ^f	256 ^f	..	..	..	643	..	14.3	..	198	..	2.4
Botswana	521	1,675	..	..	176	539	7.3	10.2	153	285	7.5	8.3
Brazil	1,991	5,019	2,600	4,825	1,085	4,577	2.1	2.9	3,982	7,501	6.3	6.2
Bulgaria	3,466	5,158	3,524	4,180	662	3,315	9.8	16.5	312	2,092	4.8	8.1
Burkina Faso	124 ^g	264 ^g	..	..	..	..	..	..	..	..	..	..
Burundi	34 ^c	201 ^c	36	..	2	2	1.9	1.7	25	126	9.7	28.1
Cambodia	220 ^e	1,700	31	427	71	1,080	7.3	21.6	22	176	1.6	3.2
Cameroon	100 ^g	176 ^g	..	..	75	212	3.7	5.8	140	394	8.7	9.9
Canada	16,932	18,265	18,206	22,732	9,176	16,976	4.2	3.7	12,658	25,994	6.3	6.1
Central African Republic	26 ^e	12 ^e	..	7	4 ^d	4 ^d	..	..	43 ^d	32 ^d	..	..
Chad	19 ^g	29 ^g	..	..	43 ^d	..	..	..	38 ^d	..	..	..
Chile	1,540	2,027	1,070	2,651	1,186	1,816	6.1	2.8	934	1,581	5.1	3.6
China	20,034	49,913	4,520	34,524	8,730	37,132	5.9	3.5	3,688	28,242	2.7	3.3
Hong Kong, China	10,200	15,821	3,023	75,812	9,604 ^d	15,311 ^d	..	3.9 ^d	10,497 ^{d,h}	13,974 ^{d,h}	..	3.8 ^{d,h}
Colombia	1,433 ^b	1,053 ^b	1,057	1,553	887	2,005	7.2	7.0	1,162	1,796	7.3	5.9
Congo, Dem. Rep.	35 ^e	61 ^e	..	..	..	..	..	..	..	..	..	..
Congo, Rep.	37 ^g	..	..	..	15	34	1.1	0.7	69	103	5.1	3.5
Costa Rica	785	1,725	273	485	763	1,890	17.1	17.1	336	577	7.1	4.6
Côte d'Ivoire	188	..	..	..	103	84	2.4	0.9	312	361	8.2	5.0
Croatia	1,485 ^f	8,659 ^f	..	..	1,349	8,296	19.3	38.7	422	770	4.6	3.1
Cuba	742 ^e	2,150 ^e	72	199	1,100 ^d	2,404 ^d	..	..	..	..	..	..
Czech Republic	3,381 ^f	6,435 ^f	..	..	2,880	5,869	10.2	5.4	1,635	2,781	5.4	2.7
Denmark	2,124 ^f	4,699 ^f	5,035	5,469	3,691 ^h	4,493 ^h	5.6 ^h	3.5 ^h	4,288 ^h	5,690 ^h	7.4 ^h	5.0 ^h
Dominican Republic	1,776 ^{c,e}	3,965 ^{c,e}	168	420	1,571 ^h	3,792 ^h	27.4 ^h	35.6 ^h	267	499	4.4	3.9
Ecuador	440 ^{b,i}	841 ^{b,i}	271	733	315	492	6.1	3.5	331	706	5.8	5.1
Egypt, Arab Rep.	2,871	8,646	2,683	4,531	2,954	8,133	22.3	22.2	1,371	2,156	8.0	5.3
El Salvador	235	1,138	348	1,382	152	1,175	7.5	23.2	99	601	2.7	6.9
Eritrea	315 ^{b,c}	78 ^{b,c}	..	..	58 ^d	60 ^d	43.1 ^d	..	..	..	..	..
Estonia	530	1,940	1,764	..	452	1,372	17.6	10.5	121	705	4.2	4.8
Ethiopia	103 ^e	290 ^c	120	..	177	639	23.1	29.1	30	97	2.1	1.8
Finland	..	3,375	5,147	5,756	2,384	3,326	5.0	3.6	2,853	3,988	7.6	4.9
France	60,033	79,083	18,686	22,466	31,295	54,033	8.6	9.0	20,699	37,793	6.2	6.0
Gabon	125 ^e	..	..	..	94	74	3.2	1.8	183	275	10.6	12.8
Gambia, The	45	125	..	..	28	69	15.8	34.4	16	8	6.9	2.5
Georgia	85 ^b	983 ^b	228	..	75	361	13.1	14.1	171	257	12.1	5.8
Germany	14,847 ^f	23,569 ^f	55,800	71,200	24,052	42,792	4.0	3.3	66,527	84,205	11.2	7.3
Ghana	286 ^c	429 ^c	..	..	30	910	1.9	17.8	74	575	3.5	6.9
Greece	10,130	16,039	..	..	4,182	14,495	26.9	25.9	1,495	3,004	6.0	3.7
Guatemala	563	1,502	333	1,055	216	1,008	7.7	13.6	167	572	4.5	4.5
Guinea	12 ^e	46 ^e	..	..	1	70	0.1	3.7	29	41	2.9	3.0
Guinea-Bissau	..	12 ^e	..	..	3	2	5.3	2.6	6	18	6.7	17.3
Haiti	145	112	..	..	90 ^h	135 ^h	46.8 ^h	19.3 ^h	35	233	4.4	11.2

	International tourists				Inbound tourism expenditure				Outbound tourism expenditure			
	thousands				\$ millions				\$ millions			
	Inbound		Outbound				% of exports				% of imports	
	1995	2006	1995	2006	1995	2006	1995	2006	1995	2006	1995	2006
Honduras	271	739	149	308	85	490	5.2	12.9	99	353	5.3	5.8
Hungary	..	9,259	13,083	17,612	2,938	5,223	14.9	6.0	1,501	3,076	7.5	3.5
India	2,124 ⁱ	4,447 ⁱ	3,056	8,340	2,582	9,227	6.8	4.6	996	9,296	2.1	4.0
Indonesia	4,324	4,871	1,782	4,106	5,229	4,890	9.9	4.3	2,172	5,028	4.0	5.3
Iran, Islamic Rep.	489	1,659	1,000	..	205	1,513	1.1	..	247	5,004	1.6	..
Iraq	61 ^b	..	..	..	18 ^{d,h}	..	..	..	117 ^{d,h}	..	..	..
Ireland	4,818	8,001	2,547	6,848	2,698	7,664	5.5	4.4	2,034	6,978	4.8	4.6
Israel	2,215 ⁱ	1,825 ⁱ	2,259	3,713	3,491	3,319	12.7	5.3	2,626	3,870	7.4	6.3
Italy	31,052	41,058	18,173	25,697	30,426	41,644	10.3	8.1	17,219	27,437	6.9	5.2
Jamaica	1,147 ^{c,e}	1,679 ^{c,e}	..	..	1,199	2,094	35.3	43.8	173	315	4.6	4.4
Japan	3,345 ^{b,i}	7,334 ^{b,i}	15,298	17,535	4,894	11,490	1.0	1.6	46,966	37,659	11.2	5.6
Jordan	1,075	3,225 ^c	1,128	1,628	973	2,008	28.0	26.1	719	698	14.7	5.4
Kazakhstan	..	3,143	523	3,004	155	973	2.6	2.3	296	1,060	4.9	3.2
Kenya	896	1,536	..	..	590	1,182	20.0	19.8	183	178	5.2	2.2
Korea, Dem. Rep.	..	..	..	..	..	..	..	..	..	..	..	..
Korea, Rep.	3,753 ^{b,c}	6,155 ^{b,c}	3,819	11,610	6,670	8,069	4.5	2.1	6,947	20,386	4.5	5.5
Kuwait	72 ^g	91 ^g	878	1,928	307	470	2.2	0.7	2,514	5,753	19.9	23.4
Kyrgyz Republic	36	766	42	454	5	176	1.1	14.8	7	115	1.0	5.1
Lao PDR	60	842	..	..	52	173	12.8	..	34	..	4.5	..
Latvia	539	1,535	1,812	3,151	37	622	1.8	7.1	62	788	2.8	5.9
Lebanon	450	1,063	..	..	710	5,491	..	38.1	..	3,783	..	21.9
Lesotho	87	347	..	..	29	28	14.6	3.7	17	22	1.6	1.5
Liberia	..	..	..	..	..	..	..	..	..	..	..	..
Libya	56	149	484	..	4	244	0.1	0.6	98	915	1.7	5.8
Lithuania	650	2,000	1,925	..	102	1,077	3.2	6.1	107	931	2.7	4.5
Macedonia, FYR	147 ^f	202 ^f	..	..	19	156	2.7	5.2	27	110	1.7	2.6
Madagascar	75 ^e	312 ^e	39	..	106	386	14.2	21.8	79	86	8.0	3.9
Malawi	192	438	..	..	22	43	4.7	..	53	75	8.0	..
Malaysia	7,469	17,547	20,642	30,761	5,044	12,355	6.1	6.8	2,722	4,847	3.1	3.3
Mali	42 ^{e,g}	153 ^{e,g}	..	..	26	167	4.9	10.8	74	133	7.5	7.3
Mauritania	..	..	..	..	11 ^h	..	2.2 ^h	..	30	..	5.9	..
Mauritius	422	788	107	186	616	1,302	26.2	32.5	184	347	7.5	7.3
Mexico	20,241 ^c	21,353 ^c	8,450	14,002	6,847	13,341	7.7	5.0	3,587	9,399	4.4	3.4
Moldova	32	13	71	68	71	145	8.0	9.4	73	220	7.3	7.0
Mongolia	108	386	..	..	33	261	6.5	12.9	22	212	4.2	11.3
Morocco	2,602 ^c	6,558 ^c	1,317	2,247	1,469	6,899	16.2	31.7	356	1,123	3.2	4.4
Mozambique	..	578	..	..	49	145	10.2	5.2	68	205	6.6	6.0
Myanmar	117	264	..	..	169	59	12.9	1.2	18	40	0.9	1.4
Namibia	272	833	..	..	278	473	16.0	14.9	90 ^h	118 ^h	4.3 ^h	4.0 ^h
Nepal	363	375	100	373	232	157	22.5	12.7	167	261	10.3	8.9
Netherlands	6,574 ^f	10,739 ^f	12,313	16,695	10,611	11,548	4.4	2.5	13,151	17,125	6.1	4.1
New Zealand	1,409 ^b	2,409 ^b	920	1,861	2,318 ^h	4,563 ^h	13.0 ^h	15.0 ^h	1,289 ^h	2,526 ^h	7.5 ^h	7.8 ^h
Nicaragua	281	773 ^c	255	788	51	237	7.7	10.2	56	177	4.9	4.5
Niger	35	60	10	..	7	35	2.2	7.8	26	54	5.7	4.0
Nigeria	656	1,010	..	..	47	46	0.4	0.1	939	1,385	7.3	5.6
Norway	2,880 ^a	3,945	590	3,193	2,730	4,224	4.9	2.7	4,481	11,400	9.6	12.1
Oman	279 ^g	1,306 ^g	..	..	193	743	2.5	3.3	47	868	0.9	6.4
Pakistan	378	898	..	..	582	919	5.7	4.5	654	2,029	4.6	5.8
Panama	345	843	185	284	372	1,446	4.9	11.6	181	401	2.3	3.4
Papua New Guinea	42	78	51	..	25	4	0.8	0.1	58	56	3.0	2.1
Paraguay	438 ⁱ	388 ⁱ	427	210	162	111	3.4	2.0	173	143	3.3	2.3
Peru	479	1,635	508	1,857	521	1,586	7.9	6.0	428	1,005	4.5	5.5
Philippines	1,760 ^c	2,843 ^c	1,615	2,144	1,141	3,063	4.3	5.8	551	1,550	1.7	2.6
Poland	19,215	15,670	36,387	44,696	6,927	8,121	19.4	5.9	5,865	6,151	17.3	4.3
Portugal	9,511 ⁱ	11,282 ^c	..	18,378	5,646	10,036	17.5	16.3	2,540	4,050	6.4	5.3
Puerto Rico	3,131 ^e	3,722 ^e	1,237	1,468	1,828 ^d	3,369 ^d	..	..	1,155 ^d	1,752 ^d	..	..



6.17

Travel and tourism

	International tourists				Inbound tourism expenditure				Outbound tourism expenditure			
	thousands				\$ millions				\$ millions			
	Inbound 1995	Inbound 2006	Outbound 1995	Outbound 2006	1995	2006	% of exports 1995	% of exports 2006	1995	2006	% of imports 1995	% of imports 2006
Romania	5,445 ^b	6,037 ^b	5,737	8,906	689	1,650	7.3	4.2	749	1,457	6.6	2.7
Russian Federation	10,290	22,486	21,329	29,107	4,312	9,720	4.6	2.9	11,599	19,601	14.0	9.4
Rwanda	..	..	..	..	4	31	5.4	11.2	13	35	3.5	4.8
Saudi Arabia	3,325	8,620	..	2,000	..	4,961 ^d	..	2.3 ^d	..	1,806 ^d	..	1.7 ^d
Senegal	..	769	..	..	168	334	11.2	13.2	154	144	8.5	4.3
Serbia	..	469 ^f	..	..	..	398 ^d	..	..	..	322 ^d	..	..
Sierra Leone	38 ^e	34 ^e	6	67	57 ^h	23 ^h	44.4 ^h	7.4 ^h	51	15	19.4	3.5
Singapore	6,070	7,588	2,867	5,533	7,611 ^h	7,069 ^h	4.8 ^h	2.1 ^h	4,663 ^h	10,384 ^h	3.2 ^h	3.6 ^h
Slovak Republic	903 ^f	1,612 ^f	218	22,688	630	1,513	5.7	..	338	1,055	3.2	..
Slovenia	732 ^f	1,617 ^f	..	2,680	1,128	1,911	10.9	7.4	606	1,058	5.6	4.1
Somalia	..	..	..	..	..	..	..	..	..	..	..	..
South Africa	4,488	8,396	2,520	..	2,655	8,967	7.7	11.8	2,414	5,230	7.2	6.2
Spain	34,920	58,451	3,648	10,676	27,369	57,537	20.4	17.8	5,826	20,348	4.3	5.1
Sri Lanka	403 ⁱ	560 ⁱ	504	757	367	733	7.9	8.6	279	666	4.7	5.7
Sudan	29 ⁱ	328 ^c	195	..	8 ^h	126 ^h	1.2 ^h	2.1 ^h	43 ^h	1,403 ^h	3.5 ^h	14.2 ^h
Swaziland	300 ^a	873 ^g	..	1,072	54	74	5.3	3.3	45	53	3.5	2.3
Sweden	2,310 ^f	3,270 ^f	10,127	12,591	4,390	10,437	4.6	5.2	6,816	12,844	8.4	7.7
Switzerland	6,946 ^g	7,863 ^g	11,148	..	11,354	12,755	9.2	5.8	9,478	11,866	8.7	6.2
Syrian Arab Republic	..	4,422	1,746	4,042	1,258	2,113	21.9	16.0	498	585	9.0	4.9
Tajikistan	..	..	..	..	..	11	..	0.7	..	6 ^h	..	0.3 ^h
Tanzania	285	622	157	..	502	950	39.7	29.6	360	571	16.8	11.2
Thailand	6,952 ^c	13,822 ⁱ	1,820	3,382	9,257	15,559	13.2	10.2	4,791	6,140	5.8	4.2
Timor-Leste	..	..	..	..	..	..	..	..	..	..	..	..
Togo	53 ^g	81 ^g	..	..	13	27	2.8	3.2	40	42	6.0	2.9
Trinidad and Tobago	260 ^e	463 ^e	261	..	232	593	8.3	5.6	91	234	4.3	3.7
Tunisia	4,120 ⁱ	6,549 ⁱ	1,778	2,241	1,838	2,999	23.0	19.0	294	498	3.3	3.0
Turkey	7,083	18,916	3,981	8,275	4,957	18,441	13.6	15.8	911	3,154	2.3	2.2
Turkmenistan	218	12	21	33	13	..	0.7	..	74	..	4.1	..
Uganda	160	539	148	254	78	356	11.7	23.8	80	210	5.4	6.5
Ukraine	3,716	18,900	6,552	16,875	191	4,018	1.1	8.0	210	3,202	1.1	6.0
United Arab Emirates	2,315 ^{a,c}	7,126 ^{a,c}	..	..	632 ^d	4,972 ^d	..	..	..	8,827 ^d	..	..
United Kingdom	21,719	30,654	41,345	69,536	27,577	43,041	8.6	6.3	30,749	78,325	9.4	10.2
United States	43,490	50,978	51,285	63,662	93,700	128,922	11.8	8.9	60,924	104,310	6.8	4.7
Uruguay	2,022	1,749	562	666	725	706	20.7	12.5	332	306	9.3	5.3
Uzbekistan	92	262	246	455	15 ^d	57 ^d	..	..	..	..	..	..
Venezuela, RB	700	748	534	1,095	995	745	4.8	1.1	1,852	1,807	11.0	4.7
Vietnam	1,351 ^b	3,583 ^b	..	..	..	3,200 ^d	..	5.1 ^d	..	..	..	..
West Bank and Gaza	220 ^g	123 ^g	..	..	255 ^h	121 ^h	..	..	162 ^h	265 ^h	..	..
Yemen, Rep.	61 ^g	382 ^g	..	..	50 ^h	181 ^h	2.3 ^h	2.3 ^h	76	225	3.1	2.9
Zambia	163	669	..	..	29 ^h	110 ^h	2.4 ^h	2.7 ^h	83	96	6.2	3.0
Zimbabwe	1,416 ^b	2,287 ^b	256	..	145 ^d	338 ^d	..	..	106 ^d	..	..	..
World	538,992 t	850,778 t	579,267 t	1,030,976 t	486,150 t	887,743 t	7.6 w	6.0 w	458,239 t	803,866 t	7.5 w	5.6 w
Low income	11,056	27,246	..	..	7,285	22,549	6.5	5.7	6,477	24,213	4.2	4.4
Middle income	156,970	301,883	179,154	344,318	90,126	231,020	8.4	6.3	64,580	148,415	6.0	4.6
Lower middle income	60,125	148,352	35,370	107,329	42,277	111,524	9.1	6.1	20,190	67,636	3.9	3.8
Upper middle income	97,893	155,980	134,188	222,638	47,852	119,501	7.9	6.4	44,492	80,578	7.5	5.4
Low & middle income	170,318	332,275	212,104	419,006	97,598	253,983	8.3	6.2	71,208	171,125	5.8	4.6
East Asia & Pacific	44,243	98,476	36,056	81,142	31,197	78,567	7.8	4.8	14,769	48,335	3.5	3.5
Europe & Central Asia	56,887	108,942	101,318	176,948	24,108	68,438	9.1	7.0	24,473	49,564	9.4	5.8
Latin America & Carib.	38,965	55,387	21,780	38,100	21,591	45,333	7.5	5.6	18,751	33,091	6.5	4.9
Middle East & N. Africa	13,617	36,214	13,353	26,968	9,947	30,744	12.8	16.2	4,459	13,835	4.3	6.4
South Asia	3,819	7,296	5,151	12,998	4,016	11,608	6.8	4.8	2,393	12,923	3.0	4.2
Sub-Saharan Africa	12,878	27,486	..	..	6,729	19,170	7.6	10.0	6,766	15,177	7.0	5.5
High income	361,206	510,271	320,789	533,390	388,504	633,422	7.5	5.9	386,329	632,672	7.9	6.0
Euro area	201,613	284,903	139,868	194,611	163,394	285,919	7.8	6.5	154,655	243,434	7.8	5.9

a. Arrivals in hotels only. b. Arrivals of nonresident visitors at national borders. c. Includes nationals residing abroad. d. Country estimates. e. Arrivals by air only. f. Arrivals in all types of accommodation establishments. g. Arrivals in hotels and similar establishments. h. Expenditure on travel-related items only; excludes passenger transport items. i. Excludes nationals residing abroad.

About the data

Tourism is defined as the activities of people traveling to and staying in places outside their usual environment for no more than one year for leisure, business, and other purposes not related to an activity remunerated from within the place visited. The social and economic phenomenon of tourism has grown substantially over the past quarter century.

Statistical information on tourism is based mainly on data on arrivals and overnight stays along with balance of payments information. But these data do not completely capture the economic phenomenon of tourism or give governments, businesses, and citizens the information needed for effective public policies and efficient business operations. Credible data are needed on the scale and significance of tourism. Information on the role of tourism in national economies is particularly deficient. Although the World Tourism Organization reports that progress has been made in harmonizing definitions and measurement, differences in national practices still prevent full international comparability.

The data in the table are from the World Tourism Organization, an agency of the United Nations. The data on international inbound and outbound tourists refer to the number of arrivals and departures of visitors, not to the number of people traveling. Thus a person who makes several trips to a country during a given period is counted each time as a new arrival. Unless otherwise indicated in the footnotes, the data on inbound tourism show the arrivals of nonresident tourists (overnight visitors) at national borders. When data on international tourists are unavailable or incomplete, the table shows

the arrivals of international visitors, which include tourists, same-day visitors, cruise passengers, and crew members.

Sources and collection methods for data on arrivals differ across countries. In some cases data are obtained from border statistics (police, immigration, and the like) and supplemented by border surveys. In other cases data are obtained from tourism accommodation establishments. For some countries number of arrivals is limited to arrivals by air and for others to arrivals staying in hotels. Some countries include arrivals of nationals residing abroad while others do not. Comparison of arrivals across countries should thus be treated with caution.

The World Tourism Organization is improving its coverage of tourism expenditure data. It is now using balance of payments data from the International Monetary Fund (IMF), supplemented by data received from individual countries. The new data, shown in the table, include travel and passenger transport items as defined in the IMF's *Balance of Payments Manual*. When the IMF does not report data on passenger transport items, expenditure data for travel items are shown instead.

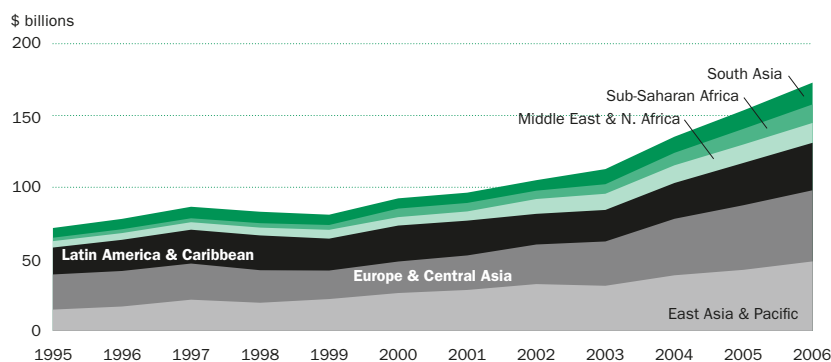
Aggregates are based on the World Bank's classification of countries and differ from those of the World Tourism Organization. Countries not shown in the table but for which data are available are included in the regional and income group totals. The aggregates are calculated using the World Bank's weighted aggregation methodology (see *Statistical methods*) and differ from the World Tourism Organization's aggregates.

Definitions

• **International inbound tourists** (overnight visitors) are the number of tourists who travel to a country other than that in which they have their usual residence, but outside their usual environment, for a period not exceeding 12 months and whose main purpose in visiting is other than an activity remunerated from within the country visited. When data on number of tourists are not available, the number of visitors, which includes tourists, same-day visitors, cruise passengers, and crew members, is shown instead. • **International outbound tourists** are the number of departures that people make from their country of usual residence to any other country for any purpose other than a remunerated activity in the country visited. • **Inbound tourism expenditure** is expenditures by international inbound visitors, including payments to national carriers for international transport. These receipts include any other prepayment made for goods or services received in the destination country. They also may include receipts from same-day visitors, except when these are important enough to justify separate classification. For some countries they do not include receipts for passenger transport items. Their share in exports is calculated as a ratio to exports of goods and services, which comprise all transactions between residents of a country and the rest of the world involving a change of ownership from residents to nonresidents of general merchandise, goods sent for processing and repairs, nonmonetary gold, and services. • **Outbound tourism expenditure** is expenditures of international outbound visitors in other countries, including payments to foreign carriers for international transport. These expenditures may include those by residents traveling abroad as same-day visitors, except in cases where these are important enough to justify separate classification. For some countries they do not include expenditures for passenger transport items. Their share in imports is calculated as a ratio to imports of goods and services, which comprise all transactions between residents of a country and the rest of the world involving a change of ownership from nonresidents to residents of general merchandise, goods sent for processing and repairs, nonmonetary gold, and services.

Developing countries are spending more on tourism in other countries

6.17a



Although almost 80 percent of the world's expenditure on tourism in other countries originated in high-income countries in 2006, developing countries' share has been gradually rising. Developing countries' expenditures on tourism in other countries nearly doubled between 2000 and 2006.

Source: World Bank staff calculations based on World Tourism Organization data.

Data sources

Data on visitors and tourism expenditure are from the World Tourism Organization's *Yearbook of Tourism Statistics* and *Compendium of Tourism Statistics 2008*. Data in the table are updated from electronic files provided by the World Tourism Organization. Data on exports and imports are from the IMF's *Balance of Payments Statistics Yearbook* and data files.



PRIMARY DATA DOCUMENTATION

The World Bank is not a primary data collection agency for most areas other than business and investment climate surveys, living standards surveys, and external debt. As a major user of socioeconomic data, however, the World Bank recognizes the importance of data documentation to inform users of differences in the methods and conventions used by primary data collectors—usually national statistical agencies, central banks, and customs services—and by international organizations, which compile the statistics that appear in the World Development Indicators database. These differences may give rise to significant discrepancies over time both within countries and across them. Delays in reporting data and the use of old surveys as the base for current estimates may further compromise the quality of data reported here.

The tables in this section provide information on sources, methods, and reporting standards of the principal demographic, economic, and environmental indicators in World Development Indicators. Additional documentation is available from the World Bank's Country Statistical Information Database at www.worldbank.org/data.

The demand for good quality statistical data is increasing. Timely and reliable statistics are key to the broad development strategy often referred to as “managing for results.” Monitoring and reporting on publicly agreed indicators are central to implementing poverty reduction strategies and lie at the heart of the Millennium Development Goals and the new Results Measurement System adopted for the 14th replenishment of the International Development Association.

A global action plan to improve national and international statistics was agreed on during the Second Roundtable on Managing for Development Results in February 2004 in Marrakech, Morocco. The plan, now referred to as the Marrakech Action Plan for Statistics, or MAPS, has been widely endorsed and forms the overarching framework for statistical capacity building. The third roundtable conference, held in February 2007 in Hanoi, Vietnam, reaffirmed MAPS as the guiding strategy for improving the capacity of the national and international statistical systems. See www.mfdr.org/RT3 for reports from the conference.

PRIMARY DATA DOCUMENTATION

	Currency	National accounts						Balance of payments and trade			Government finance	IMF data dissemination standard
		Base year	Reference year	System of National Accounts	SNA price valuation	Alternative conversion factor	PPP survey year	Balance of Payments Manual in use	External debt	System of trade	Accounting concept	
Afghanistan	Afghan afghani	2002/03			VAB				Preliminary		C	G
Albania	Albanian lek	^a 1996		^b	VAB		2005	BPM5	Actual	G	C	G
Algeria	Algerian dinar	1980			VAB			BPM5	Actual	S	B	
Angola	Angolan kwanza	1997			VAP	1991–96	2005	BPM5	Actual	S		G
Argentina	Argentine peso	1993		^b	VAB	1971–84	2005	BPM5	Actual	S	C	S
Armenia	Armenian dram	^a 1996		^b	VAB	1990–95	2005	BPM5	Actual	S	C	S
Australia	Australian dollar	^a 2000		^b	VAB		2005	BPM5		G	C	S
Austria	Euro	2000		^b	VAB		2005	BPM5		S	C	S
Azerbaijan	New Azeri manat	^a 2003		^b	VAB	1992–95	2005	BPM5	Actual	G	C	G
Bangladesh	Bangladesh taka	1995/96		^b	VAB		2005	BPM5	Actual	G	C	G
Belarus	Belarusian rubel	^a 2000		^b	VAB	1990–95	2005	BPM5	Actual	G	C	S
Belgium	Euro	2000		^b	VAB		2005	BPM5		S	C	S
Benin	CFA franc	1985			VAP	1992	2005	BPM5	Preliminary	S	B	G
Bolivia	Boliviano	1990		^b	VAB	1960–85	2005	BPM5	Actual	S	C	G
Bosnia and Herzegovina	Konvertible mark	^a 1996		^b	VAB		2005	BPM5	Actual		C	
Botswana	Botswana pula	1993/94		^b	VAB		2005	BPM5	Actual	G	B	G
Brazil	Brazilian real	^a 2000		^b	VAB		2005	BPM5	Actual	S	C	S
Bulgaria	Bulgarian lev	^a 2002		^b	VAB	1978–89, 1991–92	2005	BPM5	Actual	G	C	S
Burkina Faso	CFA franc	1999			VAB	1992–93	2005	BPM4	Actual	G	B	G
Burundi	Burundi franc	1980			VAB		2005	BPM5	Actual	S	C	
Cambodia	Cambodian riel	2000			VAB		2005	BPM5	Actual	G	C	G
Cameroon	CFA franc	2000		^b	VAB		2005	BPM5	Preliminary	S	B	G
Canada	Canadian dollar	2000		^b	VAB		2005	BPM5		G	C	S
Central African Republic	CFA franc	2000			VAB		2005	BPM4	Estimate	S	B	G
Chad	CFA franc	1995			VAB		2005	BPM5	Preliminary	S	C	G
Chile	Chilean peso	1996		^b	VAB		2005	BPM5	Actual	S	C	S
China	Chinese yuan	2000		^b	VAP	1978–93	2005	BPM5	Preliminary	S	B	G
Hong Kong, China	Hong Kong dollar	2000		^b	VAB		2005	BPM5		G	C	S
Colombia	Colombian peso	1994		^b	VAB	1992–94	2005	BPM5	Actual	S	B	S
Congo, Dem. Rep.	Congo franc	1987			VAB	1999–2001	2005	BPM5	Estimate	S	C	G
Congo, Rep.	CFA Franc	1978			VAP		2005	BPM5	Estimate	S	C	G
Costa Rica	Costa Rican colon	1991		^b	VAB			BPM5	Actual	S	C	S
Côte d'Ivoire	CFA franc	1996			VAP		2005	BPM5	Actual	S	C	G
Croatia	Croatian kuna	^a 1997		^b	VAB		2005	BPM5	Actual	G	C	S
Cuba	Cuban peso	1984			VAP					G		
Czech Republic	Czech koruna	2000	1995	^b	VAB		2005	BPM5		G	C	S
Denmark	Danish krone	2000		^b	VAB		2005	BPM5		G	C	S
Dominican Republic	Dominican peso	1990			VAP			BPM5	Actual	G	C	G
Ecuador	U.S. dollar	2000		^b	VAB		2005	BPM5	Actual	S	B	S
Egypt, Arab Rep.	Egyptian pound	1991/92			VAB		2005	BPM5	Actual	S	B	S
El Salvador	U.S. dollar	1990			VAB	1982–90		BPM5	Actual	S	C	S
Eritrea	Eritrean nakfa	1992			VAB			BPM4	Actual			
Estonia	Estonian kroon	2000		^b	VAB	1991–95	2005	BPM5		G	C	S
Ethiopia	Ethiopian birr	1999/2000		^b	VAB		2005	BPM5	Actual	G	C	G
Finland	Euro	2000		^b	VAB		2005	BPM5		G	C	S
France	Euro	^a 2000		^b	VAB		2005	BPM5		S	C	S
Gabon	CFA franc	1991			VAP	1993	2005	BPM5	Estimate	S	B	G
Gambia, The	Gambian dalasi	1987			VAB		2005	BPM5	Actual	G	B	G
Georgia	Georgian lari	^a 1994		^b	VAB	1990–95	2005	BPM5	Actual	G	C	G
Germany	Euro	2000		^b	VAB		2005	BPM5		S	C	S
Ghana	Ghanaian cedi	1975			VAP	1973–87	2005	BPM5	Actual	G	B	G
Greece	Euro	^a 2000			VAB		2005	BPM5		S	C	S
Guatemala	Guatemalan quetzal	1958			VAP			BPM5	Actual	S	B	G
Guinea	Guinean franc	1996	1994		VAB		2005	BPM5	Preliminary	S	B	G
Guinea-Bissau	CFA franc	1986			VAB		2005	BPM5	Estimate	G		G

PRIMARY DATA DOCUMENTATION

	Latest population census	Latest demographic, education, or health household survey	Source of most recent income and expenditure data	Vital registration complete	Latest agricultural census	Latest industrial data	Latest trade data	Latest water withdrawal data
Afghanistan	1979	MICS, 2003					1977	1987
Albania	2001	RHS, 2002	LSMS, 2004	Yes	1998	2004	2006	1995
Algeria	1998	MICS, 2000	HLSS, 1995		2001		2006	1995
Angola	1970	MICS, 2001			1964–65		1991	1987
Argentina	2001		EPH, 2003	Yes	2002	2002	2006	1995
Armenia	2001	DHS, 2005	ILCS, 2003	Yes			2006	1994
Australia	2006		SIHC, 1994	Yes	2001	2003	2006	1985
Austria	2001		Microcensus, 2000	Yes	1999–2000	2003	2006	1991
Azerbaijan	1999	RHS, 2001	HBS, 2003	Yes			2006	1995
Bangladesh	2001	DHS, 2004; MICS 2006	HES, 2005		2005	1998	2004	1990
Belarus	1999	MICS, 2005	IES, 2005	Yes	1994		2006	1990
Belgium	2001		ECHP, 2000	Yes	1999–2000 ^c	2001	2006	
Benin	2002	DHS, 2001	CWIQ, 2003		1992		2005	1994
Bolivia	2001	DHS, 2003	MECOVI, 2002		1984–88	2001	2006	1987
Bosnia and Herzegovina	1991	MICS, 2006	LSMS, 2005	Yes			2006	1995
Botswana	2001	MICS, 2000	HIES, 1993/94		1993	2004	2006	1992
Brazil	2000	DHS, 1996	PNAD, 2005		1996	2004	2006	1992
Bulgaria	2001		HBS, 2003	Yes			2006	1988
Burkina Faso	2006	DHS, 2003	EVCBM, 2003		1993		2004	1992
Burundi	1990	MICS, 2000	Priority survey, 1998				2005	1987
Cambodia	1998	DHS, 2005	SES, 2004				2004	1987
Cameroon	1987	DHS, 2004	Priority survey, 2001		1984		2006	1987
Canada	2006		SLID, 2000	Yes	1996/2001	2002	2006	1991
Central African Republic	2003	MICS, 2006	EPI, 1993		1985		2005	1987
Chad	1993	DHS, 2004	ECOSIT, 1995				1995	1987
Chile	2002		CASEN, 2003	Yes	1996–97		2006	1987
China	2000	Intercensal survey, 1995	HHS (Rural/Urban), 2004		1997		2006	1993
Hong Kong, China	2006			Yes			2006	
Colombia	2005–06	DHS, 2005	ECV, 2004		2001	2000	2006	1996
Congo, Dem. Rep.	1984	MICS, 2001			1990		1986	1990
Congo, Rep.	1996	DHS, 2005			1985–86		1995	1987
Costa Rica	2000	RHS, 1993	EHPM, 2004	Yes	1973		2006	1997
Côte d'Ivoire	1998	MICS, 2006; AIS, 2005	LSMS, 2002		2001		2006	1987
Croatia	2001		HBS, 2005	Yes	2003		2006	1996
Cuba	2002	MICS, 2006		Yes			2004	1995
Czech Republic	2001	RHS, 1993	Microcensus, 1996/97	Yes	2000		2006	1991
Denmark	2001		Income Tax Register, 1997	Yes	1999–2000	2003	2006	1990
Dominican Republic	2002	DHS, 2002; ENHOGAR, 2006	ENFT, 2005		1971		2001	1994
Ecuador	2001	RHS, 2004	LSMS, 1998		1999–2000	2004	2006	1997
Egypt, Arab Rep.	2006	DHS, 2005; SPA 2004	HECS, 2004/05	Yes	1999–2000	2002	2006	1996
El Salvador	1992	RHS, 2002/03	EHPM, 2002	Yes	1970–71		2006	1992
Eritrea	1984	DHS, 2002					2003	
Estonia	2000		HBS, 2004	Yes	2001		2006	1995
Ethiopia	1994	DHS, 2005	ICES, 2000		2001–02		2006	1987
Finland	2000		IDS, 2000	Yes	1990–2000	2002	2006	1991
France	2004		HBS, 1994/95	Yes	1999–2000	2003	2006	1999
Gabon	2003	DHS, 2000			1974–75		2006	1987
Gambia, The	2003	MICS, 2005/06	HHS, 2003/04		2001–02	1995	2006	1982
Georgia	2002	MICS, 1999; RHS, 1999	SGH, 2005	Yes			2006	1990
Germany	2004		GSOEP, 2000	Yes	1999–2000	2003	2006	1991
Ghana	2000	DHS, 2003; MICS, 2006	LSMS, 1998/99		1984	2003	2006	1997
Greece	2001		ECHP, 2000	Yes	1999–2000	1998	2006	1980
Guatemala	2002	RHS, 2002	ENEI-2, 2004	Yes	2003		2006	1992
Guinea	1996	DHS, 2005	LSMS, 2003		2000–01		2002	1987
Guinea-Bissau	1991	MICS, 2000	IES, 1993		1988		1995	1991

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	Currency	National accounts						Balance of payments and trade			Government finance	IMF data dissemination standard
		Base year	Reference year	System of National Accounts	SNA price valuation	Alternative conversion factor	PPP survey year	Balance of Payments Manual in use	External debt	System of trade	Accounting concept	
Haiti	Haitian gourde	1975/76			VAB	1991		BPM5	Preliminary	G		
Honduras	Honduran lempira	1978			VAB	1988–89		BPM5	Actual	S	B	G
Hungary	Hungarian forint		^a 2000	^b	VAB		2005	BPM5	Actual	S	C	S
India	Indian rupee	1999/2000		^b	VAB		2005	BPM5	Actual	G	C	S
Indonesia	Indonesian rupiah	2000			VAP		2005	BPM5	Actual	S	C	S
Iran, Islamic Rep.	Iranian rial	1997/98			VAB	1980–90	2005	BPM5	Actual	G	C	
Iraq	Iraqi dinar	1997			VAB		2005			S		
Ireland	Euro	2000		^b	VAB		2005	BPM5		G	C	S
Israel	Israeli new shekel	2005		^b	VAP		2005	BPM5		S	C	S
Italy	Euro	2000		^b	VAB		2005	BPM5		S	C	S
Jamaica	Jamaica dollar	1996			VAB		1996	BPM5	Actual	G	C	G
Japan	Japanese yen	2000			VAB		2005	BPM5		G	C	S
Jordan	Jordan dinar	1994			VAB		2005	BPM5	Actual	G	B	G
Kazakhstan	Kazakh tenge		^a 1995	^b	VAB	1987–95	2005	BPM5	Actual	G	C	S
Kenya	Kenya shilling	2001		^b	VAB		2005	BPM5	Actual	G	B	G
Korea, Dem. Rep.	Democratic Republic of Korea won							BPM5				
Korea, Rep.	Korean won	2000		^b	VAB		2005	BPM5		S	C	S
Kuwait	Kuwaiti dinar	1995			VAP		2005	BPM5		S	C	G
Kyrgyz Republic	Kyrgyz som		^a 1995	^b	VAB	1990–95	2005	BPM5	Actual	G	C	S
Lao PDR	Lao kip	1990			VAB		2005	BPM5	Preliminary	G		
Latvia	Latvian lat	2000		^b	VAB	1991–95	2005	BPM5	Actual	S	C	S
Lebanon	Lebanese pound	2004			VAB		2005	BPM5	Actual	G	B	G
Lesotho	Lesotho loti	1995		^b	VAB		2005	BPM5	Actual	G	C	G
Liberia	Liberian dollar	1992			VAB		2005		Estimate			G
Libya	Libyan dinar	1975			VAB	1986		BPM5		G		
Lithuania	Lithuanian litas	2000		^b	VAB	1990–95	2005	BPM5	Actual	G	C	S
Macedonia, FYR	Macedonian denar	1997	1995	^b	VAB		2005	BPM5	Actual	G		G
Madagascar	Malagasy ariary	1984			VAB		2005	BPM5	Actual	S	C	G
Malawi	Malawi kwacha	1994			VAB		2005	BPM5	Estimate	G	B	G
Malaysia	Malaysian ringgit	1987			VAP		2005	BPM5	Estimate	G	C	S
Mali	CFA franc	1987			VAB		2005	BPM4	Actual	G	B	G
Mauritania	Mauritanian ouguiya	1985			VAB		2005	BPM4	Actual	G		G
Mauritius	Mauritian rupee	1997/98			VAB		2005	BPM5	Actual	G	C	G
Mexico	Mexican new peso	1993		^b	VAB		2005	BPM5	Actual	G	C	S
Moldova	Moldovan leu		^a 1996	^b	VAB	1987–95	2005	BPM5	Actual	G	C	S
Mongolia	Mongolian tugrik	2005		^b	VAB		2005	BPM5	Actual	S	C	G
Morocco	Moroccan dirham	1998			VAB		2005	BPM5	Actual	S	C	S
Mozambique	Mozambican metical	1995			VAB	1992–95	2005	BPM5	Preliminary	S		G
Myanmar	Myanmar kyat	1985/86			VAP			BPM5	Estimate	G	C	
Namibia	Namibia dollar	1995/96		^b	VAB		2005	BPM5			B	G
Nepal	Nepalese rupee	1994/95			VAB		2005	BPM5	Actual	S	C	G
Netherlands	Euro		^a 2000	^b	VAB		2005	BPM5		S	C	S
New Zealand	New Zealand dollar	2000/01			VAB		2005	BPM5		G	C	
Nicaragua	Nicaraguan gold cordoba	1994		^b	VAB	1965–93		BPM5	Actual	S	B	G
Niger	CFA franc	1987			VAP	1993	2005	BPM5	Preliminary	S		G
Nigeria	Nigerian naira	1987			VAB	1971–98	2005	BPM5	Preliminary	G		G
Norway	Norwegian krone		^a 2000	^b	VAB		2005	BPM5		G	C	S
Oman	Rial Omani	1988			VAP		2005	BPM5	Actual	G	B	G
Pakistan	Pakistan rupee	1999/2000		^b	VAB		2005	BPM5	Actual	G	C	G
Panama	Panamanian balboa	1996		^b	VAB		1996	BPM5	Actual	S	C	G
Papua New Guinea	Papua New Guinea kina	1983			VAB	1989		BPM5	Actual	G	B	
Paraguay	Paraguayan guarani	1994		^b	VAP	1982–88	2005	BPM5	Actual	S	C	G
Peru	Peruvian new sol	1994			VAB	1985–91	2005	BPM5	Actual	S	C	S
Philippines	Philippine peso	1985			VAP		2005	BPM5	Actual	G	B	S
Poland	Polish zloty		^a 2002	^b	VAB		2005	BPM5	Actual	S	C	S

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	Latest population census	Latest demographic, education, or health household survey	Source of most recent income and expenditure data	Vital registration complete	Latest agricultural census	Latest industrial data	Latest trade data	Latest water withdrawal data
Haiti	2003	DHS, 2005	ECVH, 2001		1971		1997	1991
Honduras	2001	DHS, 2005	EPHPM, 2003		1993		2006	1992
Hungary	2001		FBS, 2004	Yes	2000	2002	2006	1991
India	2001	DHS, 2005/06	NSS, 2004/05		1995–1996/ 2000–2001	2003	2006	1990
Indonesia	2000	DHS, 2002/03	SUSENAS, 2005		2003	2003	2006	1990
Iran, Islamic Rep.	2006	DHS, 2000	SECH, 2005	Yes	2003	2003	2006	1993
Iraq	1997	MICS, 2006			1981		1976	1990
Ireland	2006		ECHP, 2000	Yes	2000		2006	1980
Israel	1995		HES, 2001	Yes	1981		2006	1997
Italy	2001		SHIW, 2000	Yes	2000	2003	2006	1998
Jamaica	2001	RHS, 2002/03; MICS 2005	LSMS, 2004		1978–79		2006	1993
Japan	2005			Yes	2000	2002	2006	1992
Jordan	2004	DHS, 2002	HIES, 2002/03		1997	2004	2006	1993
Kazakhstan	1999	DHS, 1999; MICS, 2006	HBS, 2003	Yes			2006	1993
Kenya	1999	DHS, 2003; SPA, 2004	WMS II, 1997		1977–79	2004	2004	1990
Korea, Dem. Rep.	1993	MICS, 2000						1987
Korea, Rep.	2005		NSFIE, 1998/99	Yes	2000	2002	2006	1994
Kuwait	2005	FHS, 1996		Yes	1970		2001	1994
Kyrgyz Republic	1999	DHS, 1997; MICS 2005/06	HBS, 2003	Yes	2002	2001	2006	1994
Lao PDR	2005	MICS, 2000	ECS I, 2002		1998–99		1975	1987
Latvia	2000		HBS, 2005	Yes	2001		2006	1994
Lebanon	1970	MICS, 2000			1998–99		2004	1996
Lesotho	2006	DHS, 2004	HBS, 1995		1999–2000		2002	1987
Liberia	1984	MICS, 1995					1984	1987
Libya	1995	MICS, 2000			2001		2004	1999
Lithuania	2001		HBS, 2004	Yes	1994	2004	2006	1995
Macedonia, FYR	2002		HBS, 2003	Yes	1994	2001	2006	1996
Madagascar	1993	DHS, 2003/04	Priority survey, 2001		1984–85	2004	2006	1984
Malawi	1998	DHS, 2004; MICS 2006	HHS, 2004/05		1993	2001	2006	1994
Malaysia	2000		HIBAS, 1997	Yes		2003	2006	1995
Mali	1998	DHS, 2001	EMCES, 2001		1984		2004	1987
Mauritania	2000	DHS, 2000/01	LSMS, 2000		1984–85		2006	1985
Mauritius	2000			Yes		2002	2006	
Mexico	2005	ENPF, 1995	ENIGH, 2004		1991	2000	2006	1998
Moldova	2004	DHS, 2005	HBS, 2003	Yes			2006	1992
Mongolia	2000	MICS, 2005	LSMS/Integrated Survey, 2002	Yes		2000	2006	1993
Morocco	2004	DHS, 2003/04	LSMS, 1998/99		1996	2004	2006	1998
Mozambique	2007	DHS, 2003	NHS, 2002/03		1999–2000		2006	1992
Myanmar	1983	MICS, 2000			2003		1992	1987
Namibia	2001	DHS, 2000	NHIES, 1993		1996–97		2006	1991
Nepal	2001	DHS, 2006	LSMS, 2003/04		2002	2002	2003	1994
Netherlands	2001		ECHP, 1999	Yes	1999–2000 ^c	2003	2006	1991
New Zealand	2006			Yes	2002	2002	2006	1991
Nicaragua	2005	DHS, 2001	LSMS, 2001	Yes	2001		2006	1998
Niger	2001	DHS/MICS, 2006			1980		2005	1988
Nigeria	2006	DHS, 2003	LSMS, 2003		1960		2003	1987
Norway	2001		IF 2000	Yes	1999	2001	2006	1985
Oman	2003	FHS, 1995			1978–79		2006	1991
Pakistan	1998	RHS, 2000/01	PIHS, 2005		2000		2006	1991
Panama	2000	LSMS, 2003	EH, 2003		2001	2001	2006	1990
Papua New Guinea	2000	DHS, 1996	HHS, 1996				2004	1987
Paraguay	2002	RHS, 2004	EIH, 2003		1991		2006	1987
Peru	2005	DHS, 2004	ENAH0, 2003		1994	1996	2006	1992
Philippines	2000	DHS, 2003	FIES, 2003	Yes	2002	2003	2006	1995
Poland	2002		HBS, 2005	Yes	1996/2002		2006	1991

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	Currency	National accounts						Balance of payments and trade			Government finance	IMF data dissemination standard
		Base year	Reference year	System of National Accounts	SNA price valuation	Alternative conversion factor	PPP survey year	Balance of Payments Manual in use	External debt	System of trade	Accounting concept	
Portugal	Euro	2000		^b	VAB		2005	BPM5		S	C	S
Puerto Rico	U.S. dollar	1954			VAP					G		
Romania	New Romanian leu	^a 1999		^b	VAB	1987–89, 1992	2005	BPM5	Preliminary	S	C	S
Russian Federation	Russian ruble	2003	2000	^b	VAB	1987–95	2005	BPM5	Preliminary	G	C	S
Rwanda	Rwanda franc	1995			VAP		2005	BPM5	Preliminary	G	C	G
Saudi Arabia	Saudi Arabian riyal	1999			VAP		2005	BPM4		G		
Senegal	CFA franc	1999		^b	VAB		2005	BPM5	Actual	S	B	G
Serbia	Serbian dinar	2002			VAB		2005		Actual			
Sierra Leone	Sierra Leonean leone	2001	1990	^b	VAB		2005	BPM5	Preliminary	G	B	G
Singapore	Singapore dollar	2000		^b	VAB		2005	BPM5		G	C	S
Slovak Republic	Slovak koruna	2000	1995	^b	VAP		2005	BPM5	Actual	G	C	S
Slovenia	Euro	^a 2000		^b	VAB		2005	BPM5		S	C	S
Somalia	Somali shilling	1985			VAB	1977–90			Estimate			
South Africa	South African rand	2000		^b	VAB		2005	BPM5	Preliminary	S	C	S
Spain	Euro	2000		^b	VAB		2005	BPM5		S	C	S
Sri Lanka	Sri Lankan rupee	1996			VAB		2005	BPM5	Actual	G	B	G
Sudan	Sudanese dinar	1981/82 ^d	1982		VAB		2005	BPM5	Actual	G	B	G
Swaziland	Lilangeni	1985			VAB		2005		Actual		C	G
Sweden	Swedish krona	^a 2000			VAB		2005	BPM5		G	C	S
Switzerland	Swiss franc	2000			VAB		2005	BPM5		S	C	S
Syrian Arab Republic	Syrian pound	2000			VAB	1970–2006	2005	BPM5	Estimate	S	C	G
Tajikistan	Tajik somoni	^a 1997		^b	VAB	1990–95	2005	BPM5	Preliminary	G	C	G
Tanzania	Tanzania shilling	1992			VAB		2005	BPM5	Estimate	S		G
Thailand	Thai baht	1988			VAP		2005	BPM5	Actual	G	C	S
Timor-Leste	U.S. dollar	2000			VAP							
Togo	CFA franc	1978			VAP		2005	BPM5	Actual	S	B	G
Trinidad and Tobago	Trinidad and Tobago dollar	2000		^b	VAB		1996	BPM5		S	C	G
Tunisia	Tunisian dinar	1990			VAP		2005	BPM5	Actual	G	C	S
Turkey	New Turkish lira	1987			VAB		2005	BPM5	Actual	S	B	S
Turkmenistan	Turkmen manat	^a 1987		^b	VAB	1987–95, 1997–2006	2000	BPM5	Actual	G		
Uganda	Uganda shilling	1997/98			VAB		2005	BPM5	Actual	G	B	G
Ukraine	Ukrainian hryvnia	^a 2003		^b	VAB	1990–95	2005	BPM5	Actual	G	C	S
United Arab Emirates	U.A.E. dirham	1995			VAB			BPM4		G	C	
United Kingdom	Pound sterling	2000		^b	VAB		2005	BPM5		G	C	S
United States	U.S. dollar	^a 2000			VAB		2005	BPM5		G	C	S
Uruguay	Uruguayan peso	1983			VAB		2005	BPM5	Actual	S	C	S
Uzbekistan	Uzbek sum	^a 1997		^b	VAB	1990–95	2000	BPM5	Actual	G		
Venezuela, RB	Venezuelan bolivar	1997			VAB		2005	BPM5	Actual	G	C	G
Vietnam	Vietnamese dong	1994		^b	VAP	1991	2005	BPM4	Actual	G	C	G
West Bank and Gaza	Israeli new shekel	1997			VAB						B	G
Yemen, Rep.	Yemen rial	1990			VAP	1991–96	2005	BPM5	Actual	G	B	G
Zambia	Zambian kwacha	1994			VAB	1990–92	2005	BPM5	Actual	G	B	G
Zimbabwe	Zimbabwe dollar	1990			VAB	1991, 1998	2005	BPM5	Actual	G	C	G

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	Latest population census	Latest demographic, education, or health household survey	Source of most recent income and expenditure data	Vital registration complete	Latest agricultural census	Latest industrial data	Latest trade data	Latest water withdrawal data
Portugal	2001			Yes	1999	2003	2006	1990
Puerto Rico	2000	RHS, 1995/96		Yes	1997/2002			
Romania	2002	RHS, 1999	LSMS, 2005	Yes	2002	2004	2006	1994
Russian Federation	2002	RHS, 1996	LMS, Round 9, 2002	Yes	1994–95	2004	2006	1994
Rwanda	2002	DHS, 2005	LSMS, 1999/2000		1984		2003	1993
Saudi Arabia	2004	Demographic survey, 1999			1999		2006	1992
Senegal	2002	DHS, 2005	ESASM, 1995		1998–99	2002	2006	1987
Serbia	2002	MICS, 2000		Yes			2006	
Sierra Leone	2004	MICS, 2005	SLIHS, 2003		1984–85		2002	1987
Singapore	2000	General household, 2005		Yes		2003	2006	1975
Slovak Republic	2001		Microcensus, 1996	Yes	2001	2003	2006	1991
Slovenia	2002		HBS, 2004	Yes	2000		2006	1996
Somalia	1987	MICS, 1999					1982	1987
South Africa	2001	DHS, 1998	IES, 2000		2002	2004	2006	1990
Spain	2001		ECHP, 2000	Yes	1999	2003	2006	1997
Sri Lanka	2001	DHS, 1987	HIES, 2002	Yes	2002		2005	1990
Sudan	1993	MICS, 2000					2006	1995
Swaziland	2007	MICS, 2000	SHIES, 2000/01		2000		2005	..
Sweden	2005		HINK, 2000	Yes	1999–2000	2002	2006	1991
Switzerland	2000		EVE, 2000	Yes	2000		2006	1991
Syrian Arab Republic	1994	MICS, 2006			1981		2006	1995
Tajikistan	2000	MICS, 2005	LSMS, 2004	Yes	1994		2000	1994
Tanzania	2002	DHS, 2004; AIS 2003	HIES, 2000/01		2002–03		2006	1994
Thailand	2000	DHS, 1987; MICS 2005/06	SES, 2002		2003	2000	2006	1990
Timor-Leste	2004							
Togo	1981	MICS, 2006			1996		2005	1987
Trinidad and Tobago	2000	MICS, 2000	LSMS, 1992	Yes	2004	2002	2006	1997
Tunisia	2004	MICS, 2000	LSMS, 2000		2004		2005	1996
Turkey	2000	DHS, 2003	LSMS, 2003		2001	2001	2006	1997
Turkmenistan	1995	DHS, 2000	LSMS, 1998	Yes			2000	1994
Uganda	2002	DHS, 2006; AIS, 2004	NIHS III, 2002		1991		2006	1970
Ukraine	2001	MICS, 2000	HBS, 2003	Yes		2004	2006	1992
United Arab Emirates	2005				1998		2005	1995
United Kingdom	2001		FRS, 1999	Yes	1999–2000 ^c	2002	2006	1991
United States	2000	CPS (monthly)	CPS, 2000	Yes	1997/2002	2001	2006	1990
Uruguay	2004		ECH, 2003	Yes	2000	2003	2006	1965
Uzbekistan	1989	MICS, 2006; DHS special, 2002	FBS, 2003	Yes				1994
Venezuela, RB	2001	MICS, 2000	EHM, 2003	Yes	1997		2006	1970
Vietnam	1999	DHS 2002; AIS 2005	LSMS, 2004		2001		2005	1990
West Bank and Gaza	1997	PAPFAM, 2006			1971			
Yemen, Rep.	2004	DHS, 1997	HBS, 2005		2002	2003	2006	1990
Zambia	2000	DHS, 2001/02, SPA, 2005	LCMS II, 2004		1990		2006	1994
Zimbabwe	2002	DHS, 2005/06	LCMS III, 1995		1960	1996	2005	1987

Note: For explanation of the abbreviations used in the table see notes following the table.

a. Original chained constant price data are rescaled. b. Country uses the 1993 System of National Accounts methodology. c. Conducted annually. d. Reporting period switch from fiscal year to calendar year from 1996. Pre-1996 data converted to calendar year.

• **Base year** is the base or pricing period used for constant price calculations in the country's national accounts. Price indexes derived from national accounts aggregates, such as the implicit deflator for gross domestic product (GDP), express the price level relative to base year prices. • **Reference year** is the year in which the local currency, constant price series of a country is valued. The reference year is usually the same as the base year used to report the constant price series. However, when the constant price data are chain linked, the base year is changed annually, so the data are rescaled to a specific reference year to provide a consistent time series. When the country has not rescaled following a change in base year, World Bank staff rescale the data to maintain a longer historical series. To allow for cross-country comparison and data aggregation, constant price data reported in *World Development Indicators* are rescaled to a common reference year (2000) and currency (U.S. dollars). • **System of National Accounts** identifies countries that use the 1993 System of National Accounts (1993 SNA), the terminology applied in *World Development Indicators* since 2001, to compile national accounts. Although more countries are adopting the 1993 SNA, many still follow the 1968 SNA, and some low-income countries use concepts from the 1953 SNA. • **SNA price valuation** shows whether value added in the national accounts is reported at basic prices (VAB) or producer prices (VAP). Producer prices include taxes paid by producers and thus tend to overstate the actual value added in production. However, VAB can be higher than VAP in countries with high agricultural subsidies. See *About the data* for tables 4.1 and 4.2 for further discussion of national accounts valuation. • **Alternative conversion factor** identifies the countries and years for which a World Bank–estimated conversion factor has been used in place of the official exchange rate (line rf in the International Monetary Fund's [IMF] *International Financial Statistics*). See *Statistical methods* for further discussion of alternative conversion factors. • **Purchasing power parity (PPP) survey year** is the latest available survey year for the International Comparison Program's estimates of PPPs. See *About the data* for table 1.1 for a more detailed description of PPPs. • **Balance of Payments Manual in use** refers to the classification system used to compile and report data on balance of payments items in table 4.15. BPM4 refers to the 4th edition of the IMF's *Balance of Payments Manual* (1977), and BPM5 to the 5th edition (1993). • **External debt** shows debt reporting status for 2006 data. *Actual* indicates that data are as reported, *preliminary* that data are preliminary and include an element of staff estimation, and *estimate* that data are World Bank staff estimates. • **System of trade** refers to the United Nations general trade system (G) or special trade system (S). Under the general trade system goods entering directly for domestic consumption and

goods entered into customs storage are recorded as imports at arrival. Under the special trade system goods are recorded as imports when declared for domestic consumption whether at time of entry or on withdrawal from customs storage. Exports under the general system comprise outward-moving goods: (a) national goods wholly or partly produced in the country; (b) foreign goods, neither transformed nor declared for domestic consumption in the country, that move outward from customs storage; and (c) nationalized goods that have been declared for domestic consumption and move outward without being transformed. Under the special system of trade, exports are categories a and c. In some compilations categories b and c are classified as re-exports. Direct transit trade—goods entering or leaving for transport only—is excluded from both import and export statistics. See *About the data* for tables 4.4, 4.5, and 6.2 for further discussion. • **Government finance accounting concept** is the accounting basis for reporting central government financial data. For most countries government finance data have been consolidated (C) into one set of accounts capturing all central government fiscal activities. Budgetary central government accounts (B) exclude some central government units. See *About the data* for tables 4.10, 4.11, and 4.12 for further details. • **IMF data dissemination standard** shows the countries that subscribe to the IMF's Special Data Dissemination Standard (SDDS) or General Data Dissemination System (GDDS). S refers to countries that subscribe to the SDDS and have posted data on the Dissemination Standards Bulletin Board at <http://dsbb.imf.org>. G refers to countries that subscribe to the GDDS. The SDDS was established for member countries that have or might seek access to international capital markets to guide them in providing their economic and financial data to the public. The GDDS helps countries disseminate comprehensive, timely, accessible, and reliable economic, financial, and sociodemographic statistics. IMF member countries elect to participate in either the SDDS or the GDDS. Both standards enhance the availability of timely and comprehensive data and therefore contribute to the pursuit of sound macroeconomic policies. The SDDS is also expected to improve the functioning of financial markets. • **Latest population census** shows the most recent year in which a census was conducted and in which at least preliminary results were released. It includes registration-based censuses. Some countries with complete population registration systems produce similar tables every 5 or 10 years instead of conducting regular censuses. • **Latest demographic, education, or health household survey** indicates the household surveys used to compile the demographic, education, and health data in section 2. AIS is AIDS Indicator Survey, CPS is Current Population Survey, DHS is Demographic and Health Survey, ENHOGAR is National Multiple Indicator

Cluster Survey (Encuesta Nacional de Hogares de Propósitos Múltiples), ENPF is National Family Planning Survey (Encuesta Nacional de Planificación Familiar), FHS is Family Health Survey, LSMS is Living Standards Measurement Survey, MICS is Multiple Indicator Cluster Survey, PAPFAM is Pan Arab Project for Family Health, RHS is Reproductive Health Survey, and SPA is Service Provision Assessments. Detailed information for AIS, DHS, and SPA are available at www.measuredhs.com/aboutsurveys; for MICS at www.childinfo.org; and for RHS at www.cdc.gov/reproductivehealth/surveys. • **Source of most recent income and expenditure data** shows household surveys that collect income and expenditure data. CASEN is Caracterización Socioeconómica Nacional, CPS is Current Population Survey, CWIQ is Core Welfare Indicators Questionnaire, ECH is Encuesta Continua de Hogares, ECHP is European Community Household Panel, ECOSIT is Enquête sur la Consommation des Ménages et le Secteur Informel au Tchad, ECS is Expenditure and Consumption Survey, ECV is Encuesta Nacional de Calidad de Vida, ECVH is Enquête sur les Conditions de Vie en Haïti, EH is Encuesta de Hogares, EHM is Encuesta de Hogares por Muestreo, EHPM is Encuesta de Hogares de Propósitos Múltiples, EIH is Encuesta Integrada de Hogares, EMCES is Enquête Malienne de Conjoncture Économique et Sociale, ENAHO is Encuesta Nacional de Hogares, ENEI is Encuesta Nacional de Empleo e Ingresos, ENFT is Encuesta Nacional de Fuerza de Trabajo, ENIGH is Encuesta Nacional de Ingreso-Gasto de los Hogares, EPH is Encuesta Permanente de Hogares, EPHPM is Encuesta Permanente de Hogares de Propósitos Múltiples, EPI is Enquête Prioritaire sur les Conditions de Vie des Ménages, ESASM is Enquête Sénégalaise Auprès des Ménages, EVCBM is Enquête Burkinabé sur les Conditions de Vie des Ménages, EVE is Einkommens- und Verbrauchserhebung, FBS and HBS are Household Budget Survey, FIES is Family Income and Expenditure Survey, FRS is Family Resources Survey, GSOEP is German Socio-Economic Panel, HECS is Household Expenditure and Consumption Survey, HES is Household Expenditure Survey, HHS is Household Survey, HIBAS is Household Income and Basic Amenities Survey, HIES is Household Income and Expenditure Survey, HINK is Household Income Survey, HLSS is Household Living Standards Survey, ICES is Income, Consumption, and Expenditure Survey, IDS is Income Distribution Survey, IES is Income and Expenditure Survey, IF is Inntekts- og formuesundersøkelsen for husholdninger, ILCS is Integrated Survey of Living Standards, LCMS is Living Conditions Monitoring Survey, LMS is Longitudinal Measurement Survey, LSMS is Living Standards Measurement Study, MECOVI is Measurement of Living Conditions in Latin America and the Caribbean, NHS is National Household Survey, NIHS is National Integrated Household Survey, NSFIE is National Survey of Family Income and

Expenditures, NSS is National Sample Survey of Households, PIHS is Pakistan Integrated Household Survey, PNAD is Pesquisa Nacional por Amostra de Domicílios, SECH is Socioeconomic Characteristics of Households, SES is Socioeconomic Survey, SGH is Survey of Georgian Households, SHIW is Survey of Household Income and Wealth, SIHC is Survey of Income and Housing Costs, SLID is Survey of Labour and Income Dynamics, SLIHS is Sierra Leone Integrated Household Survey, SUSENAS is Socioeconomic Survey, and WMS is Welfare Monitoring Survey. Detailed information on household surveys for developing countries can be found on the website of the International Household Survey Network (www.survey-network.org). • **Vital registration complete** identifies countries judged to have at least 90 percent complete registries of vital (birth and death) statistics by the United Nations Statistics Division and reported in Population and Vital Statistics Reports. Countries with complete vital statistics registries may have more accurate and more timely demographic indicators than other countries. • **Latest agricultural census** shows the most recent year in which an agricultural census was conducted and reported to the Food and Agriculture Organization of the United Nations. • **Latest industrial data** show the most recent year for which manufacturing value added data at the three-digit level of the International Standard Industrial Classification (ISIC, revision 2 or 3) are available in the United Nations Industrial Development Organization database. • **Latest trade data** show the most recent year for which structure of merchandise trade data from the United Nations Statistics Division's Commodity Trade (Comtrade) database are available. • **Latest water withdrawal data** show the most recent year for which data on freshwater withdrawals have been compiled from a variety of sources. See *About the data* for table 3.5 for more information.

Exceptional reporting periods

In most economies the **fiscal year** is concurrent with the calendar year. Exceptions are shown in this table. The ending date reported here is for the fiscal year of the central government. Fiscal years for other levels of government and reporting years for statistical surveys may differ. And some countries that follow a fiscal year report their national accounts data on a calendar year basis as shown in the *reporting period* column.

The **reporting period for national accounts data** is designated as either calendar year basis (CY) or fiscal year basis (FY). Most economies report their national accounts and balance of payments data using calendar years, but some use fiscal years. In *World Development Indicators* fiscal year data are assigned to the calendar year that contains the larger share of the fiscal year. If a country's fiscal year ends before June 30, data are shown in the first year of the fiscal period; if the fiscal year ends on or after June 30, data

are shown in the second year of the period. Balance of payments data are reported in *World Development Indicators* by calendar year and so are not comparable to the national accounts data of the countries that report their national accounts on a fiscal year basis.

Economies with exceptional reporting periods

Economy	Fiscal year end	Reporting period for national accounts data
Afghanistan	Mar. 20	FY
Australia	Jun. 30	FY
Bangladesh	Jun. 30	FY
Botswana	Jun. 30	FY
Canada	Mar. 31	CY
Egypt, Arab Rep.	Jun. 30	FY
Ethiopia	Jul. 7	FY
Gambia, The	Jun. 30	CY
Haiti	Sep. 30	FY
India	Mar. 31	FY
Indonesia	Mar. 31	CY
Iran, Islamic Rep.	Mar. 20	FY
Japan	Mar. 31	CY
Kenya	Jun. 30	CY
Kuwait	Jun. 30	CY
Lesotho	Mar. 31	CY
Malawi	Mar. 31	CY
Mauritius	Jun. 30	FY
Myanmar	Mar. 31	FY
Namibia	Mar. 31	CY
Nepal	Jul. 14	FY
New Zealand	Mar. 31	FY
Pakistan	Jun. 30	FY
Puerto Rico	Jun. 30	FY
Sierra Leone	Jun. 30	CY
Singapore	Mar. 31	CY
South Africa	Mar. 31	CY
Swaziland	Mar. 31	CY
Sweden	Jun. 30	CY
Thailand	Sep. 30	CY
Uganda	Jun. 30	FY
United States	Sep. 30	CY
Zimbabwe	Jun. 30	CY

Revisions to national accounts data

National accounts data are revised by national statistical offices when methodologies change or data sources improve. National accounts data in *World Development Indicators* are also revised when data sources change. The following notes, while not comprehensive, provide information on revisions from previous data.

• **Bhutan.** Data revisions reflect changes in sources. Current and constant price value added data from 1980 to 2006 are from the government of Bhutan. Current price expenditure data for 1989–2005 and constant price expenditure data for 2000–05 are from the Asian Development Bank's *Key Indicators 2007*. • **Botswana.** Large changes in constant price consumption indicators from 1998–2006 are due to

statistical discrepancy. The Central Statistical Office published large-scale revisions of constant price discrepancy in GDP for 1996/97–2004/05 in April 2006 and May 2007. • **Brazil.** The Institute of Geography and Statistics revised its national accounts data. Among the changes are new sources and a change in base year to 2000. • **Burkina Faso.** National accounts value added and expenditure data have been revised from 1985–2006 according to recently released data from the Ministry of Economy and Finance. Constant price series have been linked back since 1984. Valuation is value added at basic prices, and the new base year is 1999. • **Chile.** Data from 2003 onward reflect the Central Bank's new series using 2003 as the base year. • **China.** The base year for constant price data changed from 1990 to 2000. • **Côte d'Ivoire.** Data for 1999–2006 were revised using data from the IMF, national authorities, and World Bank staff estimates.

• **Egypt.** Constant price data are updated from official published national accounts. Constant price imports and exports data have been revised based on data from the Central Bank website (www.cbe.org.eg), which lists the constant price expenditure components of GDP.

• **Fiji.** Data revisions reflect changes in sources. Data for 1996–2005 were revised using data from the Asian Development Bank's *Key Indicators 2007*. • **India.** In May 2007 the Central Statistical Organization published revised national accounts data for 1951–99 consistent with the new series of national accounts statistics released on January 31, 2006. • **Jordan.** Data have been revised by the Central Bank and the Department of Statistics. • **Lebanon.** Data have been revised by the Central Bank. • **Malawi.** The central statistics office, with assistance from Norway, revised its national accounts data. The initial outcome is that GDP will increase by approximately 37 percent. • **Morocco.** The government revised national accounts data from 1998 onward. National accounts value added data switched from producer prices to basic prices. The new base year is 1998. • **São Tomé and Príncipe.** Data have been revised by the National Statistics Institute. Revised GDP estimates are much higher (47.5 percent for the new base year 2001) than those of the previous series and reflect improvements in coverage.

• **Senegal.** National accounts data have been revised to conform to 1993 SNA methodology, and the base year has changed to 1999. Value added data are now in basic prices. Agricultural sector data are entered in the year of production (N) in the 1999 base year of the SNA as opposed to the year following the year of production (N+1) in base year 1987. • **Sudan.** Expenditure items in both current and constant prices for 1988–95 were revised using recent United Nations Statistics Division and IMF *World Economic Outlook* estimates. • **Tanzania.** National accounts expenditure data in current and constant prices have been revised from 1995 onward. Data are from IMF and World Bank staff estimates and Tanzanian authorities.

STATISTICAL METHODS

This section describes some of the statistical procedures used in preparing the World Development Indicators. It covers the methods employed for calculating regional and income group aggregates and for calculating growth rates, and it describes the *World Bank Atlas* method for deriving the conversion factor used to estimate gross national income (GNI) and GNI per capita in U.S. dollars. Other statistical procedures and calculations are described in the *About the data* sections following each table.

Aggregation rules

Aggregates based on the World Bank's regional and income classifications of economies appear at the end of most tables. The countries included in these classifications are shown on the flaps on the front and back covers of the book. Most tables also include the aggregate euro area. This aggregate includes the member states of the Economic and Monetary Union (EMU) of the European Union that have adopted the euro as their currency: Austria, Belgium, Cyprus, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Malta, Netherlands, Portugal, Slovenia, and Spain. Other classifications, such as the European Union and regional trade blocs, are documented in *About the data* for the tables in which they appear.

Because of missing data, aggregates for groups of economies should be treated as approximations of unknown totals or average values. Regional and income group aggregates are based on the largest available set of data, including values for the 153 economies shown in the main tables, other economies shown in table 1.6, and Taiwan, China. The aggregation rules are intended to yield estimates for a consistent set of economies from one period to the next and for all indicators. Small differences between sums of subgroup aggregates and overall totals and averages may occur because of the approximations used. In addition, compilation errors and data reporting practices may cause discrepancies in theoretically identical aggregates such as world exports and world imports.

Five methods of aggregation are used in *World Development Indicators*:

- **For group and world totals denoted in the tables by a *t*,** missing data are imputed based on the relationship of the sum of available data to the total in the year of the previous estimate. The imputation process works forward and backward from 2000. Missing values in 2000 are imputed using one of several proxy variables for which complete data are available in that year. The imputed value is calculated so that it (or its proxy) bears the same relationship to the total of available data. Imputed values are usually not calculated if missing data account for more than a third of the total in the benchmark year. The variables used as proxies are GNI in U.S. dollars, total population, exports and imports of goods and services in U.S. dollars, and value added in agriculture, industry, manufacturing, and services in U.S. dollars.
- **Aggregates marked by an *s*** are sums of available data. Missing values are not imputed. Sums are not computed if more than a third of the observations in the series or a proxy for the series are missing in a given year.
- **Aggregates of ratios are denoted by a *w*** when calculated as weighted averages of the ratios (using the value of the denominator or, in some cases, another

indicator as a weight) and denoted by a *u* when calculated as unweighted averages. The aggregate ratios are based on available data, including data for economies not shown in the main tables. Missing values are assumed to have the same average value as the available data. No aggregate is calculated if missing data account for more than a third of the value of weights in the benchmark year. In a few cases the aggregate ratio may be computed as the ratio of group totals after imputing values for missing data according to the above rules for computing totals.

- **Aggregate growth rates are denoted by a *w*** when calculated as a weighted average of growth rates. In a few cases growth rates may be computed from time series of group totals. Growth rates are not calculated if more than half the observations in a period are missing. For further discussion of methods of computing growth rates see below.
- **Aggregates denoted by an *m*** are medians of the values shown in the table. No value is shown if more than half the observations for countries with a population of more than 1 million are missing.

Exceptions to the rules occur throughout the book. Depending on the judgment of World Bank analysts, the aggregates may be based on as little as 50 percent of the available data. In other cases, where missing or excluded values are judged to be small or irrelevant, aggregates are based only on the data shown in the tables.

Growth rates

Growth rates are calculated as annual averages and represented as percentages. Except where noted, growth rates of values are computed from constant price series. Three principal methods are used to calculate growth rates: least squares, exponential endpoint, and geometric endpoint. Rates of change from one period to the next are calculated as proportional changes from the earlier period.

Least-squares growth rate. Least-squares growth rates are used wherever there is a sufficiently long time series to permit a reliable calculation. No growth rate is calculated if more than half the observations in a period are missing. The least-squares growth rate, *r*, is estimated by fitting a linear regression trend line to the logarithmic annual values of the variable in the relevant period. The regression equation takes the form

$$\ln X_t = a + bt$$

which is equivalent to the logarithmic transformation of the compound growth equation,

$$X_t = X_0 (1 + r)^t.$$

In this equation *X* is the variable, *t* is time, and *a* = $\ln X_0$ and *b* = $\ln (1 + r)$ are parameters to be estimated. If *b** is the least-squares estimate of *b*, then the average annual growth rate, *r*, is obtained as $[\exp(b^*) - 1]$ and is multiplied by 100

for expression as a percentage. The calculated growth rate is an average rate that is representative of the available observations over the entire period. It does not necessarily match the actual growth rate between any two periods.

Exponential growth rate. The growth rate between two points in time for certain demographic indicators, notably labor force and population, is calculated from the equation

$$r = \ln(p_n/p_0)/n$$

where p_n and p_0 are the last and first observations in the period, n is the number of years in the period, and \ln is the natural logarithm operator. This growth rate is based on a model of continuous, exponential growth between two points in time. It does not take into account the intermediate values of the series. Nor does it correspond to the annual rate of change measured at a one-year interval, which is given by $(p_n - p_{n-1})/p_{n-1}$.

Geometric growth rate. The geometric growth rate is applicable to compound growth over discrete periods, such as the payment and reinvestment of interest or dividends. Although continuous growth, as modeled by the exponential growth rate, may be more realistic, most economic phenomena are measured only at intervals, in which case the compound growth model is appropriate. The average growth rate over n periods is calculated as

$$r = \exp[\ln(p_n/p_0)/n] - 1.$$

Like the exponential growth rate, it does not take into account intermediate values of the series.

World Bank Atlas method

In calculating GNI and GNI per capita in U.S. dollars for certain operational purposes, the World Bank uses the *Atlas* conversion factor. The purpose of the *Atlas* conversion factor is to reduce the impact of exchange rate fluctuations in the cross-country comparison of national incomes.

The *Atlas* conversion factor for any year is the average of a country's exchange rate (or alternative conversion factor) for that year and its exchange rates for the two preceding years, adjusted for the difference between the rate of inflation in the country and that in Japan, the United Kingdom, the United States, and the euro area. A country's inflation rate is measured by the change in its GDP deflator.

The inflation rate for Japan, the United Kingdom, the United States, and the euro area, representing international inflation, is measured by the change in the "SDR deflator". (Special drawing rights, or SDRs, are the International Monetary Fund's unit of account.) The SDR deflator is calculated as a weighted average of these countries' GDP deflators in SDR terms, the weights being the amount of each country's currency in one SDR unit. Weights vary over time because both the composition of the SDR and the relative exchange rates for each currency change. The SDR deflator is calculated in SDR terms first and then converted to U.S. dollars using the SDR to dollar *Atlas* conversion factor. The *Atlas* conversion factor is then applied to a country's GNI. The resulting GNI in U.S. dollars is divided by the midyear population to derive GNI per capita.

When official exchange rates are deemed to be unreliable or unrepresentative of the effective exchange rate during a period, an alternative estimate of the exchange rate is used in the *Atlas* formula (see below).

The following formulas describe the calculation of the *Atlas* conversion factor for year t :

$$e_t^* = \frac{1}{3} \left[e_{t-2} \left(\frac{p_t}{p_{t-2}} / \frac{p_t^{S\$}}{p_{t-2}^{S\$}} \right) + e_{t-1} \left(\frac{p_t}{p_{t-1}} / \frac{p_t^{S\$}}{p_{t-1}^{S\$}} \right) + e_t \right]$$

and the calculation of GNI per capita in U.S. dollars for year t :

$$Y_t^{\$} = (Y_t/N_t)/e_t^*$$

where e_t^* is the *Atlas* conversion factor (national currency to the U.S. dollar) for year t , e_t is the average annual exchange rate (national currency to the U.S. dollar) for year t , p_t is the GDP deflator for year t , $p_t^{S\$}$ is the SDR deflator in U.S. dollar terms for year t , $Y_t^{\$}$ is the *Atlas* GNI per capita in U.S. dollars in year t , Y_t is current GNI (local currency) for year t , and N_t is the midyear population for year t .

Alternative conversion factors

The World Bank systematically assesses the appropriateness of official exchange rates as conversion factors. An alternative conversion factor is used when the official exchange rate is judged to diverge by an exceptionally large margin from the rate effectively applied to domestic transactions of foreign currencies and traded products. This applies to only a small number of countries, as shown in *Primary data documentation*. Alternative conversion factors are used in the *Atlas* methodology and elsewhere in *World Development Indicators* as single-year conversion factors.

CREDITS

World Development Indicators draws on a wide range of World Bank reports and numerous external sources, listed in the bibliography following this section. Many people inside and outside the World Bank helped in writing and producing the book. The team would like to particularly acknowledge the help and encouragement of Alan Gelb, Acting Senior Vice President and Chief Economist of the World Bank, and Shaida Badiie, Director, Development Data Group. The team is also grateful to the people who provided valuable comments on the entire book. This note identifies many of those who made specific contributions. Numerous others, too many to acknowledge here, helped in many ways for which the team is extremely grateful.

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2. People

Section 2 was prepared by Masako Hiraga and Sulekha Patel in partnership with the World Bank's Human Development Network and the Development Research Group in the Development Economics Vice Presidency. Kyoko Okamoto and William Prince provided invaluable assistance in data and table preparation, and Kiyomi Horiuchi prepared the demographic estimates and projections. Masako Hiraga and Sulekha Patel wrote the introduction with valuable inputs and comments from Sadia Chowdhury, Sarwar Lateef, and Eric Swanson. The poverty estimates were prepared by Shaohua Chen and Prem Sangraula of the World Bank's Poverty Monitoring Group and Changqin Sun. The data for table 2.6 on children at work were prepared by Lorenzo Guarcello and Furio Rosati from the Understanding Children's Work project. The data on health gaps by income and gender were based on data prepared by Darcy Galluccio and Davidson Gwatkin of the Human Development Network. Other contributions were provided by Eduard Bos and Emi Suzuki (population, health, and nutrition); Montserrat Pallares-Miralles (vulnerability and security); Lawrence Jeffrey Johnson of the International Labour Organization (labor force); Juan Cruz Perusia and Jose Pessoae of the United Nations Educational, Scientific, and Cultural Organization Institute for Statistics (education and literacy); the World Health Organization's Chandika

Indikadahena (health expenditure), Monika Bloessner and Mercedes de Onis (malnutrition and overweight), Neeru Gupta (health workers), Mie Inoue (hospital beds), and Seyed Mehran Hosseini (tuberculosis); and Khin Wityee Oo of the United Nations Children's Fund (health).

3. Environment

Section 3 was prepared by Mehdi Akhlaghi and M. H. Saeed Ordoubadi in partnership with the World Bank's Sustainable Development Network. Important contributions were made by Carola Fabi and Edward Gillin of the Food and Agriculture Organization of the United Nations; Ricardo Quercioli of the International Energy Agency; Amay Cassara, Christian Layke, Daniel Prager, and Robin White of the World Resources Institute; Laura Battlebury of the World Conservation Monitoring Centre; and Gerhard Metchies of German Technical Cooperation (GTZ). The World Bank's Environment Department devoted substantial staff resources to the book, for which the team is very grateful. M.H. Saeed Ordoubadi wrote the introduction with valuable comments from Sarwar Lateef, Jeffrey Lewis, Bruce Ross-Larson, and Eric Swanson. Other contributions were made by Susmita Dasgupta, Kirk Hamilton, Craig Meisner, Kiran Pandey, Giovanni Ruta, and Jana Stover.

4. Economy

Section 4 was prepared by K.M. Vijayalakshmi in close collaboration with the Sustainable Development and Economic Data Team of the World Bank's Development Data Group, led by Soong Sup Lee. Eric Swanson and K.M. Vijayalakshmi wrote the introduction with valuable suggestions from Sarwar Lateef and Soong Sup Lee. Contributions to the section were provided by Azita Amjadi (trade). The national accounts data for low- and middle-income economies were gathered by the World Bank's regional staff through the annual Unified Survey. Maja Bresslauer, Mahyar Eshragh-Tabary, Victor Gabor, and Soong Sup Lee worked on updating, estimating, and validating the databases for national accounts. The team is grateful to the International Monetary Fund, Organisation for Economic Co-operation and Development, United Nations Industrial Development Organization, and World Trade Organization for access to the databases.

5. States and markets

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6. Global links

Section 6 was prepared by Uranbileg Batjargal and Azita Amjadi in partnership with the World Bank's Development Research Group (trade), Prospects Group (commodity prices), and external partners. Eric Swanson and Himmat Kalsi wrote the introduction, with assistance from Uranbileg Batjargal, David Cieslikowski, Ibrahim Levent, and K.M. Vijayalakshmi and comments from Sarwar Lateef and Changqing Sun. Substantial input for the data came from Azita Amjadi (trade), Jerzy Rozanski (tariffs), and Ibrahim Levent and Gloria Moreno (external debt and financial data). Other contributors include David Cristallo and Henri Laurencin of the United Nations Conference on Trade and Development, Rohini Acharya and Hubert Escaith of the World Trade Organization, and Francis Ng (trade); Betty Dow (commodity prices); Dilek Aykut (foreign direct investment flows); Eung Ju Kim (financing through capital markets); Yasmin Ahmad, Elena Bernaldo, and Aimee Nichols of the Organisation for Economic Co-operation and Development and Malvina Pollock (aid); Nanasamudd Chhim, Nevin Fahmy, and Nino Kostova (debt); Henrik Pilgaard of the United Nations Refugee Agency (refugees); Bela Hovy of the United Nations Population Division (migration); K.M. Vijayalakshmi (remittances); David Cieslikowski (table 6.1); and Teresa Ciller of the World Tourism Organization (tourism). Quality assurance of tables was provided by the Social Indicators team, led by Sulekha Patel, and the Financial Data team, lead by Ibrahim Levent. Mehdi Akhlaghi, Joseph Judkins, Gytis Kanchas, William Prince, and Atsushi Shimo provided valuable technical assistance.

Other parts of the book

Jeff Lecksell of the World Bank's Map Design Unit coordinated preparation of the maps on the inside covers. David Cieslikowski prepared the *Users guide*. Eric Swanson wrote *Statistical methods*. K.M. Vijayalakshmi coordinated preparation of *Primary data documentation*, and Uranbileg Batjargal assisted in updating the *Primary data documentation* table. Richard Fix and Beatriz Prieto-Oramas prepared *Partners* and *Index of indicators*.

Database management

Mehdi Akhlaghi coordinated management of the integrated World Development Indicators database with assistance from William Prince. Operation of the database management system was made possible by the Data and Information Systems Team under the leadership of Reza Farivari.

Design, production, and editing

Richard Fix and Beatriz Prieto-Oramas coordinated all stages of production with Communications Development Incorporated, which provided overall design direction, editing, and layout, led by Meta de Coquereumont, Bruce Ross-Larson, and Christopher Trott. Elaine Wilson created the graphics and typeset the book. Joseph Caponio and Amye Kenall provided proofreading and production assistance. Communications Development's London partner, Peter Grundy of Peter Grundy Art & Design, provided art direction and design. Staff from External Affairs oversaw printing and dissemination of the book.

Client services

The Development Data Group's Client Services and Communications Team (Azita Amjadi, Richard Fix, Buyant Erdene Khaltarkhuu, William Prince, and Beatriz Prieto-Oramas) contributed to the design and planning of *World Development Indicators 2008* and helped coordinate work with the Office of the Publisher.

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World Development Indicators CD-ROM

Programming and testing were carried out by Reza Farivari and his team: Azita Amjadi, Ying Chi, Ramgopal Erabelly, Nacer Megherbi, Shahin Outadi, and William Prince. Masako Hiraga produced the social indicators tables. William Prince coordinated user interface design and overall production and provided quality assurance. Photo credits belong to the World Bank photo library. The interactive text was produced by Dohatec.

WDI Online

Design, programming, and testing were carried out by Reza Farivari and his team: Mehdi Akhlaghi, Azita Amjadi, and Shahin Outadi. William Prince coordinated production and provided quality assurance. Valentina Kalk and Triinu Tombak of the Office of the Publisher were responsible for implementation of *WDI Online* and management of the subscription service.

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