Note on statistics in the Human Development Report

The *Human Development Report* usually presents two types of statistical information: statistics in the human development indicator tables, which provide a global assessment of country achievements in different areas of human development, and statistical evidence on the thematic analysis in the chapters. This note outlines the principles that guide the selection, use and presentation of these statistics, and the efforts of the Human Development Report Office to achieve high standard of statistical rigour in the Report and to promote innovative use and development of better human development statistics.

Human Development Report Office as a user of statistics

The Human Development Report Office is primarily a user, not a producer, of statistics. It relies on international and national data agencies with the resources and expertise to collect and compile data on specific statistical indicators.

Human development indicator tables and human development index

To allow comparisons across countries and over time, the Human Development Report Office, to the extent possible, uses international data series produced by international data agencies or other specialized institutions in preparing the human development indicator tables (box 1).

Despite significant progress over recent years, many gaps still exist in the data, even in some very basic areas of human development. While advocating for improvements in human development data, as a principle—and for practical reasons—the Human Development Report Office does not collect data directly from countries or make estimates to fill these data gaps.

The one exception is the human development index (HDI). The Human Development Report Office strives to include as many UN member countries as possible in the HDI. For a country to be included, data ideally should be available from the relevant international data agencies for all four components of the index (see *Note to table 1: About this year's human development index*). But for a significant number of countries data are missing for one or more of these components. In response to the desire of countries to be included in the HDI, the Human Development Report Office makes every effort in these cases to identify other reasonable estimates, working with international data agencies, the UN Regional Commissions, national statistical offices and United Nations Development Programme (UNDP) country offices. In a few cases the Human Development Report Office has estimated missing components in consultation with regional and national statistical offices or other experts.

Millennium Development Goal indicators

The United Nations Statistics Division maintains the global Millennium Indicators Database (http://millenniumindicators.un.org) compiled from international data series provided by the responsible international data agencies. The database forms the statistical basis for the UN Secretary-General's annual report to the UN General Assembly on global and regional progress towards the Millennium Development Goals (MDGs) and their targets. It also feeds into other international reports presenting data on the MDG indicators across countries, such as this Report and the World Bank's annual World Development Indicators.

This year's Report incorporates many of the MDG indicators in the human development

Box 1 Major sources of data used in the *Human Development Report*

By generously sharing data, the following organizations made it possible for the *Human Development Report* to publish the important human development statistics appearing in the indicator tables.

Carbon Dioxide Information Analysis Center (CDIAC) The CDIAC, a data and analysis centre of the US Department of Energy, focuses on the greenhouse effect and global climate change. It is the source of data on carbon dioxide emissions.

Food and Agriculture Organization (FAO) The FAO collects, analyses and disseminates data and information on food and agriculture. It is the source of data on food insecurity indicators.

Global IDP Project The Norwegian Refugee Council's Global IDP Project maintains an online database of information and analysis on conflict-induced internal displacement worldwide. The database is designated as the authoritative source of information on internally displaced persons by the United Nations and is presented in this year's Report for the first time.

International Institute for Strategic Studies (IISS) An independent centre for research, information and debate on the problems of conflicts, the IISS maintains an extensive military database. The data on armed forces are from its publication *The Military Balance.*

International Labour Organization (ILO) The ILO maintains an extensive statistical publication programme, with the *Yearbook of Labour Statistics* and the *Key Indicators of the Labour Market* its most comprehensive collection of labour market data. The ILO is the source of data on wages, employment and occupations and information on the ratification status of labour rights conventions.

International Monetary Fund (IMF) The IMF has an extensive programme for developing and compiling statistics on international financial transactions and balance of payments. Much of the financial data provided to the Human Development Report Office by other agencies originates from the IMF.

International Telecommunication Union (ITU) This specialized UN agency maintains an extensive collection of statistics on information and communications. The data on trends in telecommunications come from its *World Telecommunication Indicators* database.

Inter-Parliamentary Union (IPU) This organization provides data on trends in political participation and structures of democracy. The Human Development Report Office relies on the IPU for data relating to elections and information on women's political representation.

Joint United Nations Programme on HIV/AIDS (UNAIDS) This joint UN programme monitors the spread of HIV/AIDS and provides regular updates. The *Report on the Global HIV/AIDS Epidemic,* a joint publication of UNAIDS and the World Health Organization, is the primary source of data on HIV/AIDS.

Luxembourg Income Study (LIS) A cooperative research project with 25 member countries, the LIS focuses on poverty and policy issues. It is the source of income poverty estimates for many OECD countries.

Organisation for Economic Co-operation and Development (OECD) The OECD publishes data on a variety of social and economic trends in its member countries as well as on flows of aid. This year's Report presents data from the OECD on aid, energy, employment and education.

Stockholm International Peace Research Institute (SIPRI) SIPRI conducts research on international peace and security. The *SIPRI Yearbook: Armaments, Disarmament and International Security* is the published source of data on military expenditure and arms transfers.

United Nations Children's Fund (UNICEF) UNICEF monitors the well-being of children and provides a wide array of data. Its *State of the World's Children* is an important source of data for the Report.

United Nations Conference on Trade and Development (UNCTAD) UNCTAD provides trade and economic statistics through a number of publications, including the *World Investment Report.* It is the original source of data on investment flows that the Human Development Report Office receives from other agencies.

United Nations Educational, Scientific and Cultural Organization (UNESCO) The Institute for Statistics of this specialized UN agency is the source of data relating to education. The Human Development Report Office relies on data in UNESCO's statistical publications as well as data received directly from its Institute for Statistics.

United Nations High Commissioner for Refugees (UNHCR) This UN organization provides data on refugees through its *Statistical Yearbook* or other on-line statistical publications.

United Nations Office on Drugs and Crime (UNODC) This UN organization carries out international comparative research to support the fight against illicit drugs and international crime. It provides data on crime victims from the International Crime Victims Surveys.

United Nations Multilateral Treaties Deposited with the Secretary General (UN Treaty Section) The Human Development Report Office compiles information on the status of major international

Box 1 **Major sources of data used in the *Human Development Report*** (continued)

human rights instruments and environmental treaties based on the database maintained by this UN office.

United Nations Population Division (UNPOP) This specialized UN office produces international data on population trends. The Human Development Report Office relies on *World Population Prospects* and *World Urbanization Prospects,* two of the main publications of UNPOP, and its other publications and databases, for demographic estimates and projections.

United Nations Statistics Division (UNSD) The UNSD provides a wide range of statistical outputs and services. Much of the national accounts data provided to the Human Development Report Office by other agencies originates from the UNSD. This year's Report also presents UNSD data on trade and energy and draws on the global Millennium Indicators Database, maintained by the UNSD, as the source of data for the Millennium Development Goal indicators.

World Bank The World Bank produces and compiles data on economic trends as well as a broad array of other indicators. Its *World Development Indicators* is the primary source for many indicators in the Report.

World Health Organization (WHO) This specialized agency maintains a large array of data series on health issues, the source for the health-related indicators in the Report.

World Intellectual Property Organization (WIPO) As a specialized UN agency, WIPO promotes the protection of intellectual property rights throughout the world through different kinds of cooperative efforts. It is the source of data relating to patents.

indicator tables (see *Index to the Millennium Development Goal indicators in the indicator tables*). Data for these indicators provide the statistical basis for assessments of progress and prospects in each country towards achieving the MDGs and their targets, as well as the potential benefits of achieving the MDGs by 2015 (see chapter 1).

Data for thematic analysis

The statistical evidence used in the thematic analysis in the Report is often drawn from the indicator tables. But a wide range of other sources are also used, including commissioned papers, government documents, national human development reports, reports of non-governmental organizations, and journal articles and other scholarly publications. Official statistics usually receive priority. Because of the cutting-edge nature of the issues discussed, relevant official statistics may not exist, so that non-official sources of information must be used. Nevertheless, the Human Development Report Office is committed to relying on data compiled through scholarly and scientific research and to ensuring impartiality in the sources of information and in its use in the analysis.

This year's Report draws on a wide range of international and national sources of data to address the issues of inequality in income and non-income dimensions of human development, on aid, trade and conflicts, and their relationships to both the broad goals of human development and the specific objectives of the MDGs.

Where information from sources other than the Report's indicator tables is used in boxes or tables in the text, the source is shown and the full citation is given in the bibliography. In addition, a summary note for each chapter outlines the major sources for the chapter, and endnotes specify the sources of statistical information not drawn from the indicator tables.

Achieving high standards of statistical quality

Even though its direct role in international data production is limited, the Human Development Report Office fully acknowledges its distinct accountability in disseminating the international statistics produced by other data agencies through the Report. In particular, it recognizes that the Report's high profile imposes a special burden to be informed and responsible in the selection, use and presentation of statistics.

To achieve the highest standard of rigour and professionalism in the statistical work of the Report, the Human Development Report Office has sought to establish and strengthen

a number of quality assurance procedures over the past few years. In addition to building stronger internal statistical capacity and establishing a streamlined production system, these procedures include a Statistical Advisory Panel, a statistical peer review process and continuing close collaboration and networking with other regional and international data agencies.

Since 2000 the Report has benefited greatly from the intellectual and technical advice and guidance of the Statistical Advisory Panel, comprising leading national and international statisticians and development economists. The panel usually meets twice a year, at the beginning and the final stages of Report production, to discuss issues related to the guiding principles of the Report's statistical work and to specific technical issues about data sources, methods of analysis or data presentation related to the Report's thematic content. Occasionally a small working group is formed to help tackle a particular issue and provide advice to the Report's team. The panel members usually serve a two-year term.

Annual production of the Report includes a statistical peer review, with contributors from leading international, regional and national statistical offices. These peer reviewers are responsible for reviewing an advance draft of the Report for statistical relevance, consistency and proper interpretation. This review takes place separately but concurrently with the peer reviews for the substantive content of the Report. The statistical peer reviews have contributed significantly to the continuing improvement in the Report's statistical quality over the years. Responsibility for the final content of the Report, however, rests with the *Human Development Report* team.

Through close collaborations with specialized regional and international data agencies and by participating actively in regional and international statistical forums, including the United Nations Statistical Commission, the Coordination Committee for Statistical Activities and other regional statistical conferences and interagency measurement task forces, the *Human Development Report* team strives continuingly to remain informed and responsible in its selection and use of statistics in the Report.

Other mechanisms have also been used to guide and monitor the Report's statistical work. For example, the Human Development Report Office regularly consults with member states through informal consultation sessions with the United Nations Development Programme/United Nations Population Fund Executive Board. These consultations focus on the Report's statistical principles and practices, as well as proposed strategies to deal with specific statistical issues, such as inconsistencies between national and international data, that have wide implications for the Report's credibility and policy impact. Frequent feedback from national governments and other users of the Report has been another important means of quality assurance.

Promoting innovative use of statistics

Since its introduction the Report has been at the forefront of promoting the innovative use and development of human development statistics to assess achievements across countries and to facilitate policy debates on critical issues of human development. One of its important contributions is the HDI and other composite human development indices. Since the HDI was first published, it has gained wide recognition as a powerful tool for advocating for and monitoring human development. It has been explored and expanded, both in the Report itself and in other national and regional human development reports. This year, the Report explores two distinct new ways of using the HDI: to look at the relative contributions of its different components to HDI progress and to incorporate inequality by focusing on the difference between the poorest and the population as a whole in a country (box 2).

However, to be innovative and effective in using statistics to assess progress and enhance policy discussions, both the *Human Development Report* team and the readers of the Report need to understand and interpret the statistics properly. Unless the usefulness and limitations of the chosen measures and statistics are

Box 2 New applications of the human development index

The human development index (HDI) is a summary measure of three dimensions of human development: leading a long and healthy life, measured by life expectancy at birth; being knowledgeable, measured by literacy and school enrolment; and having a decent standard of living, measured by GDP per capita (PPP US$). This year, the Report explores two new ways of using the HDI. The first looks at relative contributions of the different HDI components to HDI progress. The second attempts to incorporate inequality by focusing on the difference between the poorest and the population as a whole in HDI scores.

Health, education and income—not always moving together. While the HDI provides a summary picture, taking a closer look at its components also reveals striking differences between countries. Consider Bangladesh, China and Uganda, three countries that have achieved considerable gains in human development since 1990, but from different starting points. All three have increased their HDI scores by about 20% since 1990. Looking at improvements in the variables behind the HDI shows the divergent paths these countries have taken to get there.

Table 1 shows improvements in life expectancy, literacy, enrolment and income in the three countries, expressed relative to their 1990 levels. China's income has increased by almost 200% over the whole period—while income gains in Bangladesh and Uganda were much lower. Bangladesh improved its life expectancy by about 10%, while Uganda's remained stagnant and China's improved by less than 10%. Bangladesh and Uganda both improved their school enrolment and literacy rates dramatically, contributing greatly to their rise in the HDI ranks, while China's rise was more modest.

These comparisons give an indication of the magnitude of different drivers of HDI progress in different countries, but they do not give a complete picture. Because of different starting points in HDI components, progress in them will have different impacts in different countries. Additionally, most of the indicators in the HDI have an upper bound of attainable values—the literacy rate cannot exceed 100%. For this reason, countries at low levels of human development are more likely to show large percentage gains.

Inequality and the HDI. By design the HDI looks at average achievements—by itself it says nothing about the distribution of human development within a country. Trying to incorporate an element of distribution in the HDI is challenging because of difficult methodological issues and a lack of data, particularly related to the health and education indicators in the HDI.

A simpler approach, explored in this year's Report, is to consider the situation of people living at the bottom of the distribution ladder. Household income and consumption surveys show staggering gaps between the poorest 20% of the population and the population average. Adjusting the HDI solely with regard to income and discounting inequalities in life expectancy and education does not capture the full scale of inequality. Even so, the results are staggering.

Consider Brazil, which ranks 63 in the global HDI ranking. The poorest 20% of the population in Brazil, even under the highly optimistic assumption that their health and education achievements reflect the global average, would rank 115—52 places lower than the average for the country (table 2). Indeed, the situation of the poorest 20% in Brazil is comparable to that in countries such as Guatemala, Honduras and Mongolia. Among other countries with the largest differences in HDI ranks for the poorest are Mexico, Chile and Argentina—highly unequal countries. But even for more nearly equal, highly developed countries such as Sweden the difference is large—there the poorest 20% would rank 25, compared with 6 for the average population.

Table 1 Improvements in HDI components for Bangladesh, China and Uganda from 1990 to 2003

Index (1990 = 100)

Country	Year	Life expectancy	Adult literacy	Combined primary, secondary and tertiary school enrolment	GDP per capita (PPP US$)
Bangladesh	2003	115	120	153	143
China	2003	106	116	129	296
Uganda	2003	102	123	193	157

Source: Human Development Report Office 2005.

Table 2 Difference between poorest 20% and national average in HDI rank for selected countries

	HDI rank		
Country	Whole population	Poorest 20%	Difference
Mexico	53	108	55
Brazil	63	115	52
Chile	36	85	49
Argentina	34	78	44
Thailand	72	108	36
Russian Federation	62	95	33
Belarus	66	98	32
China	85	115	30
United States	10	31	21
Sweden	6	25	19

adequately recognized, the perceived messages associated with the statistics presented in the Report could be misleading.

For example, relative poverty measures, such as the proportion of people with disposable income less that 50% of the adjusted national disposable income (a component of the human poverty index for selected high-income countries), are usually used to assess poverty in high-income countries. These measures are the most informative approach for point in time comparisons across these countries. But when countries experience rapid economic growth—as Ireland did during the late 1990s—relative poverty measures on their own can be misleading (box 3).

While promoting the innovative use of statistics, the Human Development Report Office makes continuing efforts to enhance the public's understanding and to encourage proper interpretations of statistics presented in the Report. In addition to other outreach activities, the Human Development Report Office offers discussions on a wide range of measurement issues and provides extensive links to the technical information of all major international data agencies' databases through its statistics website (http://hdr.undp.org/statistics/understanding/resources.cfm).

Through policy discussions on critical, emerging human development issues, the Report often reveals, and advocates for, the need to develop innovative measures and collect new data in specific areas. As this year marks the International Year of Microfinance

Box 3 Two tales of Irish poverty

To ensure comparability across high-income countries, most comparative databases, such as the Luxembourg Income Study (www.lisproject.org), measure poverty on a relative basis. Instead of an absolute poverty line (for example, the $1 a day international poverty line for developing countries), relative poverty measures define the poverty rate as the proportion of people with disposal income less than 50% or 60% of adjusted average national disposable income. For point in time comparisons across countries, this is the most informative approach. But when countries experience rapid economic growth—as in the case of Ireland in the late 1990s—relative poverty measures on their own can sometimes be misleading.

Based on the 50% and 60% of median income measures, the table presents two different time series of poverty estimates for Ireland—relative and anchored—for 1994–2000. A relative poverty line shifts yearly according to the annual median income of a country. An anchored poverty line maintains the initial year poverty line, adjusting it to each subsequent year only according to changes in consumer prices.

According to the relative poverty line of 60% of annual median income, the preferred measure of the European Union, poverty rose 11.3% between 1994 and 2000 in Ireland (see table). But if we set the poverty line at 60% of the 1994 median income and adjust the poverty line only by the change in consumer prices for subsequent years—the anchored poverty line approach—Irish poverty falls by 55.9% during the same period. Similar patterns are evident for the 50% of median income line—a measure favoured by most international analysts of poverty and used in the human poverty index in this Report. According to the table, a poverty rate of 11.9% in 1994 increases to 16.5% in 2000 on a relative basis, while falling by more than over three-quarters to only 3.5% using the anchored approach. The two different sets of poverty lines—relative and anchored—tell two different stories of Irish poverty trends.

It is clear that when economic conditions change rapidly, relative poverty trends do not always present a complete picture of the ways that economic change affects people's lives. The relative poverty trends suggest that not all incomes in Ireland grew at the same rate and that low incomes grew at a slower rate than higher incomes (or relative poverty would also have fallen). But even so, lower incomes grew enough to reduce the anchored poverty by almost half. In particular, social transfers rose substantially in real terms, so pensioners, for example, saw their living standards improve markedly though they still lagged behind rapidly rising incomes resulting from employment and profits. Whether this represents "pro-poor economic growth" remains debatable. But both sides of the poverty story must be recognized.

Differences between relative and anchored poverty lines for Ireland

	50% of median income		60% of median income	
Year	Relative poverty line	Anchored poverty line	Relative poverty line	Anchored poverty line
1994	11.9	11.9	20.4	20.4
1995	12.9	11.1	20.8	19.2
1996	12.3	8.5	21.8	16.6
2000	16.5	3.5	22.7	9.0
Percentage change, 1994–2000	38.7	–70.6	11.3	–55.9

Source: Nolan, Munzi and Smeeding 2005.

2005, the Report highlights the importance of access to adequate financial services by the poor to help lift their families and communities out of poverty and draws attention to the pressing need to collect better data for assessing the needs for and the impact of microfinance (box 4).

Advocating for better human development statistics

While this year's Report presents the best data currently available for measuring human development, many gaps and problems remain.

Data gaps

Gaps throughout the indicator tables demonstrate the pressing need for improvements in the availability of relevant, reliable and timely human development statistics. A stark example of data gaps is the large number of countries excluded from the HDI. The intent is to include all UN member countries, along with Hong Kong, China (SAR), and the Occupied Palestinian Territories in this Report. But because of a lack of reliable data, 16 UN member countries are excluded from the HDI and therefore from the main indicator tables (what key indicators are available for these

Box 4 Measuring financial access

Economic research supports the broad view that access to deep and efficient financial sector services contributes importantly to economic growth. Poor people can particularly benefit from these services, such as loans, savings deposits, insurance and payment systems. Anecdotal evidence suggests that financial services are reaching more poor people and that, as a result, wealth increases not only for the recipients, but their communities as well. Hard data, however, on who receive what types of services and how effective these services are, and the funding sources of these services, remain scarce and at times even unhelpful: estimates of worldwide microfinance clients range from 70 million to 750 million. We need better data to understand how microfinance can reach its potential and effectively contribute to human development.

Private sector providers of microfinance need this information to channel their investments. Policy-makers and regulators, both at the national level and in bilateral and multilateral donor agencies, need to know whether and to what extent the poor have access financial services in order to measure the effectiveness of their own activities, and understand what changes, in regulation or structural reform, are needed.

The convergence of information needs between public and private interests has motivated a number of institutions to consider how best to move forward. The World Bank and the International Monetary Fund (IMF) has increased their attention to microfinance in their Financial Sector Assessment processes. The UK Department for International Development (DFID) has made progress in collecting data on access to finance in South Africa. In October 2004, the United Nations Capital Development Fund (UNCDF), the World Bank and the IMF brought together top economists and statisticians to figure out how to get better data.

West Africa shows what can be achieved in this way. Since 1993 the Central Bank of West Africa has collected detailed statistics on institutions that offer microfinance in seven West African countries. As a result, it knows that the number of institutions that provided microfinance from 1994 to 2004 increased sixfold and that the number of service points increased from 1,000 to 3,000 outlets. Furthermore, it knows that these services reach more than 12% of the economically active population of West Africa and that a 13-fold increase occurred in the value of deposits since 1994. There is also some evidence that the areas where microfinance has grown have seen particularly strong economic growth—an encouraging sign, though the impact of microfinance will clearly need to be further analyzed.

The International Year of Microcredit 2005 provides a unique opportunity to understand and address the dearth of critical information on the access of poor and low-income people to inclusive financial services, and to determine how these services can be effectively provided in the future.

Source: Fischer, Banny and Barrineau 2005.

countries are presented in table 33). Similarly, the human poverty index covers only 103 developing countries and 18 high-income OECD countries, the gender-related development index 140 countries and the gender empowerment measure 80 countries. For a significant number of countries data for the components of these indices are unreliable and out of date and in some cases need to be estimated (for the definition and methodology of the indices, see *Technical note 1*).

Data gaps in the Millennium Indicators Database (http://millenniumindicators.un.org), which is based on national statistics compiled or estimated by international data agencies, are also revealing. Despite considerable improvements in recent years, for most of the MDG indicators many countries still have no data for 1990–2003, and few have data on trends over that time (table 1). Data for some of the indicators, such as maternal mortality ratios (box 5), are particularly difficult to obtain.

Table 1 **Large data gaps remain even in basic human development indicators: countries lacking data, 1990–2003**

Indicator	Countries lacking trend data	Countries lacking any data
Children under weight for age	115	35
Net primary enrolment ratio	40	9
Children reaching grade 5	114	53
Youth literacy	57	29
Births attended by skilled health personnel	162	9
Female share of non-agricultural wage employment	68	15
HIV prevalence among pregnant women ages 15–24 in major urban areas	162	139
Population with sustainable access to an improved water source, rural	59	15
Population living on less than $1 a day	93	67

Note: Data refer to developing countries and countries in Central and Eastern Europe and the Commonwealth of Independent States. A country is defined as having trend data if at least two data points are available—one in 1990–96 and one in 1997–2003—and the two points are at least three years apart.
Source: Human Development Report Office, based on UN 2005f.

Inconsistencies between national and international estimates

Inconsistencies between national and international data have often been brought to light through the Report, most visibly through the HDI. Sometimes the data gap in an international data series is contested and a national estimate is claimed to be available, but more frequently the accuracy of the international estimate is questioned and a different national estimate is proposed. Such inconsistencies frequently dispute the accuracy and reliability of data presented in the Report, challenging its statistical credibility and policy impact.

Some of the differences between national and international data are inevitable. They can result from the process of international harmonization, in which national data—inconsistent with the international standards and definitions or of poor quality for other reasons—need to be adjusted. When data for a country are missing, international agencies may produce an estimate if other relevant information can be used. In some cases, the international indicator, such as GDP per capita in purchasing power parity US$, is produced mainly for international comparisons and is not directly comparable to other related national statistics.

In other cases, however, data inconsistencies may occur as a result of lack of coordination—either between national and international data agencies or among various government agencies in a national statistical system—and can be avoided. Sometimes, the most recent national statistics are not made available to the relevant international data agency in time, despite its earnest data collection efforts. Other times, when multiple sources for a given indicator exist in a country, the data submitted by a government agency are not coordinated through the central national statistical office and could be contested by the government once published in the international series. Occasionally, errors creep into the compilation of international data series.

While the primary responsibility to deal with these inconsistency issues lies with international data producers and their national and regional counterparts, all international data users should support their efforts. The Human

Box 5 **Monitoring maternal mortality**

Maternal mortality claims around half a million lives each year and many millions more women suffer ill health as a result of complications in pregnancy. The world is off track for the Millennium Development Goal of reducing maternal deaths by two-thirds, but it is hard to tell exactly how far off because maternal mortality ratios are notoriously difficult to measure accurately.

Nationally reported data on maternal deaths often suffer from underreporting and misclassification. Only one-third of the world's population lives in countries that maintain comprehensive statistics about human lives and deaths—vital registration—the most effective way of measuring adult (including maternal) mortality. Even in countries with good vital registration, maternal deaths, including deaths due to direct obstetric causes and to conditions aggravated by pregnancy and delivery, can be hard to identify precisely and are frequently underrecorded. Moreover, many maternal deaths in developing countries, especially those with high maternal mortality ratios, occur outside of health facilities and go completely unrecorded.

In the absence of strong vital registration systems, measuring maternal mortality—because it is relatively rare—requires large, costly household surveys or regular censuses. Even when indirect estimation techniques (such as the sisterhood method) are used in surveys (such as the Demographic and Health Surveys), the resulting estimates of maternal mortality ratios are inevitably associated with large standard errors, typically refer to an earlier period and are not suitable for assessing short-term policy impact.

In an effort to address the gaps and poor comparability of national data, the World Health Organization (WHO), the United Nations Children's Fund (UNICEF) and the United Nations Population Fund (UNFPA) have developed international estimates using a methodology that adjusts nationally reported data to account for misclassifications and underreporting, while developing model-based estimates for countries with no recent data of acceptable quality. These modelled estimates—used in this Report and in other major global monitoring reports—rely on more widely available data on fertility and coverage of skilled attendant at delivery to predict maternal mortality.

So far, three sets of international estimates have been produced separately for 1990, 1995 and 2000. Because of large ranges of uncertainty and lack of comparability due to changes in methodology, these estimates can be used only to indicate the scope of the problem and offer little insight about the trends over time.

The majority of maternal deaths—about three-quarters—are due to obstetric complications that can be successfully treated with available technology. Accordingly, process indicators—such as the proportion of births attended by skilled health personnel and coverage of emergency obstetric care—are increasingly used as proxies for assessing trends in maternal mortality and for directing public health policies and programmes to improve maternal health.

Source: Based on Abou-Zahr 2005; UN Millennium Project 2005; UNICEF, WHO and UNFPA 1997; WHO 2005.

Development Report Office has an especially important role given the Report's high profile. It has in recent years strived to be more proactive in identifying potential problems in advance, defusing potential conflicts through timely interventions with governments and international agencies and engaging in more visible public discussions about the problem and possible solutions.

In particular, the Human Development Report Office recognizes the unique role of the Report in

- Advocating for improvements in human development measurements and data through the Report, including the need for countries to adopt internationally agreed standards and definitions in basic areas of statistics and for international agencies to be more transparent and accessible with their methodologies and processes.
- Identifying potential problems and coordinating between national and international data agencies to resolve the differences.
- Improving its statistical outreach to increase the public understanding of the statistical principles and processes and to enhance the awareness of governments' own responsibilities.

Box 6 Dealing with data inconsistencies—the Qatar experience

The government of Qatar noticed that certain data presented in recent *Human Development Reports* were inconsistent with official data published by Qatar, leading to disparities in a number of indices. Some of the statistics employed in the *Human Development Reports* were out of date, and others reported as unavailable did in fact exist. Human development indicator tables prepared by the Planning Council were, in some instances, at odds with those appearing in the Report.

The Planning Council of Qatar called on the advice of the Human Development Report Office, and active communication and cooperation has since been maintained, including an advisory visit by a senior member of the Human Development Report Office to Qatar in December 2004.

Since the Human Development Report relies on the statistical series published by other international data agencies, the Planning Council initiated direct contact with 22 international agencies to ensure that statistics for Qatar are accurately and comprehensively reported. This has in turn led to more active cooperation between the statistical organization of Qatar and the main statistics organizations of the United Nations.

Qatar initiated an active process of cooperation between the users and producers of statistics, aimed at a smoother and more accurate flow of information. It held a symposium in May 2004, in which representatives of the statistical organizations of a number of UN agencies took part. A strategy for more active cooperation between users and producers and more timely and accurate reporting was formulated. The strategy has since been rigorously implemented, and substantial improvements have been achieved. A follow-up symposium was held in May 2005.

Source: Aboona 2005.

Box 7 National strategies for the development of statistics

Increased use of quality statistics leads to improvements in policy decisions and development outcomes. This transition to evidence-based policy-making can be achieved through implementing a statistical capacity building strategy that is fully integrated into national policy processes such as poverty reduction strategies and monitoring progress towards the Millennium Development Goals. A National Strategy for the Development of Statistics (NSDS) helps achieve this objective. An NSDS converts statistical priorities into a detailed, flexible work programme, building on the existing statistical system and ongoing improvement processes, such as the International Monetary Fund's General Data Dissemination System and the UN's Fundamental Principles for Official Statistics.

A good strategy—backed with political commitment and adequate funding—can increase the contribution of a national statistical system. It can help countries break free from a vicious circle of underfunding and underperformance. Support from the international development community, however, is crucial. Those countries most in need of better statistics are those least able to afford them. The World Bank's Trust Fund for Statistical Capacity Building is one important source of grant funding to help countries to design an NSDS. The World Bank has also launched a new programme—STATCAP—to help countries access loans and credits to support implementation of an NSDS.

The 2004 Marrakech Action Plan for Statistics (MAPS) recommends that all low-income countries prepare an NSDS by 2006 and begin to implement it by the following year in order to have high quality, locally produced data for the next major review of the Millennium Development Goals in 2010. This is an ambitious but achievable goal. Partnership in Statistics for Development in the 21st Century (PARIS21) works through advocacy, developing methodological guidelines and documentation and facilitating regional programmes with regional partner organisations. Helping countries to achieve this target is the main objective of the PARIS21 in its work programme for 2004–06. NSDS guidelines and the PARIS21 work plan can be viewed on the PARIS21 website at www.paris21.org.

Source: William 2005.

It acknowledges explicitly the role of UNDP country offices—as partners in both disseminating the Report and coordinating with governments. Through them we can improve the national capacity in managing statistical information, particularly through better communication and coordination between national and international data agencies to reduce data discrepancies.

Since last year the Human Development Report Office has taken important steps to develop better launch materials, establish a new statistical Web site and provide training to UNDP country offices and national experts. While continuing to work closely with international data agencies, the Human Development Report Office has also initiated more direct contact with national statistical offices and other government agencies. Meanwhile, many governments have increasingly recognized the implications of data inconsistencies for national policy debates and discussions and acknowledged their own role in reducing such data inconsistencies. More and more country governments, such as Qatar (box 6), are working to improve coordination with relevant international data agencies and among government agencies within the national statistical system.

Towards stronger statistical capacity

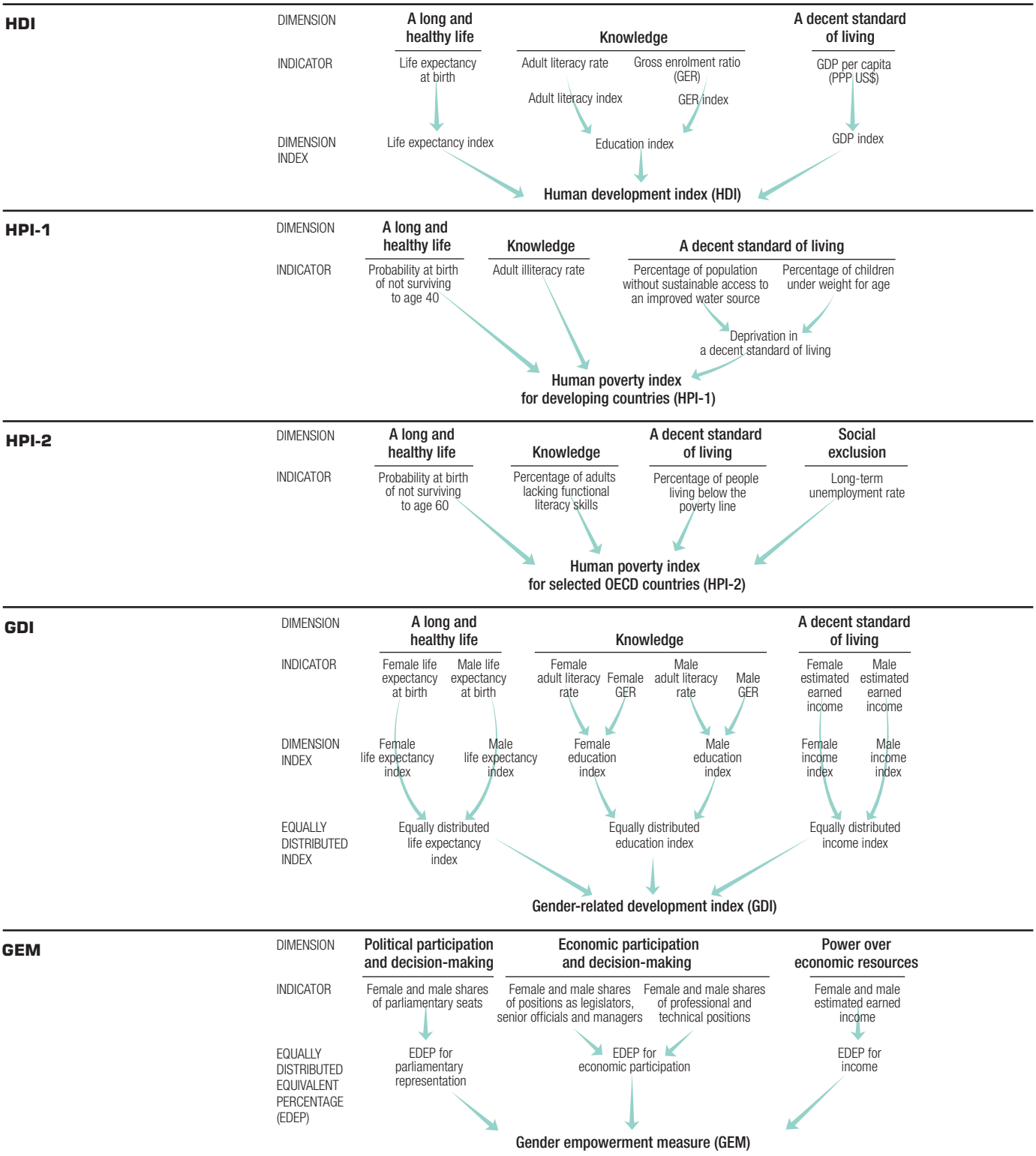
A vital part of the solution to the enormous gaps and deficiencies in statistical information is building sustainable statistical capacity in countries, an effort requiring financial and political commitment at both the national and international levels. The momentum generated by the MDG process has mobilized the entire international statistical community, and many initiatives are under way, including the development of national strategies for the development of statistics recommended by the Marrakech Action Plan for Statistics (http://unstats.un.org/unsd/statcom/doc04/marrakech.pdf) and supported by the Partnership in Statistics for Development in the 21st Century (box 7).

International statistical agencies should continue to play an active part in statistical development by improving, promoting and implementing internationally agreed standards, methods and frameworks for statistical activities, while strengthening their own statistical capacity to meet the increasing demand for better international statistics for monitoring human development.

TECHNICAL NOTE 1

Calculating the human development indices

The diagrams here summarize how the five human development indices used in the *Human Development Report* are constructed, highlighting both their similarities and their differences. The text on the following pages provides a detailed explanation.

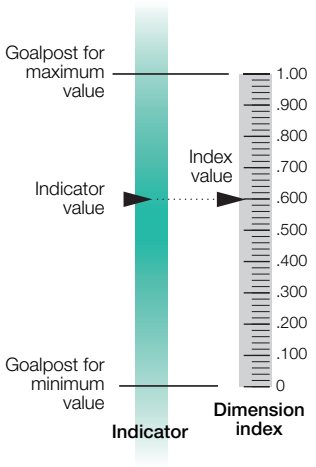


The human development index (HDI)

The HDI is a summary measure of human development. It measures the average achievements in a country in three basic dimensions of human development:

- A long and healthy life, as measured by life expectancy at birth.
- Knowledge, as measured by the adult literacy rate (with two-thirds weight) and the combined primary, secondary and tertiary gross enrolment ratio (with one-third weight).
- A decent standard of living, as measured by GDP per capita (PPP US$).

Before the HDI itself is calculated, an index needs to be created for each of these dimensions. To calculate these dimension indices—the life expectancy, education and GDP indices—minimum and maximum values (goalposts) are chosen for each underlying indicator.



Performance in each dimension is expressed as a value between 0 and 1 by applying the following general formula:

$$\text{Dimension index} = \frac{\text{actual value} - \text{minimum value}}{\text{maximum value} - \text{minimum value}}$$

The HDI is then calculated as a simple average of the dimension indices. The box at right illustrates the calculation of the HDI for a sample country.

Goalposts for calculating the HDI

Indicator	Maximum value	Minimum value
Life expectancy at birth (years)	85	25
Adult literacy rate (%)	100	0
Combined gross enrolment ratio (%)	100	0
GDP per capita (PPP US$)	40,000	100

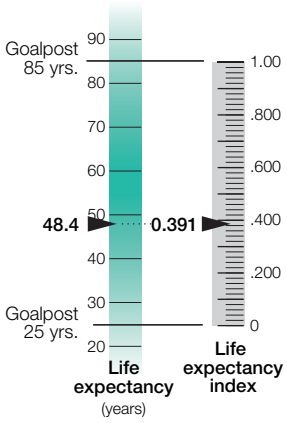
Calculating the HDI

This illustration of the calculation of the HDI uses data for South Africa.

1. Calculating the life expectancy index

The life expectancy index measures the relative achievement of a country in life expectancy at birth. For South Africa, with a life expectancy of 48.4 years in 2003, the life expectancy index is 0.391.

$$\text{Life expectancy index} = \frac{48.4 - 25}{85 - 25} = \mathbf{0.391}$$

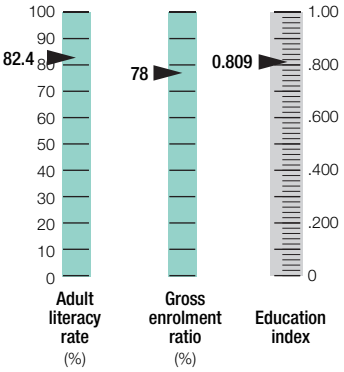


2. Calculating the education index

The education index measures a country's relative achievement in both adult literacy and combined primary, secondary and tertiary gross enrolment. First, an index for adult literacy and one for combined gross enrolment are calculated. Then these two indices are combined to create the education index, with two-thirds weight given to adult literacy and one-third weight to combined gross enrolment. For South Africa, with an adult literacy rate of 82.4% in 2003 and a combined gross enrolment ratio of 78% in the school year 2002/03, the education index is 0.809.

$$\text{Adult literacy index} = \frac{82.4 - 0}{100 - 0} = 0.824$$

$$\text{Gross enrolment index} = \frac{78 - 0}{100 - 0} = 0.780$$

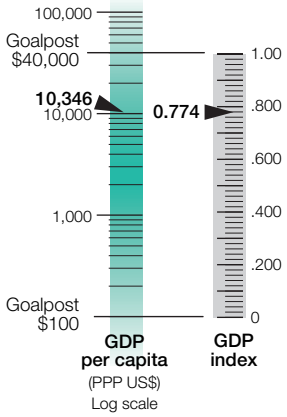


$$\text{Education index} = 2/3\ (\text{adult literacy index}) + 1/3\ (\text{gross enrolment index})$$
$$= 2/3\ (0.824) + 1/3\ (0.780) = \mathbf{0.809}$$

3. Calculating the GDP index

The GDP index is calculated using adjusted GDP per capita (PPP US$). In the HDI income serves as a surrogate for all the dimensions of human development not reflected in a long and healthy life and in knowledge. Income is adjusted because achieving a respectable level of human development does not require unlimited income. Accordingly, the logarithm of income is used. For South Africa, with a GDP per capita of $10,346 (PPP US$) in 2003, the GDP index is 0.774.

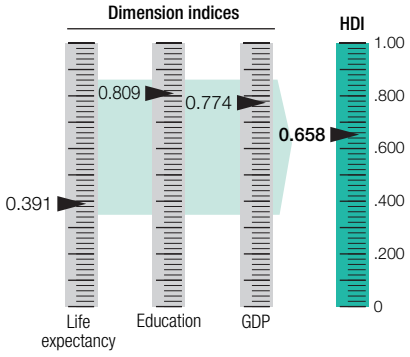
$$\text{GDP index} = \frac{\log(10{,}346) - \log(100)}{\log(40{,}000) - \log(100)} = \mathbf{0.774}$$



4. Calculating the HDI

Once the dimension indices have been calculated, determining the HDI is straightforward. It is a simple average of the three dimension indices.

$$\text{HDI} = 1/3\ (\text{life expectancy index}) + 1/3\ (\text{education index}) + 1/3\ (\text{GDP index})$$
$$= 1/3\ (0.391) + 1/3\ (0.809) + 1/3\ (0.774) = \mathbf{0.658}$$



The human poverty index for developing countries (HPI-1)

While the HDI measures average achievement, the HPI-1 measures *deprivations* in the three basic dimensions of human development captured in the HDI:

- A long and healthy life—vulnerability to death at a relatively early age, as measured by the probability at birth of not surviving to age 40.
- Knowledge—exclusion from the world of reading and communications, as measured by the adult illiteracy rate.
- A decent standard of living—lack of access to overall economic provisioning, as measured by the unweighted average of two indicators, the percentage of the population without sustainable access to an improved water source and the percentage of children under weight for age.

Calculating the HPI-1 is more straightforward than calculating the HDI. The indicators used to measure the deprivations are already normalized between 0 and 100 (because they are expressed as percentages), so there is no need to create dimension indices as for the HDI.

Originally, the measure of deprivation in a decent standard of living also included an indicator of access to health services. But because reliable data on access to health services are lacking for recent years, in this year's Report deprivation in a decent standard of living is meausred by two rather than three indicators—the percentage of the population without sustainable access to an improved water source and the percentage of children under weight for age.

The human poverty index for selected OECD countries (HPI-2)

The HPI-2 measures deprivations in the same dimensions as the HPI-1 and also captures social exclusion. Thus it reflects deprivations in four dimensions:

- A long and healthy life—vulnerability to death at a relatively early age, as measured by the probability at birth of not surviving to age 60.
- Knowledge—exclusion from the world of reading and communications, as measured by the percentage of adults (aged 16–65) lacking functional literacy skills.
- A decent standard of living—as measured by the percentage of people living below the income poverty line (50% of the median adjusted household disposable income).
- Social exclusion—as measured by the rate of long-term unemployment (12 months or more).

Calculating the HPI-1

1. Measuring deprivation in a decent standard of living

An unweighted average of two indicators is used to measure deprivation in a decent standard of living.

$$\text{Unweighted average} = 1/2\ (\text{population without sustainable access to an improved water source}) + 1/2\ (\text{children under weight for age})$$

A sample calculation: Angola

Population without sustainable access to an improved water source = 50%
Children under weight for age = 31%

$$\text{Unweighted average} = 1/2\ (50) + 1/2\ (31) = 40.5\%$$

2. Calculating the HPI-1

The formula for calculating the HPI-1 is as follows:

$$\text{HPI-1} = [1/3\ (P_1^{\alpha} + P_2^{\alpha} + P_3^{\alpha})]^{1/\alpha}$$

Where:

P_1 = Probability at birth of not surviving to age 40 (times 100)
P_2 = Adult illiteracy rate
P_3 = Unweighted average of population without sustainable access to an improved water source and children under weight for age
α = 3

A sample calculation: Angola

P_1 = 48.1%
P_2 = 33.2%
P_3 = 40.5%

$$\text{HPI-1} = [1/3\ (48.1^3 + 33.2^3 + 40.5^3)]^{1/3} = \mathbf{41.5}$$

Calculating the HPI-2

The formula for calculating the HPI-2 is as follows:

$$\text{HPI-2} = [1/4\ (P_1^{\alpha} + P_2^{\alpha} + P_3^{\alpha} + P_4^{\alpha})]^{1/\alpha}$$

Where:

P_1 = Probability at birth of not surviving to age 60 (times 100)
P_2 = Adults lacking functional literacy skills
P_3 = Population below income poverty line (50% of median adjusted household disposable income)
P_4 = Rate of long-term unemployment (lasting 12 months or more)
α = 3

A sample calculation: United States

P_1 = 11.8%
P_2 = 20.0%
P_3 = 17.0%
P_4 = 0.7%

$$\text{HPI-2} = [1/4\ (11.8^3 + 20.0^3 + 17.0^3 + 0.7^3)]^{1/3} = \mathbf{15.4}$$

Why α = 3 in calculating the HPI-1 and HPI-2

The value of α has an important impact on the value of the HPI. If α = 1, the HPI is the average of its dimensions. As α rises, greater weight is given to the dimension in which there is the most deprivation. Thus as α increases towards infinity, the HPI will tend towards the value of the dimension in which deprivation is greatest (for Angola, the example used for calculating the HPI-1, it would be 48, equal to the probability at birth of not surviving to age 40).

In this Report the value 3 is used to give additional but not overwhelming weight to areas of more acute deprivation. For a detailed analysis of the HPI's mathematical formulation, see Sudhir Anand and Amartya Sen's "Concepts of Human Development and Poverty: A Multidimensional Perspective" and the technical note in *Human Development Report 1997* (see the list of selected readings at the end of this technical note).

The gender-related development index (GDI)

While the HDI measures average achievement, the GDI adjusts the average achievement to reflect the *inequalities* between men and women in the following dimensions:

- A long and healthy life, as measured by life expectancy at birth.
- Knowledge, as measured by the adult literacy rate and the combined primary, secondary and tertiary gross enrolment ratio.
- A decent standard of living, as measured by estimated earned income (PPP US$).

The calculation of the GDI involves three steps. First, female and male indices in each dimension are calculated according to this general formula:

$$\text{Dimension index} = \frac{\text{actual value} - \text{minimum value}}{\text{maximum value} - \text{minimum value}}$$

Second, the female and male indices in each dimension are combined in a way that penalizes differences in achievement between men and women. The resulting index, referred to as the equally distributed index, is calculated according to this general formula:

$$\text{Equally distributed index} = \{[\text{female population share} \times (\text{female index}^{1-\epsilon})] + [\text{male population share} \times (\text{male index}^{1-\epsilon})]\}^{1/1-\epsilon}$$

ϵ measures the aversion to inequality. In the GDI $\epsilon = 2$. Thus the general equation becomes:

$$\text{Equally distributed index} = \{[\text{female population share} \times (\text{female index}^{-1})] + [\text{male population share} \times (\text{male index}^{-1})]\}^{-1}$$

which gives the harmonic mean of the female and male indices.

Third, the GDI is calculated by combining the three equally distributed indices in an unweighted average.

Goalposts for calculating the GDI

Indicator	Maximum value	Minimum value
Female life expectancy at birth (years)	87.5	27.5
Male life expectancy at birth (years)	82.5	22.5
Adult literacy rate (%)	100	0
Combined gross enrolment ratio (%)	100	0
Estimated earned income (PPP US$)	40,000	100

Note: The maximum and minimum values (goalposts) for life expectancy are five years higher for women to take into account their longer life expectancy.

Calculating the GDI

This illustration of the calculation of the GDI uses data for Brazil.

1. Calculating the equally distributed life expectancy index

The first step is to calculate separate indices for female and male achievements in life expectancy, using the general formula for dimension indices.

FEMALE
Life expectancy: 74.6 years

$$\text{Life expectancy index} = \frac{74.6 - 27.5}{87.5 - 27.5} = 0.785$$

MALE
Life expectancy: 66.6 years

$$\text{Life expectancy index} = \frac{66.6 - 22.5}{82.5 - 22.5} = 0.735$$

Next, the female and male indices are combined to create the equally distributed life expectancy index, using the general formula for equally distributed indices.

FEMALE
Population share: 0.507
Life expectancy index: 0.785

MALE
Population share: 0.493
Life expectancy index: 0.735

$$\text{Equally distributed life expectancy index} = \{[0.507 \times (0.785^{-1})] + [0.493 \times (0.735^{-1})]\}^{-1} = \mathbf{0.760}$$

2. Calculating the equally distributed education index

First, indices for the adult literacy rate and the combined primary, secondary and tertiary gross enrolment ratio are calculated separately for females and males. Calculating these indices is straightforward, since the indicators used are already normalized between 0 and 100.

FEMALE
Adult literacy rate: 88.6%
Adult literacy index: 0.886
Gross enrolment ratio: 92.7%
Gross enrolment index: 0.927

MALE
Adult literacy rate: 88.3%
Adult literacy index: 0.883
Gross enrolment ratio: 88.5%
Gross enrolment index: 0.885

Second, the education index, which gives two-thirds weight to the adult literacy index and one-third weight to the gross enrolment index, is computed separately for females and males.

$$\text{Education index} = 2/3\ (\text{adult literacy index}) + 1/3\ (\text{gross enrolment index})$$

$$\text{Female education index} = 2/3\ (0.886) + 1/3\ (0.927) = 0.899$$

$$\text{Male education index} = 2/3\ (0.883) + 1/3\ (0.885) = 0.884$$

Finally, the female and male education indices are combined to create the equally distributed education index.

FEMALE
Population share: 0.507
Education index: 0.899

MALE
Population share: 0.493
Education index: 0.884

$$\text{Equally distributed education index} = \{[0.507 \times (0.899^{-1})] + [0.493 \times (0.884^{-1})]\}^{-1} = \mathbf{0.892}$$

3. Calculating the equally distributed income index

First, female and male earned income (PPP US$) are estimated (for details on this calculation, see the addendum to this technical note). Then the income index is calculated for each gender. As for the HDI, income is adjusted by taking the logarithm of estimated earned income (PPP US$):

$$\text{Income index} = \frac{\log(\text{actual value}) - \log(\text{minimum value})}{\log(\text{maximum value}) - \log(\text{minimum value})}$$

FEMALE
Estimated earned income (PPP US$): 4,704

$$\text{Income index} = \frac{\log(4{,}704) - \log(100)}{\log(40{,}000) - \log(100)} = 0.643$$

MALE
Estimated earned income (PPP US$): 10,963

$$\text{Income index} = \frac{\log(10{,}963) - \log(100)}{\log(40{,}000) - \log(100)} = 0.784$$

Calculating the GDI continues on next page

Calculating the GDI (continued)

Second, the female and male income indices are combined to create the equally distributed income index:

FEMALE	MALE
Population share: 0.507	Population share: 0.493
Income index: 0.643	Income index: 0.784

$$\text{Equally distributed income index} = \{[0.507\ (0.643^{-1})] + [0.493\ (0.784^{-1})]\}^{-1} = \mathbf{0.706}$$

4. Calculating the GDI

Calculating the GDI is straightforward. It is simply the unweighted average of the three component indices—the equally distributed life expectancy index, the equally distributed education index and the equally distributed income index.

$$\begin{aligned}\text{GDI} &= 1/3\ (\text{life expectancy index}) + 1/3\ (\text{education index}) + 1/3\ (\text{income index})\\ &= 1/3\ (0.760) + 1/3\ (0.892) + 1/3\ (0.706) = \mathbf{0.786}\end{aligned}$$

Why $\epsilon = 2$ in calculating the GDI

The value of ϵ is the size of the penalty for gender inequality. The larger the value, the more heavily a society is penalized for having inequalities.

If $\epsilon = 0$, gender inequality is not penalized (in this case the GDI would have the same value as the HDI). As ϵ increases towards infinity, more and more weight is given to the lesser achieving group.

The value 2 is used in calculating the GDI (as well as the GEM). This value places a moderate penalty on gender inequality in achievement.

For a detailed analysis of the GDI's mathematical formulation, see Sudhir Anand and Amartya Sen's "Gender Inequality in Human Development: Theories and Measurement," Kalpana Bardhan and Stephan Klasen's "UNDP's Gender-Related Indices: A Critical Review" and the technical notes in *Human Development Report 1995* and *Human Development Report 1999* (see the list of selected readings at the end of this technical note).

The gender empowerment measure (GEM)

Focusing on women's opportunities rather than their capabilities, the GEM captures gender inequality in three key areas:

- Political participation and decision-making power, as measured by women's and men's percentage shares of parliamentary seats.
- Economic participation and decision-making power, as measured by two indicators—women's and men's percentage shares of positions as legislators, senior officials and managers and women's and men's percentage shares of professional and technical positions.
- Power over economic resources, as measured by women's and men's estimated earned income (PPP US$).

For each of these three dimensions, an equally distributed equivalent percentage (EDEP) is calculated, as a population-weighted average, according to the following general formula:

$$\text{EDEP} = \{[\text{female population share} \times (\text{female index}^{1-\epsilon})] + [\text{male population share} \times (\text{male index}^{1-\epsilon})]\}^{1/1-\epsilon}$$

ϵ measures the aversion to inequality. In the GEM (as in the GDI) $\epsilon = 2$, which places a moderate penalty on inequality. The formula is thus:

$$\text{EDEP} = \{[\text{female population share} \times (\text{female index}^{-1})] + [\text{male population share} \times (\text{male index}^{-1})]\}^{-1}$$

For political and economic participation and decision-making, the EDEP is then indexed by dividing it by 50. The rationale for this indexation: in an ideal society, with equal empowerment of the sexes, the GEM variables would equal 50%—that is, women's share would equal men's share for each variable.

Where a male or female index value is zero, the EDEP according to the above formula is not defined. However, the limit of EDEP, when the index tends towards zero, is zero. Accordingly, in these cases the value of the EDEP is set to zero.

Finally, the GEM is calculated as a simple average of the three indexed EDEPs.

Calculating the GEM

This illustration of the calculation of the GEM uses data for Denmark.

1. Calculating the EDEP for parliamentary representation

The EDEP for parliamentary representation measures the relative empowerment of women in terms of their political participation. The EDEP is calculated using the female and male shares of the population and female and male percentage shares of parliamentary seats according to the general formula.

FEMALE	MALE
Population share: 0.505	Population share: 0.495
Parliamentary share: 36.9%	Parliamentary share: 63.1%

$$\text{EDEP for parliamentary representation} = \{[0.505 \times (36.9^{-1})] + [0.495 \times (63.1^{-1})]\}^{-1} = 46.42$$

Then this initial EDEP is indexed to an ideal value of 50%.

$$\text{Indexed EDEP for parliamentary representation} = \frac{46.42}{50} = \mathbf{0.928}$$

2. Calculating the EDEP for economic participation

Using the general formula, an EDEP is calculated for women's and men's percentage shares of positions as legislators, senior officials and managers, and another for women's and men's percentage shares of professional and technical positions. The simple average of the two measures gives the EDEP for economic participation.

FEMALE	MALE
Population share: 0.505	Population share: 0.495
Percentage share of positions as legislators, senior officials and managers: 26.2%	Percentage share of positions as legislators, senior officials and managers: 73.8%
Percentage share of professional and technical positions: 51.0%	Percentage share of professional and technical positions: 49.0%

$$\text{EDEP for positions as legislators, senior officials and managers} = \{[0.505 \times (26.2^{-1})] + [0.495 \times (73.8^{-1})]\}^{-1} = 38.48$$

$$\text{Indexed EDEP for positions as legislators, senior officials and managers} = \frac{38.48}{50} = 0.770$$

$$\text{EDEP for professional and technical positions} = \{[0.505 \times (51.0^{-1})] + [0.495 \times (49.0^{-1})]\}^{-1} = 49.99$$

$$\text{Indexed EDEP for professional and technical positions} = \frac{49.99}{50} = 1.00$$

The two indexed EDEPs are averaged to create the EDEP for economic participation:

$$\text{EDEP for economic participation} = \frac{0.770 + 1.00}{2} = \mathbf{0.885}$$

3. Calculating the EDEP for income

Earned income (PPP US$) is estimated for women and men separately and then indexed to goalposts as for the HDI and the GDI. For the GEM, however, the income index is based on unadjusted values, not the logarithm of estimated earned income. (For details on the estimation of earned income for men and women, see the addendum to this technical note.)

FEMALE	MALE
Population share: 0.505	Population share: 0.495
Estimated earned income (PPP US$): 26,587	Estimated earned income (PPP US$): 36,430
Income index $= \frac{26{,}519 - 100}{40{,}000 - 100} = 0.663$	Income index $= \frac{36{,}390 - 100}{40{,}000 - 100} = 0.910$

The female and male indices are then combined to create the equally distributed index:

$$\text{EDEP for income} = \{[0.505 \times (0.663^{-1})] + [0.495 \times (0.910^{-1})]\}^{-1} = \mathbf{0.766}$$

4. Calculating the GEM

Once the EDEP has been calculated for the three dimensions of the GEM, determining the GEM is straightforward. It is a simple average of the three EDEP indices.

$$\text{GEM} = \frac{0.928 + 0.885 + 0.766}{3} = \mathbf{0.859}$$

TECHNICAL NOTE 1 ADDENDUM

Female and male earned income

Despite the importance of having gender-disaggregated data on income, direct measures are unavailable. For this Report crude estimates of female and male earned income have therefore been derived.

Income can be seen in two ways: as a resource for consumption and as earnings by individuals. The use measure is difficult to disaggregate between men and women because they share resources within a family unit. By contrast, earnings are separable because different members of a family tend to have separate earned incomes.

The income measure used in the GDI and the GEM indicates a person's capacity to earn income. It is used in the GDI to capture the disparities between men and women in command over resources and in the GEM to capture women's economic independence. (For conceptual and methodological issues relating to this approach, see Sudhir Anand and Amartya Sen's "Gender Inequality in Human Development" and, in *Human Development Report 1995,* chapter 3 and technical notes 1 and 2; see the list of selected readings at the end of this technical note.)

Female and male earned income (PPP US$) are estimated using the following data:

- Ratio of the female non-agricultural wage to the male non-agricultural wage.
- Male and female shares of the economically active population.
- Total female and male population.
- GDP per capita (PPP US$).

Key

W_f / W_m = ratio of female non-agricultural wage to male non-agricultural wage
EA_f = female share of economically active population
EA_m = male share of economically active population
S_f = female share of wage bill
Y = total GDP (PPP US$)
N_f = total female population
N_m = total male population
Y_f = estimated female earned income (PPP US$)
Y_m = estimated male earned income (PPP US$)

Note

Calculations based on data in the technical note may yield results that differ from those in the indicator tables because of rounding.

Estimating female and male earned income

This illustration of the estimation of female and male earned income uses 2003 data for Switzerland.

1. Calculating total GDP (PPP US$)
Total GDP (PPP US$) is calculated by multiplying the total population by GDP per capita (PPP US$).

Total population: 7,350 (thousand)
GDP per capita (PPP US$): 30,550
Total GDP (PPP US$) = 7,350 (30,550) = 224,542,500 (thousand)

2. Calculating the female share of the wage bill
Because data on wages in rural areas and in the informal sector are rare, the Report has used non-agricultural wages and assumed that the ratio of female wages to male wages in the non-agricultural sector applies to the rest of the economy. The female share of the wage bill is calculated using the ratio of the female non-agricultural wage to the male non-agricultural wage and the female and male percentage shares of the economically active population. Where data on the wage ratio are not available, a value of 75% is used.

Ratio of female to male non-agricultural wage (W_f/W_m) = 1.324
Female percentage share of economically active population (EA_f) = 40.8%
Male percentage share of economically active population (EA_m) = 59.2%

$$\text{Female share of wage bill } (S_f) = \frac{W_f/W_m\,(EA_f)}{[W_f/W_m\,(EA_f)] + EA_m} = \frac{1.324\,(40.8)}{[1.324\,(40.8)] + 59.2} = \mathbf{0.477}$$

3. Calculating female and male earned income (PPP US$)
An assumption has to be made that the female share of the wage bill is equal to the female share of GDP.

Female share of wage bill (S_f) = 0.477
Total GDP (PPP US$) ($Y$) = 224,542,500 (thousand)
Female population (N_f) = 3,699 (thousand)

$$\text{Estimated female earned income (PPP US\$) } (Y_f) = \frac{S_f\,(Y)}{N_f} = \frac{0.477\,(224{,}542{,}500)}{3{,}699} = \mathbf{28{,}972}$$

Male population (N_m) = 3,651 (thousand)

$$\text{Estimated male earned income (PPP US\$) } (Y_m) = \frac{Y - S_f\,(Y)}{N_m} = \frac{224{,}542{,}500 - [0.477\,(224{,}542{,}500)]}{3{,}651} = \mathbf{32{,}149}$$

Selected readings

Anand, Sudhir, and Amartya Sen. 1994. "Human Development Index: Methodology and Measurement." Occasional Paper 12. United Nations Development Programme, Human Development Report Office, New York. *(HDI)*

———. 1995. "Gender Inequality in Human Development: Theories and Measurement." Occasional Paper 19. United Nations Development Programme, Human Development Report Office, New York. *(GDI, GEM)*

———. 1997. "Concepts of Human Development and Poverty: A Multi-dimensional Perspective." In United Nations Development Programme, *Human Development Report 1997 Papers: Poverty and Human Development.* New York. *(HPI-1, HPI-2)*

Bardhan, Kalpana, and Stephan Klasen. 1999. "UNDP's Gender-Related Indices: A Critical Review." *World Development* 27 (6): 985–1010. *(GDI, GEM)*

United Nations Development Programme. 1995. *Human Development Report 1995.* New York: Oxford University Press. Technical notes 1 and 2 and chapter 3. *(GDI, GEM)*

———. 1997. *Human Development Report 1997.* New York: Oxford University Press. Technical note 1 and chapter 1. *(HPI-1, HPI-2)*

———. 1999. *Human Development Report 1999.* New York: Oxford University Press. Technical note. *(HDI, GDI)*

TECHNICAL NOTE 2

Two sides of the poverty reduction coin—why growth and distribution matter

This year the *Human Development Report* presents new data and simulations on income, exploring the relationship between economic growth, redistribution and income poverty. Chapter 1 focuses on the international level, looking at global distribution and exploring the implications of different growth patterns for poverty reduction. The chapter draws on a global income distribution model prepared for *Human Development Report 2005* (Dikhanov 2005). The model is used to explore how different growth and distribution scenarios to 2015 might have a bearing on poverty. Trend growth projections and the $1 a day poverty line are used to determine how many fewer people would be living in poverty with a pro-poor growth pattern with the income of poor people growing at twice the average rate. Chapter 2 shifts from the global to the national level. Household expenditure surveys are used to plot income distribution patterns for three countries. Starting from the prevailing distribution, a forward-looking projection is developed to consider the impact on poverty of pro-poor growth patterns, with the income of the poor—defined as the population living below the national poverty line—rising at twice the national average.

The scenario exercises illustrate the potentially large scale benefits for poverty reduction of small changes in distribution in favour of the poor. However, the simulations used are stylized exercises. They cast some light on how the interaction of economic growth with different distribution patterns can influence prospects for poverty reduction. By definition, simulations do not help identify the specific strategies that might achieve the optimal growth distribution patterns for maximizing the speed of poverty reduction. That does not mean that the simulations in chapters 1 and 2 have no implications for policy. As the global modeling exercise in chapter 1 demonstrates, creating conditions under which the world's poor people capture a larger share of future growth would create an enabling environment for accelerated poverty reduction. The same applies at a national level. As the pro-poor growth simulations here demonstrate, modest gains in the income share of the poor can shorten the time horizon for halving poverty. One of the central messages that emerges for policy-makers is that distribution matters both for the Millennium Development Goals and for wider poverty reduction efforts.

World income distribution

The global income distribution model used in chapter 1 provides an estimate of global income distribution for 1970–2000. These estimates are supplemented with two forward-looking scenarios for 2015. The first scenario looks at poverty in 2015 on a distribution-neutral growth projection—that is, with national income distribution held constant over time. The second scenario assumes that the income of the poor grows at twice the average rate until 2015. The scenarios are based on 1990–2002 trends in GDP growth and UN population projections for 2015. The simulations highlight the impact of different growth patterns on income inequality and income poverty. Additionally, the model looks at the dimensions of the income transfer that would be required to eliminate $1 a day poverty.

Data and methodological issues

Dikhanov (2005) is a model of world inequality accounting. It provides an approximation for global income inequality, which is narrower than a model of wealth accounting because it

does not take into account ownership of productive assets, which might be seen as a primary source of economic power and a determinant of income inequality. Nor does it take into account the notional value of non-market goods and services delivered by governments.

In effect, world inequality accounting attempts to capture income inequality among all individuals in the world. The exercise involves combining income distribution within countries and comparing incomes across countries. Global income is taken to be the sum of the reported, as well as estimated and imputed, personal consumption expenditure from national accounts data of all countries in the World Bank database. Thus national accounts data, rather than data from household surveys, are used to determine average incomes in each country. National accounts data are more suitable for comparison over time. However, such data are incomplete because they do not include the informal economy and certain categories of income. This makes it possible to scale up national accounting exercises to arrive at a global income using consistent methodology across countries. Personal consumption expenditure differs from standard GDP or GNI measurement in that it excludes some national accounting items, such as savings by firms and governments. The current exercise uses a polynomial interpolation to approximate a continuous distribution from the information provided by the underlying data.

Applying distributional information from the income and consumption surveys to average incomes yields an approximation, in national currencies, of each individual's income. For international comparisons these incomes must be converted into the same currency. Because exchange rates do not take into account price differential between countries, international comparison requires adjustments. The model converts personal consumption expenditure values in local currency into international dollars using 1999 purchasing power parities (PPPs). The PPP methodology collects information on prices through the International Comparison Program, which surveys the price for a basket of goods across more than 100 countries. An important debate has developed in recent years over the use of PPP adjustments, specifically in relation to the $1 a day poverty line. This debate is not revisited here. Interested readers should see the list of readings at the end of this note.

Some countries lack the national accounts information needed to scale up from the national level to the global level. To obtain global totals, gap-filling procedures involving imputation were used. The techniques are detailed in notes to *World Development Indicators 2001* (World Bank 2001). Imputation procedures are applied to a relatively small group of countries, with standard national accounting providing data for over 80 percent of the global personal consumption expenditure and population.

World inequality accounting makes it possible to derive various regional subaggregates of global distribution, as well as the share of global income accounted for at each percentile level, regardless of the country in which individuals live. That is, the model creates a hypothetical world in which all people can be lined up in a single distribution, regardless of where they live. The shape and regional decomposition of the distribution is set out in chapter 1.

Simulations and results

Much heat has been generated by the debate on globalization and inequality. Polarized conclusions have been reached with regard to both trend and attribution. Studies employing different techniques and data sources have reached divergent conclusions on whether global income inequality is increasing or decreasing and on the precise role played by globalization. World inequality accounting does not resolve the global inequality debate, though it does call into question claims that globalization has been accompanied by income convergence (as claimed by some supporters of global integration) or by rapid divergence (as claimed by others). The model used in chapter 1 finds that overall inequality, as measured by the Gini coefficient, has changed little, from 67 in 1970 to 68 in 2000. This shift is probably smaller than the margin of error introduced by the data, and is thus insignificant.

As indicated earlier, the 2015 simulation compares two different growth paths for 2002–15. Both simulations use a similar growth

projection. For countries with positive growth, trends for 1990–2002 are projected forward to 2015. For countries and regions with negative growth, positive future growth is assumed based on regional averages for the period 2000–06 as set out in *Global Economic Prospects 2005* (World Bank 2005).

In the first simulation the model assumes that within-country distribution stays constant—that is, increments to growth are shared to reflect the current distribution. The second assumes that the income of people below an annual income of $700 (2000 PPP US$), an amount roughly equivalent to the $1 a day poverty line, would grow at twice the rate of the population as a whole. The income growth rate of the rest of the population would be adjusted downward to keep the average income growth rate the same as in the first simulation. This pro-poor growth simulation results in 253 million fewer people living in poverty in 2015. However, much of the reduction is concentrated in East Asia and South Asia, rather than Sub-Saharan Africa, reflecting the higher average growth trends for the first two regions. The conclusion: growth and distribution matter a great deal in defining poverty reduction prospects.

National income distribution and poverty reduction

In any country the rate at which poverty declines is primarily a function of two variables: the economic growth rate and poor people's share of growth. There are complex variations within this interaction in, for example, the depth of poverty or the distance measured in income terms from the poverty line. The overall effect of growth on poverty incidence will be determined by distribution below the poverty line, as well as distribution between poor people and non-poor people. If there is a large concentration of poverty just below the line, increases in income for this group will have a large impact on poverty incidence. However, large relative increases in income for groups that are further from the poverty line produce only small reductions in the incidence of poverty. It also has to be borne in mind that any poverty threshold is, to some degree, an artificial construct that provides a partial indicator for measuring the dynamic processes associated with poverty.

Exercises and results

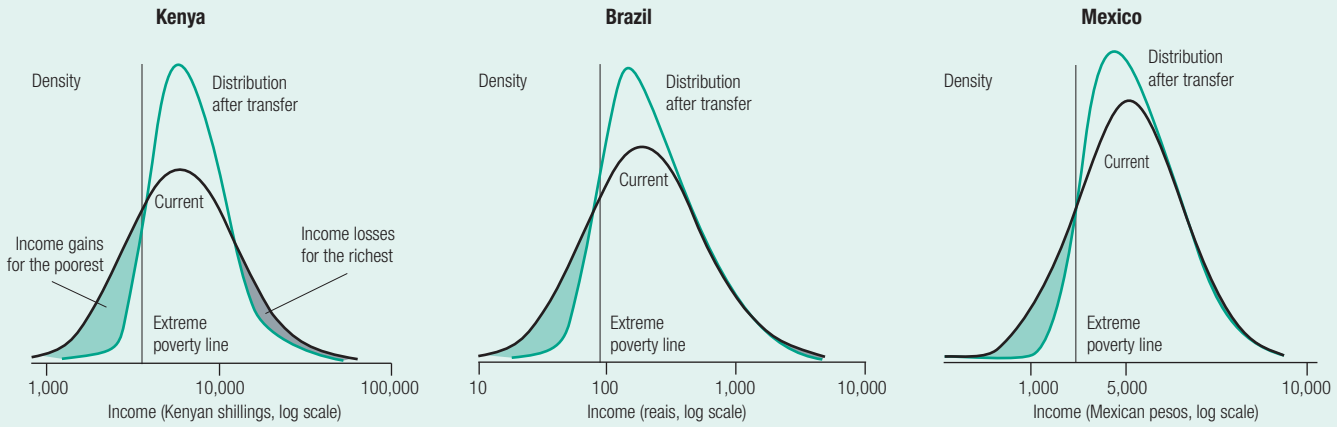
In chapter 2 kernel density curves are constructed for income distribution in Brazil, Kenya and Mexico. These distribution data are used in two exercises. The first considers the effect of a hypothetical transfer from top to bottom of the distribution. This is a stylized exercise, but it draws attention to a central characteristic of countries with large concentrations of poverty at one end of the distribution and wealth at the other: small transfers would substantially reduce poverty. The second exercise builds on a global income distribution simulation. It uses the national income distribution data as the basis for a simulation that examines the effect of two different growth scenarios on poverty reduction. Projecting forward trend growth rates, it simulates the impact on poverty incidence of distribution neutral growth (holding current distribution patterns constant) and pro-poor growth (in which the income of the population below the poverty line grows at twice the national rate).

Static redistribution

In a simple exercise the effect of doubling the total income share of all the people below the poverty line is considered, with an adjustment among the top 20 percent of the distribution. For practical purposes, this can be thought of as a hypothetical lump-sum transfer. Specifically, the size of the transfer received is inversely proportional to the income of the recipient. Figure 1 illustrates the impact. The black line shows the pre-redistribution pattern and the green line the post-redistribution pattern. Redistribution pushes the bottom end of the distribution up and to the right. For Kenya and, less spectacularly, Brazil and Mexico, the median poor household is taken above the poverty line. The figure shows that a doubling of poor people's income would have a large effect on the number of people in poverty and a relatively small impact on the income of the richest.

Figure 1 **Doubling the income of the poor would take a small transfer from the rich**

Income distribution before and after hypothetical wealth transfer



Note: The area under each curve represents 100% of people. The simulated distribution reflects a transfer proportionate to income from the richest 20% large enough to double the income of those below the poverty line. The size of the transfer received is inversely proportionate to income below the poverty line.
Source: Fuentes 2005.

Table 1 **Pro-poor growth provides greater results**

	Kenya 1997	Brazil 2002	Mexico 2002
Doubling the income share of poor people: static transfer from the richest quintile			
Poverty rate decline	23% to 4%	22% to 7%	16% to 4%
People out of poverty (millions)	5	26	12
Transfer as share of total household income (%)	7.00	2.91	2.57
Transfer as share of richest quintile's income (%)	14.2	4.6	4.7
Year median household is out of poverty under different growth patterns			
Simulation 1 (no change in distribution)	2030	2041	2032
Simulation 2 (pro-poor growth)	2013	2022	2017

Note: The data for the national simulations are computed from household surveys that are the basis for the government's own poverty estimated and also underpin the World Bank's assessment of $1 a day poverty.
Source: Fuentes 2005.

Dynamic pro-poor growth

In a dynamic model the distribution pattern changes over time. The simulation here compares the time horizon for the median poor household crossing the poverty line under distribution-neutral growth and under the pro-poor growth scenario. Under both scenarios average per capita growth rates are assumed to follow the observed trend between 1990 and 2002—a period chosen to reflects two full economic cycles.

Table 1 summarizes the main results from both simulations. For both Brazil and Mexico the static transfer required to double income below the poverty line is equivalent to less than 5% of the income of the richest population quintile. Poverty incidence falls sharply in both countries: from 22% to 7% in Brazil and from 16% to 4% in Mexico. In Kenya less extreme disparities of wealth and a higher incidence of poverty mean that the incomes of the richest quintile would have to fall far more to finance the transfer, but the overall incidence of poverty still falls from 23% to 4%. For all three countries the pro-poor growth scenario reduces the time horizon for lifting the median household above the poverty line. For Brazil the time horizon falls by 19 years, for Mexico by 15 years and for Kenya by 17 years.

Calculations for the two scenarios are based on the following formulation. In the distribution-neutral simulation, the observed growth rate is imputed to each percentile so that:

$$Y_{it+1} = Y_{it} * e^{gi} \text{ for every percentile } i.$$

The pro-poor growth simulation assumes a growth rate for the number of poor people twice the average growth rate observed in 1990–2002, with growth rate remaining constant so that:[1]

$$Y_{jt+1} = Y_{jt} * e^{gj} \text{ for every percentile } j.$$

Percentile j is defined as those below the poverty line at the initial time t_0.

$$Y_{it+1} = Y_{it} * e^{gi} \text{ for every percentile } i.$$

Percentile i is defined as those above the poverty line at the initial time t_0.

The growth rate gj is double the observed growth rate in 1990–2002. The growth rate gi is such that the overall growth rate of the economy remains constant over time. Given that the relative weights of each percentile change every year, gi in time t is slightly higher than gi in time $t + 1$.

The data are for average per capita income of households in 100 percentiles. The welfare indicator is after-tax per capita income for the household. International poverty estimates were used for Brazil and Kenya and national computations of poverty incidence for Mexico. The simulations used the 1990–2002 per capita growth rates as reported in *Human Development Report 2004* to capture two full economic cycles for Brazil and Mexico.[2] For Kenya, since observed growth rates are negative, an optimistic yet plausible per capita growth rate of 1 percent was assumed.

Notes

1 These assumptions have two implications. First, inequality will fall every year. Second, for the overall growth rate to remain constant, the growth rate for those above the poverty line will be smaller every year, as the share of income of poor people increases.

2 Despite the presence of financial crises in both Brazil and Mexico during that period, the growth rates used are representative of long-term growth. Growth rates for 1970–2002 are lower in both countries. The difference in time horizon between growth patterns does not change significantly when using different growth rates.

Sources and selected readings

Chen, Shaohua, and Martin Ravallion. 2004. "How Have the World's Poorest Fared since the Early 1980s?" Policy Research Paper 3341. Washington, DC: World Bank.

Cornia, Giovanni Andrea, ed. 2004. *Inequality, Growth, and Poverty in an Era of Liberalization and Globalization*. Oxford: Oxford University Press.

Deaton, Angus. 2003a. "How to Monitor Poverty for the Millennium Development Goals." *Journal of Human Development* 4(3): 353–78.

———. 2003b. *Measuring Poverty in a Growing World.* NBER Working Paper: 9822. Cambridge, Mass.: National Bureau of Economic Research.

Dikhanov, Yuri. 2005. "Trends in Global Income Distribution 1970–2015." Background note for *Human Development Report 2005*. New York.

Fuentes, Ricardo. 2005. "Poverty, Pro-Poor Growth and Simulated Inequality Reduction." Background note for *Human Development Report 2005*. New York.

Kakwani, Nanak. 2004. "Poverty Measurement Matters: An Indian Story." Brasilia: United Nations Development Programme, International Poverty Centre, Brasilia.

Reddy, Sanjay G., and Thomas W. Pogge. 2003. "How Not to Count the Poor." Columbia University, New York. [http://www.columbia.edu/~sr793/count.pdf]. May 2005.

World Bank. 2001. *World Development Indicators 2001.* Washington, DC: World Bank.

———. 2005. *Global Economic Prospects 2005.* Washington, DC: World Bank.

TECHNICAL NOTE 3

Assessing progress towards the Millennium Development Goals

Assessing progress towards the Millennium Development Goals

This year's *Human Development Report* assesses progress towards the Millennium Development Goals (MDGs) and attempts to quantify the potential benefits of achieving the MDGs by 2015. For each country the exercise attempts to answer two distinct questions for each MDG:

- If the MDG were achieved by 2015, how many fewer people would suffer human deprivation than if progress continued along the trends of the 1990s?
- If progress continued along the trends of the 1990s, when would the MDG be achieved?

The Report makes these assessments for five MDG indicators that have reasonably reliable trend data available on a country-by-country basis (table 1).

Calculating progress towards each MDG

Progress towards each MDG is assessed by comparing average annual progress if current trends prevailed with the annual progress needed to meet the indicator, under the assumption of linear progress.

The average annual rate of progress is calculated using the general formula:

$$\alpha_0 = \frac{(x_{t_1} - x_{t_0}) / x_{t_0}}{t_1 - t_0},$$

where x_{t_1} and x_{t_0} are the values of the indicator for 1990 or the year closest to 1990 for which data are available; t_1 is the most recent year for which data are available, generally 2003; and t_0 is 1990 or the year closest to 1990 for which data are available. For hunger and under-five mortality rates, for which the most desirable value is 0, the formula is applied without modification.

For the net primary enrolment ratio, gender equality in education (ratio of girls to boys) and share of population with access to safe water and sanitation, for which the most desirable value is 100%, progress is expressed as "shortfall reduction" according to the following formula:

$$\alpha_1 = \frac{(x_{t_1} - x_{t_0}) / (100 - x_{t_0})}{t_1 - t_0}.$$

Calculating the human cost of not meeting the MDGs

The average annual rate of progress is then used to calculate the value of the indicator on current trends in 2015:

$$x_{tMDG} = x_{t_0} + [\alpha_i(t_{MDG} - t_0)],$$

where t_{MDG} denotes 2015, the target year for achieving the MDGs and i can take the value 0 or 1 depending on the indicator.

The indicator is then multiplied by the value of its denominator, w, listed in table 1, as projected by the UN Population Division, to arrive at the total number of deprived people, p_{tMDG}, in 2015:

$$p_{tMDG} = x_{tMDG}\ w_{tMDG}.$$

The number of people deprived if the MDG is met, $\hat{p}_{tMDG}$, is also calculated for each country as the value of the indicator needed to achieve

the MDG, determined by the MDG indicator (x^*), multiplied by its denominator:

$$\hat{p}_{t_{MDG}} = x^* w_{t_{MDG}}.$$

The shortfall, the difference between achieving the MDG and progress along current trends, is calculated by adding the differences between these two values for all countries not on track to achieve the MDG:

$$\text{Shortfall} = \sum (p_{t_{MDG}} - \hat{p}_{t_{MDG}})\,[p_{t_{MDG}} > \hat{p}_{t_{MDG}}]$$

where $[p_{t_{MDG}} > \hat{p}_{t_{MDG}}]$ is equal to 1 if true and 0 if false.

Calculating the year in which MDGs are achieved on current trends

The necessary level to achieve each MDG is determined by the MDG itself. For example, the target for MDG 4 calls for reducing the under-five mortality rate by two-thirds. The level at which the MDG is achieved is thus set to the initial level multiplied by a coefficient β. For child mortality, this coefficient is set to ⅓. For hunger, it is set to ½, as determined by the MDG target. The year in which a country will achieve the MDG, $\tilde{t}$, is then determined by the formula:

$$\tilde{t} = t_0 + \frac{\beta x_{t_0}}{\alpha}.$$

Table 1 Millennium Development Goals assessed

Target	Variable (indicator)	Source agency	Reference year t_0	Reference year t_1	Denominator used for calculating counts (w)
Goal 1. Eradicate extreme poverty and hunger					
Target 1. Halve the proportion of people whose income is less than $1 a day	People living on less than $1 a day (1993 PPP US$) (%) [a]	World Bank	1990	2000	Total population
Target 2. Halve the proportion of people who suffer from hunger	Undernourished people (%)	FAO	1990–92	1999–2001	Total population
Goal 2. Achieve universal primary education					
Target 3. Ensure that children everywhere will be able to complete a full course of primary schooling	Net primary enrolment ratio (%)	UNESCO Institute for Statistics	1990/91	2002/03	Children of primary school age
Goal 3. Promote gender equality and empower women					
Target 4. Eliminate gender disparity in all levels of education	Female net primary enrolment ratio (%)	UNESCO Institute for Statistics	1990/91	2002/03	Girls of primary school age
Goal 4. Reduce child mortality					
Target 5. Reduce by two-thirds the under-five mortality rate	Under-five mortality rate (per 1,000 live births)	UNICEF and WHO	1990	2003	Births
Goal 7. Ensure environmental sustainability					
Target 10. Halve the proportion of people without sustainable access to safe drinking water and sanitation	People with sustainable access to an improved water source (%)	UNICEF and WHO	1990	2003	Total population
	People with access to improved sanitation (%)	UNICEF and WHO	1990	2003	Total population

a. Assessment of human costs only, not timeline.

Definitions of statistical terms

Agriculture, domestic support Annual monetary value of all gross transfers from taxpayers and consumers arising from policy measures that support agriculture, minus the associated budgetary receipts, regardless of their objectives and impacts on farm production and income or on consumption of farm products.

Armed forces, total Strategic, land, naval, air, command, administrative and support forces. Includes paramilitary forces such as the gendarmerie, customs service and border guard, if these are trained in military tactics.

Arms transfers, conventional Refers to the voluntary transfer by the supplier (and thus excludes captured weapons and weapons obtained through defectors) of weapons with a military purpose destined for the armed forces, paramilitary forces or intelligence agencies of another country. These include major conventional weapons or systems in six categories: ships, aircraft, missiles, artillery, armoured vehicles and guidance and radar systems (excluded are trucks, services, ammunition, small arms, support items, components and component technology and towed or naval artillery under 100-millimetre calibre).

Births attended by skilled health personnel The percentage of deliveries attended by personnel (including doctors, nurses and midwives) trained to give the necessary care, supervision and advice to women during pregnancy, labour and the postpartum period, to conduct deliveries on their own and to care for newborns.

Birthweight, infants with low The percentage of infants with a birthweight of less than 2,500 grams.

Carbon dioxide emissions Human-originated carbon dioxide emissions stemming from the burning of fossil fuels, gas flaring and the production of cement. Emissions are calculated from data on the consumption of solid, liquid and gaseous fuels, gas flaring and the production of cement.

Cellular subscribers (also referred to as cellular mobile subscribers) Subscribers to an automatic public mobile telephone service that provides access to the public switched telephone network using cellular technology. Systems can be analogue or digital.

Children reaching grade 5 The percentage of children starting primary school who eventually attain grade 5 (grade 4 if the duration of primary school is four years). The estimates are based on the reconstructed cohort method, which uses data on enrolment and repeaters for two consecutive years.

Children with diarrhoea receiving oral rehydration and continued feeding Percentage of children (ages 0–4) with diarrhoea in the last two weeks preceding the survey who received either oral rehydration therapy (oral rehydration solutions or recommended homemade fluids) or increased fluids and continued feeding.

Consumer price index, average annual change in 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.

Condom use at last high-risk sex Men and women who say they used a condom the last time they had sex with a non-marital, non-cohabiting partner, of those who have had sex with such a partner in the last 12 months.

Contraceptive prevalence rate The percentage of married women (including women in union) ages 15–49 who are using, or whose partners are using, any form of contraception, whether modern or traditional.

Contributing family worker Defined according to the 1993 International Classification by Status in Employment (ICSE) as a person who works without pay in an economic enterprise operated by a related person living in the same household.

Crime, population victimized by The percentage of the population who perceive that they have been victimized by certain types of crime in the preceding year, based on responses to the International Crime Victims Survey.

Debt forgiveness, gross bilateral Forgiveness of bilateral debts of developing countries with the support of official funds of donor countries, whether owed to public or private creditors. Offsetting entries for official development assistance (ODA) principal are not subtracted. See *official development assistance (ODA) disbursed, net*.

Debt relief committed under HIPC initiative Forgiveness of loans as a component of official development assistance under the Debt Initiative for Heavily Indebted Poor Countries (HIPCs). The initiative is a mechanism for debt relief, jointly overseen by the International Monetary Fund (IMF) and the World Bank. Bilateral and multilateral creditors have provided debt

relief through this framework to the 42 poorest, most heavily indebted countries since 1996.

Debt service, total The sum of principal repayments and interest actually paid in foreign currency, goods or services on long-term debt (having a maturity of more than one year), interest paid on short-term debt and repayments to the International Monetary Fund.

Earned income (PPP US$), estimated Roughly derived on the basis of the ratio of the female nonagricultural wage to the male non-agricultural wage, the female and male shares of the economically active population, total female and male population and GDP per capita (PPP US$). For details on this estimation, see *Technical note 1.*

Earned income, ratio of estimated female to male The ratio of estimated female earned income to estimated male earned income. See *earned income (PPP US$), estimated (female and male).*

Economic activity rate, female The share of the female population ages 15 and above who supply, or are available to supply, labour for the production of goods and services.

Education expenditure, public Includes both capital expenditures (spending on construction, renovation, major repairs and purchase of heavy equipment or vehicles) and current expenditures (spending on goods and services that are consumed within the current year and would need to be renewed the following year). It covers such expenditures as staff salaries and benefits, contracted or purchased services, books and teaching materials, welfare services, furniture and equipment, minor repairs, fuel, insurance, rents, telecommunications and travel. See *education levels.*

Education index One of the three indices on which the human development index is built. It is based on the adult literacy rate and the combined gross enrolment ratio for primary, secondary and tertiary schools. For details on how the index is calculated, see *Technical note 1.*

Education levels Categorized as pre-primary, primary, secondary or tertiary in accordance with the International Standard Classification of Education (ISCED). *Pre-primary education* (ISCED level 0) is provided at such schools as kindergartens and nursery and infant schools and is intended for children not old enough to enter school at the primary level. *Primary education* (ISCED level 1) provides the basic elements of education at such establishments as primary and elementary schools. *Secondary education* (ISCED levels 2 and 3) is based on at least four years of previous instruction at the first level and provides general or specialized instruction, or both, at such institutions as middle schools, secondary schools, high schools, teacher training schools at this level and vocational or technical schools. *Tertiary education* (ISCED levels 5–7) refers to education at such institutions as universities, teachers colleges and higher level professional schools—requiring as a minimum condition of admission the successful completion of education at the second level or evidence of the attainment of an equivalent level of knowledge.

Electricity consumption per capita Refers to gross production, in per capita terms, which includes consumption by station auxiliaries and any losses in the transformers that are considered integral parts of the station. Also includes total electric energy produced by pumping installations without deduction of electric energy absorbed by pumping.

Employment by economic activity, women Female employment in industry, agriculture or services as defined according to the International Standard Industrial Classification (ISIC) system (revisions 2 and 3). *Industry* refers to mining and quarrying, manufacturing, construction and public utilities (gas, water and electricity). *Agriculture* refers to activities in agriculture, hunting, forestry and fishing. *Services* refer to wholesale and retail trade; restaurants and hotels; transport, storage and communications; finance, insurance, real estate and business services; and community, social and personal services.

Energy use, GDP per unit of The ratio of GDP (in 2000 PPP US$) to commercial energy use, measured in kilograms of oil equivalent. Provides a measure of energy efficiency by showing comparable and consistent estimates of real GDP across countries relative to physical inputs (units of energy use). See *GDP (gross domestic product)* and *PPP (purchasing power parity).*

Enrolment ratio, gross The number of students enrolled in a level of education, regardless of age, as a percentage of the population of official school age for that level. The gross enrolment ratio can be greater than 100% as a result of grade repetition and entry at ages younger or older than the typical age at that grade level. See *education levels.*

Enrolment ratio, gross, combined for primary, secondary and tertiary schools The number of students enrolled in primary, secondary and tertiary levels of education, regardless of age, as a percentage of the population of official school age for the three levels. See *education levels* and *enrolment ratio, gross.*

Enrolment ratio, net The number of students enrolled in a level of education who are of official school age for that level, as a percentage of the population of official school age for that level. See *education levels.*

Environmental treaties, ratification of After signing a treaty, a country must ratify it, often with the approval of its legislature. Such process implies not only an expression of interest as indicated by the signature, but also the transformation of the treaty's principles and obligations into national law.

Exports, high-technology Exports of products with a high intensity of research and development. Includes high-technology products such as in aerospace, computers, pharmaceuticals, scientific instruments and electrical machinery.

Exports, manufactured Defined according to the Standard International Trade Classification to include exports of chemicals, basic manufactures, machinery and transport equipment and other miscellaneous manufactured goods.

Exports of goods and services The value of all goods and other market services provided to the rest of the world. Includes the value of merchandise, freight, insurance, transport, travel, royalties, licence fees and other services, such as communication, construction, financial, information, business, personal and government services. Excludes labour and property income and transfer payments.

Exports, primary Defined according to the Standard International Trade Classification to include exports of food, agricultural raw materials, fuels and ores and metals.

Fertility rate, total The number of children that would be born to each woman if she were to live to the end of her child-bearing years and bear children at each age in accordance with prevailing age-specific fertility rates.

Foreign direct investment, net inflows of Net inflows of investment to acquire a lasting management interest (10% or more of voting stock) in 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.

Fuel consumption, traditional Estimated consumption of fuel wood, charcoal, bagasse (sugar cane waste) and animal and vegetable wastes.

GDP (gross domestic product) The sum of 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 making deductions 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.

GDP (US$) GDP converted to US dollars using the average official exchange rate reported by the International Monetary Fund. 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. See *GDP (gross domestic product).*

GDP index One of the three indices on which the human development index is built. It is based on GDP per capita (PPP US$). For details on how the index is calculated, see *Technical note 1.*

GDP per capita (PPP US$) See *GDP (gross domestic product)* and *PPP (purchasing power parity).*

GDP per capita (US$) GDP (US$) divided by midyear population. See *GDP (US$).*

GDP per capita annual growth rate Least squares annual growth rate, calculated from constant price GDP per capita in local currency units.

Gender empowerment measure (GEM) A composite index measuring gender inequality in three basic dimensions of empowerment—economic participation and decision-making, political participation and decision-making and power over economic resources. For details on how the index is calculated, see *Technical note 1.*

Gender-related development index (GDI) A composite index measuring average achievement in the three basic dimensions captured in the human development index—a long and healthy life, knowledge and a decent standard of living—adjusted to account for inequalities between men and women. For details on how the index is calculated, see *Technical note 1.*

Gini index Measures the extent to which the distribution of income (or consumption) among individuals or households within a country deviates from a perfectly equal distribution. A Lorenz curve plots the cumulative percentages of total income received against the cumulative number of recipients, starting with the poorest individual or household. The Gini index measures the area between the Lorenz curve and a hypothetical line of absolute equality, expressed as a percentage of the maximum area under the line. A value of 0 represents perfect equality, a value of 100 perfect inequality.

GNI (gross national income) The sum of value added by all resident producers in the economy 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. Value added is the net output of an industry after adding up all outputs and subtracting intermediate inputs. Data are in current US dollars converted using the *World Bank Atlas* method.

Health expenditure per capita (PPP US$) The sum of public and private expenditure (in PPP US$), divided by the population. Health expenditure includes the provision of health services (preventive and curative), family planning activities, nutrition activities and emergency aid designated for health, but excludes the provision of water and sanitation. See *health expenditure, private; health expenditure, public;* and *PPP (purchasing power parity).*

Health expenditure, private Direct household (out of pocket) spending, private insurance, spending by nonprofit institutions serving households and direct service payments by private corporations. Together with public health expenditure, it makes up total health expenditure. See *health expenditure per capita (PPP US$)* and *health expenditure, public.*

Health expenditure, public Current and capital spending from government (central and local) budgets, external borrowings and grants (including donations from international agencies and non-governmental organizations) and social (or compulsory)

health insurance funds. Together with private health expenditure, it makes up total health expenditure. See *health expenditure per capita (PPP US$)* and *health expenditure, private.*

HIPC completion point The date at which a country included in the Debt Initiative for Heavily Indebted Poor Countries (HIPCs) successfully completes the key structural reforms agreed on at the HIPC decision point, including developing and implementing a poverty reduction strategy. The country then receives the bulk of its debt relief under the HIPC Initiative without further policy conditions.

HIPC decision point The date at which a heavily indebted poor country with an established track record of good performance under adjustment programmes supported by the International Monetary Fund and the World Bank commits, under the Debt Initiative for Heavily Indebted Poor Countries (HIPCs), to undertake additional reforms and to develop and implement a poverty reduction strategy.

HIPC trust fund, bilateral pledges to the A firm obligation undertaken by an official donor to provide specified assistance to the HIPC trust fund. Bilateral commitments are recorded in the full amount of expected transfer, irrespective of the time required for the completion of disbursements.

HIV prevalence The percentage of people ages 15–49 who are infected with HIV.

HIV/AIDS prevalence, pregnant women ages 15–24 attending antenatal care in clinics in capital city Percentage of blood samples taken from women that test positive for HIV during routine sentinel surveillance at selected antenatal clinics. Data are median values of all antenatal clinics in the cities specified and are from national surveillance reports and database of census bureau.

Human development index (HDI) A composite index measuring average achievement in three basic dimensions of human development—a long and healthy life, knowledge and a decent standard of living. For details on how the index is calculated, see *Technical note 1.*

Human poverty index (HPI-1) for developing countries A composite index measuring deprivations in the three basic dimensions captured in the human development index—a long and healthy life, knowledge and a decent standard of living. For details on how the index is calculated, see *Technical note 1.*

Human poverty index (HPI-2) for selected high-income OECD countries A composite index measuring deprivations in the three basic dimensions captured in the human development index—a long and healthy life, knowledge and a decent standard of living—and also capturing social exclusion. For details on how the index is calculated, see *Technical note 1.*

Illiteracy rate, adult Calculated as 100 minus the adult literacy rate. See *literacy rate, adult.*

Immunization, one-year-olds fully immunized against measles or tuberculosis One-year-olds injected with an antigen or a serum containing specific antibodies against measles or tuberculosis.

Imports of goods and services The value of all goods and other market services received from the rest of the world. Includes the value of merchandise, freight, insurance, transport, travel, royalties, licence fees and other services, such as communication, construction, financial, information, business, personal and government services. Excludes labour and property income and transfer payments.

Income poverty line, population below The percentage of the population living below the specified poverty line:

- $1 a day—at 1985 international prices (equivalent to $1.08 at 1993 international prices), adjusted for purchasing power parity.
- $2 a day—at 1985 international prices (equivalent to $2.15 at 1993 international prices), adjusted for purchasing power parity.
- $4 a day—at 1990 international prices, adjusted for purchasing power parity.
- $11 a day (per person for a family of three)—at 1994 international prices, adjusted for purchasing power parity.
- National poverty line—the poverty line deemed appropriate for a country by its authorities. National estimates are based on population weighted subgroup estimates from household surveys.
- 50% of median income—50% of the median adjusted disposable household income. See *PPP (purchasing power parity).*

Income or consumption, shares of The shares of income or consumption accruing to subgroups of population indicated by deciles or quintiles, based on national household surveys covering various years. Consumption surveys produce results showing lower levels of inequality between poor and rich than do income surveys, as poor people generally consume a greater share of their income. Because data come from surveys covering different years and using different methodologies, comparisons between countries must be made with caution.

Infant mortality rate The probability of dying between birth and exactly one year of age, expressed per 1,000 live births.

Internally displaced people People or groups of people who have been forced or obliged to flee or to leave their homes or places of habitual residence, in particular as a result of or in order to avoid the effects of armed conflict, situations of generalized violence, violations of human rights or natural or human-made disasters, and who have not crossed an internationally recognized state border.

Internet users People with access to the worldwide network.

Labour force All those employed (including people above a specified age who, during the reference period, were in paid employment, at work, self-employed or

with a job but not at work) and unemployed (including people above a specified age who, during the reference period, were without work, currently available for work and seeking work).

Legislators, senior officials and managers, female Women's share of positions defined according to the International Standard Classification of Occupations (ISCO-88) to include legislators, senior government officials, traditional chiefs and heads of villages, senior officials of special interest organizations, corporate managers, directors and chief executives, production and operations department managers and other department and general managers.

Life expectancy at birth The number of years a newborn infant would live if prevailing patterns of age-specific mortality rates at the time of birth were to stay the same throughout the child's life.

Life expectancy index One of the three indices on which the human development index is built. For details on how the index is calculated, see *Technical note 1.*

Literacy rate, adult The percentage of people ages 15 and above who can, with understanding, both read and write a short, simple statement related to their everyday life.

Literacy rate, youth The percentage of people ages 15–24 who can, with understanding, both read and write a short, simple statement related to their everyday life.

Literacy skills, functional, population lacking The share of the population ages 16–65 scoring at level 1 on the prose literacy scale of the International Adult Literacy Survey. Most tasks at this level require the reader to locate a piece of information in the text that is identical to or synonymous with the information given in the directive.

Malaria cases The total number of malaria cases reported to the World Health Organization by countries in which malaria is endemic. Many countries report only laboratory-confirmed cases, but many in Sub-Saharan Africa report clinically diagnosed cases as well.

Malaria prevention, children under age 5 The percentage of children under age 5 sleeping under insecticide-treated bednets.

Malaria treatment, children under age 5 with fever The percentage of children under age 5 who were ill with fever in the two weeks before the survey and received antimalarial drugs.

Market activities Defined according to the 1993 revised UN System of National Accounts to include employment in establishments, primary production not in establishments, services for income and other production of goods not in establishments. See *non-market activities* and *work time, total.*

Maternal mortality ratio The annual number of deaths of women from pregnancy-related causes per 100,000 live births.

Maternal mortality ratio, adjusted Maternal mortality ratio adjusted to account for well documented problems of underreporting and misclassification of maternal deaths, as well as estimates for countries with no data. See *maternal mortality ratio.*

Maternal mortality ratio, reported Maternal mortality ratio as reported by national authorities. See *maternal mortality ratio.*

Medium-variant projection Population projections by the United Nations Population Division assuming medium-fertility path, normal mortality and normal international migration. Each assumption implies projected trends in fertility, mortality and net migration levels, depending on the specific demographic characteristics and relevant policies of each country or group of countries. In addition, for the countries highly affected by the HIV/AIDS epidemic, the impact of HIV/AIDS is included in the projection. The UN Population Division also publishes low- and high-variant projections. For more information, see http://esa.un.org/unpp/assumptions.html.

Military expenditure All expenditures of the defence ministry and other ministries on recruiting and training military personnel as well as on construction and purchase of military supplies and equipment. Military assistance is included in the expenditures of the donor country.

Non-market activities Defined according to the 1993 revised UN System of National Accounts to include household maintenance (cleaning, laundry and meal preparation and cleanup), management and shopping for own household; care for children, the sick, the elderly and the disabled in own household; and community services. See *market activities* and *work time, total.*

Official aid Grants or loans that meet the same standards as for official development assistance (ODA) except that recipient countries do not qualify as recipients of ODA. These countries are identified in part II of the Development Assistance Committee (DAC) list of recipient countries, which includes more advanced countries of Central and Eastern Europe, the countries of the former Soviet Union and certain advanced developing countries and territories.

Official development assistance (ODA) disbursed, net Disbursements of loans made on concessional terms (net of repayments of principal) and grants by official agencies of the members of the Development Assistance Committee (DAC), by multilateral institutions and by non-DAC countries to promote economic development and welfare in countries and territories in part I of the DAC list of aid recipients. Includes loans with a grant element of at least 25% (calculated at a rate of discount of 10%).

Official development assistance (ODA), per capita of donor country Official development assistance granted by a specific country divided by this country's total population. See *official development assistance (ODA) disbursed, net.*

Official development assistance (ODA) to basic social services ODA directed to basic social services, which include basic education (primary education, early childhood education and basic life skills for youth and adults), basic health (including basic health care, basic health infrastructure, basic nutrition, infectious disease control, health education and health personnel development) and population policies and programmes and reproductive health (population policy and administrative management, reproductive health care, family planning, control of sexually transmitted diseases, including HIV/AIDS, and personnel development for population and reproductive health). Aid to water supply and sanitation is included only if it has a poverty focus.

Official development assistance (ODA) to least developed countries See *official development assistance (ODA) disbursed, net* and country classifications for least developed countries.

Official development assistance (ODA), untied Bilateral ODA for which the associated goods and services may be fully and freely procured in substantially all countries and that is given by one country to another.

Patents granted to residents Refers to documents issued by a government office that describe an invention and create a legal situation in which the patented invention can normally be exploited (made, used, sold, imported) only by or with the authorization of the patentee. The protection of inventions is generally limited to 20 years from the filing date of the application for the grant of a patent.

Physicians Includes graduates of a faculty or school of medicine who are working in any medical field (including teaching, research and practice).

Population growth rate, annual Refers to the average annual exponential growth rate for the period indicated. See *population, total.*

Population, total Refers to the de facto population, which includes all people actually present in a given area at a given time.

Population, urban The midyear population of areas classified as urban according to the criteria used by each country, as reported to the United Nations. See *population, total.*

PPP (purchasing power parity) A rate of exchange that accounts for price differences across countries, allowing international comparisons of real output and incomes. At the PPP US$ rate (as used in this Report), PPP US$1 has the same purchasing power in the domestic economy as $1 has in the United States.

Private flows, other A category combining non-debt-creating portfolio equity investment flows (the sum of country funds, depository receipts and direct purchases of shares by foreign investors), portfolio debt flows (bond issues purchased by foreign investors) and bank and trade-related lending (commercial bank lending and other commercial credits).

Probability at birth of not surviving to a specified age Calculated as 1 minus the probability of surviving to a specified age for a given cohort. See *probability at birth of surviving to a specified age.*

Probability at birth of surviving to a specified age The probability of a newborn infant surviving to a specified age if subject to prevailing patterns of age specific mortality rates.

Professional and technical workers, female Women's share of positions defined according to the International Standard Classification of Occupations (ISCO-88) to include physical, mathematical and engineering science professionals (and associate professionals), life science and health professionals (and associate professionals), teaching professionals (and associate professionals) and other professionals and associate professionals.

Refugees People who have fled their country because of a well founded fear of persecution for reasons of their race, religion, nationality, political opinion or membership in a particular social group and who cannot or do not want to return. *Country of asylum* is the country in which a refugee has filed a claim of asylum but has not yet received a decision or is otherwise registered as an asylum seeker. *Country of origin* refers to the claimant's nationality or country of citizenship.

Research and development expenditures Current and capital expenditures (including overhead) on creative, systematic activity intended to increase the stock of knowledge. Includes fundamental and applied research and experimental development work leading to new devices, products or processes.

Researchers in R&D People trained to work in any field of science who are engaged in professional research and development (R&D) activity. Most such jobs require the completion of tertiary education.

Royalties and licence fees, receipts of Receipts by residents from non-residents for the authorized use of intangible, non-produced, non-financial assets and proprietary rights (such as patents, trademarks, copyrights, franchises and industrial processes) and for the use, through licensing agreements, of produced originals of prototypes (such as films and manuscripts). Data are based on the balance of payments.

Sanitation, improved, population with sustainable access to The percentage of the population with access to adequate excreta disposal facilities, such as a connection to a sewer or septic tank system, a pour-flush latrine, a simple pit latrine or a ventilated improved pit latrine. An excreta disposal system is considered adequate if it is private or shared (but not public) and if it can effectively prevent human, animal and insect contact with excreta.

Science, math and engineering, tertiary students in The share of tertiary students enrolled in natural sciences; engineering; mathematics and computer sciences; architecture and town planning; transport and communications; trade, craft and industrial programmes; and agriculture, forestry and fisheries. See *education levels.*

Seats in parliament held by women Refers to seats held by women in a lower or single house or an upper house or senate, where relevant.

Smoking, prevalence The percentage of men and women who smoke cigarettes.

Telephone mainlines Telephone lines connecting a customer's equipment to the public switched telephone network.

Terms of trade The ratio of the export price index to the import price index measured relative to a base year. A value of more than 100 means that the price of exports has risen relative to the price of imports.

Tuberculosis cases The total number of tuberculosis cases reported to the World Health Organization. A tuberculosis case is defined as a patient in whom tuberculosis has been bacteriologically confirmed or diagnosed by a clinician.

Tuberculosis cases cured under DOTS The percentage of estimated new infectious tuberculosis cases cured under the directly observed treatment, short course (DOTS) case detection and treatment strategy.

Tuberculosis cases detected under DOTS The percentage of estimated new infectious tuberculosis cases detected (diagnosed in a given period) under the directly observed treatment, short course (DOTS) case detection and treatment strategy.

Under-five mortality rate The probability of dying between birth and exactly five years of age, expressed per 1,000 live births.

Under height for age, children under age five Includes moderate and severe stunting, defined as more than two standard deviations below the median height for age of the reference population.

Under weight for age, children under age five Includes moderate underweight, defined as more than two standard deviations below the median weight for age of the reference population, and severe underweight, defined as more than three standard deviations below the median weight.

Undernourished population People whose food intake is chronically insufficient to meet their minimum energy requirements.

Unemployment Refers to all people above a specified age who are not in paid employment or self-employed, but are available for work and have taken specific steps to seek paid employment or self-employment.

Unemployment, long-term Unemployment lasting 12 months or longer. See *unemployment*.

Unemployment rate The unemployed divided by the labour force (those employed plus the unemployed).

Unemployment rate, youth Refers to unemployment between the ages of 15 or 16 and 24, depending on the national definition. See *unemployment*.

Wage employment in non-agricultural sector, percentage of total non-agricultural employees, female Women's share in paid non-agricultural employment. People in paid non- agricultural employment are those who during a specified reference period (for example, one week) performed some work for wage or salary in cash or in kind, as well as persons who, having already worked in their present job, were temporarily not at work during the reference period for reasons such as illness or injury, holiday or vacation, strike or lockout, educational or training leave, maternity or parental leave, reduction in economic activity, temporary disorganization or suspension of work (bad weather, mechanical or electrical breakdown, shortage of raw materials or fuels) and the like and who had a formal attachment to their job as evidenced by one or more of the following criteria: the continued receipt of a wage or salary; an assurance of return to work following the end of the contingency or an agreement as to the date of return; or a short duration of absence from the job. Non-agricultural employment refers to employment in industry or services as defined according to the International Standard Industrial Classification system (revisions 2 and 3). *Industry* refers to mining and quarrying, manufacturing, construction and public utilities (gas, water and electricity). *Services* refer to wholesale and retail trade; restaurants and hotels; transport, storage and communications; finance, insurance, real estate and business services; and community, social and personal services.

Water source, improved, population without sustainable access to Calculated as 100 minus the percentage of the population with sustainable access to an improved water source. Unimproved sources include vendors, bottled water, tanker trucks and unprotected wells and springs. See *water source, improved, population with sustainable access to*.

Water source, improved, population with sustainable access to The share of the population with reasonable access to any of the following types of water supply for drinking: household connections, public standpipes, boreholes, protected dug wells, protected springs and rainwater collection. Reasonable access is defined as the availability of at least 20 litres a person per day from a source within 1 kilometre of the user's dwelling.

Women in government at ministerial level Includes deputy prime ministers and ministers. Prime ministers were also included when they held ministerial portfolios. Vice presidents and heads of ministerial-level departments or agencies were also included when exercising a ministerial function in the government structure.

Work time, total Time spent on market and non-market activities as defined according to the 1993 revised UN System of National Accounts. See market activities and non-market activities.

Statistical references

Aten, Bettina, Alan Heston, and Robert Summers. 2001. Correspondence on data from the Penn World Table 6.0. March. Philadelphia, Penn.

———. 2002. "Penn World Tables 6.1." University of Pennsylvania, Center for International Comparisons, Philadelphia. [http://pwt.econ.upenn.edu/]. Accessed March 2005.

Aboona, Yuhanna. 2005. "Qatar's Approach towards Data Inconsistencies." Background note prepared for *Human Development Report 2005*. March. Doha.

Abou-Zahr, Carla. 2005. "Measuring Maternal Mortality." Background note prepared for *Human Development Report 2005*. April. Geneva.

CDIAC (Carbon Dioxide Information Analysis Center). 2005. Data on carbon dioxide emissions. [http://cdiac.esd.ornl.gov/trends/emis/em_cont.htm]. Accessed April 2005.

FAO (Food and Agriculture Organization of the United Nations). 2005. *The State of Food Insecurity in the World 2004*. Rome.

Fischer, Stanley, Charles Konan Banny, and Christina Barrineau. 2005. "Measuring Financial Access." Background note prepared for *Human Development Report 2005*. April. New York.

Global IDP Project. 2005. Internally displaced people estimates. [www.idpproject.org/statistics.htm]. Accessed March 2005.

Goldshmidt-Clermont, Luisella, and Elisabetta Pagnossin Aligisakis. 1995. "Measures of Unrecorded Economic Activities in Fourteen Countries." Background paper for *Human Development Report 1995*. United Nations Development Programme, Human Development Report Office, New York.

Gwatkin, Davidson, Shea Rutstein, Kiersten Johnson, Eldaw Abdalla Suliman, Adam Wagstaff, and Agbessi Amouzou. Forthcoming. *Socioeconomic Differences in Health, Nutrition, and Population*. Second edition. Washington, D.C.: World Bank.

Harvey, Andrew S. 1995. "Market and Non-Market Productive Activity in Less Developed and Developing Countries: Lessons from Time Use." Background Paper for *Human Development Report 1995*. United Nations Development Programme, Human Development Report Office, New York.

———. 2001. "National Time Use Data on Market and Non-Market Work by Both Women and Men." Background Paper for *Human Development Report 2001*. United Nations Development Programme, Human Development Report Office, New York.

Human Development Report Office. 2005. "New Applications of the Human Development Index." Background note prepared for *Human Development Report 2005*. May. New York.

IISS (International Institute for Strategic Studies). 2004. *The Military Balance 2004–2005*. Oxford, U.K.: Oxford University Press.

ILO (International Labour Organization). 2002. *Estimates and Projections of the Economically Active Population, 1950–2010,* 4th ed., rev. 2. Database. Geneva.

———. 2003. *Key Indicators of the Labour Market*. Third edition. Geneva. [http://kilm.ilo.org/kilm/]. Accessed March 2005.

———. 2005a. *Database on International Labour Standards (ILOLEX)*. Geneva. [www.ilo.org/ilolex/english/docs/declworld.htm]. Accessed May 2005.

———. 2005b. *Laboursta Database*. Geneva. [http://laborsta.ilo.org]. Accessed March 2005.

IMF (International Monetary Fund) and IDA (International Development Association). 2004. "Heavily Indebted Poor Countries (HIPC) Initiative—Status of Implementation." August. Washington, D.C.

IPU (Inter-Parliamentary Union). 1995. *Women in Parliaments 1945–1995: A World Statistical Survey*. Geneva.

———. 2005a. Correspondence on women in government at ministerial level. March. Geneva.

———. 2005b. Correspondence on women in national parliaments. March. Geneva.

———. 2005c. Correspondence on year women received the right to vote and to stand for election and year first woman was elected or appointed to parliament. March. Geneva.

———. 2005d. *Parline Database and World Classification of Women in National Parliaments*. Geneva. [www.ipu.org]. Accessed March 2005.

ITU (International Telecommunication Union). 2005. *World Telecommunication Indicators Database*. 8th edition. [www.itu.int/ITU-D/ict/publications/world/world.html]. Accessed March 2005.

LIS (Luxembourg Income Study). 2005. "Relative Poverty Rates for the Total Population, Children and the Elderly." Luxembourg. [www.lisproject.org/keyfigures/povertytable.htm]. Accessed March 2005.

Milanovic, Branko. 2002. Correspondence on income, inequality and poverty during the transition from planned to market economy. March. World Bank, Washington, D.C.

Nolan, Brian, Teresa Munzi, and Timothy M. Smeeding. 2005. "Two Views of Irish Poverty Trends." Background note prepared for *Human Development Report 2005*. March. Dublin.

OECD (Organisation for Economic Co-operation and Development), Development Assistance Committee. 2005a. Correspondence on agricultural support estimates. March. Paris.

———. 2005b. Correspondence on employment rates. March. Geneva.

———. 2005c. Correspondence on official development assistance disbursed. March. Paris.

———. 2005d. Correspondence on youth and long-term unemployment rates. March. Geneva.

———. 2005e. *DAC Journal: Development Cooperation 2004 Report* 6(1). Paris.

———. 2005f. *DAC Online*. Database. Paris.

OECD (Organisation for Economic Co-operation and Development) and Statistics Canada. 2000. *Literacy in the Information Age: Final Report on the International Adult Literacy Survey*. Paris.

———. 2005. *Learning a Living by Earning Skills: First Results of the Adult Literacy and Life Skills Survey*. Paris.

Ruoen, Ren, and Chen Kai. 1995. "China's GDP in U.S. Dollars Based on Purchasing Power Parity." Policy Research Working Paper 1415. World Bank, Washington, D.C.

SIPRI (Stockholm International Peace Research Institute). 2004. *SIPRI Yearbook: Armaments, Disarmaments and International Security*. Oxford, U.K.: Oxford University Press.

———. 2005a. Correspondence on military expenditure data. March. Stockholm.

———. 2005b. Correspondence on weapons transfers data. March. Stockholm.

———. **2005c.** *SIPRI Arms Transfers. Database.* March. Stockholm.

Smeeding, Timothy M. 1997. "Financial Poverty in Developed Countries: The Evidence from the Luxembourg Income Study." In Sheldon H. Danziger and Robert H. Haveman, eds., *Understanding Poverty.* New York: Russell Sage Foundation; and Cambridge, Mass.: Harvard University Press.

Smeeding, Timothy M., Lee Rainwater, and Gary Burtless. 2000. "United States Poverty in a Cross-National Context." In Sheldon H. Danziger and Robert H. Haveman, eds., *Understanding Poverty.* New York: Russell Sage Foundation; and Cambridge, Mass.: Harvard University Press.

Statec. 2005. Correspondence on gross enrolment ratio for Luxembourg. May. Luxembourg.

UN (United Nations). 2002. Correspondence on time use surveys. Department of Economic and Social Affairs, Statistics Division. February. New York.

———. **2003.** *World Population Prospects 1950–2050: The 2002 Revision.* Database. Department of Economic and Social Affairs, Population Division. New York.

———. **2004.** *World Urbanization Prospects: The 2003 Revision.* Department of Economic and Social Affairs, Population Division. New York.

———. **2005a.** *Comtrade.* Database. Department of Social and Economic Affairs, Statistics Division. New York.

———. **2005b.** Correspondence on energy consumption. Department of Economic and Social Affairs, Statistics Division. March. New York.

———. **2005c.** Correspondence on life expectancy at birth. Department of Economic and Social Affairs, Statistics Division. March. New York.

———. **2005d.** Correspondence on traditional fuel use. Department of Economic and Social Affairs, Statistics Division. March. New York.

———. **2005e.** *Database on Contraceptive Use.* Department of Economic and Social Affairs, Population Division. New York.

———. **2005f.** Millennium Indicators Database. Department of Economic and Social Affairs, Statistics Division. New York. [http://millenniumindicators.un.org]. Accessed April 2005.

———. **2005g.** "Multilateral Treaties Deposited with the Secretary-General." New York. [http://untreaty.un.org]. Accessed April 2005.

———. **2005h.** *World Population Prospects 1950–2050: The 2004 Revision.* Database. Department of Economic and Social Affairs, Population Division. New York.

UNAIDS (Joint United Nations Programme on HIV/AIDS). 2005. Correspondence on HIV prevalence. March. Geneva.

UNDP (United Nations Development Programme). 2003. *Bosnia and Herzegovina Human Development Report 2003.* Sarajevo.

UNESCO (United National Educational, Scientific and Cultural Organization). 1997. "International Standard Classification of Education 1997." Paris. [www.uis.unesco.org/ev_en.php?ID=3813_201&ID2=DO_TOPIC]. Accessed March 2005.

UNESCO (United National Educational, Scientific and Cultural Organization) Institute for Statistics. 1999. *Statistical Yearbook.* Montreal.

———. **2003a.** Correspondence on adult and youth literacy rates. March. Montreal.

———. **2003b.** Correspondence on gross and net enrolment ratios and children reaching grade 5. March. Montreal.

———. **2005a.** Correspondence on adult and youth literacy rates. March. Montreal.

———. **2005b.** Correspondence on education expenditure. March. Montreal.

———. **2005c.** Correspondence on gross and net enrolment ratios and children reaching grade 5. March. Montreal.

———. **2005d.** Correspondence on students in math science and engineering. April. Montreal.

UNHCR (United Nations High Commissioner for Refugees). 2005. Correspondence on refugees by country of asylum and by country of origin. April. Geneva.

UNICEF (United Nations Children's Fund). 2004. *State of the World's Children 2005.* New York: Oxford University Press.

UNICEF (United Nations Children's Fund), WHO (World Health Organization), and UNFPA (United Nations Population Fund). 1997. *Guidelines for Monitoring the Availability and Use of Obstetric Services.* New York.

UN Millennium Project. 2005. *Who's Got the Power? Transforming Health Systems for Women and Children.* Task Force on Child Health and Maternal Health. London: Earthscan.

UNODC (United Nations Office on Drugs and Crime). 2004. Correspondence on data on crime victims. March. Vienna.

UN-OHRLLS (United Nations Office of the High Representative for the Least Developed Countries, Landlocked Developing Countries and Small Island Developing States). 2005. "List of Least Developed Countries." New York. [www.un.org/special-rep/ohrlls/ldc/list.htm]. Accessed May 2005.

WHO (World Health Organization). 2003. *Global Tuberculosis Control: WHO Report 2003.* Geneva. [www.who.int/gtb/publications/globrep/]. Accessed March 2005.

———. **2005a.** Correspondence on health expenditure. March. Geneva.

———. **2005b.** Correspondence on human resources for health. March. Geneva.

———. **2005c.** *World Health Report 2005: Make Every Mother and Child Count.* Geneva.

William, Tony. 2005. "National Strategies for the Development of Statistics." Background note prepared for *Human Development Report 2005.* March. Paris.

WIPO (World Intellectual Property Organization). 2004. *Intellectual Property Statistics.* Publication B. Geneva.

World Bank. 2003. *World Development Indicators 2003.* CD-ROM. Washington, D.C.

———. **2005a.** Correspondence on GDP per capita annual growth rates. March. Washington, D.C.

———. **2005b.** Correspondence on income distribution data. April. Washington, D.C.

———. **2005c.** *World Development Indicators 2005.* CD-ROM. Washington, D.C.

Classification of countries

Countries in the human development aggregates [a]

High human development (HDI 0.800 and above)

Argentina
Australia
Austria
Bahamas
Bahrain
Barbados
Belgium
Brunei Darussalam
Bulgaria
Canada
Chile
Costa Rica
Croatia
Cuba
Cyprus
Czech Republic
Denmark
Estonia
Finland
France
Germany
Greece
Hong Kong, China (SAR)
Hungary
Iceland
Ireland
Israel
Italy
Japan
Korea, Rep. of
Kuwait
Latvia
Lithuania
Luxembourg
Malta
Mexico
Netherlands
New Zealand
Norway
Panama
Poland
Portugal
Qatar
Saint Kitts and Nevis
Seychelles
Singapore
Slovakia
Slovenia
Spain
Sweden
Switzerland
Tonga
Trinidad and Tobago
United Arab Emirates
United Kingdom
United States
Uruguay
(57 countries or areas)

Medium human development (HDI 0.500–0.799)

Albania
Algeria
Antigua and Barbuda
Armenia
Azerbaijan
Bangladesh
Belarus
Belize
Bhutan
Bolivia
Bosnia and Herzegovina
Botswana
Brazil
Cambodia
Cape Verde
China
Colombia
Comoros
Congo
Dominica
Dominican Republic
Ecuador
Egypt
El Salvador
Equatorial Guinea
Fiji
Gabon
Georgia
Ghana
Grenada
Guatemala
Guyana
Honduras
India
Indonesia
Iran, Islamic Rep. of
Jamaica
Jordan
Kazakhstan
Kyrgyzstan
Lao People's Dem. Rep.
Lebanon
Libyan Arab Jamahiriya
Macedonia, TFYR
Malaysia
Maldives
Mauritius
Moldova, Rep. of
Mongolia
Morocco
Myanmar
Namibia
Nepal
Nicaragua
Occupied Palestinian Territories
Oman
Pakistan
Papua New Guinea
Paraguay
Peru
Philippines
Romania
Russian Federation
Saint Lucia
Saint Vincent and the Grenadines
Samoa (Western)
São Tomé and Principe
Saudi Arabia
Solomon Islands
South Africa
Sri Lanka
Sudan
Suriname
Syrian Arab Republic
Tajikistan
Thailand
Timor-Leste
Togo
Tunisia
Turkey
Turkmenistan
Uganda
Ukraine
Uzbekistan
Vanuatu
Venezuela
Viet Nam
Zimbabwe
(88 countries or areas)

Low human development (HDI below 0.500)

Angola
Benin
Burkina Faso
Burundi
Cameroon
Central African Republic
Chad
Congo, Dem. Rep. of the
Côte d'Ivoire
Djibouti
Eritrea
Ethiopia
Gambia
Guinea
Guinea-Bissau
Haiti
Kenya
Lesotho
Madagascar
Malawi
Mali
Mauritania
Mozambique
Niger
Nigeria
Rwanda
Senegal
Sierra Leone
Swaziland
Tanzania, U. Rep. of
Yemen
Zambia
(32 countries or areas)

a Excludes the following UN member countries for which the human development index cannot be computed: Afghanistan, Andorra, Iraq, Kiribati, the Democratic Republic of Korea, Liberia, Liechtenstein, Marshall Islands, the Federated States of Micronesia, Monaco, Nauru, Palau, San Marino, Serbia and Montenegro, Somalia and Tuvalu.

Countries in the income aggregates [a]

High income (GNI per capita of $9,386 or more in 2003)

Andorra
Australia
Austria
Bahamas
Bahrain
Belgium
Brunei Darussalam
Canada
Cyprus
Denmark
Finland
France
Germany
Greece
Hong Kong, China (SAR)
Iceland
Ireland
Israel
Italy
Japan
Korea, Rep. of
Kuwait
Luxembourg
Malta
Monaco
Netherlands
New Zealand
Norway
Portugal
Qatar
San Marino
Singapore
Slovenia
Spain
Sweden
Switzerland
United Arab Emirates
United Kingdom
United States
(39 countries or areas)

Middle income (GNI per capita of $766–9,385 in 2003)

Albania
Algeria
Antigua and Barbuda
Argentina
Armenia
Azerbaijan
Barbados
Belarus
Belize
Bolivia
Bosnia and Herzegovina
Botswana
Brazil
Bulgaria
Cape Verde
Chile
China
Colombia
Costa Rica
Croatia
Cuba
Czech Republic
Djibouti
Dominica
Dominican Republic
Ecuador
Egypt
El Salvador
Estonia
Fiji
Gabon
Georgia
Grenada
Guatemala
Guyana
Honduras
Hungary
Indonesia
Iran, Islamic Rep. of
Iraq
Jamaica
Jordan
Kazakhstan
Kiribati
Latvia
Lebanon
Libyan Arab Jamahiriya
Lithuania
Macedonia, TFYR
Malaysia
Maldives
Marshall Islands
Mauritius
Mexico
Micronesia, Fed. Sts.
Morocco
Namibia
Northern Mariana Islands
Occupied Palestinian Territories
Oman
Palau
Panama
Paraguay
Peru
Philippines
Poland
Romania
Russian Federation
Saint Kitts and Nevis
Saint Lucia
Saint Vincent and the Grenadines
Samoa (Western)
Saudi Arabia
Serbia and Montenegro
Seychelles
Slovakia
South Africa
Sri Lanka
Suriname
Swaziland
Syrian Arab Republic
Thailand
Tonga
Trinidad and Tobago
Tunisia
Turkey
Turkmenistan
Ukraine
Uruguay
Vanuatu
Venezuela
(91 countries or areas)

Low income (GNI per capita of $765 or less in 2003)

Afghanistan
Angola
Bangladesh
Benin
Bhutan
Burkina Faso
Burundi
Cambodia
Cameroon
Central African Republic
Chad
Comoros
Congo
Congo, Dem. Rep. of the
Côte d'Ivoire
Equatorial Guinea
Eritrea
Ethiopia
Gambia
Ghana
Guinea
Guinea-Bissau
Haiti
India
Kenya
Korea, Dem. Rep.
Kyrgyzstan
Lao People's Dem. Rep.
Lesotho
Liberia
Madagascar
Malawi
Mali
Mauritania
Moldova, Rep. of
Mongolia
Mozambique
Myanmar
Nepal
Nicaragua
Niger
Nigeria
Pakistan
Papua New Guinea
Rwanda
São Tomé and Principe
Senegal
Sierra Leone
Solomon Islands
Somalia
Sudan
Tajikistan
Tanzania, U. Rep. of
Timor-Leste
Togo
Uganda
Uzbekistan
Viet Nam
Yemen
Zambia
Zimbabwe
(61 countries or areas)

a World Bank classification (effective 1 July 2004) based on gross national income (GNI) per capita. Excludes Nauru and Tuvalu because of lack of data.

Countries in the major world aggregates

Developing countries

Afghanistan
Algeria
Angola
Antigua and Barbuda
Argentina
Bahamas
Bahrain
Bangladesh
Barbados
Belize
Benin
Bhutan
Bolivia
Botswana
Brazil
Brunei Darussalam
Burkina Faso
Burundi
Cambodia
Cameroon
Cape Verde
Central African Republic
Chad
Chile
China
Colombia
Comoros
Congo
Congo, Dem. Rep. of the
Costa Rica
Côte d'Ivoire
Cuba
Cyprus
Djibouti
Dominica
Dominican Republic
Ecuador
Egypt
El Salvador
Equatorial Guinea
Eritrea
Ethiopia
Fiji
Gabon
Gambia
Ghana
Grenada
Guatemala
Guinea
Guinea-Bissau
Guyana
Haiti
Honduras
Hong Kong, China (SAR)
India
Indonesia
Iran, Islamic Rep. of
Iraq
Jamaica
Jordan
Kenya
Kiribati
Korea, Dem. Rep.
Korea, Rep. of
Kuwait
Lao People's Dem. Rep.
Lebanon
Lesotho
Liberia
Libyan Arab Jamahiriya
Madagascar
Malawi
Malaysia
Maldives
Mali
Marshall Islands
Mauritania
Mauritius
Mexico
Micronesia, Fed. Sts.
Mongolia
Morocco
Mozambique
Myanmar
Namibia
Nauru
Nepal
Nicaragua
Niger
Nigeria
Occupied Palestinian Territories
Oman
Pakistan
Palau
Panama
Papua New Guinea
Paraguay
Peru
Philippines
Qatar
Rwanda
Saint Kitts and Nevis
Saint Lucia
Saint Vincent and the Grenadines
Samoa (Western)
São Tomé and Principe
Saudi Arabia
Senegal
Seychelles
Sierra Leone
Singapore
Solomon Islands
Somalia
South Africa
Sri Lanka
Sudan
Suriname
Swaziland
Syrian Arab Republic
Tanzania, U. Rep. of
Thailand
Timor-Leste
Togo
Tonga
Trinidad and Tobago
Tunisia
Turkey
Tuvalu
Uganda
United Arab Emirates
Uruguay
Vanuatu
Venezuela
Viet Nam
Yemen
Zambia
Zimbabwe
(137 countries or areas)

Least developed countries [a]

Afghanistan
Angola
Bangladesh
Benin
Bhutan
Burkina Faso
Burundi
Cambodia
Cape Verde
Central African Republic
Chad
Comoros
Congo, Dem. Rep. of the
Djibouti
Equatorial Guinea
Eritrea
Ethiopia
Gambia
Guinea
Guinea-Bissau
Haiti
Kiribati
Lao People's Dem. Rep.
Lesotho
Liberia
Madagascar
Malawi
Maldives
Mali
Mauritania
Mozambique
Myanmar
Nepal
Niger
Rwanda
Samoa (Western)
São Tomé and Principe
Senegal
Sierra Leone
Solomon Islands
Somalia
Sudan
Tanzania, U. Rep. of
Timor-Leste
Togo
Tuvalu
Uganda
Vanuatu
Yemen
Zambia
(50 countries or areas)

Central and Eastern Europe and the Commonwealth of Independent States (CIS)

Albania
Armenia
Azerbaijan
Belarus
Bosnia and Herzegovina
Bulgaria
Croatia
Czech Republic
Estonia
Georgia
Hungary
Kazakhstan
Kyrgyzstan
Latvia
Lithuania
Macedonia, TFYR
Moldova, Rep. of
Poland
Romania
Russian Federation
Serbia and Montenegro
Slovakia
Slovenia
Tajikistan
Turkmenistan
Ukraine
Uzbekistan
(27 countries or areas)

OECD

Australia
Austria
Belgium
Canada
Czech Republic
Denmark
Finland
France
Germany
Greece
Hungary
Iceland
Ireland
Italy
Japan
Korea, Rep. of
Luxembourg
Mexico
Netherlands
New Zealand
Norway
Poland
Portugal
Slovakia
Spain
Sweden
Switzerland
Turkey
United Kingdom
United States
(30 countries or areas)

High-income OECD countries [b]

Australia
Austria
Belgium
Canada
Denmark
Finland
France
Germany
Greece
Iceland
Ireland
Italy
Japan
Korea, Rep. of
Luxembourg
Netherlands
New Zealand
Norway
Portugal
Spain
Sweden
Switzerland
United Kingdom
United States
(24 countries or areas)

a United Nations classification based on UN-OHRLLS 2005.
b Excludes the Czech Republic, Hungary, Mexico, Poland, Slovakia and Turkey.

Developing countries in the regional aggregates

Arab States
Algeria
Bahrain
Djibouti
Egypt
Iraq
Jordan
Kuwait
Lebanon
Libyan Arab Jamahiriya
Morocco
Occupied Palestinian Territories
Oman
Qatar
Saudi Arabia
Somalia
Sudan
Syrian Arab Republic
Tunisia
United Arab Emirates
Yemen
(20 countries or areas)

East Asia and the Pacific
Brunei Darussalam
Cambodia
China
Fiji
Hong Kong, China (SAR)
Indonesia
Kiribati
Korea, Dem. Rep.
Korea, Rep. of
Lao People's Dem. Rep.
Malaysia
Marshall Islands
Micronesia, Fed. Sts.
Mongolia
Myanmar
Nauru
Palau
Papua New Guinea
Philippines
Samoa (Western)
Singapore
Solomon Islands
Thailand
Timor-Leste
Tonga
Tuvalu
Vanuatu
Viet Nam
(28 countries or areas)

South Asia
Afghanistan
Bangladesh
Bhutan
India
Iran, Islamic Rep. of
Maldives
Nepal
Pakistan
Sri Lanka
(9 countries or areas)

Latin America and the Caribbean
Antigua and Barbuda
Argentina
Bahamas
Barbados
Belize
Bolivia
Brazil
Chile
Colombia
Costa Rica
Cuba
Dominica
Dominican Republic
Ecuador
El Salvador
Grenada
Guatemala
Guyana
Haiti
Honduras
Jamaica
Mexico
Nicaragua
Panama
Paraguay
Peru
Saint Kitts and Nevis
Saint Lucia
Saint Vincent and the Grenadines
Suriname
Trinidad and Tobago
Uruguay
Venezuela
(33 countries or areas)

Southern Europe
Cyprus
Turkey
(2 countries or areas)

Sub-Saharan Africa
Angola
Benin
Botswana
Burkina Faso
Burundi
Cameroon
Cape Verde
Central African Republic
Chad
Comoros
Congo
Congo, Dem. Rep. of the
Côte d'Ivoire
Equatorial Guinea
Eritrea
Ethiopia
Gabon
Gambia
Ghana
Guinea
Guinea-Bissau
Kenya
Lesotho
Liberia
Madagascar
Malawi
Mali
Mauritania
Mauritius
Mozambique
Namibia
Niger
Nigeria
Rwanda
São Tomé and Principe
Senegal
Seychelles
Sierra Leone
South Africa
Swaziland
Tanzania, U. Rep. of
Togo
Uganda
Zambia
Zimbabwe
(45 countries or areas)

Index to indicators

Index to Millennium Development Goal indicators in the indicator tables

Goals and targets from the Millennium Declaration	Indicators for measuring progress	Indicator table
Goal 1 Eradicate extreme poverty and hunger		
Target 1 Halve, between 1990 and 2015, the proportion of people whose income is less than $1 a day	1. Proportion of population below $1 (PPP) a day 2. Poverty gap ratio (incidence × depth of poverty) 3. Share of poorest quintile in national consumption	3 15
Target 2 Halve, between 1990 and 2015, the proportion of people who suffer from hunger	4. Prevalence of underweight children under five years of age 5. Proportion of population below minimum level of dietary energy consumption	3, 7 7 [a], 33 [a]
Goal 2 Achieve universal primary education		
Target 3 Ensure that, by 2015, children everywhere, boys and girls alike, will be able to complete a full course of primary schooling	6. Net enrolment ratio in primary education 7. Proportion of pupils starting grade 1 who reach grade 5 8. Literacy rate of 15- to 24-year-olds	12, 33 12 12
Goal 3 Promote gender equality and empower women		
Target 4 Eliminate gender disparity in primary and secondary education, preferably by 2005, and to all levels of education no later than 2015	9. Ratio of girls to boys in primary, secondary and tertiary education 10. Ratio of literate women to men ages 15–24 11. Share of women in wage employment in the non-agricultural sector [b] 12. Proportion of seats held by women in national parliaments	27 [c] 27 [d] 30
Goal 4 Reduce child mortality		
Target 5 Reduce by two-thirds, between 1990 and 2015, the under-five mortality rate	13. Under-five mortality rate 14. Infant mortality rate 15. Proportion of one-year-old children fully immunized against measles	10, 33 10 6
Goal 5 Improve maternal health		
Target 6. Reduce by three-quarters, between 1990 and 2015, the maternal mortality ratio	16. Maternal mortality ratio 17. Proportion of births attended by skilled health personnel	10 6
Goal 6 Combat HIV/AIDS, malaria and other diseases		
Target 7 Have halted by 2015 and begun to reverse the spread of HIV/AIDS	18. HIV prevalence among pregnant women 15–24 [e] 19. Condom use rate of the contraceptive prevalence rate 19a. Condom use at last high-risk sex 19b. Percentage of 15- to 24-year-olds with comprehensive correct knowledge of HIV/AIDS 20. Ratio of school attendance of orphans to school attendance of non-orphans ages 10–14	 9
Target 8 Have halted by 2015 and begun to reverse the incidence of malaria and other major diseases	21. Prevalence and death rates associated with malaria 22. Proportion of population in malaria-risk areas using effective malaria prevention and treatment measures 23. Prevalence and death rates associated with tuberculosis 24. Proportion of tuberculosis cases detected and cured under directly observed treatment, short course (DOTS)	9 [f] 9 [g] 9 [h] 9
Goal 7 Ensure environmental sustainability		
Target 9 Integrate the principles of sustainable development into country policies and programmes and reverse the loss of environmental resources	25. Proportion of land area covered by forest 26. Ratio of area protected to maintain biological diversity to surface area 27. Energy use (kilograms of oil equivalent) per $1 GDP (PPP) 28. Carbon dioxide emissions per capita and consumption of ozone-depleting chlorofluorocarbons (ODP tons) 29. Proportion of population using solid fuels	 22 [i] 22 [j]
Target 10 Halve by 2015 the proportion of people without sustainable access to safe drinking water and sanitation	30. Proportion of population with sustainable access to an improved water source, urban and rural 31. Proportion of population with access to improved sanitation, urban and rural	7 [k], 33 [k] 7 [l]

Index to Millennium Development Goal indicators in the indicator tables
(continued)

Goals and targets from the Millennium Declaration	Indicators for measuring progress	Indicator table
Target 11 By 2020 to have achieved a significant improvement in the lives of at least 100 million slum dwellers	32. Proportion of households with access to secure tenure	
Goal 8 Develop a global partnership for development		
Target 12 Develop further an open, rule-based, predictable, non-discriminatory trading and financial system. Includes a commitment to good governance, development, and poverty reduction—both nationally and internationally	*Official development assistance* 33. Net ODA, total and to least developed countries, as a percentage of OECD/DAC donors' gross national income GNI 34. 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) 35. Proportion of bilateral ODA of OECD/DAC donors that is untied	17 [n] 17
Target 13 Address the special needs of the least developed countries. Includes: tariff- and quota-free access for least-developed countries' exports; enhanced programme of debt relief for HIPCs and cancellation of official bilateral debt; and more generous ODA for countries committed to poverty reduction	36. ODA received in landlocked countries as proportion of their gross national incomes 37. ODA received in small island developing States as proportion of their gross national incomes	17
Target 14 Address the special needs of landlocked countries and small island developing states	*Market access* 38. Proportion of total developed country imports (by value and excluding arms) from developing countries and from the least developed countries, admitted free of duties 39. Average tariffs imposed by developed countries on agricultural products and textiles and clothing from developing countries 40. Agricultural support estimate for OECD countries as a percentage of their gross domestic product 41. Proportion of ODA provided to help build trade capacity	18
Target 15 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* 42. Total number of countries that have reached their HIPC decision points and number that have reached their HIPC completion points (cumulative) 43. Debt relief committed under HIPC Debt Initiative [m] 44. Debt service as a percentage of exports of goods and services	19
Target 16 In cooperation with developing countries, develop and implement strategies for decent and productive work for youth	45. Unemployment rate of 15- to 24-year-olds, male and female and total	21 [o]
Target 17 In cooperation with pharmaceutical companies, provide access to affordable essential drugs in developing countries	46. Proportion of population with access to affordable essential drugs on a sustainable basis	
Target 18 In cooperation with the private sector, make available the benefits of new technologies, especially information and communications	47. Telephone lines and cellular subscribers per 100 people 48a. Personal computers in use per 100 people 48b. Internet users per 100 people	13 [p] 13

a Tables 7 and 33 present this indicator as undernourished people as percent of total population.
b Table 28 includes data on female employment by economic activity.
c Table presents female (net or growth) enrolment ratio as percent of male ratio for primary, secondary and tertiary education levels separately.
d Table presents data on female youth literacy data as percent of male rate.
e Tables 9 and 33 present HIV prevalence among people ages 15–49.
f Table includes data on malaria cases per 100,000 people.
g Table includes data on children under age five with insecticide-treated bed nets, and children under age five with fever treated with anti-malarial drugs.
h Table includes data on tuberculosis cases per 100,000 people.
i Table presents this indicator as GDP per unit of energy use (2000 PPP US$ per kilogram of oil equivalent).
j Table includes data on carbon dioxide emissions per capita.
k Tables 7 and 33 include data on population with sustainable access to an improved water source for urban and rural combined.
l Table includes data on population with sustainable access to improved sanitation for urban and rural combined.
m Table 18 includes data on bilateral debt relief pledges to the HIPC trust fund, and gross bilateral debt forgiveness.
n Table includes data on official development assistance (ODA) to least developed countries as percent of total ODA.
o Table includes data on unemployment rate of 15- to 24-year-olds as total and female rate as percent of male rate for OECD countries only.
p Table presents telephone lines and cellular subscribers separately.