

# Human development indicators



## The state of human development

“The basic objective of development”, wrote Mahbub ul Haq in the first *Human Development Report* in 1990, “is to create an enabling environment in which people can enjoy long, healthy and creative lives.” Sixteen years on, that vision retains a powerful resonance.

People are the real wealth of nations. That simple truth is sometimes forgotten. Mesmerized by the rise and fall of national incomes (as measured by GDP), we tend to equate human welfare with material wealth. The importance of GDP growth and economic stability should not be understated: both are fundamental to sustained human progress, as is clear in the many countries that suffer from their absence. But the ultimate yardstick for measuring progress is people’s quality of life. As Aristotle argued, “Wealth is evidently not the good we are seeking; for it is merely useful and for the sake of something else.”<sup>1</sup> That “something else” is the opportunity of people to realize their potential as human beings. Real opportunity is about having real choices—the choices that come with a sufficient income, an education, good health and living in a country that is not governed by tyranny. As Amartya Sen has written: “Development can be seen... as a process of expanding the real freedoms that people enjoy.”<sup>2</sup>

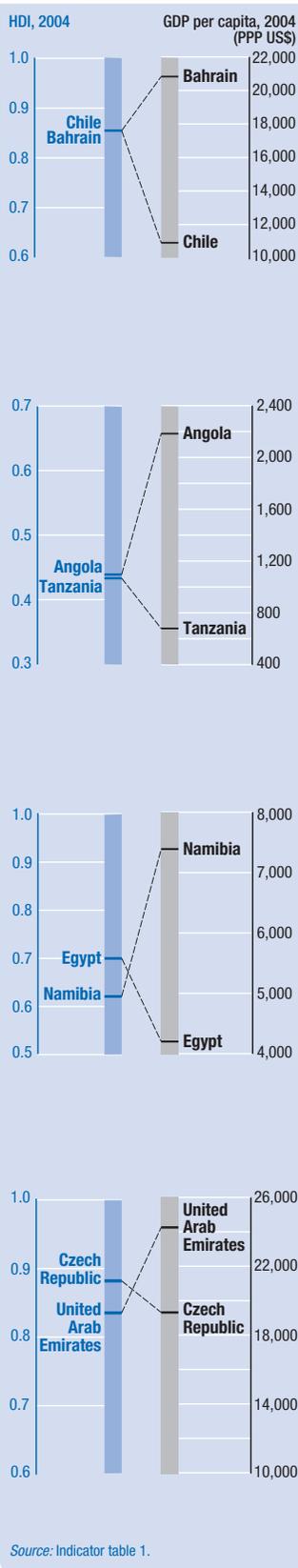
Over the past decades there have been unprecedented increases in material wealth and prosperity across the world. At the same time these increases have been very uneven, with vast numbers of people not participating in progress. Mass poverty, deeply entrenched inequality and lack of political empowerment contribute to deny a large share of the world’s population the freedom to make real choices. Moreover, GDP is still measured in a way that does not take into account environmental degradation and the depletion of natural resources.

### The human development index

Each year since 1990 this report has published a human development index (HDI) that looks beyond GDP to a broader definition of well-being. The HDI provides a composite measure of three dimensions of human development: living a long and healthy life (measured by life expectancy), being educated (measured by adult literacy and enrolment at the primary, secondary and tertiary level) and having a decent standard of living (measured by purchasing power parity, PPP, income). The index is not in any sense a comprehensive measure of human development. It does not, for example, include important indicators such as respect for human rights, democracy and inequality. What it does provide is a broadened prism for viewing human progress and the complex relationship between income and well-being.

This year’s HDI, which refers to 2004, highlights the very large gaps in well-being and life chances that continue to divide our increasingly interconnected world. It was US President John F. Kennedy who coined the adage that “a rising tide lifts all boats.”<sup>3</sup> But when it comes to human development, the rising tide of global prosperity has lifted some boats faster than others—and some boats are sinking fast. Enthusiasts who emphasize the positive aspects of globalization sometimes get carried away. They increasingly use the language of the global village to describe the new order. But when viewed through the lens of human development the global village appears deeply divided between the streets of the haves and those of the have-nots. The average person in Norway (at the top of the HDI league) and the average person in countries such as Niger (at the bottom) certainly live in different human development

**Figure 1** From income to HDI—some do better than others



districts of the global village. People in Norway are more than 40 times wealthier than people in Niger. They live almost twice as long. And they enjoy near universal enrolment for primary, secondary and tertiary education, compared with an enrolment rate of 21% in Niger. For the 31 countries in the low human development category—a group with 9% of the world’s people—life expectancy at birth is 46 years, or 32 years less than in high human development countries.

The HDI underlines another core theme that has run through the *Human Development Report* since its inception. On average human development indicators tend to rise and fall with income. That finding is hardly surprising. Very low average incomes and high levels of income poverty contribute to the lack of substantive freedoms in the world, robbing people of the ability to achieve adequate nutrition, treat illness or gain an education. The HDI reflects the positive association between income on one side and health and education on the other: people in richer countries tend to be healthier and to have more educational opportunities. It also draws attention to the fact that some countries are far better than others at converting wealth into opportunities for health and education.

Some countries have an HDI rank far below their income rank, while others invert this relationship. For example, Viet Nam remains quite poor but has a much higher HDI ranking than many countries with higher per capita incomes. Conversely, Bahrain has an average income almost twice the level in Chile but, despite recent progress, a lower HDI rank because it underperforms on education and literacy. In Sub-Saharan Africa Tanzania has an average income one-third that in Angola but a similar HDI rank—an outcome that reflects the high human cost of conflict in Angola (figure 1).

Governments often look at the HDI as an instrument for assessing their performance against that of neighbouring countries. Competition for human development is a healthy rivalry—more healthy, it might be argued, than competition on GDP. However, there has been something of a tendency for governments to

neglect more pressing questions, including the underlying reasons for large discrepancies between the national position in global income tables and in HDI rank. In some cases, as in Southern Africa, these discrepancies can be traced to specific problems (such as HIV/AIDS). In many others they can be traced to domestic policy failures in providing opportunities for health and education.

The HDI is a less effective measure of cross-country performance at the top end of the league table. Near universal literacy and educational enrolment, allied to upper limits on life expectancy (see *Technical note 1*), tend to equalize scores among countries. But even here the index highlights some discrepancies between income and overall HDI rank. For example, the United States, whose citizens are on average the second richest in the world after Luxembourg, stands six places lower in its HDI rank than its income rank. One reason is that average life expectancy is almost three years less than in Sweden—a country with an average income that is one-fourth lower. Within the high human development group Chile and Cuba enjoy HDI ranks far above their income ranks.

As with any index that aggregates data across several areas of achievement, the HDI is subject to constant adjustment in the light of shifts in statistical reporting systems. In some cases these shifts can affect a country’s ranking in either a positive or negative direction, regardless of underlying performance. This year’s HDI demonstrates the problem. Several countries have seen their HDI scores drop not because of a change in underlying performance, but because of a change in reporting systems for education. By definition the school enrolment data used in the HDI should not include adult education. However, some 32 countries have in the past included adult education when reporting school enrolment. This year these countries have changed data reporting to correct this anomaly. The new data sets are now more uniform and more accurate. But the change has had an adverse effect on the HDI rank of several countries, including Argentina, Belgium, Brazil, Paraguay, Peru and the United Kingdom. For Brazil the decline in the HDI rank—from 63

to 69—is almost entirely a result of the change in statistical reporting rather than any real deterioration in education performance. Similar outcomes can be observed for other countries in the group.

## Human development trends—the HDI and beyond

Human development trends tell an important story. Since the mid-1970s almost all regions have been progressively increasing their HDI score (figure 2). East Asia and South Asia have accelerated progress since 1990. Central and Eastern Europe and the Commonwealth of Independent States (CIS), following a catastrophic decline in the first half of the 1990s, has also recovered strongly and regained the level before the reversal. The major exception is Sub-Saharan Africa. Since 1990 it has stagnated, partly because of economic reversal but principally because of the catastrophic effect of HIV/AIDS on life expectancy. Eighteen countries have a lower HDI score today than in 1990—most in Sub-Saharan Africa. Today 28 of the 31 low human development countries are in Sub-Saharan Africa. This underlines the supreme importance for the Millennium Development Goals of national efforts and global

partnerships to overcome the enormous inherited disadvantage faced by people in Africa today.

Progress in human development is sometimes taken as evidence of convergence between the developed and the developing world. In broad terms, that picture is accurate: there has been a steady improvement in human development indicators for the developing world over several decades. But convergence is taking place at very different rates in different regions—and from different starting points. Inequalities in human development remain large, and for a large group of countries divergence is the order of the day. This can be illustrated by reference to some of the core indicators that underpin the HDI.

### Life expectancy

Over the past three decades developing countries as a group have been converging on developed countries in life expectancy. Their average life expectancy at birth has increased by nine years, compared with seven in high-income countries (figure 3). The exception again is Sub-Saharan Africa. For the region as a whole life expectancy today is lower than it was three decades ago—and even this headline story understates the problem. Several countries in Southern Africa have suffered catastrophic reversals: 20 years in Botswana, 16 in Swaziland and 13 in Lesotho and Zambia. These demographic

Figure 2 The human development trend—upwards but uneven

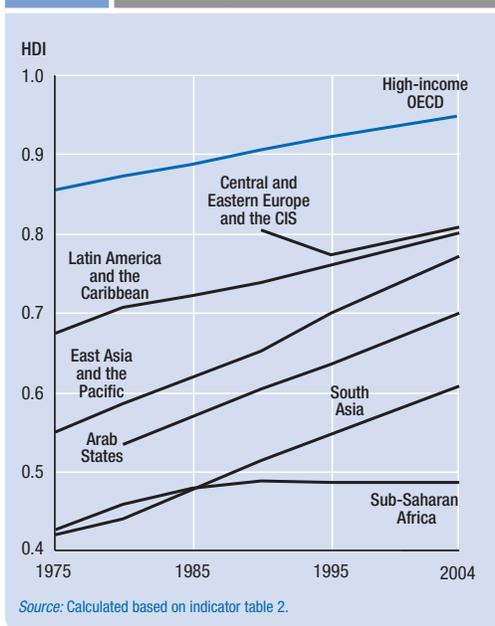
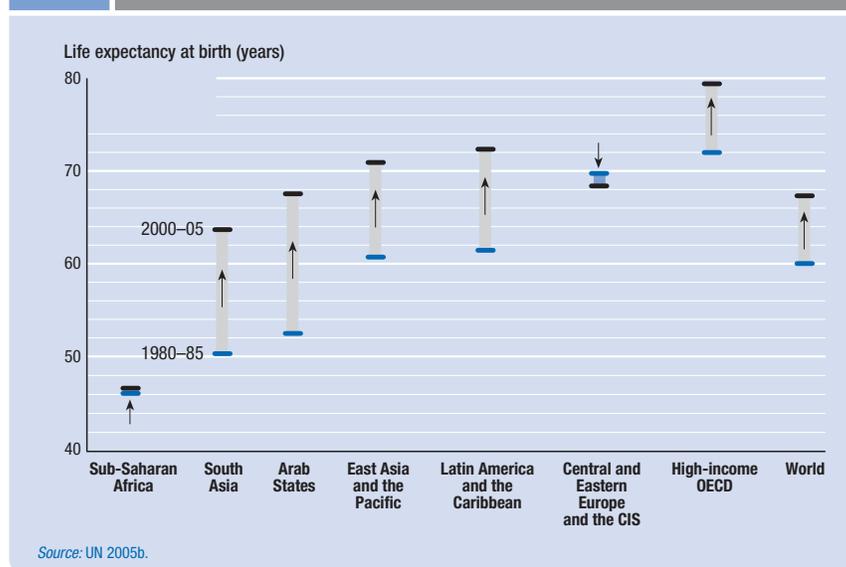


Figure 3 Life expectancy gaps are closing—but there are exceptions



HIV/AIDS has thrown human development into reverse gear across a large group of countries. More than 39 million people are infected with HIV, the virus that causes AIDS, and 3 million died of the disease in 2005 alone. Falling life expectancy has been one of the most visible impacts of HIV/AIDS on the human development index (HDI). Less visible has been the feminization of the disease and the consequences for gender equity.

In Sub-Saharan Africa, the epicentre of the crisis, infection rates have been growing far more rapidly for women than for men (figure 1). Women now account for 57% of HIV infections in the region, and young African women (ages 15–24) are now three times more likely to become infected than men.

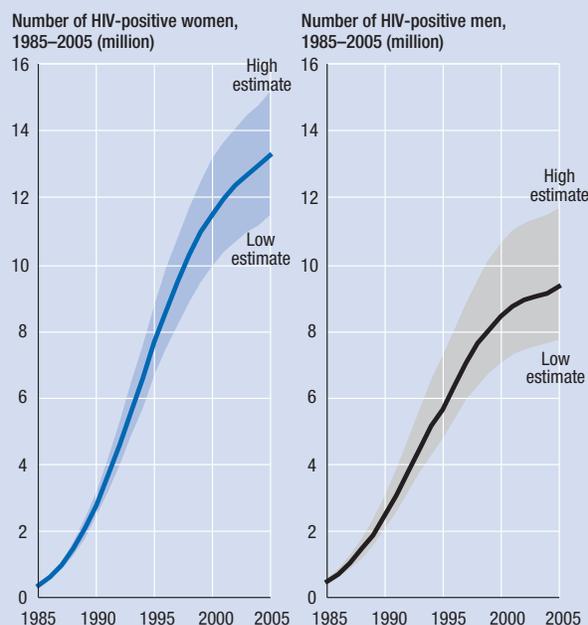
The pandemic is shaping the demographic structure of many African countries. Women have a greater probability of contracting the infection—and are more likely to die from it earlier in life. In Southern Africa this is reversing the standard life expectancy pattern for men and women (figure 2). On current trends average life expectancy in Botswana, Lesotho, South Africa and Swaziland will be two years less for women than for men by 2005–10, compared with seven years more in 1990–95. Part of the gender bias in HIV/AIDS death rates can be traced to early marriage or sexual unions that increase the exposure of young women and girls to risk.

Even so, evidence from 11 countries studied in detail by the Joint United Nations Programme on HIV/AIDS shows a decline in eight countries in the proportion of people having sex before age 15 and an increase in the use of condoms. The figures for treatment are also moving in the right direction: use of antiretroviral drugs in Sub-Saharan Africa expanded from 100,000 people in 2003 to 810,000 at the end of 2005. But only about one person in every six of the 4.7 million in need of treatment now receives it. And coverage rates range broadly—from more than 80% in Botswana to 4% in Angola. South Africa alone accounts for about a quarter of those receiving treatment.

Does gender bias also skew prevention and treatment? The evidence is mixed. Unequal power relationships can disadvantage women and young girls in prevention because they are able to exercise less control over decision-making. Educational disadvantage is also a factor. Because school is an important site for education on HIV/AIDS, gender disparities in school attendance disadvantage girls. Current evidence does not point to systematic bias in treatment. In Ethiopia and Ghana women account for a smaller share of treatment than predicted on the basis of infection rates, but in South Africa and Tanzania they account for a larger share.

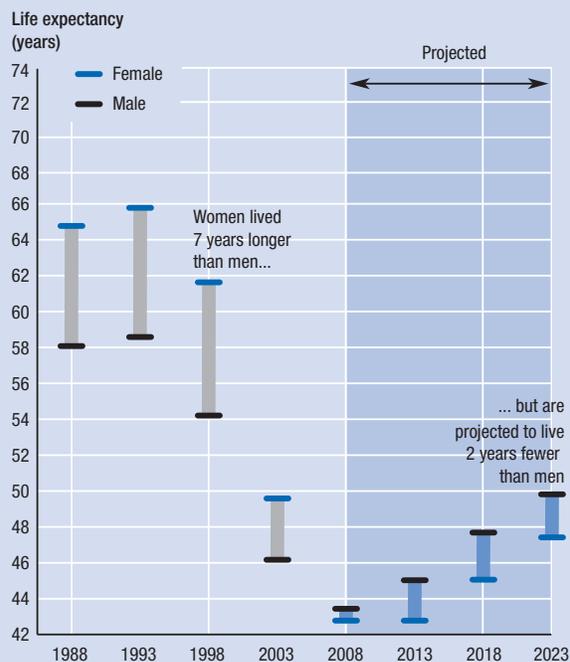
Like men, women in Sub-Saharan Africa suffer from the stigma, fear and weak leadership and inadequate political participation that have held back the development of an effective response to HIV/AIDS in many countries. They also stand to gain if the goal of the Global Fund to Fight AIDS, Malaria and Tuberculosis of providing 10 million people globally with antiretroviral treatment by 2010 is attained. The commitment by the Group of Seven leading industrial countries to provide as close to universal access to treatment as possible by 2010 is important. At the same time national governments should put gender and overcoming gender inequality at the centre of strategies for prevention and treatment.

Figure 1 Sub-Saharan Africa—an increasingly female crisis



Note: Refers to adults ages 15 and older.  
Source: UNAIDS 2006.

Figure 2 Life expectancy—the great gender reversal in Southern Africa



Source: UN 2005b.

reversals are greater than France's after the First World War (see *Human Development Report 2005*). There has also been a reversal in the gender pattern of life expectancy. Across Sub-Saharan Africa women account for a rising share of HIV/AIDS infections—a trend that is dramatically lowering female relative to male life expectancy. Prevention and treatment of HIV/AIDS remain among the most important conditions for a resumption of positive human development trends across much of the region (box 1).

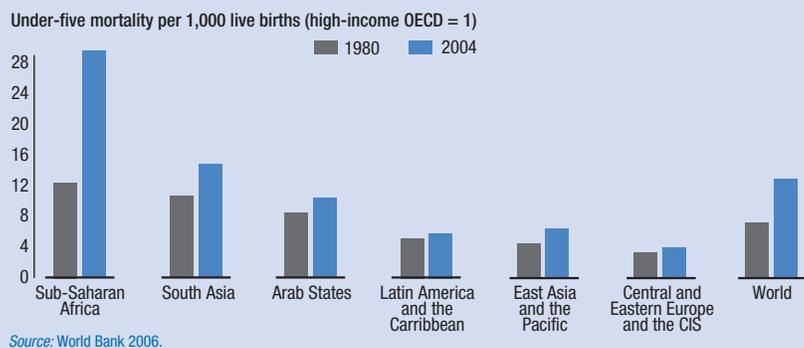
### Child mortality

Survival rates for children are among the most sensitive indicators of human well-being. Here, too, there are some encouraging trends. Child mortality rates are falling: there were 2.1 million fewer deaths in 2004 than in 1990. Survival prospects are improving in all regions (figure 4). Yet the 10.8 million child deaths in 2004 bear testimony to the inequality in the most basic of all life chances—the chance of staying alive. Being born on the wrong street in the global village carries with it a large risk in terms of survival prospects.

For children in much of the developing world the risk differential is increasing. Child death rates in all developing regions are rising when expressed as a multiple of the rate in high-income countries. Moreover, the rate of progress in reducing child mortality has slowed for a large group of countries. Had the rate of progress registered in the 1980s been sustained since then, there would have been 1.5 million fewer child deaths in the world in 2004. The slowdown in the reduction in child mortality rates has implications for the Millennium Development Goals. On current trends the target of cutting overall death rates by two-thirds by 2015 will be missed by some 4.4 million deaths in that year. Only three Sub-Saharan African countries are on track for achieving the goal.

Perhaps more powerfully than any other indicator, child mortality demonstrates that increases in income are not equivalent to improvements in human development. Measured by wealth generation, India is one of the success stories of globalization: its GDP per capita growth has averaged 4% a year since 1990. But

Figure 4 Global divergence in child deaths



the trend rate for reducing child mortality has slowed from 2.9% a year in the 1980s to 2.2% since 1990. While India has outperformed Bangladesh in economic growth and average income, Bangladesh has outperformed India in reducing child death rates, maintaining a rate of decline of 3.45% since 1990. The contrasting fortune of children in India and Bangladesh when assessed on survival prospects points to the limits of wealth as a metric for measuring human development.

### Education

Progress in education is critical for human development in its own right and because of the links to health, equity and empowerment. Here, too, the progress report is one of a glass half empty and half full. Much has been achieved—but large deficits remain.

Illiteracy patterns today are a legacy of education deficits of the past. Since 1990 adult literacy rates have risen from 75% to 82%, reducing the number of illiterate people in the world by 100 million. There has been less progress in gender equity. Women still account for about two-thirds of adult illiteracy—the same as in the 1990s. Net primary enrolment ratios have increased across the developing world, and the gender equity gap in enrolment is shrinking in all regions. Set against this good news, the bad news is that 115 million children are still out of school—and some 62 million of them are girls.

Enrolment differences at the primary level capture an important dimension of progress in education, but only one dimension. In a knowledge-based global economy a good quality primary education is just a first step on a

ladder and not a destination. In this broader perspective the inequality in the distribution of global education opportunities remains daunting. On average a child in Burkina Faso can expect less than 4 years of education, compared with more than 15 in most high-income countries. These large educational inequalities of today are the income and health inequalities of tomorrow. Among the core challenges to be addressed:

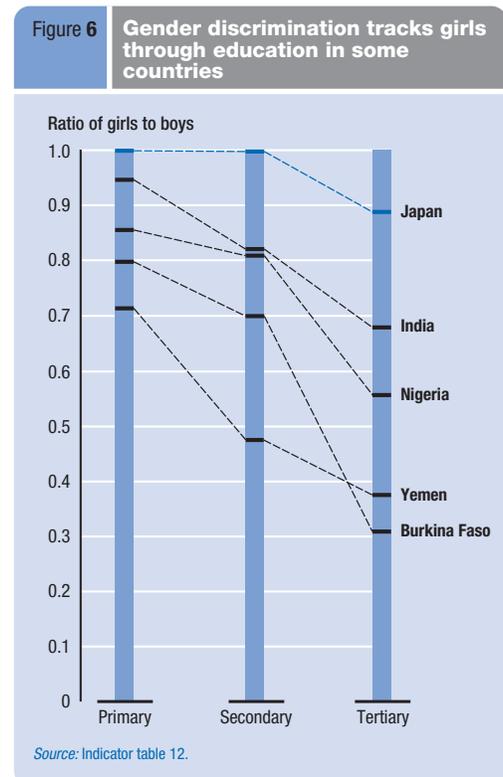
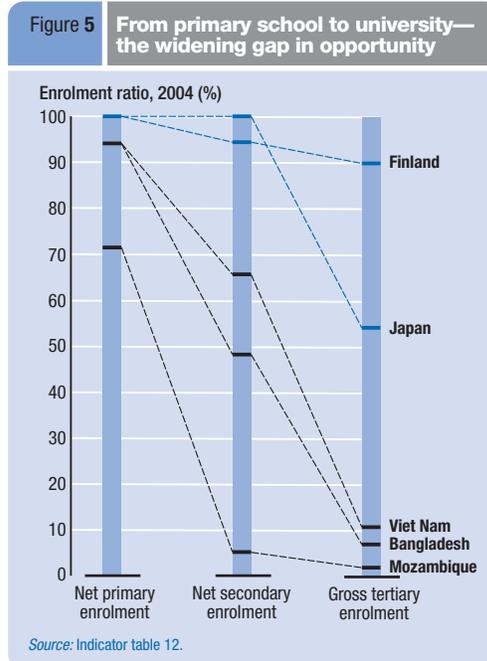
- *The enrolment-completion gap.* Almost one child in five in developing countries drops out before completing primary school. In some cases high enrolment rates mask limited progress towards the acquisition of basic literacy and numeracy skills. In countries such as Chad, Malawi and Rwanda fewer than 40% of the children who enrol in school complete a full primary education cycle.
- *Low rates of transition to secondary school and beyond* (figure 5). In rich countries more than 80% of children who reach the end of primary school continue their studies at a lower secondary level. Over half go on to tertiary education. The picture is very different in Sub-Saharan Africa, where less than half of children make the transition from primary to secondary school. There

are 37 countries with net secondary enrolment rates of less than 40%, 26 of them in Sub-Saharan Africa.

- *High levels of post-primary gender inequality.* While enrolment gaps between girls and boys are narrowing, large disparities remain at secondary and tertiary levels (figure 6). The disparities reflect institutionalized gender discrimination that disadvantages women by restricting their choices and reducing their opportunities for income and employment. Because of the links between maternal education and child health, gender discrimination also holds back progress in child mortality reduction.

### Income poverty and distribution

Income poverty has fallen in all regions since 1990, except in Sub-Saharan Africa. The share of the world's people living on less than \$1 a day has fallen from 28% to 21%, leaving just over 1 billion people below the threshold. High economic growth in China and India has been the most powerful motor for reducing income poverty. Sub-Saharan Africa is the only region that has witnessed an increase both in the



incidence of poverty and in the absolute number of poor. Some 300 million people there—almost half of the region’s population—live on less than \$1 a day.

While the world as a whole is on track for achieving the 2015 target of halving extreme income poverty, Sub-Saharan Africa is off track, as are many countries in other regions. Country-level data indicate that the 2015 goals will be missed by about 380 million people. Such high levels of poverty in a more prosperous global economy reflect the extreme disparities in wealth and the small shares of world income captured by the poor:

- The poorest 20% of the world’s people, roughly corresponding to the population living on less than \$1 a day, account for 1.5% of world income. The poorest 40%, corresponding to the \$2 a day poverty threshold, account for 5% of world income.
- Nine of 10 people in high-income Organisation for Economic Co-operation and Development (OECD) countries are in the top 20% of the global income distribution. At the other end of the scale one person in two in Sub-Saharan Africa is in the poorest 20%—and the region’s share of people in the bottom 20% has more than doubled since 1980 (to 36% of the total).
- Average income for the world as a whole is \$5,533 (PPP)—but 80% of the world lives on less than this average. Global inequality is captured in the large gap between average and median incomes (\$1,700 in 2000).
- The world’s 500 richest people have an income of more than \$100 billion, not taking into account asset wealth. That exceeds the combined incomes of the poorest 416 million. Wealth accumulation at the top of the global income distribution has been more impressive than poverty reduction at the bottom. The 2004 World Wealth Report prepared by Merrill Lynch projects that the financial asset wealth of 7.7 million “high net worth individuals” reached \$28 trillion in 2003, with projected growth to \$41 trillion by 2008.

Globalization has given rise to a protracted debate over the precise direction of trends in

global income distribution. What is sometimes lost sight of is the sheer depth of inequality—and the associated potential for greater equity to accelerate poverty reduction. Measured in 2000 purchasing power parity (PPP) terms, the gap between the incomes of the poorest 20% of the world’s population and the \$1 a day poverty line amounts to about \$300 billion. That figure appears large, but it is less than 2% of the income of the world’s wealthiest 10%. Achieving greater equity in world income distribution through inclusive and broad-based national growth strategies—backed by international action through aid, trade and technology transfer—is one of the keys to bringing the 2015 goals for income poverty within reach.

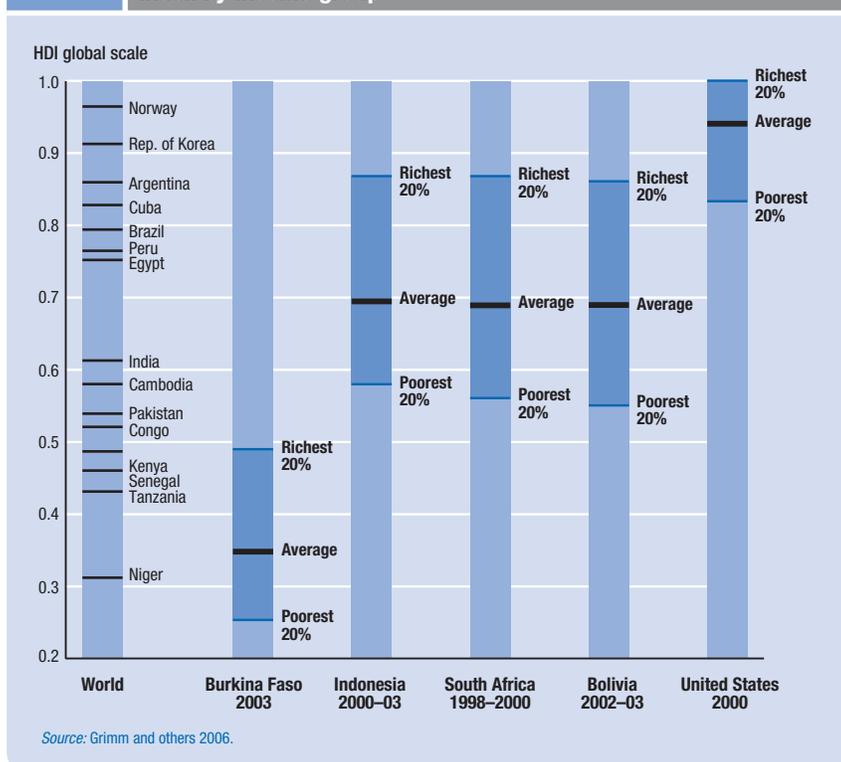
### **Inequality and human development**

The HDI provides a snapshot of average national performance in human development. However, averages can obscure large disparities within countries. Inequalities based on income, wealth, gender, race and other forms of inherited disadvantage, as well as location, can make national averages a misleading indicator for human well-being.

Can the HDI be used to capture inequalities in human development within countries? Research undertaken for this year’s *Human Development Report* addressed this question by attempting to disaggregate national HDI scores by income quintiles. The exercise covered 13 developing countries and two developed countries—Finland and the United States—with sufficient data available.

The construction of HDI scores for different income groups within countries poses technical challenges (see *Technical note 2*). Standardized household income surveys and Demographic and Health Surveys make it possible to generate data for the index at different points in the income distribution. But problems in data availability and comparability make it difficult to construct indexes that are comparable across countries. An added problem is that the data required for the construction of HDI scores by income group are not available for many high-income countries. Despite these problems the construction of

**Figure 7** Same country, different worlds—a human development index by income group



internationally comparable HDI scores based on national income groups has the potential to provide a powerful instrument for understanding the dimensions of capability deprivation.

The HDI by income group points to stark inequalities in human development (figure 7). For Burkina Faso, Madagascar and Zambia the HDI score for the richest 20% is about twice that for the poorest 20%. The observed gaps in Bolivia, Nicaragua and South Africa are also very large. HDI disparities by income between rich and poor in high-income countries are smaller, partly because income differentials translate less emphatically into life expectancy differences and basic education outcome. Even so, the United States displays significant HDI disparities by income group.

Beyond the domestic rankings, cross-country comparisons highlight the inequality of human development:

- The richest 20% of the people in Bolivia have a ranking that would place them in the high human development league, alongside Poland, while the poorest 20% would rank at a level comparable to the average for

Pakistan. The two groups are separated by 97 places on the global HDI ranking. For Nicaragua the HDI gap between the richest and the poorest 20% is 87 places in the global league.

- In South Africa the richest 20% have an HDI rank 101 places above the poorest 20%.
- In Indonesia human development stretches from a level comparable to that of the Czech Republic for the richest 20% to that of Cambodia for the poorest 20%.
- While the richest 20% in the United States (followed by Finland) would top the list of human development achievements, the poorest quintile in the United States achieves only a rank of 50.

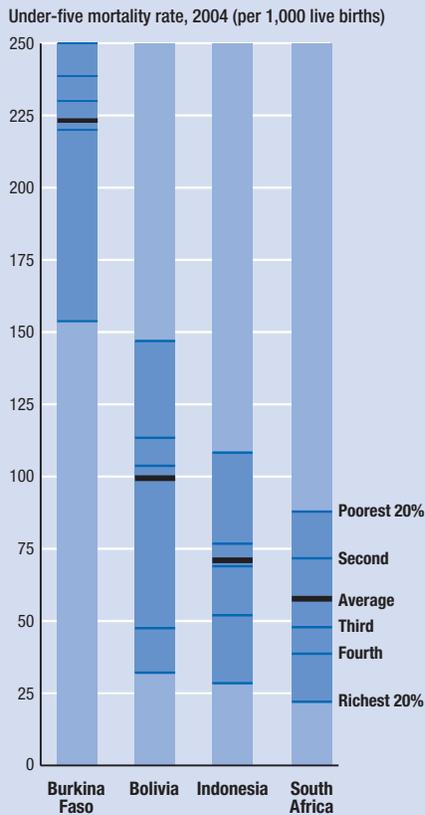
### Behind the HDI inequalities—child mortality and education inequalities

The HDI by income group provides an aggregate indicator of some important dimensions of well-being. Behind it are some very stark inequalities in capabilities and life chances linked to income inequalities. These can be highlighted by reference to household survey data for some of the countries covered by the research exercise.

Children born into the poorest 20% of the income distribution in countries such as Bolivia, Indonesia and South Africa face a risk of dying before their fifth birthday that is about four times higher than for children born into the richest 20% (figure 8). School completion rates also vary, with gender inequalities interacting with wealth-based disparities. Both girls and boys in the poorest 20% of the income distribution in Burkina Faso are far less likely to complete primary school than their high-income counterparts, though the disparity between girls and boys is equally marked (figure 9). These large variations in life chances based on inherited markers for advantage and disadvantage point to the need for public policies that equalize choice and opportunity by extending substantive freedoms.

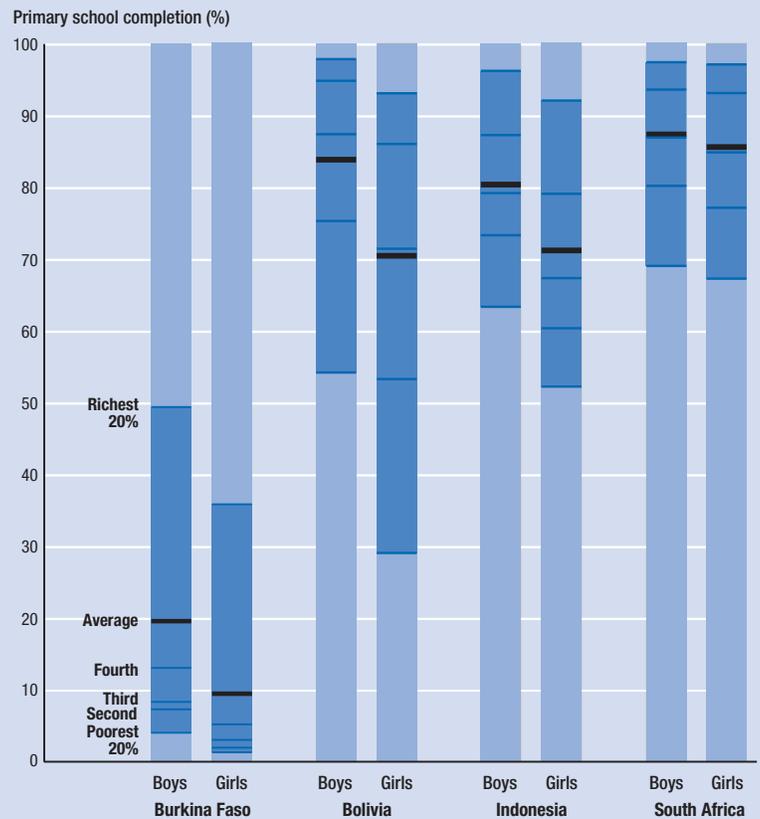
Apart from the moral imperative to overcome extreme disparities in these areas, inequalities have important implications for the Millennium Development Goals. Consider the

**Figure 8** Staying alive—opportunities linked to wealth



Source: Gwatkin and others 2005.

**Figure 9** Opportunities for education are shaped by income and gender



Source: Gwatkin and others 2005.

target of reducing child mortality rates by two-thirds. Poor households, with child death rates that are typically two to three times the national average, account for a disproportionate share of overall child deaths. In Nicaragua and Peru, for example, about 40% of child deaths occur in the poorest 20% of households. Policies to reduce death rates among the poor have the potential to accelerate progress towards the target, though in most countries child mortality inequalities are widening: death rates among the poor are falling on average at less than half the rate among the rich.

Looking beyond household income, disaggregating the HDI can capture inequalities at various levels. In many countries it reveals large differences among regions. Kenya has an HDI that ranges from 0.75 in Nairobi (almost on par with Turkey) to 0.29 in Turkana, a pastoral area in the north of the country (figure 10). If Turkana were a country, it would be off the current HDI scale by a considerable margin, reflecting the region's

recurrent droughts, poor access to health and water infrastructure and high malnutrition rates.

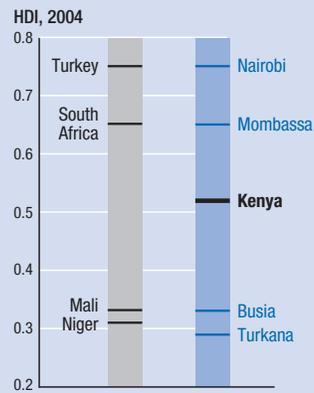
Rural-urban differences interact with regional disparities. In China urban Shanghai would rank 24 in the global HDI league, just above Greece, while rural Guizhou Province would rank alongside Botswana (figure 11).

For some countries the HDI reveals very large inequalities based on group membership. An example is Guatemala, where human development opportunities are heavily skewed against indigenous groups. Q'eqchi have an HDI rank on par with Cameroon and 32 places below the rank for *ladinos* (roughly equivalent to Indonesia) (figure 12).

### Income inequality

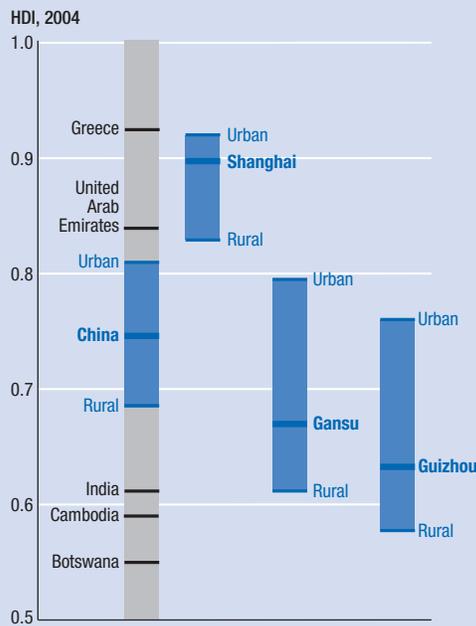
Inequality raises important questions rooted in normative ideas about social justice and fairness in all societies. Because income distribution patterns directly affect opportunities for nutrition, health and education, income inequality

**Figure 10** Wide inequalities in human development between districts in Kenya



Source: UNDP 2005c.

**Figure 11** Rural-urban differences intensify regional disparities in China



Source: UNDP 2005d.

is also intimately related to wider inequalities in capability and in some cases to absolute deprivation.

Regional variations in income inequality are large. The Gini coefficient, a measure of inequality calibrated on a scale from 0 (perfect equality) to 100 (perfect inequality), ranges from 33 in South Asia to 57 in Latin America and to more than 70 in Sub-Saharan Africa.

While caution has to be exercised in cross-regional comparisons, these regional differences are associated with large variations in the income shares of the richest and poorest 20%. They also reflect the gap between average income and median income, which widens with inequality. In a highly unequal country like Mexico the median income is only 51% of the average. For Viet Nam, where income distribution is more equitable, the median rises to 77% of the average.

Why does income distribution matter for poverty reduction? In a mechanical sense the rate of income poverty reduction in a country is a function of two things: the rate of economic growth and the share of any increment in growth captured by the poor. Other things being equal, the larger the share of income captured by the poor, the more efficient the country is in converting growth into poverty reduction. Holding income distribution patterns constant and projecting current growth rates into the future, it would take three decades for the median household in poverty to cross the poverty line in Mexico. Doubling the share of the poor in future income growth would cut this time horizon by half. For Kenya the time horizon would be reduced by 17 years, from 2030 to 2013—a transition that would bring the country within touching distance of an otherwise unattainable Millennium Development Goal target of halving income poverty.

As the examples show, distribution matters because it affects the rate at which economic growth converts into poverty reduction (the growth elasticity of poverty). Thus every 1% increase in growth reduces poverty by about 1.5% in Viet Nam—twice the 0.75% in Mexico. The good news is that extreme inequality is not an immutable fact of life. Over the past five years Brazil, one of the world's most unequal countries, has combined strong economic performance with a decline in income inequality (according to national sources, the Gini index has come down from 56 in 2001 to 54 in 2004) and poverty. Economic growth has created employment and increased real wages. And a large social welfare programme—Bolsa Familia—has provided financial transfers to 7 million

families living in extreme or moderate poverty to support nutrition, health and education, creating benefits today and assets for the future.<sup>4</sup>

Income distribution is not only an issue for developing countries. As underlined by the HDI by income quintiles for the United States, it is also important in some of the world's richest countries. Over the past quarter century the gap between the bottom of the US income distribution and the middle and top has widened dramatically. Between 1980 and 2004 the income of the richest 1% of households (average incomes of more than \$721,000 in 2004) rose 135%. Over the same period real manufacturing wages declined by 1%. The share of national income of the richest 1% doubled to 16% over the same period. In other words, the fruits of the productivity gains that have driven growth in the United States have been heavily skewed towards the wealthiest sections of society.

Does rising inequality restrict opportunity? One way of addressing that question is to measure the influence of the earning power of parents on the future earnings of their offspring. In countries with low inequality—such as Denmark and Norway—parental income explains

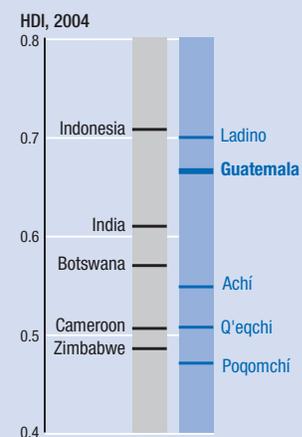
about 20% of the earnings of offspring. For the United States—and for the United Kingdom—that figure rises to more than 50%.

Within any one country high levels of inequality in income and opportunity are a constraint on human development. Apart from their adverse implications for economic dynamism, growth and social cohesion, they limit the conversion of growth into human development. The same applies at a global level, where the increasingly visible divides that separate the haves and the have-nots have become a focal point for discontent. One of the central human development challenges in the decades ahead is to diminish the tolerance for extreme inequalities that have characterized globalization since the early 1990s and to ensure that the rising tide of prosperity extends opportunities for the many, and not just the privileged few.

## Notes

- 1 Aristotle, *Nicomachean Ethics*, book 1, chapter 5.
- 2 Sen 1999, p.3.
- 3 Kennedy 1962, p. 626.
- 4 IBGE 2005.

**Figure 12** Large ethnic differences in HDI in Guatemala



Source: UNDP 2005b.

## Readers guide and notes to tables

The human development indicator tables provide a global assessment of country achievements in different areas of human development. The main tables are organized thematically, as described by the running titles at the top of each table. The tables include data for 175 UN member states—those for which the human development index (HDI) could be calculated—along with Hong Kong, China (SAR), and the Occupied Palestinian Territories. Because of lack of data, an HDI could not be calculated for the remaining 17 UN member countries. Basic human development indicators for these countries are presented in table 1a.

In the tables, countries and areas are ranked by their HDI value. To locate a country in these tables, refer to *Key to countries* on the back cover flap, which lists countries alphabetically with their HDI rank. Most of the data in the tables are for 2004 and are those available to the Human Development Report Office as of 1 August 2006, unless otherwise specified.

### Sources and definitions

The Human Development Report Office is primarily a user, not a producer, of statistics. It relies on international data agencies with the resources and expertise to collect and compile international data on specific statistical indicators. Sources for all data used in compiling the indicator tables are given in short citations at the end of each table. These correspond to full references in *Statistical references*. When an agency provides data that it has collected from another source, both sources are credited in the table notes. But when an agency has built on the work of many other contributors, only that agency is given as the source. The source notes also show the original data components used in

any calculations by the Human Development Report Office to ensure that all calculations can be easily replicated. Indicators for which short, meaningful definitions can be given are included in *Definitions of statistical terms*. Other relevant information appears in the notes at the end of each table. For more detailed technical information about these indicators, please consult the relevant Web sites of the source agencies through the *Human Development Report Web site* at <http://hdr.undp.org/statistics/>.

### Inconsistencies between national and international estimates

When compiling international data series, international data agencies often apply international standards and harmonization procedures to improve comparability across countries. When international data are based on national statistics, as they usually are, national data may need to be adjusted. When data for a country are missing, an international agency may produce an estimate if other relevant information can be used. And because of the difficulties in coordination between national and international data agencies, international data series may not incorporate the most recent national data. All these factors can lead to significant inconsistencies between national and international estimates.

This Report has often brought such inconsistencies to light. When data inconsistencies have arisen, we have helped to link national and international data authorities to address those inconsistencies. In many cases this has led to better statistics in the Report. The Human Development Report Office advocates for improvements in international data, plays an active role in supporting efforts to enhance data quality and works with national agencies and

international bodies to improve data consistency through more systematic reporting and monitoring of data quality.

### Comparability over time

Statistics presented in different editions of the Report may not be comparable, due to revisions to data or changes in methodology. For this reason the Human Development Report Office strongly advises against trend analysis based on data from different editions. HDI values and ranks similarly are not comparable across editions of the Report. For HDI trend analysis based on consistent data and methodology, refer to table 2 (Human development index trends).

### Country classifications

Countries are classified in four ways: by human development level, by income, by major world aggregates and by region (see *Classification of countries*). These designations do not necessarily express a judgement about the development stage of a particular country or area. The term *country* as used in the text and tables refers, as appropriate, to territories or areas.

#### Human development classifications

All countries included in the HDI are classified into one of three clusters by achievement in human development: high human development (with an HDI of 0.800 or above), medium human development (HDI of 0.500–0.799) and low human development (HDI of less than 0.500).

#### Income classifications

All countries are grouped by income using World Bank classifications: high income (gross national income per capita of \$10,066 or more in 2004), middle income (\$826–\$10,065) and low income (\$825 or less).

#### Major world classifications

The three global groups are *developing countries*, *Central and Eastern Europe and the CIS (Commonwealth of Independent States)* and *OECD (Organisation for Economic Co-operation and Development)*. These groups are not mutually

exclusive. (Replacing the OECD group with the high-income OECD group and excluding the Republic of Korea would produce mutually exclusive groups.) Unless otherwise specified, the classification *world* represents the universe of 194 countries and areas covered—192 UN member countries plus Hong Kong, China (SAR), and the Occupied Palestinian Territories.

#### Regional classifications

Developing countries are further classified into regions: Arab States, East Asia and the Pacific, Latin America and the Caribbean (including Mexico), South Asia, Southern Europe and Sub-Saharan Africa. These regional classifications are consistent with the Regional Bureaux of the United Nations Development Programme. An additional classification is *least developed countries*, as defined by the United Nations (UN-OHRLLS 2006).

### Aggregates and growth rates

#### Aggregates

Aggregates for the classifications described above are presented at the end of tables where it is analytically meaningful to do so and data are sufficient. Aggregates that are the total for the classification (such as for population) are indicated by a *T*. All other aggregates are weighted averages.

In general, an aggregate is shown for a country grouping only when data are available for half the countries and represent at least two-thirds of the available weight in that classification. The Human Development Report Office does not fill in missing data for the purpose of aggregation. Therefore, unless otherwise specified, aggregates for each classification represent only the countries for which data are available, refer to the year or period specified and refer only to data from the primary sources listed. Aggregates are not shown where appropriate weighting procedures are unavailable.

Aggregates for indices, growth rates and indicators covering more than one point in time are based only on countries for which data exist for all necessary points in time. When no aggregate is shown for one or more regions,

aggregates are not always shown for the *world* classification, which refers only to the universe of 194 countries and areas.

Aggregates in this Report will not always conform to those in other publications because of differences in country classifications and methodology. Where indicated, aggregates are calculated by the statistical agency providing the data for the indicator.

### Growth rates

Multiyear growth rates are expressed as average annual rates of change. In calculating growth rates, the Human Development Report Office uses only the beginning and end points. Year-to-year growth rates are expressed as annual percentage changes.

### Country notes

Unless otherwise noted, data for China do not include Hong Kong, China (SAR), Macau, China (SAR), or Taiwan Province of China. In most cases data for Eritrea before 1992 are included in the data for Ethiopia. Data for Germany refer to the unified Germany, unless otherwise noted. Data for Indonesia include Timor-Leste through 1999, unless otherwise noted. Data for Jordan refer to the East Bank only. Economic data for Tanzania cover the mainland only. Data for Sudan are often based on information collected from the northern part of the country. While Serbia and Montenegro became two independent states in June 2006, the indicator tables generally report data only for the country of Serbia and Montenegro since disaggregated data were not available at the time of printing. And data for the Republic of Yemen refer to that country from 1990 onward, while data for earlier years refer to aggregated data for the former People's Democratic Republic of Yemen and the former Yemen Arab Republic.

### Symbols

In the absence of the words *annual*, *annual rate* or *growth rate*, a dash between two years, such as in 1995–2000, indicates that the data were collected during one of the years in that period. A slash between two years, such as in 1998/2001, indicates an average for the years

shown unless otherwise specified. The following symbols are used:

- .. Data not available.
- (.) Greater (or less) than zero but small enough that the number would round to zero at the displayed number of decimal points.
- < Less than.
- Not applicable.
- T Total.

### Table 1: about the human development index

The human development index (HDI) is a composite index that 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 and the combined gross enrolment ratio for primary, secondary and tertiary schools; and a decent standard of living, as measured by gross domestic product (GDP) per capita in purchasing power parity (PPP) US dollars. The index is constructed from indicators that are available globally using a methodology that is simple and transparent (see *Technical note 1*).

While the concept of human development is much broader than any single composite index can measure, the HDI offers a powerful alternative to income as a summary measure of human well-being. It provides a useful entry point into the rich information contained in the subsequent indicator tables on different aspects of human development.

### Data availability determines HDI country coverage

The HDI in this Report refers to 2004. It covers 175 UN member countries, along with Hong Kong, China (SAR), and the Occupied Palestinian Territories. Because of a lack of comparable data, 17 UN member countries cannot be included in the HDI this year. Basic human development indicators for these countries are presented in table 1a.

To enable cross-country comparisons, the HDI is, to the extent possible, calculated based

on data from leading international data agencies available at the time the Report was prepared (see *Primary international data sources* below). But for a number of countries data are missing from these agencies for one or more of the four HDI components.

In response to the desire of countries to be included in the HDI table, and in line with the goal of including as many UN member countries as possible, the Human Development Report Office has made special efforts to obtain estimates from other international, regional or national sources when the primary international data agencies lack data for one or two HDI components for a country. In a few cases the Human Development Report Office has produced an estimate. These estimates from sources other than the primary international agencies are clearly documented in the footnotes to table 1. They are of varying quality and reliability and are not presented in other indicator tables showing similar data.

### Primary international data sources

*Life expectancy at birth.* The life expectancy at birth estimates are from the *2004 Revision of World Population Prospects* (UN 2005b), the official source of UN population estimates and projections. They are prepared biannually by the Population Division of the United Nations Department of Economic and Social Affairs using data from national vital registration systems, population censuses and surveys.

In the *2004 Revision* the United Nations Population Division incorporated national data available to it through the end of 2004. For assessing the impact of HIV/AIDS, the latest HIV prevalence estimates available at the time, prepared by the Joint United Nations Programme on HIV/AIDS, are combined with a series of assumptions about the demographic trends and mortality of both infected and noninfected people in each of the 60 countries for which the impact of the disease is explicitly modelled.

These life expectancy estimates are published by the United Nations Population Division with five-year intervals as the reference point. The estimates for 2004 shown in table 1 and those underlying table 2 are annual interpolations based on these five-year data (UN

2005a). For details on the *2004 Revision of World Population Prospects* (UN 2005b), see [www.un.org/esa/population/unpop.htm](http://www.un.org/esa/population/unpop.htm).

*Adult literacy rate.* Data on adult literacy come from national population censuses or household surveys. This Report uses national estimates of adult literacy from the United Nations Educational, Scientific and Cultural Organization (UNESCO) Institute for Statistics (UIS) April 2006 Assessment (UNESCO Institute for Statistics 2006c) and UIS estimates from UNESCO Institute for Statistics (2003). The national estimates, made available through targeted efforts by UIS to collect recent literacy data from countries, are obtained from national censuses or surveys between 2000 and 2005 (with the exception of a few cases referring to 1995–99). The UIS estimates, produced in July 2002, were based mostly on national data collected before 1995. For details on these literacy estimates, see [www.uis.unesco.org](http://www.uis.unesco.org).

Many high-income countries, having attained high levels of literacy, no longer collect basic literacy statistics and thus are not included in the UIS data. In calculating the HDI, a literacy rate of 99.0% is applied for these countries.

In collecting literacy data, many countries estimate the number of literate people based on self-reported data. Some use educational attainment data as a proxy, but measures of school attendance or grade completion may differ. Because definitions and data collection methods vary across countries, literacy estimates should be used with caution.

The UIS, in collaboration with partner agencies, is actively pursuing an alternative methodology for measuring literacy, the Literacy Assessment and Monitoring Programme (LAMP). LAMP seeks to go beyond the current simple categories of literate and illiterate by providing information on a continuum of literacy skills.

*Combined gross enrolment ratio for primary, secondary and tertiary schools.* Gross enrolment ratios are produced by the UIS based on enrolment data collected from national governments (usually from administrative sources) and population data from the United Nations Population

Division's *2004 Revision of World Population Prospects* (UN 2005). The ratios are calculated by dividing the number of students enrolled in all levels of schooling (excluding adult education) by the total population in the official age group corresponding to these levels. The tertiary age group is set to five cohorts immediately following on the end of upper secondary school in all countries.

Though intended as a proxy for educational attainment, combined gross enrolment ratios do not reflect the quality of education outcomes. Even when used to capture access to education opportunities, combined gross enrolment ratios can hide important differences among countries because of differences in the age range corresponding to a level of education and in the duration of education programmes. Grade repetition and dropout rates can also distort the data. Measures such as the mean years of schooling of a population or school life expectancy could more adequately capture education attainment and should ideally supplant the gross enrolment ratio in the HDI. However, such data are not yet regularly available for a sufficient number of countries.

As currently defined, the combined gross enrolment ratio does not take into account students enrolled in other countries. Current data for many smaller countries, for which pursuit of a tertiary education abroad is common, could significantly underrepresent access to education or educational attainment of the population and thus lead to a lower HDI value.

In previous editions data for some countries included adult education, contrary to the preferred definition of the enrolment indicator. The data in this year's Report excludes adult education for these countries, bringing their data into compliance with the standard definition. As a result, enrolment ratios and HDI values for these countries are lower than if adult education had been included.

*GDP per capita (PPP US\$)*. In comparing standards of living across countries, economic statistics must be converted into PPP terms to eliminate differences in national price levels. The GDP per capita (PPP US\$) data for the HDI are provided for 164 countries by the World Bank based on price data from the latest International Com-

parison Program (ICP) surveys and GDP in local currency from national accounts data. The latest round of ICP surveys covered 118 countries. PPPs for these countries are estimated directly by extrapolating from the latest benchmark results. For countries not included in the ICP surveys, estimates are derived through econometric regression. For countries not covered by the World Bank, PPP estimates provided by the Penn World Tables of the University of Pennsylvania (Heston, Summers and Aten 2001, 2002) are used.

Though much progress has been made in recent decades, the current PPP data set suffers from several deficiencies, including lack of universal coverage, of timeliness of the data and of uniformity in the quality of results from different regions and countries. The importance of PPPs in economic analysis underlines the need for improvement in PPP data. A new Millennium Round of the ICP has been established and promises much improved PPP data for economic policy analysis, including international poverty assessment. For details on the ICP and the PPP methodology, see the ICP Web site at [www.worldbank.org/data/icp](http://www.worldbank.org/data/icp).

### Comparisons over time and across editions of the Report

The HDI is an important tool for monitoring long-term trends in human development. To facilitate trend analyses across countries, the HDI is calculated at five-year intervals for the period 1975–2004. These estimates, presented in table 2, are based on a consistent methodology and on comparable trend data available when the Report is prepared.

As international data agencies continually improve their data series, including updating historical data periodically, the year to year changes in the HDI values and rankings across editions of the *Human Development Report* often reflect revisions to data—both specific to a country and relative to other countries—rather than real changes in a country. In addition, occasional changes in country coverage could also affect the HDI ranking of a country, even when consistent methodology is used to calculate the HDI. As a result, a country's HDI rank could drop considerably between two consecutive Reports. But

when comparable, revised data are used to reconstruct the HDI for recent years, the HDI rank and value may actually show an improvement.

For these reasons HDI trend analysis should not be based on data from different editions of the Report. Table 2 provides up-to-date HDI trend data based on consistent data and methodology. For HDI values and ranks recalculated for 2003 (the reference year of the HDI in *Human Development Report 2005*) based on the data sources used for the HDI in this year's Report, please visit <http://hdr.undp.org/statistics>.

### HDI for high human development countries

The HDI in this Report is constructed to compare country achievements across all levels of human development. Thus the indicators chosen are not necessarily those that best differentiate between rich countries. The indicators currently used in the index yield very small differences among the top HDI countries, and thus the top of the HDI ranking often reflects only very small differences in these underlying indicators. For these high-income countries, an alternative index—the human poverty index (shown in table 4)—can better reflect the extent of human deprivation that still exists among the populations of these countries and help direct the focus of public policies.

For further discussions on the use and limitations of the HDI and its component indicators, see <http://hdr.undp.org/statistics>.

### Tables 24 and 25: revisiting the gender-related development index and the gender empowerment measure

In 1995 the *Human Development Report* introduced the gender-related development index (GDI) and the gender empowerment measure (GEM). These measures have since been used as advocacy and monitoring tools for gender-related human development analysis and policy discussions. To mark the 10th anniversary of the GDI and GEM, the Human Development Report Office launched an evaluation of the indices to identify areas for improvement and consider alternative measurement tools for examining gen-

der equity as a key aspect of human development. This section summarizes the main findings from this project and outlines possible changes to the indices. The papers prepared for this project as well as the proceedings of a workshop organized to discuss them were published in a special edition of the *Journal of Human Development*.<sup>1</sup>

### (Mis)interpretation of the GDI

The review concluded that the indices have often been misinterpreted, particularly the GDI. The GDI is not a measure of *gender inequality*. Rather, it is a measure of *human development* that adjusts the human development index (HDI) to penalize for disparities between women and men in the three dimensions of the HDI: a long and healthy life, knowledge and a decent standard of living (as measured by estimated earned income) (see *Technical note 1*).

The method of calculating the GDI implies that it will always have a lower value than the HDI. But a low GDI value can result from disparities in achievements of women and men as well as from low average achievement in any of the dimensions considered in the index despite high levels of gender equity. Conversely, a country can have a relatively high GDI value despite large inequalities between men and women as long as its level of human development is high. To obtain a measure of gender inequality requires comparing the GDI with the HDI, using either the difference or the ratio between the two as an indicator rather than using the GDI alone.

In general, the differences between the HDI and GDI tend to be small. The GDI is on average about 0.6% lower than the HDI. This gives the highly misleading impression that gender gaps are largely irrelevant for human development. The reason for the problem is that the gender gaps in the three dimensions captured tend to be small—and are diminished further by the aversion to inequality formula used in calculating the GDI. As such, very large gender inequalities linked to pay and promotion in employment, and to quality of education, are often not captured in the GDI.

### The GEM—a measure of agency

The GEM was intended to measure women's and men's abilities to participate actively in

economic and political life and their command over economic resources.

In contrast to the GDI, which is concerned with well-being, the GEM focuses on agency. It measures three dimensions in this area: political participation and decision-making power, economic participation and decision-making power, and command over economic resources. Calculation of the GEM, also explained in *Technical note 1*, mirrors that of the GDI. The first two components are calculated using shares of female to male participation to which an inequality aversion penalty is applied. The earned income component, by contrast, incorporates inequality-adjusted income levels.

This has implications for interpreting the index. A poor country cannot achieve a high value for the GEM, even if earned income is equally distributed. Conversely, a rich country might do well in the GEM either because the gender gaps in the three dimensions are low or because the country is rich (which raises its GEM value due to the earnings component).

### Issues raised in the GDI and GEM review

The GDI and GEM review addressed a wide range of analytical and methodological questions. Among the key measurement issues and proposed solutions:

- *Improving the presentation and explanation of the GDI and GEM.* Understanding the conceptual and empirical problems identified here will help readers make more informed use of the two indices. Future *Human Development Reports* will continue to refine and clarify the GDI and GEM.
- *Creating a separate HDI for men and for women to replace the GDI.* A more intuitive way of presenting gender-related differences in the human development indicators would be to create a separate HDI for men and for women. Differences between the two indices might be easier to interpret than the GDI.
- *Tackling problems linked to earned income for men and women.* Because gender disaggregated income figures are not widely available, estimating earned income for men and women is the most problematic issue in the current calculation of the GDI and the GEM. The Human Development Report Office

estimation of male and female earnings is based on the wage ratio in the nonagricultural sector and the labour force participation rate by gender. This approach has serious shortcomings. First, the underlying data are often not available. Second, income transfers within the household often mean that differences in living standards of individual household members are smaller than actual earnings would imply. There are no easy solutions to these problems, though ongoing work has the potential to refine the measurement of gender disparity.

- *Producing a GEM with income shares.* The GEM includes the absolute average level of income in a country, which means that only rich countries can achieve a high GEM score. Considering only the relative income shares of men and women rather than average income levels would remedy this problem.
- *Considering new indicators.* Current indicators do not capture some important dimensions of gender discrimination in human development. One example is care work, which is not reflected in the GDI or GEM, because the focus is exclusively on market work. This is an area in which researchers and the international statistics community could help over time to build and consolidate a more robust data base. Violence against women is another important gap in the indices. While data on violence has improved greatly in recent years, there are serious problems in making cross-country comparisons and measuring trends over time. Because reliable data still exist for only a small number of countries, it is not yet possible to include an indicator on gender-related violence, but the *Human Development Report* will encourage and monitor further development of these data.

Both the GDI and the GEM have stimulated public debate on gender equity. The *Human Development Report* is committed to maintaining that debate. The problems raised by the GDI and GEM review and outlined here will be addressed in future Reports as research progresses.

### Note

- 1 *Journal of Human Development* 7 (2).



# Human development indicators

## Indicator tables

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