Human development is an expansion of the real freedoms of people to pursue lives that they value and have reason to value. The Human Development Index (HDI), launched in 1990, was a pioneering measure that went beyond income to reflect health and education. The 1990 Human Development Report (HDR) recognized that the HDI “captures a few of people’s choices and leaves out many that people may value highly—economic, social and political freedom, and protection against violence, insecurity and discrimination, to name but a few.” This gap has been highlighted in subsequent investigations of well-being.1 Regional and National HDRs have created innovative measures of human development in a wide variety of ways, and a sizeable academic literature has emerged around the HDI and related topics.

To obtain a full picture of the evolution of human development, we must go beyond the dimensions in the HDI. Significant aggregate progress in health, education and income is qualified by high and persistent inequality, unsustainable production patterns and disempowerment of large groups of people around the world. This chapter and chapter 6 review the implications of this broader vision for measuring human development and designing development policies and strategies.

A simple matrix shows how the HDI covers an important core of human development, complemented by the new measures introduced here and presented in the statistical annex (table 5.1). The columns list the components (health, education, material goods, political participation and social cohesion), and the rows list the empirical measures of those components (deprivation, average level, vulnerability and inequality). Environmental sustainability, for example, is captured by vulnerability, which relates to human development prospects and risks. The table displays the areas with advances in measurement this year (stronger colours) and the areas to be pursued in future HDRs.

### Table 5.1 Measuring human development

<table>
<thead>
<tr>
<th>Empirical measure</th>
<th>Components of Human Development</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average level</td>
<td>Health: Human Development Index</td>
</tr>
<tr>
<td></td>
<td>Education: Multidimensional Poverty Index</td>
</tr>
<tr>
<td></td>
<td>Material goods: Inequality-adjusted HDI</td>
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<tr>
<td></td>
<td>Social: Gender Inequality Index</td>
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<tr>
<td>Deprivation</td>
<td>Health: Human Development Index</td>
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<td></td>
<td>Education: Multidimensional Poverty Index</td>
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<td></td>
<td>Material goods: Inequality-adjusted HDI</td>
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<td></td>
<td>Social: Gender Inequality Index</td>
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<tr>
<td>Vulnerability</td>
<td>Health: Human Development Index</td>
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<td></td>
<td>Education: Multidimensional Poverty Index</td>
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<td>Material goods: Inequality-adjusted HDI</td>
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<td>Social: Gender Inequality Index</td>
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<tr>
<td>Inequality</td>
<td>Health: Human Development Index</td>
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<td></td>
<td>Education: Multidimensional Poverty Index</td>
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<td></td>
<td>Material goods: Inequality-adjusted HDI</td>
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<tr>
<td></td>
<td>Social: Gender Inequality Index</td>
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</tbody>
</table>

Source: HDRO based on Pritchett (2010).
Three new multidimensional measures

In the most notable innovations in this 20th anniversary year, we introduce three multidimensional measures of inequality and poverty to the HDR family of measures:

- The Inequality-adjusted HDI (IHDI), estimated for 139 countries, captures the losses in human development due to inequality in health, education and income. Losses in the three dimensions vary across countries, ranging from 1 percent in education (Czech Republic) to 68 percent in income (Namibia), and tend to be largest in low HDI countries.

- The Gender Inequality Index (GII), estimated for 138 countries, reveals gender disparities in reproductive health, empowerment and labour market participation. The losses in these achievements due to gender inequality, as expressed by the GII, range from 17 percent to 85 percent, with larger losses concentrated in the Arab States and South Asia.

- The Multidimensional Poverty Index (MPI) identifies overlapping deprivations suffered by households in health, education and living standards. An estimated one-third of the population in 104 developing countries, or about 1.75 billion people, experience multidimensional poverty. More than half live in South Asia, though rates are highest in Sub-Saharan Africa, with significant variation across regions, groups and indigenous peoples.

As described in box 1.2 in chapter 1, the HDI is a summary aggregate of progress in health, education and income, and improvements are regularly made in its indicators and functional specifications. The reforms reinforce its value and centrality as an approach to thinking about development.

Our approach is informed by the many National HDRs that have expanded methods of analysing human development. Indeed, measurement innovations have been spawned nationally and locally. Most of them are highly context driven and may not be practical or relevant across countries due to data constraints. Even so, these local adaptations provide valuable insights (box 5.1).

Advances in knowledge and data allow for innovations in measuring multidimensional inequality and poverty, which can be applied globally to enable comparisons and provide new insights.

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**Box 5.1 Innovations in measurement: the Human Development Index in action**

Several National Human Development Reports (HDRs) have assessed broader aspects of well-being at the national level by extending and adapting the standard Human Development Index (HDI):

- A Bosnia and Herzegovina report examined social exclusion as a multidimensional concept in the shift from socialism and in the wake of conflict. It measured political participation in elections and civil society, access to services, and extreme and long-term exclusion and found that half the population suffers social exclusion, which disproportionately affects rural residents, the poor, the elderly, young people and children with special needs.

- A Colombia report demonstrated the effects of armed conflict on people’s lives, using data on homicide, displacement, war degradation (crimes committed under conflict circumstances), governability and violence. Drawing on social dialogues with communities across the country, it analysed the underlying causes of conflict and identified enhancing freedoms and addressing inequalities as solutions. It pointed to a range of policies beyond military action to complement high-level peace negotiations.

- A Costa Rica report explored the relationship between citizen insecurity and human development. It introduced new tools to measure citizen insecurity at the district level, including security (especially violence and theft), perceptions of insecurity and individual liberties. It discounted the conventional HDI values and redrew the map of Costa Rica based on broader notions of well-being.

Measuring multidimensional inequality—
the Inequality-adjusted HDI

The HDI presents averages, concealing wide disparities in human development across people in a country. Previous HDR estimates of inequality have been partial (such as income only) or have covered just a few countries (15 in 2006). Building on an innovation in the 2002 Mexico HDR that was recently extended in a Regional HDR for Latin America, this Report constructs the IHDI to be directly comparable to the HDI, reflecting inequality in each dimension of the HDI for a large number of countries. The IHDI has desirable statistical properties for cross-country estimates and enables combining data from different sources—such as health data from life tables and income data from household surveys. A full set of estimates related to the IHDI for all the countries for which data are available is in statistical table 3.

The IHDI takes into account not only a country’s average human development, as measured by health, education and income indicators, but also how it is distributed. We can think of each individual in a society as having a “personal HDI.” If everyone had the same life expectancy, schooling and income, and hence the average societal level of each variable, the HDI for this society would be the same as each personal HDI level and hence the HDI of the “average person.” In practice, of course, there are differences across people, and the average HDI differs from personal HDI levels. The IHDI accounts for inequalities in life expectancy, schooling and income, by “discounting” each dimension’s average value according to its level of inequality. The IHDI will be equal to the HDI when there is no inequality across people, but falls further below the HDI as inequality rises. In this sense, the HDI can be viewed as an index of “potential” human development (or the maximum IHDI that could be achieved if there were no inequality), while the IHDI is the actual level of human development (accounting for inequality). The difference between the HDI and the IHDI measures the “loss” in potential human development due to inequality.

Varying losses in human development due to inequality

We estimate the total loss in human development due to multidimensional inequalities, the loss in each dimension and the effects of inequality on country HDI rank. The average loss in HDI is about 22 percent—ranging from 6 percent (Czech Republic) to 45 percent (Mozambique). More than 80 percent of countries lose more than 10 percent, and almost 40 percent lose more than 25 percent (see statistical table 3).

Generally, countries with less human development have more multidimensional inequality—and thus larger losses in human development—though there is significant variation. Figure 5.1 shows the largest and smallest losses across HDI groups and the patterns of losses. For instance, among the low HDI countries, Mozambique loses more than 45 percent of its HDI value whereas Ghana loses 25 percent. Among the high HDI countries Peru loses 31 percent compared with 8 percent for Ukraine. The highest loss among developed countries is for South Korea, which loses almost 17 percent.

People in Sub-Saharan Africa suffer the largest HDI losses because of substantial inequality across all three dimensions, followed by South Asia and the Arab States (figure 5.2). South Asia shows high inequality in health and education: India’s loss in HDI is 41 percent in education and 31 percent in health. Considerable losses in the Arab States can generally be traced to the unequal distribution of education. Egypt and Morocco, for example, each lose 28 percent of their HDI largely because of inequality in education. In other regions the losses are more directly attributable to inequality in a single dimension.

People in developed countries experience the least inequality in human development. East Asia and the Pacific also does well, particularly in access to healthcare and education, and formerly socialist countries in Europe and
FIGURE 5.1  Inequality has large impacts on human development

Loss in HDI due to multidimensional inequality

Note: Numbers beside bars are percentage loss due to multidimensional inequality (see statistical table 5).
Source: HDRO calculations using data from the HDRO database.

FIGURE 5.2  People in Sub-Saharan Africa, South Asia and Arab States lose most from inequality in human development

Loss in the HDI and its components due to inequality, by region

Note: Numbers inside bars are the percentage share of total losses due to inequality attributable to each HDI component.
Source: HDRO calculations using data from the HDRO database.
Central Asia still have relatively egalitarian distributions across all three dimensions.

By calculating the IHDI at different points in time, changes in different aspects of inequality can be estimated and compared. For example, between 2000 and 2005 Brazil’s HDI losses due to inequality fell from about 31 percent to 28.5 percent, given declines in inequality across all the dimensions, falling by 3 percentage points in health and 2 percentage points in education and income.

Losses often greater in health and education than in income

In more than a third of countries inequality in health, education or both exceeds that in income. The range of loss is from 4 percent (Iceland) to 59 percent (Afghanistan) in health, from 1 percent (Czech Republic) to 50 percent (Yemen) in education and from 4 percent (Azerbaijan) to 68 percent (Namibia) in income.

Both income and nonincome inequality tend to be greater in low HDI countries. The relationship between inequality and the HDI, however, is stronger for inequality in the non-income dimensions than in income (see chapter 3). Overall, there is a negative correlation between achievement and inequality, but with great variation: some countries with below average years of schooling are no less equitable than countries with above average attainment.

Mean years of schooling are far lower in Brazil (7 years) than in South Korea (12 years), but the two countries have similar inequality loss in education (about 26 percent). Countries with similar life expectancy can also have very different inequality—for example, Pakistan (33 percent loss in health), Mongolia (23 percent) and the Russian Federation (12 percent). Inequality in life expectancy at birth is driven mainly by infant and child mortality.

These findings show the value of a truly multidimensional measure of inequality and point to potential policies. Dispersion in health and education is a major challenge for policymakers. For health, programmes are needed to reduce the gap in access to public services—such as vaccination programmes—between the rich and the poor. And, as seen in chapter 2, most schooling is publicly provided, so stronger efforts are needed to promote equitable access.

Limitations of the Inequality-adjusted HDI

The IHDI captures the inequality that the HDI does not measure. But due to data and technical issues, it does not yet capture overlapping inequalities—whether the same people experience one or multiple deprivations. As an experimental series, it will be improved over time in response to feedback and greater data availability.

Measuring gender inequality—the Gender Inequality Index

Gender inequality remains a major barrier to human development. Girls and women have made major strides since 1990, but they have not yet gained gender equity. In this section we review ways to measure and monitor gender inequality, and we extend the methods applied to measuring multidimensional inequality to gender. The GII, introduced as another experimental series, is unique in including educational attainment, economic and political participation and female-specific health issues and in accounting for overlapping inequalities at the national level. It is thus an important advance on existing global measures of gender equity. A full set of GII estimates for all the countries for which data are available is in statistical table 4.

Measures of the disadvantages for women raise awareness of problems, permit monitoring of progress towards gender equity objectives and keep governments accountable. Thanks to collective efforts by governments, civil
Gender inequality remains a major barrier to human development. Girls and women have made major strides since 1990, but they have not yet gained gender equity.

The first global gender indices were launched in the 1995 HDR—the Gender-related Development Index (GDI) and the Gender Empowerment Measure (GEM)—just before the Fourth World Conference on Women, held in Beijing. The GDI considered inequalities by gender in the HDI dimensions. The GEM focused on political participation (measured by women’s shares of parliamentary seats), economic participation (shares of high-level and professional positions) and power over economic resources (income gaps). These two pioneering efforts gained some public visibility, supported by annual reporting, and signalled the importance of collecting and analysing gender-disaggregated data. Both the GDI and the GEM provoked debate about how to construct a valid and reliable gender index.

Critics have noted three key drawbacks of the GDI and GEM.11
- The measures combine absolute and relative achievements. Thus, a country with low absolute income scores poorly, even with perfect gender equity. The GDI adjusts the HDI for gender inequalities, thereby measuring both total achievements and disparities—though it is often misinterpreted as reflecting only the latter.
- Extensive imputations were needed to fill in missing data. For the relative income shares in both indices, more than three-fourths of country estimates were partly imputed. With income the most important driver of the wedge between the HDI and the GDI, this imputation was particularly problematic.
- Nearly all indicators in the GEM arguably reflect a strong urban elite bias and use some indicators more relevant to developed countries.

These problems partly reflect severe data limitations, which still exist, but the GII addresses the key criticisms. It does not rely on imputations. It includes three critical dimensions for women—reproductive health, empowerment and labour market participation. It captures these dimensions in one synthetic index, since joint consideration of empowerment and development reflects important complementarities.12 And none of the underlying measures pertains to a country’s general level of development, so developing countries can perform relatively well if gender disadvantages are limited.

The approach is consistent with that for inequality—comparing two groups, women and men, and considering only inequalities between them, at the country level (see Technical note 3 for more details). Like the IHDI, the GII captures the loss of achievement in key dimensions due to gender inequality. It ranges from 0 (no inequality in the included dimensions) to 1 (complete inequality).

The GII increases when disadvantages across dimensions are associated—that is, the more correlated the disparities between genders across dimensions, the higher the index.13 This recognizes that the dimensions are complementary and that inequality in schooling tends to be correlated with, say, access to work opportunities and maternal mortality.14 Overlapping disadvantages are an important aspect of gender inequality, and capturing them is a major advantage of the GII. This contrasts with the IHDI, for which data limitations impede capturing associations across dimensions. The method also ensures that low achievement in one dimension cannot be totally compensated for by high achievement in another.

**Dimensions and indicators**

Figure 5.3 summarizes the dimensions and indicators of the GII and suggests the huge data limitations in measuring how women and girls fare across the globe. We briefly discuss each in turn.

**Reproductive health**

Two indicators measure women’s reproductive health: the maternal mortality ratio and adolescent fertility rates.15 The well-being...
of women during childbirth is intrinsically important and a clear signal of women's status in society. The risk of death in childbirth is reduced through basic education, adequate nutrition, and access to contraceptives, antenatal health services and skilled attendants at birth. However, such services are still denied to too many women, even though many services are inexpensive.

Countries exhibit enormous variation in maternal mortality ratios, even countries at similar incomes. Iran enjoys a higher per capita income than Costa Rica, but Iran's maternal mortality ratio is 4.5 times Costa Rica's. Indonesia’s per capita income is slightly higher than Mongolia’s, but its maternal mortality ratio is more than 9 times higher. Maternal mortality in the United States is 11 times that of Ireland, the leading country on this front.

Reproduction is not only risky—it often begins too early, compromising health and limiting future opportunities. Early childbearing, as measured by the adolescent fertility rate, is associated with greater health risks for mother and baby and tends to prevent young women from going to school, often destining them to low-skilled jobs at best.16

**Empowerment**

Women have traditionally been disadvantaged in the political arena at all levels of government. To capture this disadvantage, we use the ratio of female to male representatives in parliament. National parliamentary representation, which reflects women’s visibility in political leadership and in society more generally, has been increasing over time—though the global average is still only 16 percent. In 2008 Rwanda’s parliament became the first to have a majority of women.

Higher educational attainment expands women’s freedoms by strengthening their capacity to question, reflect and act on their condition and by increasing their access to information. Educated women are more likely to enjoy satisfying work, participate in public debate, care for their and their family’s health and take other initiatives. We focus on differences in secondary and higher educational attainment.

**Labour market**

Female labour force participation, which includes both the employed and unemployed (actively looking for work) as well as those
Gender roles influence how men and women spend their time. In addition to working in the labour force, many women have the additional burden of care giving and housekeeping, which cut into leisure time and increase stress and exhaustion. While better understanding is emerging of how time use affects well-being, this information is not generally available or regularly collected and thus cannot be included in global measures. Information about the ownership of economic assets by women, either alone or co-owned with a spouse, is crucial; immovable assets are especially important. However, data are not widely available. The Food and Agriculture Organization of the United Nations has a new database on gender and land rights that covers six topics—legal framework, land tenure, international treaties, customary laws, civil society organizations and land use statistics—but for fewer than 100 countries.

Violence against women is sadly very prevalent but not documented in an internationally comparable way. The World Health Organization estimates that the share of women who have experienced physical or sexual violence is as high as 71 percent in some countries.

For participation in decision-making, community-level indicators would be valuable—for example, on representation and leadership, which have become more important in many countries, including India. However, comparable data are available for only a few countries. Data on the gender breakdown of electoral turnout are equally scarce.


**Box 5.2**

**Important gender issues not included due to data constraints**

Other important issues are relevant to women’s well-being, such as time use, access to assets, domestic violence and local-level empowerment, but reliable and timely data are lacking (box 5.2). These concerns must inform renewed efforts to improve the information base to support greater awareness, public discussion and policy-making (chapter 6).

**Figure 5.4**

Large losses due to gender inequality across the HDI spectrum

Loss in achievement due to gender inequality, selected countries

Source: HDRO calculations using data from the HDRO database.
**Tremendous variation in gender inequality**

The GII ranges from 0.17 to 0.85 (reflecting percentage losses in achievement of 17 percent to 85 percent). Figure 5.4 shows the largest and smallest losses by HDI classification. The Netherlands tops the list as the closest to gender equality, followed by Denmark, Sweden and Switzerland. The average GII for the 10 countries closest to gender equality is 0.23. The Netherlands has very low maternal mortality, has among the world’s lowest adolescent fertility rate and is close to parity in educational attainment, political participation and employment. Qatar is the farthest from gender equality among the developed countries, while Saudi Arabia, Iraq and Yemen are farthest from parity in their HDI groups. Burundi emerges as the closest to gender equality among the low HDI countries, as does China among the medium HDI group.

The bottom 10 countries (in descending order) are Cameroon, Côte d’Ivoire, Liberia, Central African Republic, Papua New Guinea, Afghanistan, Mali, Niger, the Democratic Republic of the Congo and Yemen, with an average GII of 0.79. Other countries with high gender inequality are Benin, Malawi, Saudi Arabia and Sierra Leone. Saudi Arabia shows high human development, with a global HDI ranking of 55, an HDI of 0.75 and income per capita of nearly $25,000. However, despite good female educational attainment, women are nearly absent from parliament, and female labour force participation rates are only one-fourth those of men, giving the country a GII value of 0.76 and ranking it 128th of 138 countries.

Regional patterns reveal that reproductive health is the largest contributor to gender inequality around the world (figure 5.5). The Arab States and South Asia are both characterized by relatively weak female empowerment. Women are also affected by unequal labour force participation in the Arab States. Women’s political participation is greater in Sub-Saharan Africa than in the Arab States, Europe and Central Asia, and South Asia, but empowerment is offset by disparities in education. Countries in Europe and Central Asia have few women in parliament, though they are close to parity in educational attainment and employment, and they have low maternal mortality ratios.

More generally, the bottom-ranked countries all have appalling records on multiple dimensions of women’s well-being. For the bottom 20 the average maternal mortality ratio is about 915 deaths per 100,000 live births, and the adolescent fertility rate is 111 births per 1,000 women ages 15–19, both well above the global averages of 273 deaths and 54 births. Moreover, there is only one woman for every eight men in parliament.

The correlation is strong (0.87) between gender inequality and the loss due to inequality in the distribution of the HDI. This suggests that countries with an unequal distribution of human development also experience high inequality between women and men and that countries with high gender inequality also have an unequal distribution of human development (figure 5.6).
Among the countries doing very badly on both fronts are the Central African Republic, Haiti, Mozambique and Namibia, each with losses of more than 40 percent (inequality) and 70 percent (gender). Countries in the middle of the distribution—with inequality loss of about 21 percent and gender loss of about 58 percent—include Mexico and Thailand. Countries doing the best on both fronts—inequality loss of less than 10 percent and gender loss of less than 22 percent—including Denmark, the Netherlands and Sweden.

Limitations of the Gender Inequality Index

The GII is not perfect. Among its shortcomings is the bias towards elites that remains in some indicators (such as parliamentary representation). Even so, the inequality adjustments cast important new light on the position of women in almost 140 countries. Yielding insights on gender gaps in well-being and empowerment, it also underlines the importance of proactive public policy to overcome systemic disadvantages.

Measuring poverty—
the Multidimensional Poverty Index

A focus on deprivation is fundamental to human development. The dimensions of poverty go far beyond inadequate income—to poor health and nutrition, low education and skills, inadequate livelihoods, bad housing conditions, social exclusion and lack of participation. Experienced by people around the world and brought into vivid relief by the fieldwork that informs this Report (box 5.3), poverty is multifaceted and thus multidimensional.

Money-based measures are obviously important, but deprivations in other dimensions and their overlap also need to be considered, especially because households facing multiple deprivations are likely to be in worse situations than income poverty measures suggest.

The MPI is grounded in the capability approach. It includes an array of dimensions from participatory exercises among poor communities and an emerging international consensus. However, because the measure requires that all data pertain to the same household, the options of dimensions for the measure were limited. For example, surveys that collect the information necessary to assess other important dimensions have insufficient data on work, empowerment and consumption. Better data are needed in such core areas as informal work, empowerment, safety from violence, and human relationships (social capital and respect)—a theme we revisit in chapter 6.

The MPI, simple and policy relevant, complements monetary-based methods by taking a broader approach. It identifies overlapping deprivations at the household level across the same three dimensions as the HDI and shows the average number of poor people and deprivations with which poor households contend.
full set of estimates related to the MPI for all the countries for which data are publicly available is in statistical table 5.

This new measure replaces the Human Poverty Index (HPI), published since 1997. Pioneering in its day, the HPI used country averages to reflect aggregate deprivations in health, education and standard of living. It could not identify specific individuals, households or larger groups of people as jointly deprived. The MPI addresses this shortcoming by capturing how many people experience overlapping deprivations and how many deprivations they face on average. It can be broken down by dimension to show how the composition of multidimensional poverty changes in incidence and intensity for different regions, ethnic groups and so on—with useful implications for policy.

Overall patterns of multidimensional poverty

The MPI is the product of the multidimensional poverty headcount (the share of people who are multidimensionally poor) and the average number of deprivations each multidimensionally poor household experiences (the intensity of their poverty). It has three dimensions mirroring the HDI—health, education and living standards—which are reflected in 10 indicators, each with equal weight within its dimension (figure 5.7). A household is multidimensionally poor if it is deprived in at least two to six indicators (the cut-off depends on the weight of the specific indicator in the overall measure; see Technical note 4). The cut-offs are austere, reflecting acute deprivations, and most are linked to the Millennium Development Goals.

Immediately apparent is that the MPI is most appropriate for less developed countries. It captures the widespread deprivations in South Asia and Sub-Saharan Africa and in the poorest Latin American countries. It reveals the magnitude of poverty beyond monetary measures—an important accomplishment. In short, it helps capture and vividly convey overlapping deprivations—building on international consensus, captured in the Millennium Development Goals, about the

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**Box 5.3 Poverty: views from the ground in Indonesia, Kenya and Madagascar**

Jiyem, 70, lives near Jenar in Indonesia, with her husband, son, daughter-in-law and grandchild. Jiyem’s husband, Djojo, is blind and cannot work. Her son, Paninyo, has a mental disability and works as a harvester, earning about $1.10 a day. Jiyem used to work on a farm, but now she just collects the remains of the rice harvests, which brings her no money but provides some food. No member of Jiyem’s household has completed primary school. They are deprived in several indicators of standard of living—they have a dirt floor and no electricity, running water or adequate cooking fuel—as well as in nutrition.

Salome, 30 years old, lives with her husband and six daughters in the Lunga Lunga slum in Nairobi. Her husband can work only when jobs are available in the surrounding industry park, which is not often. She cannot work because she has to take care of their children, but she earns a little money from other households by delivering water. The family has no electricity, running water or adequate sanitation facilities. Salome has given birth to seven children, one of whom passed away a few years ago at 4 months of age. Merah, 6 years old, should already be enrolled in school with her older sisters, but Salome and her husband cannot afford the registration fee of 300 Ksh ($54). The other children range in age from 3 months to 14 years. Salome and her husband sometimes cannot provide meals for the family, so they rely on other community members. “I am worried about not being able to feed my children,” she says. Salome’s household is deprived in health, education and standard of living.

Lydia, 35, lives in Mararinotoa, one of the poorest districts of Antananarivo, Madagascar. She lives in a small makeshift cabin, with a dirt floor and no water or electricity, built by her brother on a plot of land that she rents for $2.30 a month. A single parent since her husband left four years ago, Lydia lives with her four children and one grandchild. She earns $0.31–$0.63 a day by selling salvaged garbage, such as plastic bottles, cans, shoes and rags. On a typical day she rises at 5 a.m. to secure a stall in the market to sell the goods she salvages. She then goes home to have breakfast with her children, usually coffee and sometimes some bread, before returning to her stall. Hasina, her eldest daughter, does household chores while Lydia works. The family’s main meal is dinner; they usually buy lunch only on holidays. Her youngest children, ages 4 and 6, also collect scrap metal for resale or beg in order to buy food. Lydia’s household is deprived in several standard of living indicators—they have a dirt floor and no electricity, toilet or running water—as well as in education and nutrition.

Source: Field studies conducted as part of Human Development Report background research; see Alkire and Santos (2010).
dimensions of serious, and indeed unacceptable, disadvantage.

In sum, we estimate that about a third of the population in 104 countries, or almost 1.75 billion people, experience multidimensional poverty. For example, they might live in a household that has a member who is undernourished, that has experienced a child death or that has no member with five years of education and no school-age children who are enrolled in school. Or they might live in a household deprived of cooking fuel, sanitation facilities, water, electricity, floor and assets.

Today, the most widely used measure of poverty is income poverty, using either a national poverty line or an international standard. Preliminary analysis suggests that the MPI captures overlapping but still distinct aspects of poverty. Plotting the national headcounts of those who are income poor (using the $1.25 a day poverty line) against those who are multidimensionally poor shows that in most countries—including China, Sri Lanka, Tanzania and Uzbekistan—the headcount rate for income poverty is higher than that for multidimensional poverty. In general, the lower the national HDI, the more likely that multidimensional poverty exceeds income poverty.

Our aggregate estimate of 1.75 billion multidimensionally poor people exceeds the 1.44 billion people estimated to be living on less than $1.25 a day in the same countries, but it is below the 2.6 billion people estimated to be living on less than $2 a day. For most countries the estimates differ, for several reasons. First, the measures capture different concepts, so they would not be expected to fully converge. Second, in many developing countries income and consumption are difficult to measure, especially because of the size of the informal sector and home-produced consumption. Third, in some countries the resources measured by the MPI are provided free or at low cost; in others, they are out of reach even for working people—hence we see that countries with relatively good access to services have
An MPI that is significantly lower than monetary-based estimates—for example, Sri Lanka, Tanzania and Uzbekistan. This is not the case in countries such as Ethiopia and Niger, where deprivations beyond inadequate income are even worse. Moreover, at the individual and household levels people have different abilities to convert income into nutrition or education gains—for example, in households where there are people with disabilities or special needs. The MPI is thus intended to complement monetary measures of poverty, including $1.25 a day estimates. The relationship between these measures, as well as their policy implications and methodological improvement, are priorities for further research.

How are the multidimensional poverty headcount and its intensity related? The relationship is surprisingly consistent: countries with higher multidimensional poverty headcounts tend to have more deprivations (figure 5.9). At the same time, interesting outliers emerge—countries with a low poverty headcount but high intensity of poverty (such as Myanmar, Philippines and Viet Nam) and countries with a high headcount but low intensity of poverty (such as Bangladesh, Cambodia and the Democratic Republic of the Congo).

### Multidimensional poverty by region and country

The regional rates of multidimensional poverty vary from around 3 percent in Europe and Central Asia to 65 percent in Sub-Saharan Africa. South Asia is home to the largest number of people living in multidimensional poverty, followed by Sub-Saharan Africa (figure 5.10).

- Sub-Saharan Africa has the highest incidence of multidimensional poverty, with considerable variation across the 37 African countries in our sample—from a low of 3 percent in South Africa to a massive 93 percent in Niger—while the average...
share of deprivations ranges from about 45 percent (in Gabon, Lesotho and Swaziland) to 69 percent (in Niger). In Guinea, Mali and Niger more than half the population is poor and has experienced a child death. In those countries as well as Burkina Faso, Burundi, Ethiopia and Mozambique more than half the population is poor and lives in a household where no one has completed primary school.

- Eight Indian states, with poverty as acute as the 26 poorest African countries, are home to 421 million multidimensionally poor people, more than the 410 million people living in those African countries combined. Thus, the MPI starkly exposes the intensity and incidence of multidimensional poverty in South Asia as greater than in any other region.

- In most of East Asia and the Pacific, including China and Thailand, rates of multidimensional poverty are relatively low. But more than half of Cambodians are estimated to be multidimensionally poor,
mostly because of a lack of electricity, sanitation and cooking fuel.

- In Latin America and the Caribbean multidimensional poverty affects from 2 percent of the population (Uruguay) to 57 percent (Haiti, even before the devastating earthquake in 2010).
- The Arab States constitute a highly heterogeneous group of countries. The incidence of multidimensional poverty is generally below 7 percent—for example, the United Arab Emirates and Tunisia—but the rate rises to more than 14 percent in Iraq, to 28 percent in Morocco and 29 percent in Djibouti, and up to 52 percent in Yemen and 81 percent in Somalia.
- In Europe and Central Asia the levels of poverty estimated with the MPI are very low. The rates are close to zero in several countries, with the higher rates—5–7 percent—in Azerbaijan, Estonia, Kyrgyzstan and Turkey and the highest estimated rate, 17 percent, in Tajikistan. These figures reflect the limitations of using the austere MPI thresholds in countries that have fairly good access to basic services and should not be taken to imply that hardship does not exist in Europe and Central Asia.

Within-country variation is of great policy interest. In India Delhi’s rate of multidimensional poverty is close to Iraq’s and Viet Nam’s (about 14 percent), while the state of Bihar’s is similar to Sierra Leone’s and Guinea’s (about 81 percent). Figure 5.11 shows a decomposition in Kenya by province, and within the poorest and central provinces by urban and rural areas, relative to selected countries. Nairobi’s MPI is slightly higher than Brazil’s, while that for northeastern rural Kenya is worse than that of Niger, the poorest country in the sample.

Poverty can be investigated by ethnicity, religious affiliation and caste. Mexico’s national multidimensional poverty measure, launched in 2009, highlighted poverty among indigenous peoples (see box 6.4 in chapter 6). In Bolivia poverty was 27 percent among Mestizos, but 1.6 times higher among the indigenous Quechua. In India 81 percent of people of Scheduled Tribes are multidimensionally poor, alongside 66 percent of those of Scheduled Castes and 58 percent of those of Other Backward Castes. About a third of other Indian households are multidimensionally poor, with an MPI just below that of Honduras.

**Limitations of the Multidimensional Poverty Index**

Like the GII, the MPI has some drawbacks, due mainly to data constraints. First, the indicators include both outputs (such as years of schooling) and inputs (such as cooking fuel) as well as one stock indicator (child mortality, which could reflect a death that was recent or long ago), because flow data are not available for all dimensions. Second, the health data are relatively weak or have poor coverage, especially for nutrition, though the patterns that emerge are plausible and familiar. Third, in some cases careful judgements were needed...
to address missing data. But to be considered multidimensionally poor, households must be deprived in at least six standard of living indicators or in three standard of living indicators and one health or education indicator. This requirement makes the MPI less sensitive to minor inaccuracies. Fourth, as is well known, intrahousehold inequalities may be severe, but these could not be reflected. Fifth, while the MPI goes well beyond a headcount to include the intensity of poverty experienced, it does not measure inequality among the poor. Finally, the estimates presented here are based on publicly available data and cover various years between 2000 and 2008, which limits direct cross-country comparability.

Among the medium HDI group (Thailand, transition economies and some richer Latin American countries), the deprivations measured by the MPI are much less prevalent. But the low reported MPIs in these countries do not imply that there is no real poverty. While not well captured by the MPI, we know from the field and from complementary sources—including monetary-based estimates of poverty—that the suffering of poor people in these countries is real and that multidimensional inequality is often large.

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This year’s Report advances the measurement agenda for human development. Building on many years of research and critiques, it introduces new measures for multidimensional inequality—overall and by gender—and for poverty. It underlines the fundamental robustness of the HDI while introducing carefully conceived refinements. With the surge of interest in alternative measures of well-being, the HDI is assuming even greater prominence. It will remain a pillar of the HDR. Despite improvements in data availability and quality since 1990, huge gaps and shortcomings remain. Still lacking are good summary measures of critical aspects of well-being—most notably, empowerment. And more conceptual and empirical work is needed to bring the environmental sustainability and human development measurement agendas together. We return to these challenges in the forward-looking agenda outlined in chapter 6.