Chapter 2 considers poverty in monetary terms. Using income or the monetary value of consumption as a basis for defining the poor is appealing on several grounds. It allows for different preferences in purchases, the definition of a poverty threshold in “objective” ways (such as the cost of a minimum-calorie diet), and aggregation across domains (the value of food and non-food consumed).

Yet, income fails to provide a complete picture of well-being for several reasons. First, many aspects of well-being are not just difficult to price but valuable in ways that cannot be monetized (Sandel 2012; Sen 1985). For example, commoditizing the right to vote by allowing people to sell it would yield a market value of voting rights that would not capture the full meaning and value of the right as an expression of citizenship and political participation. The list of difficult-to-monetize aspects of well-being is long, including the ability to read and write, longevity and good health, security, political freedoms, social acceptance and status, and the ability to move and connect.

Second, the benefit of income can be limited when it interacts with other conditions. The benefits of a bicycle as a means of transport, for example, are quite different for an able-bodied and a handicapped person. Such resources are instrumentally valuable; they have no intrinsic value. Relying on their monetary valuation as a measure of well-being can therefore be misleading.

Third, income measures are at the household level, which assumes the equal distribution of income across household members. Yet intrahousehold inequalities in the distribution of household income across household members can be substantial (Chiappori and Meghir 2015; see box 4.3 in chapter 4). Direct information on individuals avoids this strong assumption.

This chapter briefly reviews how the capability approach motivates a nonmonetary multidimensional perspective on poverty. It then assesses Africa’s progress in literacy and education, life expectancy and health, freedom from violence, and self-determination (freedom to decide). It devotes special attention to displaced and disabled people, two vulnerable groups that are rarely covered in standard poverty reports (because of data limitations). Finally, it considers the four dimensions of well-being jointly, in order to...
identify countries and individuals that are deprived in multiple dimensions.

**The Capability Approach**

Sen (1980, 1985, 1999) proposes the capability approach as an alternative to monetary measures of poverty. This approach focuses on what people effectively do and are (their functionings) and on the capacity of people to freely choose and achieve these functionings (that is, their capability) rather than on the commodities bought or consumed. There is broad consensus that functionings such as the ability to read and write and being well nourished, healthy, and free from violence and oppression are vital for human development. They are ontological needs (stemming from the condition of being human) that apply to every person regardless of geographic location or time (Max-Neef, Elizalde, and Hopenhayn 1991). Focusing on individual achievements in these areas thus provides a good basis to begin assessing poverty from a nonmonetary perspective.

Education, health, and security also expand the choices people can make and the range of things they can do and be (that is, their capabilities). But they are not sufficient. Social and political institutions often impede self-realization. Basic personal and political freedoms are equally essential. To appreciate the importance of opportunity and choice for assessing well-being, consider two people, both teachers. One chooses teaching from among a range of occupational options. The other becomes a teacher because other, preferred options are excluded because of cultural constraints (engineering is closed to women) or location (engineering jobs are not available in remote villages) or because someone else chose the profession for her (Foster 2011). Can they be considered equally well off? Clearly, personal autonomy and self-determination (freedom to decide) matter for well-being. The study of outcomes should not be indifferent to the process by which the choice was made.

The capability approach provides the philosophical underpinnings for the nonmonetary perspective on poverty examined in this chapter. Sen’s vision of capabilities and functionings also underlies the rich and vibrant literature on multidimensional poverty (Alkire 2008; Bourguignon and Chakravarty 2003; Robeyns 2005; Sen 1999).

Using the capability approach to measure well-being is challenging. There are some common approaches to measuring certain basic functionings, such as the ability to read and write, adequate nourishment, and good health, even though measurement issues remain here as well (de Walque and Filmer 2012; UNESCO 2015). There is much less experience in measuring other functionings (including mobility, social integration, and even the capacity to aspire) and in measuring capability. An added complexity is determining thresholds below which a person is considered poor, as these cutoffs arguably depend on the individual’s choices and preferences. Finally, there is the challenge of aggregation. For example, how much poorer should a person be considered when deprived in several functionings compared to when deprived in only one?

The human development index (HDI) and the multidimensional poverty index (MPI) (Alkire and Santos 2014) are applications of the capability approach to assessing progress in societies. Both indexes focus on achievements in education, longevity/health, and living standards (through income and assets). The approach pursued in this chapter is in this tradition, though with a different emphasis in three areas.

First, to provide a more comprehensive view of people’s basic capabilities, the chapter considers two additional dimensions: freedom from violence and the opportunity for self-determination (freedom to decide). Poverty analyses have largely ignored these dimensions.

Second, the degree of joint deprivation is explored by estimating the share of people deprived in one, two, and more dimensions. This approach achieves a middle ground between a single index of poverty (which requires weighting achievements in the various dimensions) and a dashboard approach (which simply lists achievements dimension by dimension, ignoring jointness in deprivation) (Ferreira and Lugo 2013).
Third, the focus is on outcomes measured at the individual (not the household) level. Where data on outcomes are not available, information on inputs (such as use of bednets and vaccination rates in lieu of disease prevalence measures) and proximate measures (such as governance indicators for freedom to decide) are used.

Data on nonmonetary dimensions of poverty are now much more widely and more regularly available than they once were, including at the individual level. This follows the rapid expansion and public availability of the Demographic and Health Surveys (DHS), as well as the Africa-wide and globally comparable national opinion surveys, such as the Afrobarometer, the Gallup World Poll, and the World Value Surveys. These data enable the much wider dimensional and more individualistic scope of this chapter. Some of the concerns regarding data availability, comparability, and quality highlighted in the context of the expenditure surveys apply here as well, however. Their implications are discussed throughout the chapter where relevant.

There has also been an upsurge in the availability and use of subjective measures of well-being and poverty, such as measures based on ordinal questions about happiness or life satisfaction (box 3.1). Given the lack of a common frame of reference, which makes it difficult to compare across people and time, these measures are not used here to assess poverty.

**BOX 3.1 How useful are subjective data in monitoring poverty?**

Subjective measures of well-being reflect utility as a mental state (happiness) or as a cognitive reflection of the condition of one’s life. Unlike income measures of poverty, they do not rely on prices or monetary valuations, although they include both monetary and nonmonetary dimensions of well-being. These measures are based on the personal evaluation of individuals themselves, reflecting the value attached to individual sovereignty. Being one-dimensional, they facilitate complete orderings.

Answers to subjective well-being questions, such as questions based on ordinal questions about happiness, economic welfare, or life satisfaction, are intuitive and not time consuming to collect. They confirm that many dimensions beyond income and material consumption—health, job market status, the quality of relations and social interactions, and even political rights and freedom of speech (Frey and Stutzer 2002)—matter and that happiness and life satisfaction increase with income at a declining pace (or not at all beyond a certain level of income), according to the Easterlin paradox (Easterlin 1974), though the existence of this paradox remains debated [Stevenson and Wolfers 2008].

One challenge with subjective well-being is the lack of a common frame of reference. As individuals adapt their tastes and aspirations to their circumstances, intrapersonal comparisons over time and interpersonal comparisons become difficult. Adaptation of happiness standards and aspirations—lowering them when conditions go awry and raising them when conditions improve—are pervasive worldwide. Countries with higher rates of HIV prevalence, for example, do not systematically report lower life satisfaction (Deaton 2008); people who lose limbs still record good well-being scores (Loewenstein and Ubel 2008; Oswald and Powdthavee 2008).

The subjective well-being approach also does not adjust for individual tastes or aspirations. This could lead to paradoxical policy actions, such as redistribution from poor happy subsistence farmers to unhappy millionaires. Subjective well-being data may therefore not yet be appropriate to monitor living standards. They do, however, contain important complementary information about people’s preferences that could help inform policy makers about how to value public goods or weight nonmonetary dimensions of well-being (Decanq, Fleurbaey, and Schokkaert 2015) or set the poverty line (Ravallion 2012). As the capability approach emphasizes, personal preferences and choices cannot be ignored in assessing an individual’s level of poverty and well-being. How to use questions about subjective well-being to learn about those aspects of people’s preferences that policymakers want to take on board is an important research agenda.
Levels of and Trends in Well-Being

Education and Literacy

Education can expand people’s capabilities. It helps people access and digest information and knowledge. Doing so requires at a minimum being literate. The focus here is mainly on adult literacy rates: the percentage of adults who can, with understanding, read and write a short, simple statement about their everyday lives.

Adult literacy rates evolve slowly in the absence of effective large-scale adult education programs, because their evolution is influenced mainly by the literacy levels of younger cohorts. Current school enrollment rates and test scores are therefore also considered, to assess how adult literacy is likely to evolve.

Africa’s literacy rate stood at 58 percent in 2012: more than two in five Africans cannot read or write a short sentence (figure 3.1 and box 3.2). There has been progress, but it has been slow. Between 1995 and 2012, the literacy level in the region increased by 4 percentage points, despite a rapid increase in primary enrollment rates since 2000. This change compares unfavorably with the 17 percentage point increase in South Asia and in the Middle East and North Africa and the 10 percentage point increase in East Asia and Pacific, where the literacy rate is approaching 93 percent.

This low average for Africa masks substantial variation within the region. More than half the population is illiterate in seven countries, almost all of them in West Africa (figure 3.2). Niger (with an adult literacy rate of only 15 percent) and Guinea (where the rate is just 25 percent) have the lowest literacy levels in Africa. At the other extreme, literacy levels exceed 90 percent in Equatorial Guinea and South Africa, and they exceed 70 percent in some poor and fragile countries as well, such as Eritrea and Zimbabwe.

The gender literacy gap remains high, averaging about 25 percentage points, although gender parity in education is one of the Millennium Development Goals on which Africa has performed best. Gender parity in literacy is especially low in West Africa (figure 3.3).

**FIGURE 3.1** Africa’s literacy rate is the lowest in the world

Source: EDSTAT data.

Note: The adult literacy rate is the percent of the population 15 and older that can, with understanding, read and write a short, simple statement about their everyday lives. Missing years were inter- or extrapolated.
This gap partly accounts for the low levels of overall adult literacy there. Gender parity is much higher in Southern Africa. The ratio of literate women to literate men is only 0.32 in Guinea and 0.38 in Niger. In contrast, women are more likely to be literate than men in Lesotho (1.34) and Namibia (1.08).

What traits of households and countries explain the gender gap in literacy? Overall, female illiteracy rates are substantially higher in low-income countries than in higher-income countries (by about 32 percentage points in upper-middle-income and high-income countries and about 14 percentage points in low-middle-income countries) (figure 3.4). In resource-rich countries, however, illiteracy rates are about 3 percentage points higher than in resource-poor countries (irrespective of the country’s income level, landlockedness, or fragility), indicating that governance factors matter. Women in poor rural households are 36 percent more likely
to be illiterate than their urban counterparts in richer households. Literacy is positively correlated with being divorced, widowed, or single (20 percent less likely to be illiterate). Illiteracy is much lower among younger people, holding hope for gender parity and overall literacy levels.

Progress has been slow despite the rapid increase in gross primary school enrollment, which rose from 75 percent in 1995 to 106 percent in 2012. Even in Kenya 20 percent of sixth graders could not read for meaning. Among francophone countries in the region, 55 percent of fifth graders did not reach the minimum performance threshold, and half of them performed at or below the level expected from random guessing. Scores for numeracy skills and mathematics are equally poor.

**Life Expectancy, Health, and Nutrition**

A widely used measure of the ability to live a long and healthy life is life expectancy at birth. It provides a comprehensive reflection of the various factors that affect health and mortality. A more refined measure is healthy life expectancy, the number of years a newborn can expect to live in full health. Life expectancy and mortality indicators are estimated for a population (usually at the country level). In contrast, nutrition (and disability) indicators provide individual views of health status.

**Life expectancy.** Over the past decade, Africa experienced a massive increase in life expectancy: babies born in 2013 are expected to live 6.2 years longer than babies born in 2000 (figure 3.6). The change makes the region one of the strongest recent performers in the world, above South Asia, where life expectancy increased by 6.0 years since 1995. This progress follows directly from the rapid decline in under-five mortality rates in the region.

Even so, at 57 years, life expectancy in the region remains well below the average rate for the world (70.9 years). At the current annual rate of increase, it will take about two decades to reach the levels in South Asia (almost 67 in 2013), which lags other regions by several years.

Healthy life expectancy in Africa was 49 years in 2012, 8 years less than total life expectancy (WHO 2015). The gender gap favors women: in 2012 African women could expect to live 1.6 years longer in good health than men. As with literacy, the differences in healthy life expectancy across countries are significant, ranging from 39 to

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**FIGURE 3.2 Literacy rates are lowest in West Africa**

Source: EDSTAT data.
Note: Figures cover only countries for which a survey was conducted in 2010–12. Missing years were inter- or extrapolated. Africa average is population-weighted.
FIGURE 3.3  The gender gap in literacy varies widely across Africa

Source: EDSTAT data. Africa average is population-weighted.

FIGURE 3.4  Illiteracy is higher among poorer people, older people, rural dwellers, and people in resource-rich and landlocked countries

Source: Data from Demographic and Health Surveys 2005–13.
Note: Results are from ordinary least square regression. All estimated coefficients are statistically significant.
Many sixth graders in Africa lack basic reading skills

Sources: Hungi and others 2010; World Bank estimates based on PASEC data. Note: SACMEQ = Southern Africa Consortium for Measuring Educational Quality. PASEC = Programme d’Analyse des Systèmes Educatifs de la CONFEMEN. SAQMEC and PASEC statistic are the country averages.

Life expectancy in Africa is rising, but it remains the lowest in the world

Source: World Development Indicators.

67 years (figure 3.7). Many of the countries in which healthy life expectancy is shortest are fragile or conflict-affected states. Healthy life expectancy is also low in some of Africa’s oil giants, such as Angola and Nigeria. Among the top performers in 2012 are the island economies (Cabo Verde, Mauritius, and the Seychelles), which recorded healthy life expectancies of more than 60 years. Some countries saw very little change in healthy life expectancy between 2000 and 2012 (South Africa saw no change at all). Other countries—including some that were in conflict in the 1990s, such as Eritrea and Rwanda (15 years) and Ethiopia (11 years)—recorded significant improvements.

Healthy life expectancy is related to four key variables: country income, natural resources, fragility, and landlockedness. There are clear signs of a resource curse in terms of longevity (literacy is also inversely correlated with natural resource endowment) (figure 3.8): on average people born
in resource-rich countries have life spans that are 4.5 years shorter than people born in non-resource-rich countries (a difference of about 10 percent), after controlling for income level, fragility, and landlockedness. People in upper-middle-income and high-income countries can expect to live in good health 6.5 years longer than people in low-income countries, after controlling for the other country traits. People in coastal countries also have higher healthy life expectancy.

**Under-five mortality and HIV prevalence.** Two mortality indicators are significant drivers of changes in life expectancy in Africa: under-five mortality rates and HIV prevalence rates. For every 10 additional children per 1,000 live births surviving to the age of five, life expectancy increased by 0.7 years; for every percentage point increase in HIV prevalence, life expectancy decreased by 1 year. These two factors alone explain more than three-quarters of the variation in life expectancy in the region (under-five mortality explains 50 percentage points and HIV
partly as a result of the expanded use of insecticide-treated bednets. Many more children still die annually from malaria than from measles, tetanus, and pertussis together, however (figure 3.9). The risk of a child under five dying from malaria is low in Southern Africa (excluding Malawi and Zambia), partly because of climatic conditions. It exceeds 20 deaths per 1,000 live births in Angola (21), Nigeria (24), Guinea and Sierra Leone (27), Chad (28), and the Central African Republic (35).

The second-most important disease holding back Africa’s life expectancy is HIV/AIDS. In 2012, 1.1 million people in the region died of AIDS—almost four times as many as in the rest of the world combined (about 300,000). The continent’s HIV prevalence rate peaked at 5.8 percent in 2002, declining to 4.5 percent in 2013 (World Development Indicators).

Southern Africa has been especially hard hit by HIV/AIDS. At least 10 percent of 15- to 49-year-olds there are HIV-positive (10.3 percent in Malawi, 10.8 in Mozambique,
19.1 in South Africa, 21.9 percent in Botswana, 22.9 percent in Lesotho, and 27.4 percent in Swaziland). Prevalence rates of 5–7 percent are observed in East Africa (Kenya, Tanzania, and Uganda) (map 3.1). Despite substantial progress and the increased availability of better treatment options, HIV/AIDS will continue to hold back life expectancy in a number of countries, especially in Southern but also in East Africa.

**Nutrition.** A healthy life is also reflected in good nutritional status, commonly measured by assessing height and weight. For adults the body mass index (BMI)—the ratio of weight to height—is often used. Very low BMIs are indicative of undernourishment; high BMI is how obesity is often defined. Systematic BMI measures are not available for men. Among women in Africa, 13 percent are underweight and 5 percent are obese (population-weighted averages from Demographic and Health Surveys 2006–12).

Underweight is less common in middle-income countries and more prevalent in

**MAP 3.1 HIV prevalence remains very high in Southern Africa**
fragile states and, especially, resource-rich countries (where it is 3.7 percentage points higher than for non-resource-rich countries) (figure 3.10). This finding holds even after controlling for other country and household features, suggesting that policy choices underpin this poor health outcome in resource-rich countries. Malnutrition is more prevalent among poor households (by 3.2 percentage points) and in rural areas (by 1.6 percentage points). It declines with education. Widows, divorcées, and single women are at significantly greater risk than married women of being undernourished (by 2.7 percentage points). The role of marital status in women’s health capabilities is an under-appreciated aspect of well-being in Africa and highlights the importance of indicators of individual well-being (van de Walle and Milazzo 2015).

Trends in obesity suggest that poor nutritional habits are accompanying rising incomes. The condition is most prevalent among highly-educated women, women in urban settings, and women in middle-income countries. Based on an extrapolation of the data shown in figure 3.10, the total number of obese adults in Africa (both men and women) is estimated at 26.7 million. The figure is likely to reach epidemic proportions in the near future, presenting Africa with a new health challenge (Popkin 2001; Ziraba, Fotso, and Ochako 2009).

The prevalence of stunting has been declining across Africa. It fell from 44.6 percent in 1995 to 38.6 percent in 2012 (DHS 2015). Unlike in Asia, where there is a strong cultural preference for boys, who are therefore better fed, in Africa boys under five are more malnourished than girls (39.5 percent compared with 35.2 percent). This difference largely reflects biological differences in health and survival between boys and girls (Kraemer 2000; Waldron 1983). If this biological disadvantage is not offset by cultural preferences for boys (as in Asia), higher malnutrition rates among boys result (Wamani and others 2007).

The prevalence of stunting is high in Burundi (57 percent), Madagascar (50 percent), and Africa’s most populous countries—Nigeria (37 percent), Ethiopia (44 percent), and the Democratic Republic of Congo (42 percent). Only two countries (Gabon and Senegal) register rates under 20 percent. The overall level of development of a country matters for child nutrition, though other factors are likely even more important (Harttgen, Klasen, and Vollmer 2013). Children born to educated women enjoy chances of proper growth development that are 9.9 percentage points higher (for secondary education) and 19.8 percentage points higher (for higher education). Children in poor, rural households with undernourished mothers are 20 percent more likely to be stunted. Everything else equal, being born in a fragile or resource-rich country also reduces one’s chances of proper early childhood growth. A continued focus on increasing education among women will have dramatic and long-lasting effects on Africa’s human capabilities.

Physical impairment and disability also deprive people of opportunities (capabilities) and the ability to do and be what they value (their functionings) (Mitra 2006). As a group, the disabled are typically either undersampled or poorly identified in representative surveys and as a result often understudied. From a sample of seven countries across Africa on which comparable data are available, it appears that almost 1 working-age adult in 10 in Africa suffers from a disability, defined as reporting severe difficulties in moving about, concentrating, remembering, seeing or recognizing people across the road (while wearing glasses), or taking care of themselves (figure 3.11). The prevalence of disability ranges from 5.3 percent in Kenya.
FIGURE 3.10 Many factors contribute to underweight and obesity in African women

Source: Data from Demographic and Health Surveys, 2005–13.

Note: Results are from ordinary least squares regression of an indicator variable of an adult woman being underweight (1 if the body mass index is less than 18.5, 0 otherwise) or overweight (1 if the body mass index is more than 30, 0 otherwise). Sample includes nonpregnant women who did not give birth in the three months before the interview. All estimated coefficients (except on Fragile) are statistically significant.
to 13.0 percent in Malawi. The numbers are higher among women (10.6 percent) than men (7.3 percent). They are also higher in rural areas (9.9 percent) than urban areas (6.9 percent). Disability prevalence rates in Africa are similar to the average rates in the Asian and Latin American countries examined by Mitra, Posărac, and Vick (2013).

**Freedom from Violence**

The ability to live free from violence affects people’s survival, dignity, and daily life. Insecurity significantly reduces the choices a person can make regarding what to do and who to be (capabilities).

Afrobarometer data from 2010–12 indicate that insecurity is pervasive in Africa. In these surveys, 12 percent of respondents indicate that either they or a family member had been physically attacked at least once during the past year. Fifty-three percent indicated that they feared political intimidation or violence at least once during election campaigns; 40 percent indicated that they or a family member had felt unsafe at least once while walking in the neighborhood during the past year; and 33 percent report that they or a family member had feared crime in their home at least once in the past year.

**Freedom from political violence.** After years of multiple large-scale conflicts in the 1990s, Africa enjoyed a period of relative peace during the first decade of the 21st century (map 3.2). Between 1997 and 2014, the number of violent events against civilians more than quadrupled, reaching more than 4,000 in 2014. The number of victims per event declined (from 20 during the late 1990s to 4 in 2014), however, reflecting the changing nature of the events. The more conventional conflicts and civil wars of the 1990s (in Angola, Liberia, Mozambique, Rwanda, and Sierra Leone) have receded in scale and intensity, but election-related violence, extremism, terror attacks, drug trafficking, maritime piracy, and criminality have been growing. Wars are increasingly being fought by armed insurgents on the periphery of factionalized and militarily weak states, such as the Arab and Tuareg uprisings in Mali and Boko Haram in Nigeria. West Africa has emerged as a key transit point in the trafficking of narcotics between Latin America and Europe, and piracy has expanded in the Gulf of Guinea.

In addition to undermining the basic functioning of being secure, conflict also affects many of the other functionings and opportunities that are critical to self-determination. It affects not only the people directly affected but also the broader population inside and outside the country (by, for example, creating internally displaced persons and refugees [box 3.3]). Countries suffering more than 100 casualties in a year experience a decline in economic growth of 2.3 percent. These effects can be long-lasting. Annual economic growth in Burundi has hovered around 4 percent since the civil war ended in the early 2000s. But panel data indicate that the share of households that reported being (monetarily) poor rose from 21 percent in 1993 (before the civil war) to 46 percent in 1998 (during civil war) and 64 percent in 2007 (several years after the end of the civil war).
Conflict has also held back progress toward reducing under-five mortality and increasing life expectancy (figure 3.12). Freedom from domestic violence. Physical and sexual violence (and the threat of such violence) at home are negatively associated with health outcomes, empowerment, employment trajectories, and the ability to engage in productive activities (Campbell 2002; Coker, Smith, and Fadden 2005; Duflo 2012; MacQuarrie, Winter, and Kishor 2013; Nyamayemombe and others 2010; Stöckl, Heise, and Watts 2012; Vyas 2013; Wayack, Gnoumou, and Kaboré 2013). The effects also extend well beyond the direct victims. Children’s health and educational achievements are impeded, and social norms that condone violence perpetuate it (Rico and others 2011). A child whose mother experienced domestic violence is more likely to become a victim or a perpetrator of such violence later in life (Kishor and Johnson 2004). The incidence of and attitudes toward domestic violence may also reflect broader social norms toward violence and gender roles.

Domestic violence affects more than 700 million women across the world. Africa and South Asia have the largest shares of women in partnerships who have been victims of domestic violence—an astounding 40 percent in Africa and 43 percent in South Asia (World Bank 2014). North America has the lowest share (21 percent).

Acceptance of domestic violence is measured by attitudes reported by women toward domestic violence. Women are considered accepting of domestic violence if they respond that husbands are justified in beating their wives if the wives do any of the following: go out without telling the husband, neglect the children, argue with the husband, refuse to have sex, or overcook food. Between 2000–06 and 2007–13, acceptance of domestic violence by women in Africa declined by almost 10 percentage points (figure 3.13); the incidence of domestic violence, which is...
correlated with acceptance, also fell. Acceptance of domestic violence in the region is still exceptionally high, however (30 percent), more than twice the average in the rest of the developing world (14 percent) (figure 3.14).

Both the levels of and changes in acceptance of violence vary widely across countries. Women’s acceptance of domestic violence is deeply engrained in some countries (77 percent acceptance rates in Mali and Uganda); in
others, only small minorities accept domestic violence (13 percent in Malawi, 16 percent in Benin) (figure 3.15). Declining acceptance does not always translate into declining incidence, however. In Malawi, for example, while acceptance decreased 13 percentage points, incidence rose almost 1 percentage point. In Mali incidence increased 8 percent, but there was no change in acceptance rates.

Acceptance of domestic violence is much greater among women in resource-rich (16 percent) and fragile (9 percent) countries (controlling for other country traits) (figure 3.16). Surprisingly, tolerance of violence
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is also greater among younger women; it declines with age, possibly because its incidence rises (domestic violence is more common in the 20–35 age group than among the 15–19 age group). Tolerance of violence fell by 1.7 percent a year between 2000 and 2013 and the incidence of violence fell by 0.6 percent, but no broad generational shift in mindset has yet occurred.

A main distinguishing factor in acceptance is education. Better-educated women are 31 percent less likely to be tolerant of domestic violence than women with no education, and women with secondary education are 16 percent less likely to be tolerant. Education is not associated with a lower incidence of domestic violence, however. In fact, women with primary and secondary education are more than 10 percent more likely to have experienced domestic violence than uneducated women, among whom incidence rates are similar to rates among women with higher education.

Income reduces tolerance of domestic violence, especially in upper-middle-income and high-income countries and the richest segments within countries. Women in the richest quintile are 7.1 percent less likely than women in the poorest quintile to be tolerant of domestic violence. The incidence of domestic violence is just 3.9 percent lower, however. Africa’s upper-middle-income and high-income countries have higher rates of domestic violence (despite lower acceptance rates) than poorer countries. After controlling for age, educational attainment, and income, there is no discernable difference between rural and urban areas.

Freedom to Decide

The second critical dimension of the capability approach is the ability to shape one’s life—that is, to determine what one values. This dimension concerns opportunities. A woman who cannot leave her house without her husband’s permission or who has no say about her own health is not free to determine her choices in life. Homosexuals who are afraid of revealing their sexual orientation for fear of persecution are constrained in their life choices.

People gain access to a broader set of opportunities if they can participate in the processes that affect their lives and are allowed to make their own choices. These choices are often politically and socially constrained.
FIGURE 3.16  Acceptance and incidence of domestic violence are greater among younger women and women in resource-rich and fragile states; acceptance is also higher among uneducated women, but not incidence

<table>
<thead>
<tr>
<th>Category</th>
<th>Acceptance of domestic violence</th>
<th>Incidence of domestic violence</th>
</tr>
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<tbody>
<tr>
<td>Upper-middle and high income compared with low income</td>
<td>-7.6</td>
<td>7.2</td>
</tr>
<tr>
<td>Low-middle income compared with low income</td>
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<td>-10</td>
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<td>Landlocked compared with coastal</td>
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<td>Resource-rich compared with resource-poor</td>
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<td>Change per additional children born</td>
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<td>No longer living together or separated compared with never married</td>
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<td>Widowed compared with never married</td>
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</tr>
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</tr>
<tr>
<td>Richer</td>
<td>-1.6</td>
<td>-1.3</td>
</tr>
<tr>
<td>Middle</td>
<td>0.6</td>
<td>-0.3</td>
</tr>
<tr>
<td>Poorer</td>
<td>0.6</td>
<td>-0.5</td>
</tr>
<tr>
<td>Age group compared with age group 15–19</td>
<td></td>
<td></td>
</tr>
<tr>
<td>45–49</td>
<td>-13.7</td>
<td>-3.1</td>
</tr>
<tr>
<td>40–44</td>
<td>-12.1</td>
<td>-1.3</td>
</tr>
<tr>
<td>35–39</td>
<td>-10.8</td>
<td>-0.1</td>
</tr>
<tr>
<td>30–34</td>
<td>-9.1</td>
<td>2.6</td>
</tr>
<tr>
<td>25–29</td>
<td>-7</td>
<td>4.6</td>
</tr>
<tr>
<td>20–24</td>
<td>-3.3</td>
<td>4.5</td>
</tr>
</tbody>
</table>

Source: Data from Demographic and Health Surveys, 2000–13. Note: Results are from ordinary least squares regressions. All estimated coefficients are statistically significant except coefficients on divorced in acceptance of domestic violence and age 35–39 and poorer and middle-income quintiles in incidence of domestic violence.
This dimension is not so much about democracy per se but about the degree to which political systems give people voice and participation in the processes that affect their lives at all levels of society. It is about not only political freedom and participation but also social norms and the freedom to decide about routine matters in life, including within the household. Constraints can be based on gender, religion, ethnicity, sexual orientation, or other reasons.

Indicators that measure freedom to decide are often not available, particularly at the individual level. We draw on three measures: a country-level measure of voice and accountability, as a broad indicator of enabling the expression of voice; exposure to mass media, as an indicator of access to information to inform decisions; and the extent to which women have control over decision making in various domains of living.

The Worldwide Governance Indicators (WGI) project scores countries in terms of voice and accountability. It captures perceptions of the extent to which a country’s population is able to participate in selecting the government and enjoy freedom of expression, freedom of association, and a free media.

WGI scores range from −2.5 to 2.5 units in a normal standard distribution.

The WGI data indicate that perceptions of political constraints have not changed much worldwide in the past few years, although there was a slight improvement in Africa, albeit from low levels (figure 3.17). The region is doing better than the Middle East and North Africa and East Asia and Pacific.

Improvements have been especially noteworthy in West Africa (Burkina Faso, Ghana, Liberia, Niger, and Nigeria) (figure 3.18). Countries that experienced a large decline in their voice and accountability scores include the Central African Republic, Eritrea, Gabon, and Madagascar. The results for country groupings are consistent with the findings about education, health, and violence. Countries that are resource rich or fragile are less well off than countries that are not (by −0.5 units each), and upper-middle-income and high-income countries score 0.6 points higher than low-income countries, controlling for other country traits. The WGI findings are highly correlated with the findings of the Afrobarometer.8 There is no systematic difference in perceptions of political freedoms by gender and area of residence (rural or urban).

The second measure of freedom to decide reflects the ability to make informed decisions. Access to media provides an important source of information, and educational attainment helps people digest the information and act on it.

Almost 40 percent of Africans do not regularly listen to the radio, watch television, or read a newspaper at least once a week (figure 3.19). Exposure to the media is lower in Africa than in the rest of the developing world (excluding China), where only 25 percent of the population lacks regular media exposure. African countries with high media exposure (more than 80 percent of the population exposed) include Gabon, Ghana, and Kenya. Media exposure is typically lower around the Sahel, in many of the coastal countries of West Africa, and in Africa’s populous countries (the Democratic Republic of Congo and Ethiopia), where only about 40 percent of the population have regular access to the media. There is also an important gender gap. On
average media access is 15 percentage points lower among women than men (54 percent versus 69 percent). Poverty, rural residence, and lack of education are key differentiators. Media access is also 6 percent lower in resource-rich countries and 5 percent lower in fragile states. Increased use of cellphones can partly substitute for traditional media (Aker and Mbiti 2010).

The third set of indicators of freedom to decide are measures of decision making in the lives of women from household surveys.
The share of husbands who have the final say in decisions regarding their wives’ health care is 21 percent in the Middle East and North Africa, 39 percent in South Asia, and 46 percent in Africa. Women’s participation in their own health care decisions tends to be lower among younger women, women in poor and rural households, and women in resource-rich and landlocked countries (figure 3.20). It is greater in fragile states. That
such participation increases with age is consistent with the trends in women’s attitudes toward domestic violence.

The final decision on whether a married woman can visit friends or family lies with the husband alone in 40 percent of African households, compared with 33 percent in the rest of the developing world. Control over a women’s earnings lies fully with someone else in only 10 percent of households. Overall, the general trend in Africa is toward greater participation of women in household decision-making processes.

**Multiple Deprivation**

Thus far this chapter has examined the region’s well-being by assessing progress on each functioning and capability separately. Using a dashboard approach (listing achievements by dimension) instead of aggregating the measures into an index avoids having to assign weights to different dimensions.\(^9\) It also allows researchers to draw on different datasets. It does not require a measure of several dimensions of poverty (for the same individual or household) simultaneously. From a practical perspective, policies typically aim to address shortcomings in a particular dimension (education, health care, the incidence of violence). The gains from combining scores across dimensions to obtain a complete ranking may be limited.

These advantages come at the expense of being able to assess the extent to which people suffer multiple deprivations. People suffering in different dimensions are arguably worse off than people suffering in one dimension. Omission of valuable dimensions underestimates their poverty, especially when dimensions are poorly correlated (that is, when they are poor substitutes or poor complements).\(^10\) In addition, the deprivation associated with simultaneous deprivation in two dimensions may well be worse than twice the deprivation associated with each of them. As a result, country rankings may differ when simultaneity in deprivations is considered. Consider, for example, two countries with 20 people. In Country A, 10 people are illiterate and the other 10 are in poor health. In Country B, 10 people are both illiterate and in poor health and the other 10 are literate and healthy. Under the dashboard approach, which considers poverty dimension by dimension, both countries are equally poor (10 people are deprived in each dimension). But because the deprivation associated with simultaneous deprivation in two dimensions may be worse than the sum of the deprivations associated with each of them, the case could be made that B is poorer. The dashboard approach ignores jointness in deprivation.

Important insights regarding the degree of interdependency can be obtained by counting the number of dimensions in which an individual is deprived and calculating the shares of the population deprived in a given number of dimensions (Ferreira and Lugo 2013). This counting approach does not require that weights be imposed on dimensions or that the degree to which deprivations are substitutable be determined (Atkinson 2003). This approach is akin to the MPI proposed by Alkire and Foster (2011), but it does not impose a number of deprivations to qualify as poor. By capturing the essence of the interest in multidimensional poverty, it provides a middle ground between the dashboard approach (Ravallion 2011), which ignores jointness in deprivation, and the scalar MPI, which assigns a minimum number of deprivations for a person to qualify as poor (Alkire and Foster 2011; Decancq and Lugo 2013).

Measuring multidimensional deprivation requires information on each dimension for the same individual. To look at Africa wide patterns, such information is available only for women of reproductive age from 25 countries covered in the DHS. Proxy indicators for the four dimensions are used (box 3.4). Considering each dimension separately (as in the dashboard approach), about one adult woman in two is illiterate (56 percent), exposed to violence (54 percent), or insufficiently empowered (51 percent), and about one in seven (14 percent) is undernourished. For the four dimensions considered here, the
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average woman suffers 1.75 deprivations (56 + 54 + 51 + 14 = 175/100).

Does everyone suffer equally, or is deprivation concentrated among a subset of the population? Under a perfectly equal distribution of deprivations, everyone would be deprived in 1.75 dimensions. Under perfect concentration (or full inequality), all deprivations would be concentrated within a single group: 43.7 percent (175/4) of the population would suffer in each of these four dimensions, while the remaining 56.3 percent would be deprivation free. The larger the share of people suffering in three or more dimensions, the more concentrated is the deprivation.

Deprivation among African women is widespread: more than four women in five (86 percent) are deprived in at least one dimension; only 14 percent are free of deprivation (figure 3.21). Multiple deprivation characterizes a sizable group of women: almost one woman in three is poor in three or four dimensions; 55 percent suffer in one or two dimensions. Deprivation is widespread, but for a sizable group it is also highly concentrated: about one-third of women realize only one functioning or none at all.

Multiple deprivations and the concentration of deprivation are more common among women with less wealth: 42 percent of asset-poor women versus 18 percent of non-asset-poor women are deprived in at least three dimensions.

To measure deprivation in multiple dimensions, we use data from the Demographic and Health Surveys (DHS) on 25 countries, covering 72 percent of the population of Africa. We focus on the four areas of deprivation discussed earlier. Illiteracy is defined as being unable to read a full sentence, being blind, or having no reading card for the required language. More than half (56 percent) of women in the sample countries are illiterate.

Women are classified as deprived in health if they are undernourished (BMI below 18.5). There is no direct information on life expectancy. The correlation coefficient between country life expectancy and the proportion of undernourished women is 0.3.

Women’s attitudes toward domestic violence are used as an indicator of physical security. Across countries, social norms toward domestic violence and the incidence of casualties from political violence are correlated (the correlation coefficient is 0.4). Freedom to decide is measured by an indicator capturing lack of frequent media exposure (not using at least one media channel [newspaper, television, radio] at least once a week) or not being involved in decisions regarding own health care, family visits, or spending. Both indicators are correlated with the Worldwide Governance Indicator of voice and accountability (correlation coefficient is 0.4).

For comparison, we augment these dimensions by adding a fifth aspect: asset poverty. We use the DHS asset index to classify women as asset poor or nonpoor (Christiaensen and Stifel 2007; Filmer and Scott 2012; Sahn and Stifel 2000 establish correlations with consumption). Country cutoffs are defined based on the share of the population living below $1.90 for the corresponding survey year. The correlation of this indicator with the other dimensions is 0.33, underscoring the fact that asset wealth does not capture deprivation in many basic functionings and capabilities.

BOX 3.4  Demographic and Health Surveys make it possible to measure multidimensional poverty

To measure deprivation in multiple dimensions, we use data from the Demographic and Health Surveys (DHS) on 25 countries, covering 72 percent of the population of Africa. We focus on the four areas of deprivation discussed earlier. Illiteracy is defined as being unable to read a full sentence, being blind, or having no reading card for the required language. More than half (56 percent) of women in the sample countries are illiterate.

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Multiple deprivations and the concentration of deprivation are more common among women with less wealth: 42 percent of asset-poor women versus 18 percent of non-asset-poor women are deprived in at least three dimensions.
dimensions. But three out of four non-asset-poor women suffer at least one deprivation, confirming that income poverty provides only a partial picture of a population’s well-being.

Multiple deprivation is more prevalent among younger women: women 35–49 experience on average half the deprivation of women 15–19 (figure 3.22). After controlling for education and illiteracy, tolerance for domestic violence and social control over one’s actions tend to decline with age. This evidence suggests that there is a positive dynamic as life progresses, but it is also

**FIGURE 3.22**  Multidimensional poverty is more prevalent among young women, divorced women, poor women, rural women, and women living in low-income, fragile, and resource-rich countries

Source: Data from Demographic and Health Surveys 2005–13.

Note: Results are from ordinary least squares regression on the number of deprivations out of a total of four deprivations. All estimated coefficients except the annual trend are statistically significant.
indicative of the strong persistence of cultural habits across generations.

Poor women experience 0.6 more deprivations than rich women, and rural women suffer 0.5 more deprivations than urban women, holding other factors constant. As these women also have lower levels of education and poverty is more prevalent in rural areas, the unadjusted gaps are much larger. Multiple deprivations are also more common in low-income, fragile, and resource-rich states. Multiple deprivation is 10 percent higher in resource-rich countries. Countries in West Africa and the Sahel (Guinea, Mali, Niger) display high levels of multiple deprivations, as do Africa’s most populous countries (map 3.3): the share of women suffering three or more deprivations is 68 percent in Ethiopia, 40 percent in the Democratic Republic of Congo, and 22 percent in Nigeria. High rates of multiple deprivation in these populous countries partly explain the large share of multidimensional poverty in Africa, where 31 percent of women in the 25 countries studied are deprived in three dimensions or more.
The approach adopted here is similar to the MPI approach proposed by Alkire and Foster (2011) (box 3.5). To illustrate this similarity, figure 3.23 displays the share of the population in each country that is deprived in one, two, three, and four dimensions. Countries are ranked by the share of the population deprived in three or more dimensions.

In Alkire/Foster notation, figure 3.23 ranks countries based on a multidimensional poverty rate based on $k$ of 3, with no adjustment for intensity of deprivation ($A$). Using the MPI, that is adjusting the results in figure 3.23 for $A$, does not change the ranking.

Mitra, Posarac, and Vick (2013) use this approach to compare poverty among abled and disabled women. Considering the share of women deprived in one, two, three, ... $k$ dimensions (with $k$ the total number of dimensions considered) is similar to one of the family of multidimensional poverty measures proposed by Alkire and Foster (2011). They use two thresholds to determine whether a person is multidimensionally poor: a dimension-specific cutoff to determine whether he or she is deprived in each dimension and a dimension threshold ($k$) that is the number of dimensions in which a person needs to be deprived to be considered multidimensionally poor. Relative rather than equal weighting of the dimensions can be applied. The second cutoff is then a proportion (not the number) of weighted deprivations.

The multidimensional poverty rate ($H$) is the share of the population that is poor in at least $k$ dimensions.

Alkire and Foster also consider the intensity of deprivations ($A$), the average number of dimensions in which the multidimensionally poor are deprived. Adjusting the multidimensional poverty rate ($H$) for deprivation intensity ($A$) helps differentiate countries with an equal share of multidimensionally poor. A country in which 30 percent of women have three deprivations and none has four would rank higher than a country in which 30 percent of women are multidimensionally poor but half of them suffer four deprivations. The MPI can then be written as $M = H \times A$.

**BOX 3.5** What is the multidimensional poverty index (MPI)?

The approach adopted here is similar to the MPI approach proposed by Alkire and Foster (2011) (box 3.5). To illustrate this similarity, figure 3.23 displays the share of the population in each country that is deprived in one, two, three, and four dimensions. Countries are ranked by the share of the population deprived in three or more dimensions.

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**FIGURE 3.23** Country ranking changes only slightly when the dimension threshold changes

Source: Data from Demographic and Health Surveys, 2005–13.

Note: Countries are ranked by the share of the female adult population deprived in at least three out of four dimensions.
and disabled populations. They include 10 dimensions capturing both monetary and nonmonetary aspects of poverty among individuals (primary school completion, employment) and households (nonhealth expenditures, the ratio of health expenditures to total expenditures, and six indicators of assets, amenities, and housing conditions). People are considered poor if the weighted sum of their deprivations in each of these dimensions exceeds 40 percent. In the seven countries in their sample, the MPI is on average 7.2 percent larger for people with disabilities. The difference is largest in Kenya (12 percent) and smallest in Malawi (5 percent).

**Concluding Remarks**

This chapter reviews Africa’s progress since the mid-1990s in a number of nonmonetary dimensions of poverty. The dimensions include education and health, two focus areas of the Millennium Development Goals, as well as freedom from violence and freedom to decide. Wider data availability makes this possible, though some measurement issues remain, even when tracking traditional indicators, such as adult literacy. Progress has been achieved in all four domains, albeit with wide variation across countries and population groups.

Between 1996 and 2012, Africa’s adult literacy rates rose 4 percentage points, the gender gap shrank, and gross primary enrollment rates increased dramatically. Life expectancy at birth rose 6.2 years, and the prevalence of chronic malnutrition among under-five-year-olds fell 6 percentage points (to 38.6 percent). The number of deaths from politically motivated violence declined, and tolerance and the incidence of gender-based domestic violence dropped 10 percentage points each. Scores on the voice and accountability indicators rose slightly, and women’s participation in household decision-making processes increased.

This progress notwithstanding, levels of deprivation remain high in all domains and the rate of progress has leveled off. Despite substantial increases in school enrollments, more than two out of five adults in Africa cannot read or write, and the quality of schooling is poor. Improving Africa’s primary educational outcomes is urgent. Health outcomes mirror the results for literacy. Progress is happening, but outcomes are still the worst in the world. Increases in immunization and bednet coverage are slowing. Nearly two in five African children is malnourished, one in eight adult women is underweight, and obesity is emerging as a new health concern.

Africans enjoyed considerably more peace in the 2000s than before, but since 2010 the number of violent events has been four times what it was in the mid-1990s. Violence in Africa is experienced not only in terms of political unrest and large-scale civil conflicts but also in the form of domestic violence. At 30 percent, tolerance of domestic violence is twice as high as in the rest of the developing world and the incidence of domestic violence is more than 50 percent higher. Higher tolerance of domestic violence and less empowered decision making among younger (compared with older) women suggest that a generational shift in mindset is still to come. On voice and accountability, Africa remains among the bottom performers, albeit with slightly higher scores than countries in the Middle East and North Africa and East Asia and Pacific.

Around these region-wide trends is remarkable variation across countries and population groups. Rural populations and the income poor are worse off in all domains, though other factors, such as gender and female education, often matter as much or more and at times in unexpected ways. Women in Africa can, for example, expect to live in good health 1.6 years longer than men, and boys under five years are 5 percentage points more likely to be malnourished than girls. At the same time, the gender gap in literacy remains substantial, women suffer more than men from violence (especially domestic violence), and they are more curtailed in their access to information and decision making. Literacy is especially low
in West Africa, where gender disparities are large. High HIV prevalence rates are holding life expectancy back in Southern Africa. Conflict events are concentrated in the greater Horn of Africa and the Democratic Republic of Congo. The low levels of Africa’s capability achievements are driven partly by below-average performance in its three most populous countries (Nigeria, the Democratic Republic of Congo, and Ethiopia). Multiple deprivations characterize life for a sizable share of African women (data on men are unavailable).

Two important findings stand out. First, fragile and resource-rich countries tend to perform worse and middle-income countries better than other countries. This finding confirms the pernicious effects of conflict and is consistent with the widely observed association with overall economic development. People in resource-rich countries experience a resource penalty in their human development outcomes. They are less literate (by 3.1 percentage points), have shorter average life spans (by 4.5 years) and higher rates of malnutrition among women (by 3.7 percentage points) and children (by 2.1 percentage points), suffer more from domestic violence (by 9 percentage points), and have less voice and accountability than people in non-resource-rich countries.¹¹

Women’s education (secondary schooling and above) makes a decisive difference across dimensions (health, violence, and freedom in decision), among both adults and children. Improving women’s education and socioeconomic opportunities can be game changing for Africa’s capability achievement.

Notes

1. UNDP (1990, page 10) describes the HDI as follows: “Human development is a process of enlarging people’s choices. In principle, these choices can be infinite and change over time. But at all levels of development, the three essential ones are for people to lead a long and healthy life, to acquire knowledge and to have access to resources needed for a decent standard of living. If these essential choices are not available, many other opportunities remain inaccessible.”

2. UNESCO (2015) discusses reasons for limited progress in global adult literacy since the 2000s, including the underperformance of adult literacy programs. All progress has come from better literacy among younger cohorts.

3. The gross enrollment ratio can exceed 100 percent because of the inclusion of over-age and under-age students following early or late school entrance and grade repetition.

4. Higher life expectancy for women is possible even in an environment that is disadvantageous to them, given that women are genetically predisposed to live longer (Sen 2002; World Bank 2011).

5. The results are based on a country fixed-effect regression analysis of life expectancy in 2000–12 in 39 countries on the under-five mortality rate, the HIV prevalence rate, an indicator variable taking the value of 1 if the average annual number of deaths from conflict in the five years preceding the year of recorded life expectancy exceeded 100, and GDP (in constant 2005 U.S. dollars per capita) and its square. De Walque and Filmer (2013) also find no effect of GDP on adult mortality in Africa and relatively little effect of recent conflict, unless the conflicts escalated, as in the Rwandese genocide. Elsewhere in the world GDP is negatively correlated with adult mortality.

6. The increase in funding has slowed in recent years, causing both the increase in the use of treated bednets and the decline in child mortality from malaria to level off (WHO 2013, 2014b).

7. Children are considered stunted if their height-for-age is more than two standard deviations from the median height-for-age of the reference population.

8. There is a high correlation between the WGI’s voice and accountability score and the responses from 35 African countries to the Afrobarometer’s “freedom to say what you think” (0.67) and “freedom to join any political organization” (0.65) questions; the correlation with “the extent of democracy” is 0.58. Because the Afrobarometer does not measure free media but only exposure to mass media, the correlation with the WGI’s voice and accountability score is slightly lower.
9. The debate about defining weights is lively (see Alkire and Foster 2011 and critiques by Ravallion 2011). Some of it concerns whether deprivations should be treated as substitutes or complements (Bourguignon and Chakravarty 2003). Appropriate weights should reflect ethically or empirically grounded trade-offs among the components of deprivation (see Decancq and Lugo 2013; Ferreira and Lugo 2013); they should not be set for the sake of convenience.

10. At the country level, there is limited correlation in the population shares of people deprived in the four dimensions. The correlation coefficient is 0.22 on average (in absolute value); it ranges from 0.12 (for the correlation between the voice and accountability indicator and the illiteracy indicator) to 0.39 (for the correlation between the voice and accountability indicator and the indicator of the number of fatalities from violence). This low correlation is consistent with lack of interchangeability across functionings and capabilities (as emphasized by the capability approach). The overlap is greatest in the prevalence of $1.25 income poverty (33 percent) for asset-poverty and each of the other four dimensions, which could be seen as providing support for the welfarist (monetary poverty) approach to measuring poverty (that asset poverty is an indicator of multiple deprivation). Yet, even though the overlap is highest, the correlation remains nonetheless rather low, underscoring that income poverty remains a rather incomplete proxy for well-being and that good scores on income poverty hide deprivation in many basic functionings and capabilities.

11. De la Brière and others (2015) discuss how resource-rich countries could harness their mineral wealth to build more human capital.

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