Inequality in Africa is complex. Of the 10 most unequal countries in the world, 7 are in Africa. But African countries other than these seven do not have higher inequality than developing countries elsewhere in the world. For the region as a whole, however, inequality is high, because of the wide variation in income across countries. As a complement to the description of poverty, freedoms, and capabilities in the previous two chapters, this chapter profiles inequality in Africa, describing it in terms of consumption inequality (including from the perspective of extreme wealth) as well as inequality of opportunity.

An important distinction is between inequality of outcomes (such as income, consumption, and wealth) and inequality of opportunity. In the case of the latter, in many settings, circumstances over which a person has little control—mother’s education, father’s occupation, birth in a rural area or into a particular ethnic group—may largely dictate one’s future. Being born poor often means being the beneficiary of less investment in human development, which determines future living standards.

Being born poor can also influence one’s aspirations. Hoff (2012) describes how aspirations can be affected if inequality is entrenched. The expectation of having no chance of obtaining wealth or the feeling that the cards are stacked against one can yield precisely these outcomes, for example. This lack of a level playing field—the structural or ex ante component of inequality—is usually perceived to be unfair. Cultures around the world value fairness—so much that in some cases people make seemingly irrational decisions (that is, decisions that do not serve their self-interest) to punish others who behave unfairly (World Bank 2005).

Inequality in outcomes—the gap between the poorest and the richest—depends not only on opportunities but also on effort and the degree to which individuals take risks. Rewarding people for effort or risk taking can incentivize and motivate them. From this perspective, not all aspects of inequality are necessarily bad, although high levels of inequality can impose large socioeconomic costs on society.

Inequality influences the ability of communities to coordinate and provide social services and public goods.1 It can also induce conflict, although the empirical evidence that substantial inequality leads to conflict or is the source of most conflict is mixed (Cramer 2005; Lichbach 1989).2

Inequality influences how economic growth translates into poverty reduction,
and it may affect growth prospects. With respect to poverty reduction, when initial inequality is higher, a larger share of poor households will have incomes farther below the poverty line, so that growth (the increase in income) will result in less poverty reduction (Bourguignon 2004; Klasen 2004; Ravallion 2001). Tentative evidence also suggests that inequality leads to lower and less durable sustainable growth processes and thus less poverty reduction (Berg, Ostry, and Zettelmeyer 2012; OECD 2015) if, for example, wealth is used to engage in rent seeking and other distortionary economic behaviors (Stiglitz 2012). The pathway by which inequality evolves thus matters for growth. Marrero and Rodriguez (2013) find a robust negative relationship between growth and inequality of opportunity in the United States. Ferreira and others (2014) find suggestive evidence of a negative association between inequality and growth but conclude that the data do not show a robust negative association between inequality of opportunity and growth. Other studies conclude that as countries reach higher levels of development, greater emphasis should be given to reducing inequality over spurring growth to reduce poverty (Olinto, Lara Ibarra, and Saavedra-Chanduvi 2014). For high-inequality, low-income countries, then, there is tension between a focus on growth and an emphasis on addressing inequality.

On the basis of the growing body of literature on the effects of initial and changing inequality on growth and poverty, some observers argue that reducing inequality should be an explicit development goal (Shepherd and others 2014). For the few African countries for which there is evidence, this notion seems to resonate with policy makers. In its survey of 15 developing countries (in Africa, this included Cameroon, Malawi, Nigeria, and South Africa), the United Nations Development Programme (UNDP 2014) finds that 77 percent of policy makers perceive the current level of inequality as a threat to long-term national development. Only 10 percent consider inequality conducive to long-term development.

**Perceptions of Inequality**

Several survey efforts capture the perceptions and attitudes of citizens toward inequality. The picture that emerges is not clear, in part because the survey questions differ.3

The World Values Survey asks respondents if more or less inequality is needed in their country. Its results reveal polarization: in some countries, more than 20 percent of respondents indicate that more inequality is needed and more than 20 percent indicate that less inequality is needed. Figure 4.1 shows the results for four countries; the results are similar for the seven other African countries covered by the World Values Survey, and the pattern does not change markedly between country survey rounds. These results are consistent with the point made in *World Development Report 2006: Equity and Development* (World Bank 2005) that, contrary to preconceived notions, citizens do not by and large view inequality negatively. The share of the population in the African countries that indicated that income should be more equal was just 21 percent—lower than the 28 percent for all countries included in the World Value Survey.

Afrobarometer surveys find that among a list of more than 30 possible responses, respondents rarely cite inequality as one of the most important problems facing their countries. In these surveys, poverty and employment are the primary concerns of respondents in most countries. In the majority of the 30 African countries surveyed in the Gallup Poll (2013), most respondents report that individuals can get ahead by working hard.

In contrast, in the Pew Global Attitudes Survey, 70–81 percent of respondents in the six African countries covered agreed that inequality is a major problem in their country (Pew Research Center 2013). Similarly, Afrobarometer surveys show that most Africans respond that their government is doing quite or very badly at narrowing the income gap between the rich and poor. These sentiments do not correlate with the level of inequality in the country (figure 4.2).
FIGURE 4.1  Views on inequality differ within and across countries

Note: 1 = “Incomes should be made more equal,” 10 = “We need larger income differences as incentives for individual effort.”

FIGURE 4.2  Survey respondents’ perceptions of the adequacy of their government’s efforts to narrow the income gap differ across countries

Note: Blue bars show the share of the population that perceives that the government is not doing enough to narrow the income gap (right axis). Orange diamonds are Gini indexes (left axis).
Measurement of Inequality

Like the poverty analysis in chapter 2, the analysis of inequality in this chapter is based on data on consumption from nationally representative household surveys. With few exceptions, the factors that make measuring poverty a challenge also complicate the measurement of inequality. Changes in the questionnaire or the seasonal timing of fieldwork can distort apparent trends in inequality. To prevent this problem, the analysis presented in this chapter excludes surveys that are not comparable (as defined in chapter 1).

Surveys in Africa measure inequality based on consumption. Cross-regional comparisons typically ignore the difference between income and consumption measures of inequality (as noted in the next section), but it is an important distinction because consumption inequality is typically lower than other monetary inequality measures.

This chapter focuses on inequality as measured by the Gini index (box 4.1) in consumption per capita, the same metric used to assess poverty in chapter 2. Consumption is generally regarded as easier to measure than income in low-income economies (Deaton and Zaidi 2002). Current consumption generally does not reveal the full extent of economic inequality, however, because consumption does not capture savings and wealth.

Income and wealth inequality are alternatives to consumption-based measures. In most economies, income-based measures of inequality are higher than consumption-based measures (Blundell, Pistaferri, and Preston 2008; Krueger and others 2010; Santaeulàlia-Llopis and Zheng 2015), and wealth inequality is typically higher than income inequality (Davies and others 2011;)

BOX 4.1 A Primer on the Gini Index

The Gini index can be explained using the Lorenz curve, which plots the cumulative share of total consumption on the vertical axis against the cumulative proportion of the population on the horizontal axis, starting with the poorest individual or household (figure B4.1.1). If there is perfect equality, the bottom X percent of the population accounts for X percent of consumption (or earns X percent of income), and the Lorenz curve coincides with the diagonal. If there is some degree of inequality, the bottom X percent of the population accounts for less than X percent of consumption. The Lorenz curve bows outward; the farther it is from the diagonal line, the higher the degree of inequality. In the extreme case of perfect inequality, all consumption is concentrated in the hands of the richest individual, and the Lorenz curve coincides with the line from 0 to X to Y. The Gini index reflects the area between the line of perfect equality (the diagonal) and the Lorenz curve (A), relative to the maximum area that would be attained under perfect inequality (A + B).

An alternative measure of inequality is the mean log deviation (MLD), also called Theil’s L index, which is part of the generalized entropy class of inequality indexes (Cowell 2000). As in the Gini index, higher values of the MLD represent higher levels of inequality, but unlike the Gini index, the MLD is not bound by 1. The MLD shows the per-

(Box continues next page)
Diaz-Gimenez, Glover, and Rios-Rull 2011; Piketty 2014; Rama and others 2015; for Africa, see de Magalhães and Santaeulàlia-Llopis 2015). Consumption and income are flow measures that relate to a specific period (for example, one year); wealth is a stock measure that reflects assets accumulated over a lifetime (through savings) and across generations (through bequests).

Most household surveys in Africa lack detailed data on the value of household wealth. Taking advantage of the select few that include partial wealth data, de Magalhães and Santaeulàlia-Llopis (2015) compare inequality in consumption, income, and wealth in Malawi, Tanzania, and Uganda. Their measure of wealth includes land, housing, livestock, agricultural equipment, and household durable goods, net of any debt (their data exclude housing in Tanzania and debt in Uganda). Because financial assets are not included, total wealth is understated, particularly among urban households.

Their results show the pattern observed in other regions. In Malawi wealth inequality was expressed in terms of gross national income. It is an intuitive measure of inequality that highlights the large gaps in consumption often found between the rich and the poor.

Each of these measures has different properties and can produce different results. But cross-country rankings of inequality in Africa are not strongly affected by the measure of inequality used. Figure B4.1.2 plots country inequality rankings according to the MLD (panel a) and Palma (panel b) against the ranking based on the Gini index. In most cases, countries line up on the diagonal, which means that their rank position is unaffected by the measure used. These findings are similar to the finding by Cobham and Sumner (2013).

\[ \text{Gini index rank} \]

\[ \text{Mean log derivation (MLD) rank} \]

\[ \text{Palma ratio rank} \]
is almost twice as large as consumption inequality. In rural areas, the wealth Gini is 0.60, compared with 0.54 for income and 0.39 for consumption. In urban areas, these estimates are 0.84 for wealth, 0.71 for income, and 0.44 for consumption. A similar picture emerges in Tanzania and Uganda.

A second concern with consumption inequality is that, in practice, consumption inequality measures will be biased downward if the set of goods in the consumption measure does not include items consumed by the rich (luxury goods such as vacations as well as irregularly purchased consumer durable purchases such as cars). These goods are sometimes not included in surveys or are excluded from the measure of consumption if they are.\(^6\) Consumption surveys also struggle to include hard-to-survey populations, including both the extreme poor (who may live in remote areas or informal settlements) and the extreme rich (who may refuse to participate in surveys). Applying imputation methods for mismeasured income data and accounting for expatriates not included in surveys in Côte d’Ivoire and Madagascar significantly increase measured inequality, according to Guénard and Mesplé-Somps (2010). The net effect of missing these households is ambiguous in terms of the bias in inequality, contingent on which household groups are excluded from the survey. However, if top income earners or the very poor are systematically excluded, inequality measures will be underestimated.

Methods have been proposed to address some of these problems (see Korinek, Mistaen, and Ravallion 2006). One approach is to compare top incomes in household surveys with tax records (Atkinson, Piketty, and Saez 2011; Banerjee and Piketty 2005). Studies adopting this approach typically conclude that surveys underestimate top incomes. The evidence on South Africa is ambiguous, because most surveys provide estimates of top income shares that are close to the tax data (Morival 2011). Many developing countries lack administrative tax data with which to assess the level of underreporting in household surveys (see, for example, the discussion on the Middle East in Alvaredo and Piketty 2015). One study that attempts to assess the extent of the underestimation (the study of Egypt by Hlasny and Verme 2013) shows, perhaps surprisingly, that it is not large.

Another approach for gauging underestimation at the top of the distribution is to compare consumption from household surveys with private consumption in national accounts. Although there are conceptual differences between these two measures of consumption, the growing gap between national accounts and survey consumption in countries such as China and India is often interpreted as an indicator that surveys miss out on a growing share of private expenditures (Deaton 2005). This problem appears to be less important in Africa, where household surveys and national accounts have not been observed to be diverging, as discussed in chapter 1.

To study inequality in the distribution of consumption, the Gini index across countries is compared. The Gini index is a widely used measure of inequality (box 4.1). It ranges between 0 (every individual enjoys the same level of consumption per capita, perfect equality) and 1 (a single individual accounts for all consumption). A Gini index of 0.4 means that the expected difference in consumption between any two people chosen from the population at random will be 80 percent (two times the Gini). This chapter focuses on Gini indexes as derived from household surveys, rather than efforts to impute a Gini from other sources (box 4.2).

**Inequality Patterns and Trends**

This section explores both national and regional aspects of inequality and then describes core household traits that explain inequality across groups in countries.

**Inequality across African Countries**

Gini indexes from the most recent household surveys in Africa range from 0.31 (Niger and São Tomé and Príncipe) to 0.63 (South Africa). Comparing these estimates with estimates from other countries (based on the
Issues of comparability and data availability hamper studies of inequality in Africa. For the Gini results in this chapter, only nine countries have more than three data points, and seven countries have just a single data point.

Can this dearth of data be circumvented by estimating the Gini? The Standardized World Income Inequality Database (SWIID) takes this approach, seeking to maximize the comparability and coverage of Gini estimates worldwide (Solt forthcoming a). This effort works best in countries with better and more data, but it is still subject to critique (see Jenkins 2014 and the response to his critique in Solt forthcoming b).

Using a missing-data algorithm and drawing on information from proximate years within a country and various data collection efforts (such as the World Bank’s PovcalNet, the UNU-WIDER database, and country statistical reports), SWIID produces Gini estimates for 45 countries in Africa. For 1991–2012, SWIID has 16 or more annual estimates of the Gini for more than half these countries. Because of the lack of survey data in developing countries, the SWIID imputations show substantial variability in the region, as Solt (forthcoming a) notes (figure B4.2.1). Most of the estimates computed directly from the surveys are within the SWIID confidence interval, but that interval is wide.

The two sources are highly correlated (with a correlation of 0.83 between the survey estimate and the average SWIID estimate from 100 imputations). The correlation is higher (0.91) if the comparison is limited to surveys deemed comparable within the country. The correlation is low (only 0.15) among the nine countries in Central Africa.

The direction of the changes in the Gini in the SWIID does not match well with the trends revealed by the surveys (as in figure 4.4). In only 11 of 20 countries with a trend in both sources does the direction of change match. There is a high degree of uncertainty in the SWIID estimates. In only 1 of the 20 countries studied is the change in the Gini statistically significant. Until better and more surveys are conducted in the region, imputing inequality measures is fraught with serious concerns.
PovcalNet database) reveals that 7 of the 10 most unequal countries in the world are in Africa (figure 4.3). All but two of the seven countries (South Africa and Zambia) have populations of less than 5 million.

The levels of inequality in Africa appear even more remarkable if one considers that many countries outside Africa—particularly advanced economies and countries in Latin America—use income rather than consumption per capita to measure inequality. Relative to consumption data, income data generally produce higher levels of inequality.

The heterogeneity in inequality across Africa is substantial and shows a geographical pattern (map 4.1). Inequality is higher in Southern Africa (Botswana, Lesotho, Namibia, South Africa, Swaziland, and Zambia), where Gini indexes are above 0.5, as well as in Central African Republic and the Comoros. West African countries exhibit lower levels of inequality, and countries in East Africa are mixed. These findings are robust to other measures of inequality (box 4.1).

Some researchers have argued that these patterns in inequality have historical roots. In particular, the high levels of inequality in Southern Africa are legacies of the land dispossession and racially discriminatory policies of the colonial period. There are notable differences in the history of communal land tenure systems in West and Central Africa compared with white settler economies (characterized by privately owned small family plots, large estates, and plantations) in East and Southern Africa (Cornia 2014).

There are few other discernable patterns in terms of country traits and inequality. Inequality levels do not differ statistically between coastal and landlocked, fragile and nonfragile, or resource-rich and resource-poor countries, controlling for the four sub-regions. Bhorat, Naidoo, and Pillay (2015) also conclude that the average level of inequality is not different between resource-rich and other economies, but they note that a number of resource-rich economies have high levels of inequality. If the eight most unequal countries in the region (South Africa, Zambia, and six small economies) are excluded and one...
controls for country-level income, Africa has inequality levels comparable to developing countries in other parts of the world (Bhorat, Naidoo, and Pillay 2015 draw the same conclusion).

Are African countries becoming more unequal? Analysis of 23 countries for which there are two comparable surveys to measure inequality reveals that about half the countries experienced a decline in inequality while the other half saw an increase (figure 4.4). No clear patterns based on resource status, income status, or initial level of inequality in the first survey are evident.

The picture is the same if one looks at the longest available time period for which comparable data are available. Cornia (2014) describes this pattern as “inequality trend bifurcation.”8 Within-country trends in inequality in Africa differ from trends in both Asia, where inequality is on the rise, and Latin America, where inequality has been declining since the early 2000s (see Ferreira and others 2013 for Latin America;

Should one expect a more systematic increase in inequality given Africa’s double decade of growth? One of the long-standing debates in economics is about the trends in inequality during periods of economic growth. In the 1950s, Simon Kuznets formulated the hypothesis that inequality first increases and then declines as GDP per capita rises (Kuznets 1955). Because most countries in Africa still have low levels of GDP, the Kuznets hypothesis suggests that inequality should increase with rising GDP per capita.

Empirical studies have not produced robust support for the Kuznets hypothesis (Bruno, Ravallion, and Squire 1998; Deininger and Squire 1996; Milanovic 2011). The African data also fail to provide strong evidence for a Kuznets-type trajectory.

Panel a of figure 4.5 compares the level of inequality (measured by the Gini) with GDP per capita. Although there is a significant positive relationship between the level of GDP and inequality, it is driven almost entirely by the upper-middle-income countries in Southern Africa (Botswana, Namibia, and South Africa), which differ in many ways (in addition to GDP per capita) from the rest of Africa. A more appropriate test of the Kuznets hypothesis is to compare changes in inequality with changes in GDP per capita using multiple observations per country (panel b of figure 4.5). If the Kuznets hypothesis holds, the data should trace out an inverted U-pattern or at least—given that most of the countries in the sample are poor and hence likely to be shifting along the rising portion of the U—an upward slope to show inequality rising as GDP increases.

This is not the case: inequality is not moving in a clear direction and does not appear to be systematically related to changes in GDP per capita. Other researchers have reached similar conclusions based on examination of recent data (Bhorat, Naidoo, and Pillay 2015) and growth spells in the 1990s (Fields 2000).

All else constant, a reduction in inequality is associated with a decline in poverty (Bourguignon 2004; Klasen 2004). Many countries in figure 4.6 are in quadrant 4, where both inequality and poverty declined.
However, in a number of countries poverty fell despite increasing inequality (quadrant 1 in figure 4.6). In these countries, the growth in mean consumption was large enough to offset the rise in inequality.

Inequality in Africa as a Whole

Combining survey data across countries enables the study of the Africa-wide distribution of consumption. For this exercise, surveys are grouped into benchmark years (1993, 1998, 2003, and 2008). The data cover 81 percent of regional GDP and 72 percent of the population, indicating that richer countries are more likely to be included. Given this coverage, the results probably represent a lower bound on African inequality.

The African Gini index is 0.52–0.56 across the benchmark years, much higher than individual-country inequality measures (table 4.1). Only four countries (Botswana, the Central African Republic, Namibia, and South Africa) have Gini indexes that are higher than the African Gini in 2008. As discussed earlier, by and large, African countries have levels of inequality that are similar to other developing countries if measured in terms of average country inequality.

But Africa as a whole has the highest level of inequality of any region in the world. The African Gini index rose by almost 9 percent between 1993 and 2008. By contrast, the average country Gini fell by almost 5 percent, and no change is observed if countries are weighted by their population.

FIGURE 4.5 There is no systematic relationship between growth and inequality in Africa

FIGURE 4.6 Declining inequality is often associated with declining poverty

Source: World Bank Africa Poverty database (subset of countries with comparable surveys); World Development Indicators database.
Note: Panel a is based on the most recent survey. Panel b excludes the five highest-income countries in panel a.
The level of inequality in Africa is largely driven by within-country inequality, which explains considerably more than half of the inequality measured by the mean log derivation (MLD). However, the increase in African inequality was driven by a widening between countries, as opposed to within-country changes in inequality. Over time, a greater share of African inequality is explained by gaps across countries. These results stand in sharp contrast to global inequality, where within-country inequality increased both in the level of inequality and as a share of total inequality (even though between-country differences remain the dominant source of global inequality).

Does country GDP explain African inequality? To some extent, it does. Figure 4.7 divides the African distribution of consumption in 2008 into 20 ventiles, from poor to rich, each representing 5 percent of the African population. For each ventile, the figure shows the share of the population in low-, lower-middle-, and upper-middle-/high-income countries. In 2008, 54 percent of the population in the top 5 percent of the African distribution were living in upper-middle-/high-income countries, 36 percent in lower-middle-income countries, and 10 percent in low-income countries. The share of the African population in upper-middle-/high-income countries rises as one moves up the distribution, while the share of the population in lower-income countries declines. However, there is much overlap across these country classifications, meaning there are very rich households in poor countries and vice versa.

### FIGURE 4.7  The richest households in Africa live mostly in the richer countries

Source: Jirasavetakul and Lakner 2015.

### TABLE 4.1  Inequality in Africa, 1993–2008

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<tbody>
<tr>
<td>Gini index for Africa</td>
<td>0.52</td>
<td>0.52</td>
<td>0.54</td>
<td>0.56</td>
<td>8.6</td>
</tr>
<tr>
<td>Average country Gini index</td>
<td>0.47</td>
<td>0.45</td>
<td>0.45</td>
<td>0.45</td>
<td>3.8</td>
</tr>
<tr>
<td>Average country Gini index, population weighted</td>
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<td>0.44</td>
<td>0.43</td>
<td>0.44</td>
<td>−0.5</td>
</tr>
<tr>
<td>African mean log deviation</td>
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<td>0.47</td>
<td>0.51</td>
<td>0.57</td>
<td>20.0</td>
</tr>
<tr>
<td>Within-country contribution to African mean log deviation (percent)</td>
<td>73.4</td>
<td>71.3</td>
<td>64.3</td>
<td>59.7</td>
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</tbody>
</table>

Source: Jirasavetakul and Lakner 2015.

### Between-Group Inequality

This section explores the extent to which consumption levels differ across groups in an economy based on some socioeconomic or other household trait. Between-group (or horizontal) inequality is measured by decomposing overall inequality into two parts: inequality attributed to between-group (horizontal) differences and inequality within groups. Horizontal inequalities can come at a high cost to society. Between-group inequalities can perpetuate intergenerational persistence in poverty, and social exclusion and can limit socioeconomic
mobility. They have been linked to violent conflict and social unrest and are therefore particularly detrimental for economic development and poverty reduction (Cramer 2005; Langer and Stewart 2015). In a similar vein, ethnic fractionalization has been associated with poor outcomes in the provision of local public goods (Miguel and Gugerty 2005) and lower levels of overall economic growth in Africa (Easterly and Levine 1997).

To explore between-group inequality in Africa, seven groups are defined based on the consensus in the literature and the availability of information in the household surveys to define groups. Of the seven groups examined, geographical location, education, and demographics are the most important drivers of inequality (figure 4.8).

Spatial inequalities are important for both the urban-rural group and the regional group.
classifications. In Senegal one-third of total inequality is attributed to gaps between households in urban and rural areas. On the lower end of the spectrum are some of the small island states (the Comoros, São Tomé and Príncipe), where urban-rural gaps are virtually nonexistent. A similar picture holds for inequality between regions (first-tier administration units). The two between-group components (urban-rural and regions) are correlated (0.73); countries with large urban-rural gaps in living standards also tend to have significant gaps across regions. Spatial inequalities may be even higher than captured by household consumption, because of the spatial aspects of public service provision (the fact that the value of public services, such as health services and schools, may be higher in urban areas).

Another way to view the extent of regional inequality is to compare mean consumption per capita across areas. The gap (as measured by the ratio between the richest and the poorest regions) often shows that the richest regions have twice the mean consumption of the poorest. The gap for first-tier administration units is 2.1 in Ethiopia (regions), 3.4 in the Democratic Republic of Congo (provinces), and more than 4.0 in Nigeria (states). Inequality associated with geographical income segregation may be more politically destabilizing than inequality between education categories, an association that is not observed among most of the other socioeconomic groupings. Education tends to explain a greater share of inequality than the broad economic activity category of the household head, an important driver of inequality in some countries.

In most household surveys, the samples are too small to estimate inequality for geographical areas smaller than regions. Such estimates can be made by combining household surveys with census data to yield poverty maps (also known as small area poverty estimates). The poverty map of Zambia shows that of the more than 1,400 constituencies in the country, about one in seven has a poverty rate of less than half the country mean (de la Fuente, Murr, and Rascón 2015). At the other extreme, 20 percent of constituencies have poverty rates that are more than 25 percent higher than the national average.

Educational attainment of the household head is an even more important driver of gaps in consumption across households. In three countries (Rwanda, South Africa, and Zambia), educational attainment explains about 40 percent of overall inequality. Higher inequality is associated with greater inequality between education categories, an association that is not observed among most of the other socioeconomic groupings. Education tends to explain a greater share of inequality than the broad economic activity category of the household head, an important driver of inequality in some countries.

The demographic composition of the household also explains a large share of inequality, up to 30 percent of overall inequality in Senegal and 32 percent in Botswana. This finding is consistent with the fact that larger households in Africa, especially households with many children, show significantly lower levels of consumption and higher levels of poverty than smaller households.

Some demographic characteristics—for example, the gender of the household head—do not explain a substantial share of total inequality. This finding is not surprising, given that in many African countries, consumption per capita levels of male- and female-headed households do not differ widely. A shortcoming of this method of decomposing inequality is that the decomposition reveals nothing about the direction of bias (that is, whether the disadvantage lies with female- or male-headed households). Moreover, because consumption is measured at the household level, the decomposition does not provide any information about how consumption is distributed between men and women within households (box 4.3).

For many countries, horizontal inequalities can be measured for more than one point in time. The main drivers of horizontal inequalities (geography, education, and demographics) did not change during the period for which survey data are available (from the early 1990s to the present).
Unequal Opportunities

Inequality across households is the product of many forces. The circumstances in which one is born—in a rural area, to uneducated parents—are one important force. Inequality of opportunity is the extent to which such circumstances dictate the outcomes of individuals in adulthood. In economics this concept has been articulated by Fleurbaey (2008) and Roemer (2000), among others. In the field of sociology, inequality of opportunity is the concept of achieved versus ascribed status (Linton 1936) and ascriptive inequality. It can exacerbate overall inequality and violate principles of fairness and equal opportunity.

A growing body of literature in the past 15 years tries to assess the degree of inequality of opportunity and evaluate the opportunity-equalizing effects of public policies (see the recent surveys by Ferreira and Peragine 2015 and Roemer and Trannoy 2015)—efforts that face a number of challenges (Kanbur and Wagstaff 2014). Building on the previous...
discussion of horizontal inequalities, which described the contribution of different individual characteristics to total inequality, this section presents evidence on inequality of economic opportunity and the intergenerational transmission of education and occupation.17

**Inequality of Economic Opportunity**

The approach to measuring inequality of economic opportunity entails unpacking how much of current consumption can be explained by a person’s circumstances in childhood and how much is explained by individual responsibility, luck, or effort (obtained as the residual).18 Such estimates of inequality of economic opportunity are available for many countries worldwide, but evidence for Africa has been limited to date.19 Drawing on surveys from 10 countries (the Comoros, Ghana, Guinea, Madagascar, Malawi, Niger, Nigeria, Rwanda, Tanzania, and Uganda), this section presents more comprehensive evidence for countries in Africa.20

The circumstances used to measure inequality of opportunity include ethnicity, parental education and occupation, and region of birth.21 The analysis focuses on individuals 15 years and older. Like other researchers in this field (see, for example, Ferreira and Gignoux 2011), inequality is measured using the MLD.22

The share of inequality that can be attributed to inequality of opportunity ranges from 8 percent (Madagascar) to 20 percent (Malawi) (figure 4.9). The ranking of countries changes considerably if one looks at inequality of opportunity rather than overall inequality (note that the countries in figure 4.9 are sorted by inequality): Countries with higher inequality in outcomes are not necessarily characterized by a larger share of the inequality attributed to inequality of opportunity. The Comoros, for instance, has the highest overall level of inequality, but its share of inequality of opportunity is among the lowest. Furthermore, the magnitude of inequality of opportunity is only partly correlated with the number of circumstances available in the data, suggesting that the differences observed across countries do not solely reflect differences in the availability of circumstance variables but say something meaningful about the structure of inequality (however, more circumstances are also typically expected to yield greater inequality of opportunity).

Estimates of inequality of opportunity calculated in this manner represent a lower bound, because many circumstance variables (family wealth, parenting time, the quality of education) are not observed in household surveys and hence cannot be considered in the estimation.23 This issue also complicates comparisons across countries, because the surveys differ in the number and granularity of the circumstance variables.

**Intergenerational Persistence in Education and Occupation**

Does the educational attainment of parents matter less today to a child’s schooling than
Is the occupation of a farmer’s son less affected by his father’s occupation than it was a generation ago? Using data from several recent household surveys in Africa and drawing on a set of surveys with information on adult children and their fathers, the extent of intergenerational mobility in education and occupation is examined, as well as whether the extent of this mobility is changing among younger generations.

To measure educational mobility from the perspective of intergenerational persistence, education is regressed on the educational attainment of one’s parents. The coefficient from this simple regression, \( \beta \), measures education persistence (see Black and Devereux 2011 for a recent overview of approaches to this measurement). Another measure of mobility is the correlation coefficient between the outcomes of parents and their children (\( \rho \)), which is the intergenerational gradient (\( \beta \)), multiplied by the ratio of the standard deviation across the two generations. Three factors are explored—the intergenerational gradient, the correlation coefficient, and the ratio of standard deviations—for different cohorts to study intergenerational persistence in schooling across generations.

The correlation coefficient on intergenerational mobility (the blue line in figure 4.10) slightly increased in most countries. Conversely, the intergenerational gradient, \( \beta \), is falling in most countries (the orange line in figure 4.10). An additional year of schooling of one’s parent has a lower association with one’s own schooling than it used to. This reflects, however, that the ratio of the standard deviations (the red line in figure 4.10) is rising, which in turn is related to the low levels of schooling among parents in the oldest generation. For example, people born in 1949 in Rwanda have on average 1.5 years of schooling, while their parents have only 0.1 years. The Africa intergenerational mobility trends are broadly comparable to estimates in other developing countries (Ferreira and others 2013; Hertz and others 2007). These changes may partly reflect the fact that since the 1990s, many countries have eliminated school fees at the primary level (Bhalotra, Harttgen, and Klasen 2015). In terms of level of mobility in general, Africa has greater intergenerational educational mobility than Latin America. However, mobility is lower than developed countries in Europe, the United States, and the former Eastern Bloc.

Like education, one’s occupation may be determined largely by the occupations of one’s parents. The limited literature on this issue in Africa focuses on intergenerational occupational persistence from farm to nonfarm occupations. Here this analysis is extended to look at three occupational classifications among men 20–65 (agriculture, services, and other occupations) and their fathers. The analysis is restricted to the occupation of fathers because fewer surveys have information on the occupation of mothers.

Intergenerational occupational persistence in farming has been falling rapidly in some countries (table 4.2). In the Comoros, the share of farmers’ sons working in other sectors is more than twice as large for the youngest cohort as it is for older cohorts. Guinea is the most rigid economy in terms of occupational shifting. There is substantial intergenerational mobility in work among people with fathers in services and other sectors; generally less than half of the youngest cohort are performing the same services or other sector work as their fathers. This change in intergenerational occupational persistence is consistent with the overall shifts in occupational structure in each country, specifically the falling employment shares of agriculture (World Bank 2014a).

To separate out economy-wide shifts, the share of job mobility associated with expansion in nonagricultural sectors is netted out (following the approach of Bossuyt and Cogneau 2013). Net mobility shows
that shifts in the structure of occupations in the economy (sometimes called structural change) are not the only factor driving changes in intergenerational occupational mobility (table 4.3). The Comoros, Rwanda, and Uganda exhibit the highest rates of intergenerational mobility that is not attributable to structural change.
Extreme Wealth and Billionaires

Household surveys are not suited for capturing very high levels of income or wealth. Missing information on extreme wealth leads to underestimation of the extent of economic inequality in a broader sense. Wealthy households are often not surveyed and household surveys generally measure current consumption or income (a flow measure) rather than the stock of household assets. Surveys are also likely to fail to capture rare income events or income (and the wealth from it) that is obtained illegally (Africa Progress Panel 2013). Data on holders of extreme wealth are difficult to collect. The Forbes World’s Billionaires list, the World Top Incomes Database (currently covering South Africa and ongoing in 15 other African countries), and the Global Wealth Databook have made inroads, but they still generally cover little of Africa compared with other regions.

South Africa was the first African country to be represented on Forbes’ list, with two billionaires in the late 1990s, followed by Nigeria in 2008. By 2014 the region had 19 billionaires: 8 in South Africa, 7 in Nigeria, and 1 each in Angola, Kenya, Tanzania, and Uganda. Countries such as India experienced a much sharper rise during a similar period. The number of billionaires there rose from 2 in the mid-1990s to 46 in 2012, according to Gandhi and Walton (2012).

Although there are fewer billionaires in Africa, their average aggregate net wealth in 2012 was higher ($5.2 billion per billionaire) than in India ($3.8 billion). Aggregate billionaire wealth as a percent of GDP increased steadily in Nigeria and South Africa from,
0.3 and 1.6 percent in 2010 to 3.2 and 3.9 percent in 2013 (figure 4.11). The increase is partly explained by the rise in the number of billionaires in both countries over the period. Nigeria’s rapid climb also stems from the fact that, since 2011, it has been the home of the richest African (Aliko Dangote), whose fortune grew by a factor of 10 between 2010 and 2014.

The growth in extreme wealth in the region since 2010 can be decomposed into two components: the increase in the wealth of veteran billionaires and the addition of new billionaires. More than half of the growth in Nigeria’s extreme wealth is explained by the growth in the wealth of the veterans. The weight of newcomers in the growth in extreme wealth in South Africa rose from 40 percent in 2011 to 54 percent in 2013. Across the set of six countries, the contribution of newcomers to the growth in extreme wealth jumped from 37 percent in 2011 to 61 percent in 2013.

With a focus on billionaires, the Forbes list captures only the very top of extreme wealth. In 2013 Forbes reported on 50 Africans worth at least $400 million. This list still leaves out lower levels of wealth that are high by any standard.

Knight Frank (2015) surveys private bankers and wealth advisors to collect data on ultra-high-net-worth individuals (individuals whose net worth exceeds $30 million) in 90 countries, of which 14 are in Africa. Across countries, the number of ultra-high-net-worth individuals increases with GDP per capita growth. The number tends to increase even where economies are in decline or stagnating (in Zimbabwe, for example, the number of ultra-high-net-worth individuals rose by 5.2 percent while GDP per capita declined by 0.12 percent). Africa’s trend (not shown) is very similar to the global trend (the gray dotted line in figure 4.12).

What do these data reveal about inequality? Given the limited data on these extremely wealthy individuals, there is no straightforward answer. Credit Suisse (2014) presents estimates of the distribution of wealth using the Forbes list and imputations based on cross-country relationships and consumption surveys. Using these data, Lakner (2015) finds that the 10 richest people in Africa possess wealth equivalent to the wealth of the poorest half of the population. (His findings include North Africa, where 3 of the 10

**FIGURE 4.11 Billionaire wealth in Africa is growing**

![Billionaire wealth in Africa is growing](image)


**FIGURE 4.12 Extreme wealth increases with GDP in Africa and elsewhere**

![Extreme wealth increases with GDP in Africa and elsewhere](image)

Sources: Data on number of ultra-high-net-worth individuals are adapted from World Bank 2014b, based on Knight Frank 2015. GDP data are from World Development Indicators.

Note: GDP is measure in purchasing power parity constant 2011 dollars. Black dotted line shows the global trend (African and non-African countries).
richest people reside.) Oxfam International (2015) estimates that globally 80 individuals possess as much wealth as half the world’s population (the regional and global results are not strictly comparable). Few detailed studies explore the level of extreme wealth of nationals at the country level. One exception is the New World Wealth (2014) study of Kenya, which estimates that about 8,300 people own 62 percent of that country’s wealth.

Does the source of this wealth matter? Particularly in sectors where rent-seeking behavior is more likely, the role of political connections in the wealth-generating process could have implications for development and growth. Gandhi and Walton (2012) find that in India in 2012, 60 percent of total net wealth was derived from “rent-thick” sectors, such as real estate, infrastructure, construction, mining, telecommunications, cement, and media, where the influence of political connections and the potential for rent extraction are important (Rama and others 2015). In Africa the share of extreme wealth derived from extractives has been declining. During 2011–14, about 20 percent of African billionaires derived their wealth mainly or partially from telecommunications, and the share of extreme wealth derived from services and the broad category of investment jumped from 1 percent to 13 percent.

Forbes classifies the majority of net wealth in Africa in 2014 as self-made as opposed to inherited. It estimates that self-made aggregate net wealth in the region represented 74 percent of total net wealth and that 81 percent of the billionaires in Africa reported being self-made. This classification of self-made does not necessarily imply returns to successful entrepreneurship and innovation (as opposed to accumulating extreme wealth through political influence or corrupt business practices). Bagchi and Svejnar (2015) assess wealth accumulation through political connections by looking at evidence in news sources that suggests whether billionaires would have become billionaires in the absence of political connections. Among total billionaire wealth in their sample, the fraction of politically connected billionaires in 1987, 1992, 1996, and 2002 ranges from 4 percent to 13 percent. They conclude that politically connected wealth accumulation has a negative effect on economic growth worldwide. In resource-rich countries in Africa, there is concern that the elites gain wealth from resources through political connections (see the examples and broad discussion in Burgis 2015).

**Concluding Remarks**

The latest evidence on inequality in Africa paints a complicated picture. The most unequal countries in the world are in Africa, mostly in the southern part of the continent, but excluding the seven countries with extremely high inequality, inequality is not higher or lower than in other countries at similar income levels. In countries with comparable surveys over time, inequality is falling in half and rising in half, without a clear association with factors such as resource-richness, income level, or state fragility. A clearer pattern emerges for horizontal inequalities within countries, which continue to be dominated by unequal education levels and high urban-rural and regional income disparities.

From a regional perspective, inequality among Africans is rising and is high compared with other regions. This pattern reflects the range in national income levels across countries and the fact that most of the poor in Africa reside in the poorest countries. The income gap between African countries is growing.

Another aspect of inequality—extreme wealth—is missed altogether by household surveys. Africa has seen a rise in billionaire wealth, at least in countries for which data are available.

A portion of inequality in Africa can be attributed to inequality of opportunity, circumstances at birth that are major determinants of one’s poverty status as an adult. Fortunately, at least in some countries, there has been a rise in intergenerational
educational mobility, holding out hope that inequality of opportunity will decline. Neverthe-
less, intergenerational occupational persistence, at least as captured by three broad occupation categories, remains high in many countries.

Notes
1. According to Olson (1965), if a public good is of interest to the rich, inequality could facilitate collective action and allow the poor to free ride. In fact, the evidence shows, more often the opposite occurs. Wealthy households, which can afford private providers, opt out of financing public services such as schools and health care facilities and redirect resources to efforts that do not serve poor families. Mansuri and Rao (2013) present a range of evidence indicating that communities with high inequality have worse local development processes and outcomes. They find that highly unequal incomes amplify market failures.
2. Some studies find evidence that high inequality within ethnic groups rather than in the country as a whole is a driver of civil conflict (Huber and Mayoral 2014). Others find that it is inequality between ethnic groups that matters (Stewart 2008). Parallel with these efforts to explain civil conflict is the literature that explores how inequality, especially ascriptive and horizontal inequalities, explains crime rates (see, for example, Blau and Blau 1982).
3. Similar contradictions in perceptions can be found in views on inequality in the United States (Fitz 2015).
4. Purchasing power parity (PPP) adjustments to convert local currency units into U.S. dollars do not affect national inequality measures. National temporal price adjustments (to bring a survey from year 1 to year 2 prices) also do not typically affect national inequality measures. In contrast, within-survey spatial price adjustments change inequality measures. Both the World Bank Africa Poverty Database (used here) and PovcalNet compute Gini indexes based on nominal consumption measures. They do not adjust for the fact that the households interviewed pay different prices depending on where in a country they live or the time of year they are interviewed. If prices differ spatially and temporally, deflated aggregates may produce different inequality measures and trends. For most of the surveys analyzed here, a deflated (real) consumption measure is available. The general findings on the levels and trends in inequality are not substantially different if Gini indexes are estimated using deflated (real) consumption. One exception is the findings on between- and within-inequality by region or urban location, which tends to decline using spatially deflated aggregates. Székely and Hilgert (2007) analyze some of these issues in Latin American countries.
5. Excluding these surveys has implications for how the results compare with the results of other studies. For example, excluding the first of the three most recent national household surveys in Malawi (on the grounds of incomparability in survey design), the inequality trend in Malawi is not decreasing, as Bhorat, Naidoo, and Pillay find (2015).
6. Expenditure on consumer durables is not always included in the consumption measure, because it represents highly irregular purchases (Deaton and Zaidi 2002). The recommended practice is to include durable goods “use values” in the consumption measure.
7. Bhorat, Naidoo, and Pillay (2015) use a different inequality measure but show similar results: of 34 countries in Sub-Saharan Africa, inequality rose in 18 and fell in 16. Cornia (2014) and Fosu (2014) draw similar conclusions. All three reports draw on the World Bank PovcalNet database. From a population perspective, the results lean toward increasing inequality; 57 percent of the population in these countries are residing in a country with increasing inequality.
8. Measuring polarization is another approach to looking at the consumption distribution, a concept related to but distinct from inequality. Polarization measures separation (distance) across clustered groups in a society. Clementi and others (forthcoming) show that Nigeria experienced both rising inequality and rising polarization between 2003/04 and 2012/13, which contributed to the eroding of the middle class. Keefer and Knack (2002) argue that, in practice, polarization measures are strongly positively correlated with inequality measures across countries.

10. Because of the limited availability of household surveys, the analysis cannot start before 1993, and there are not enough surveys for a benchmark year after 2008.

11. General coverage of Africa is good, but the coverage of fragile countries is low: on average, the surveys cover only 28 percent of the population in fragile countries between 1993 and 2003. The rate improves markedly in 2008 with the inclusion of the Democratic Republic of Congo and Sudan.

12. Inequality in Africa as a whole is higher than in Latin America (0.528); Asia other than China (0.450) and China (0.427); mature economies (0.419); the Russian Federation, Central Asia, and Southeast Europe (0.419); and India (0.331) (Lakner and Milanovic 2015). Estimates by Pinkovskiy and Sala-i-Martín (2014) for Africa are even higher but show a decrease. However, their estimates are not drawn solely from a set of recent surveys in Africa but rather from a combination of inequality measures from surveys, national accounts, mean and growth rates, and interpolations and extrapolations for missing inequality data (including imputations of inequality measures from other countries if no survey is available for a country).

13. There are several main approaches to decomposing inequality into within- and between-group inequality. The traditional version of the decomposition apportions total inequality into a component explained by differences in mean consumption between groups and a component that reflects inequality within each group. The between-group component measures the share of overall inequality that would be obtained if every individual had the average consumption level of his or her group. However, as Elbers and others (2008) note, in this approach between-group inequality reaches a maximum if each individual constitutes a separate group—the yardstick against which between-group gaps are evaluated. In addition, the between-group component mechanically increases with the number of categories used. Elbers and others propose an alternative decomposition that compares between-group differences with the maximum inequality that would be obtainable if the number and size of groups were fixed at their actual levels, while the ranking of the groups is preserved. For instance, urban-rural inequality would be evaluated against a benchmark in which all individuals living in rural areas appear at the lower end of the distribution and all individuals living in urban areas appear at the upper end of the distribution, with the urban and rural population shares fixed at their actual levels. The decomposition thereby takes into consideration the existing configuration of population groups. Only the traditional results are reported here but broadly similar patterns result from the Elbers and others (2008) method (even though the estimated between-group shares are generally higher in the latter variant). For the analysis in this section, the mean log deviation is the measure of inequality. Unlike the Gini, it is additively decomposable, a mathematical property that is desirable in this context.

14. Region typically refers to the administrative region (for example, province) in which the household resides. Education denotes the highest level of education of the household head (none, incomplete primary, completed primary, completed lower secondary, university, other). Employment refers to the main economic activity of the household head (employee, employer/self-employed in agriculture, employer/self-employed outside agriculture, other). Gender and age refer to the household head. The demographic categories are one or two adults without children, one or two adults and fewer than three children, one or two adults and three children or more, three adults or more without children, three adults or more and up to three children, three adults or more, and four children or more.

15. The results for urban/rural and education are less pronounced than those in Belhaj Hassine (2015), who studies 12 countries in the Middle East and North Africa. She finds that gaps between regions account for a larger share of inequality than gaps within regions. Some of the inequality
across geographic areas reflects differences in the cost of living. Between-group inequality for regions and for urban/rural areas is lower if a deflated measure of consumption is used rather than a nominal measure. Across countries, it declines by about 15 percent on average for both regions and urban/rural.

If a deflated measure of consumption is used, these ratios fall to 1.3 (Ethiopia), 2.2 (Democratic Republic of Congo), and 3.9 (Nigeria).

The focus here is on inequality of opportunity from the perspective of economic outcomes in adulthood. A third domain is the human opportunity index, which captures the extent to which circumstances such as school attendance, immunizations, and household infrastructure, including access to sanitation and water, contribute to gaps in outcomes for children. Dabalen and others (2015) present detailed analysis of the human opportunity index for Africa across many countries and years. They find that greater coverage for all was more important than changes in equity for improvements in human opportunities.

This approach is described as the ex ante approach to measuring inequality of opportunity, as opposed to the ex post approach (Checchi and Peragine 2010; Fleurbaey and Peragine 2013). In the ex post approach, there is no inequality of opportunity if people who exert the same effort end up with the same outcome. Inequality of opportunity in this approach is measured as inequality within responsibility classes (that is, within the set of individuals at the same effort level).


Another circumstance that is particularly relevant for countries in the region hard hit by HIV/AIDS is orphan status. The empirical evidence on the consequences of being orphaned focuses on health indicators and education, with some studies showing a causal impact of orphanhood on schooling outcomes. Because orphanhood is not a random event (it is correlated with other household measures, such as urban status and household education and wealth), the correlation does not imply that education levels are generally worse among orphans. Indeed, the most recent Demographic and Health surveys show that in half of the countries surveyed, orphans are no less likely than nonorphans to be enrolled in school. In Nigeria and Chad, orphans are more likely than other children to be in school.

There are different methodological approaches to measuring inequality of opportunity, including the choice of inequality measure (Gini or MLD), the estimation approach (parametric or nonparametric), and the choice of circumstances to use if the set of circumstances differs across surveys. All circumstances available for each country are used. This choice is the best in analyzing a single country, but it poses some difficulties in terms of comparability across countries. There is a trade-off between the robustness and usefulness of the analysis in each country and the demands of comparability across countries. As the number of circumstances increases, the estimate of inequality of opportunity will also increase. The estimates reported here are based on a nonparametric estimation approach (Ferreira and Gignoux 2011). The MLD is commonly used as the measure of inequality in this literature, although some researchers propose using the Gini from a theoretical point of view (van de Gaer and Ramos 2015) and an empirical perspective (Brunori, Palmisano, and Peragine 2015b).

If data on these unobserved circumstances were available, the share of inequality attributed to circumstances would go up, as would the level and share of inequality of economic opportunity (though the extent of underestimation also depends on the degree of correlation between unobserved and observed circumstances).

This subsection draws on Azomahou and Yitbarek (2015).

Related studies include the following: Bossuroy and Cogneau (2013) cover

26. These two measures of mobility—the intergenerational gradient and the correlation coefficient—can produce different findings in the same setting. The intergenerational gradient may decline over time (implying more mobility), but the correlation between the educational attainment of a child and parent can remain constant (implying no change in mobility) (Hertz and others 2007). This divergence may result from a reduction in the inequality of schooling in the child’s generation (for example, achieving universal primary education) relative to the parents’ generation and a drop in the persistence effect—that is, education in the recent birth cohort has become less dependent on parental schooling than parental education was on the educational attainment of the grandparents.

27. All billionaires included in this analysis are both citizens and residents of the region. Nathan Kirsh, a citizen of Swaziland who resides in London, is thus excluded. Forbes also excludes family fortunes, such as the Chandaria family in Kenya and the Madhvanis in Uganda, if the wealth is believed to have been dispersed among family members.

28. The Oxfam estimates also draw on the data from Credit Suisse (2014). Because information on assets and debts from household survey data is rarely available in African countries, estimates for the region are based largely on imputations from other low-income countries. In general, it is difficult to compare assets because the appropriate data are not available. For example, important assets held by the poor, such as landholdings, could be undervalued and assets held by the rich may be hidden.

References


Fitz, Nicholas. 2015. “Economic Inequality: It’s Far Worse than You Think.” Scientific American March 31.


