

## CHAPTER 10: ECONOMIC AND SOCIAL INEQUALITY

The World Bank estimates that during 2020 and 2021 the COVID-19 pandemic pushed about 100 million additional people into extreme poverty across the world, a “historically unprecedented increase in global poverty”.<sup>1</sup> During this same time period, the collective wealth of billionaires in the United States increased from \$3.4 trillion to \$5.3 trillion, driven primarily by significant growth in stock markets. Elon Musk, the world’s richest person, saw his wealth increase from about \$27 billion to over \$300 billion.<sup>2</sup> Most analysts conclude that the pandemic has increased global economic inequality, as workers with lower education levels (and thus lower average incomes) were negatively impacted more than highly educated workers. The International Monetary Fund concludes that the pandemic also exacerbated pre-existing racial and gender inequalities, particularly as the burden of additional child care and housework fell disproportionately on women.<sup>3</sup>

Analysis of inequality, like most economic issues, involves both positive and normative questions. Positive analysis can help us measure inequality, determine whether it is increasing or decreasing, and explore the causes and consequences of inequality. But whether current levels of inequality are acceptable, and what policies, if any, should be implemented to counter inequality are normative questions. While our discussion of inequality in this chapter focuses mainly on positive analysis, we will also consider the ethical and policy debates that are often driven by strongly held values.

### 1. DEFINING AND MEASURING INEQUALITY

One of the final economic goals we discussed in Chapter 1 was “fairness.” Note that this goal is subtly, but fundamentally, different from “equality.” Income differences within a society may be considered fair even if they are somewhat significant. Few desire a society in which everyone earns exactly the same income. But what does it mean to have a society that is neither “too equal” nor “too unequal”? In order to discuss how to achieve a good balance of income and wealth distribution, we first need some objective measures of inequality, which allow us to draw comparisons across time and across societies. We will first consider *what* we are measuring, and then *how* we measure it.

#### 1.1 INEQUALITY OF WHAT?

When the subject of inequality is raised, most people think of income or wealth inequality. These are indeed central to any economic analysis of the topic. But it is also important to recognize that inequality is a broader concept that extends beyond the realm of money.

Let us consider a few examples. Vast inequality exists in the quality of health care across the world. Preventable or treatable diseases in numerous tropical developing countries (such as malaria, measles, and tuberculosis) cause average life expectancy to be significantly shorter than in richer countries. There is also significant health inequality within many countries. According to a 2021 analysis, average life expectancy in the United States is about 13 years longer for those in the top 20 percent by income as compared to those in the bottom 20 percent—a gap that increased over time.<sup>4</sup>

There is also a considerable imbalance in education, both nationally and internationally. Children in Germany receive, on average, about 14 years of schooling—the most years of any country. Meanwhile, the average for children in the sub-Saharan countries of Ethiopia, Mali, Chad, and Guinea is less than three years of education.<sup>5</sup> Inequalities arise not only due to income differences, but also due to race and gender. In the United States, the difference in academic achievement between white and black students has decreased significantly in recent decades but still remains evident. However, the achievement gap between students from low- and high-income families in the United States has increased since the mid-1990s.<sup>6</sup> There are mixed results for gender-based educational inequality across the world. By 2021, 37 countries had fully closed the educational attainment gap by gender, but in 26 countries girls still had less than 90 percent of the educational attainment of boys, including Afghanistan, Iraq, Niger, and Pakistan.<sup>7</sup>

Related to both health and education is what Nobel laureate Amartya Sen has famously referred to as “capabilities.” By his reckoning, money is only one dimension—albeit an important one—of an individual’s “capability” to function in his or her economic environment. To Sen, what matters most is that people possess the necessary tools such as wealth, health, education, friends, and social connections to provide them with realistic economic choices. As Sen has pointed out, there is considerable inequality of capabilities throughout the world, not just in the poor countries.

Inequality is also manifest in certain environmental outcomes. Proponents of “environmental justice,” point out that polluting industries and toxic waste disposal sites in the United States tend to be located disproportionately near poor and minority communities. This effect is even more pronounced in some developing countries. Oil and gas development in Nigeria by international corporations has resulted in thousands of oil spills that have impoverished local residents due to reduced agricultural production, lower fish harvests, and polluted drinking water.<sup>8</sup>

One also sees considerable inequality when confronting the issue of climate change. This is partly because many developing countries are heavily reliant on climate-sensitive industries, such as agriculture and fisheries. Additionally, the financial and institutional capacities of poorer countries to anticipate and respond to the effects of climate change are much more limited than in wealthier countries. Numerous studies find that climate change has already impacted, and will continue to impact, poorer countries the hardest, exacerbating global inequality. A 2019 analysis by researchers at Stanford University concluded that the current GDP gap between the world’s richest and poorest countries is 25 percent larger than it would have been without climate change.<sup>9</sup> Warmer temperatures and changing precipitation patterns in Africa and other developing regions could reduce the growing season and lower yields, leading to a 20 percent global increase in the number of people at risk of hunger by 2050.<sup>10</sup> A 2020 article finds that climate change threatens to increase economic inequality both across countries and within countries, reversing recent gains made by some developing countries.<sup>11</sup>

## 1.2 MEASURING INEQUALITY

While recognizing these various types of inequality, for the purposes of economic analysis we will focus primarily on inequality of income and wealth. The two most common metrics used to measure income inequality are:

1. Measure the income share (percent of all income) held by various groups ordered by income from poorest to richest, such as the bottom 20 percent, the middle 20 percent, the top 1 percent, etc.
2. Measure the overall distribution of income in a society, using mathematical and graphical techniques.

### Income Distribution Data

Let’s consider the first approach. Table 10.1 presents the distribution of household income in the United States in 2020. The data are arranged in order of income, and the share of the total income “pie” that accrues to each twentieth percentile (or quintile) is in the second column. To understand what this table means, imagine dividing up U.S. households into five equal-sized groups, with the lowest-income households all in one group, the next-lowest in the next group, and so on. Note that the table also breaks out the richest 5 percent as a separate group.

The lowest-income quintile, with household incomes below \$27,027, received only 3.0 percent of all the household income in the country. The richest quintile, those with incomes of \$141,111 or more, received 52.5 percent—in other words, more than half—of all the income received in the United States. The top 5 percent of households receive nearly as much income as the bottom 60 percent. (Note that the first graph in Chapter 0 presents a slightly different way to present income inequality, looking at average incomes in each group rather than income shares.)

**Table 10.1. Household Income Distribution in the United States, 2020**

Group of Households	Share of Income (Percent)	Annual Income Range
Bottom 20%	3.0	Below \$27,027
Second 20%	8.1	\$27,027-\$52,179
Third 20%	14.0	\$52,180-\$85,076
Fourth 20%	22.6	\$85,077-\$141,110
Top 20%	52.2	Above \$141,110
Top 5%	23.0	Above \$273,739

Source: Shrider *et al.*, 2021.

Using these data, we can now construct several measures of inequality based on the ratios of the income share of one group compared to another group. One common measure is the ratio of the income share of the richest fifth to that of the poorest fifth of the population; in this case, we obtain  $52.2/3.0 = 17.4$ —that is, households in the richest quintile have over 17 times the income, on average, of households in the poorest quintile. We can then see how this ratio has changed over time to track changes in inequality. For example, in 1980 this ratio was only about 10, indicating an increase in the spread between the richest and poorest fifth of the population. The U.S. Census Bureau publishes various ratios based on the incomes

at different percentiles of the distribution, such as the 90th/10th ratio, the 95th/20th ratio, and the 80th/50th ratio. Again, these can be tracked over time to determine how inequality has changed.

### The Lorenz Curve and Gini Coefficients

However, a simple ratio is somewhat arbitrary, focusing on some parts of the income distribution while ignoring others. Economists frequently prefer to use a more comprehensive measure that reflects the shape of the entire income distribution. While several measures have been developed, we focus on the most common measure—the **Lorenz curve**, named after Max Lorenz who first developed the technique. A Lorenz curve for household income in the United States is shown in Figure 10.1. In this graph, the horizontal axis represents the *cumulative* percent of households, lined up from left to right in order of increasing income. The vertical axis measures the *cumulative* percentage of all income received by different groups of households (the lowest 20 percent, the lowest 40 percent, etc.).

**Lorenz curve:** a line used to portray an income distribution, drawn on a graph with percentiles of households on the horizontal axis and the cumulative percentage of income on the vertical axis

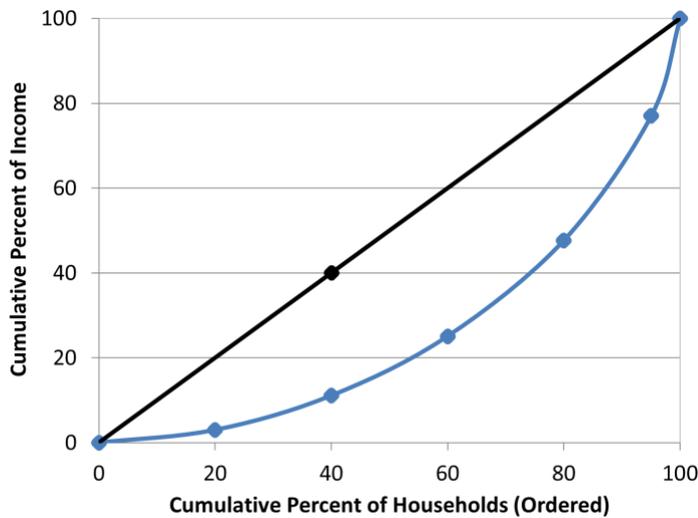
We use the data in Table 10.1 to draw the Lorenz curve in Figure 10.1. Point A represents the fact that the poorest 20 percent of households received 3.0 percent of all income. To obtain point B, we need to calculate the cumulative percent of income received by the bottom 40 percent of households. So, we add the income received by the bottom 20 percent to the income received by the next 20 percent. Thus the cumulative percent of income received by the bottom 40 percent is  $3.0 + 8.1 = 11.1$  percent of total income. For point C, we need to calculate the cumulative percent of income received by the bottom 60 percent of households, which is  $3.0 + 8.1 + 14.0 = 25.1$  percent of total income. Similarly, point D shows that the income share of the bottom 80 percent is 47.8 percent of all income. Finally, point E shows that the bottom 95 percent received 77.0 percent of all income (everyone except the top 5 percent). The Lorenz curve must start at the origin, at the lower-left corner of the graph (because 0 percent of households have 0 percent of the total income) and must end at point F in the upper right corner (because 100 percent of households must have 100 percent of the total income).

The Lorenz curve provides information about the degree of income inequality in a country. Note that the 45-degree line in Figure 10.1 represents a situation of absolute equality. If every household had exactly the same income, then, for example, the “bottom” 40 percent of households would receive 40 percent of all income. This is shown by point G in Figure 10.1. Imagine the other extreme—a situation in which one household received all the income in a country. In this case, the Lorenz curve would be a flat line along the horizontal axis at a value of zero until the very end, where it would suddenly shoot up to 100 percent of income (at point F).

Of course these two extremes do not occur in reality, but they infer that the closer a country’s Lorenz curve is to the 45-degree line, the more equal its income distribution. This is illustrated in Figure 10.2, which shows the Lorenz curve for four countries: Brazil, Sweden, the United Kingdom, and the United States. Income is distributed relatively equally in Sweden; its Lorenz curve is closest to the 45-degree line of absolute equality. Brazil has one of the most unequal income distributions—we

see its Lorenz curve bows far from the line of equality. We can also conclude that economic inequality is higher in the U.S. than in the U.K.

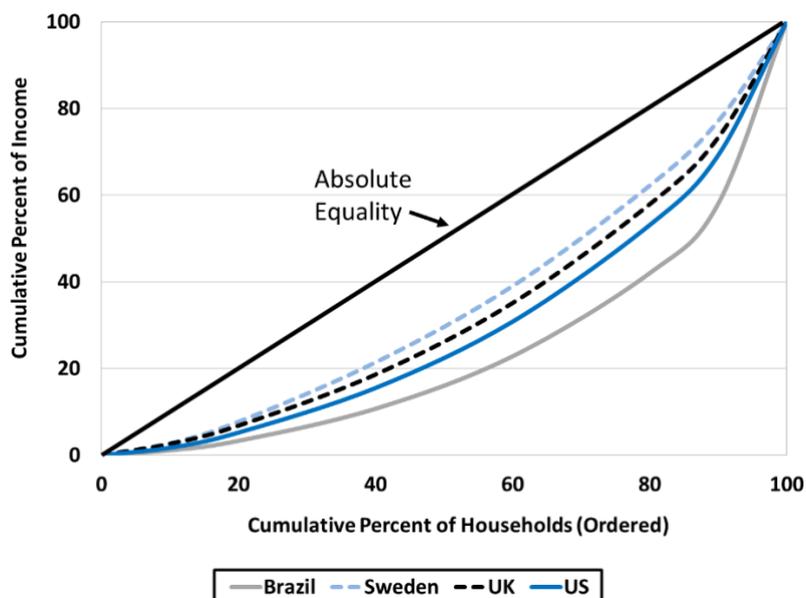
**Figure 10.1. Lorenz Curve for the United States, 2020**



Source: Shrider *et al.*, 2021.

Thus the more the Lorenz curve bows away from the line of absolute equality, the greater is the extent of inequality in the income distribution. This observation led a statistician by the name of Corrado Gini to introduce a numerical measure of inequality that came to be known as the **Gini ratio (or “Gini coefficient”)**, which is defined as the ratio of the area between the Lorenz curve and the diagonal line of equality to the total area under the diagonal line.

**Figure 10.2. Lorenz Curves for Brazil, Sweden, the United Kingdom, and the United States**



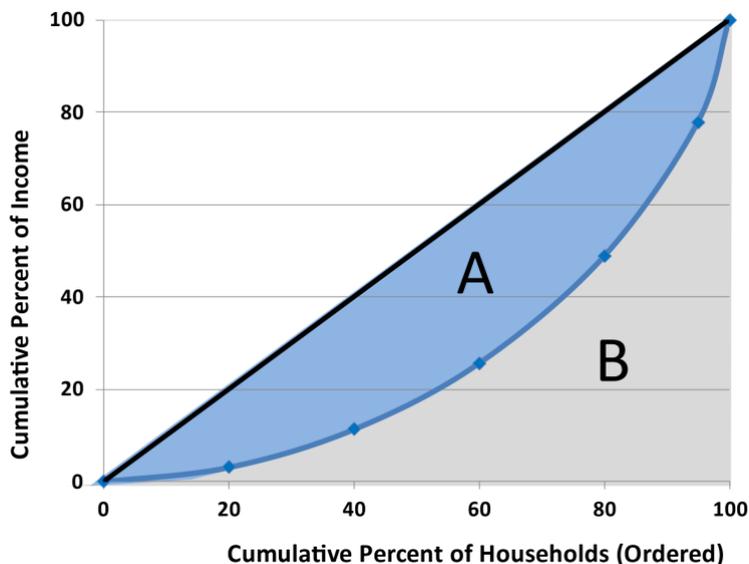
Source: World Bank, World Development Indicators database. Data are for 2018, except for the United Kingdom (2017).

Referring to areas A and B in Figure 10.3, the Gini ratio is  $A/(A+B)$ . Clearly, the Gini ratio can vary from 0 for absolute equality (since in such a case area A would equal zero as the Lorenz curve overlaps the line of absolute equality) to 1 for absolute inequality (where area B would equal zero). According to U.S. Census Bureau calculations, the Gini ratio for U.S. household income in 2020 was 0.489. We will present international comparisons of inequality, along with data trends, later in the chapter.

**Gini ratio (or Gini coefficient):** a measure of inequality, based on the Lorenz curve, that goes from 0 (absolute equality) up to 1 (absolute inequality). Greater inequality shows up as a larger area between the Lorenz curve and the diagonal line of absolute equality

Note that the definition of income used for the data in Table 10.1 is pre-tax income excluding the value of noncash government benefits such as food assistance and Medicare, and also excluding the value of employer-provided benefits such as health care. How might the Gini coefficient change if we defined income differently? Higher-income people, after all, pay more in taxes, so perhaps we should look instead at disposable income after taxes. Meanwhile, poor people may qualify for noncash programs such as food assistance, or for subsidized housing and medical care, and arguably the value of these programs should be included as part of income.

**Figure 10.3. The Gini Coefficient:  $A/(A + B)$**



On the basis of considerations like these, the U.S. Census Bureau has experimented with at least 15 different definitions of income. In addition to the definition used in Table 10.1, another definition is meant to approximate what the distribution of income would be if—hypothetically—the impact of government activity were excluded. For this definition, the Census Bureau starts with pre-tax income and subtracts government cash transfers (such as welfare payments). Then it adds the value of employer-provided health insurance benefits, generally received by workers with higher incomes. Under this definition, the Gini ratio, not surprisingly, rises, showing greater inequality. The share of income received by the bottom fifth drops considerably, while the share of the top fifth rises.

Adjusting income for the effects of the tax system mainly lowers incomes at the top, though as we will see in the next chapter all households pay taxes to some extent. When the Census Bureau further adds in the effects of noncash government transfer programs such as food assistance and Medicare, the distribution becomes somewhat less unequal.

### **Income Inequality and Well-Being**

How much importance should we place on income inequality and the Gini index? Many important goods and services are, after all, obtained without the use of cash income. Many families produce at least some valuable services (such as child care and cooking) for themselves. In addition, many of the things that we enjoy—such as pleasant parks, safe roads, or clean air—add to our well-being without requiring payments (although these things are generally financed through taxes). Does economic inequality necessarily mean an unequal distribution of well-being in a society?

As we saw in Chapter 8, the evidence generally suggests that income is positively correlated with subjective well-being. This suggests that a country with a highly unequal income distribution will also have an unequal distribution of well-being. However, recent research finds this may not be true. Based on data from over a dozen countries, a 2020 analysis concludes that inequality in well-being normally falls even as income inequality increases, as long as the overall economy is growing.<sup>12</sup> One potential explanation for this finding is that economic growth allows for more provisioning of public services that primarily increase the well-being of lower-income households. Another hypothesis is that a broad social trend toward more acceptance of diverse cultures and lifestyles has resulted in a narrowing of well-being inequality.

A related issue is the relationship between economic inequality and the average well-being in a society. Overall, the results are mixed. Most research from developed countries finds a negative relationship between well-being and economic inequality (i.e., greater inequality leads to lower average well-being), but most studies from developing countries find a positive relationship. As we'll discuss later, inequality in some poorer countries may occur during a period of rapid economic growth when some, but not all, people experience an improvement in living conditions. However, several studies have found no significant relationship between economic inequality and well-being, while other studies find that an apparent relationship depends on other factors. For example, one study found that a relationship between economic inequality and well-being exists only in poorly governed countries, while another found that economic inequality reduced well-being only for those with left-leaning political views.<sup>13</sup>

### **Discussion Questions**

- 1 What are some of the differences between inequality of income and inequality of “capabilities” or well-being? How are these three concepts related? Which one do you think deserves the most attention from policymakers?
- 2 What do you think is the minimal amount of annual income that an individual, or a small family, would need to live in *your* community? (Think about the rent or mortgage on a one- or two-bedroom residence, etc.) What does this probably mean about where the average level of income in your community fits into the U.S. income distribution shown in Table 10.1?

## 2. INEQUALITY DATA AND TRENDS IN THE UNITED STATES

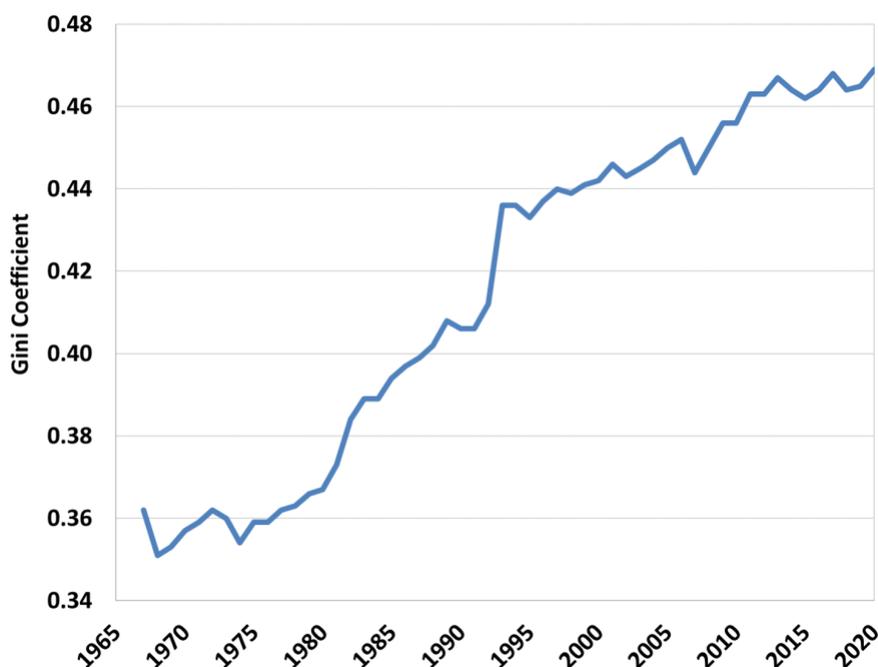
We now can use inequality data to track how inequality has changed over time. In this section we first explore income inequality trends in the United States and then discuss some additional perspectives on inequality, including inequality of wealth and how inequality is related to race, age, education, and other factors.

### 2.1 INCOME INEQUALITY OVER TIME IN THE UNITED STATES

No one disputes that income inequality in the United States has increased in recent decades. We can see this in Figure 10.4, which shows the Gini coefficient in the United States from 1967 to 2020, based on data from the U.S. Census Bureau. The Gini coefficient reached a record low of 0.351 in 1968. After that, the Gini coefficient increased in 36 of the next 52 years.

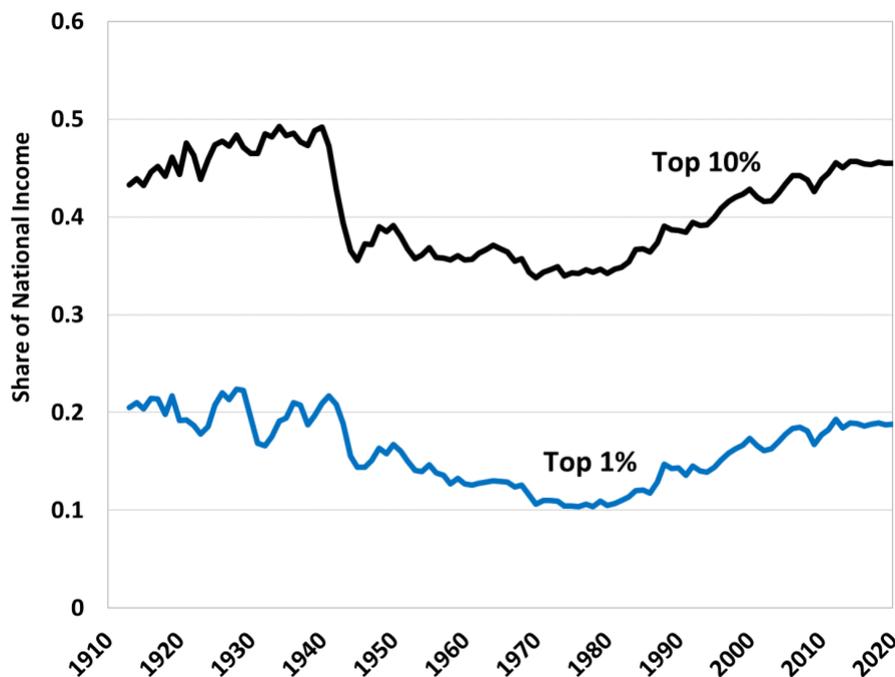
While comparable government data are not available for the years prior to 1967, academic researchers have estimated longer trends in income inequality by focusing on the share of total income going to the top-income groups. Figure 10.5 shows how the income shares of two high-income groups in the United States—the top 10 percent and the top 1 percent—have changed since the early twentieth century. After the Great Depression, the share of income going to the top-income groups generally declined, suggesting that income inequality was decreasing. The share of income going to the top 10 percent remained comparatively low, at around 35 percent, from around 1950 until 1980. Since then, as we would expect from Figure 10.4, the share going to the top 10 percent has increased, up to around 45 percent now. The share of national income going to the top 1 percent reached a low of around 10 percent in the 1970s, but has risen to close to 20 percent recently. We will consider some explanations for the recent trend toward higher inequality later in this chapter.

**Figure 10.4. Gini Coefficient in the United States, 1967–2020**



Source: Shrider *et al.*, 2021, Table A-5.

Figure 10.5. Income Shares of Top-Income Groups, United States, 1913–2020



Source: World Inequality Database, <https://wid.world/country/usa/>.

## 2.2 WEALTH INEQUALITY

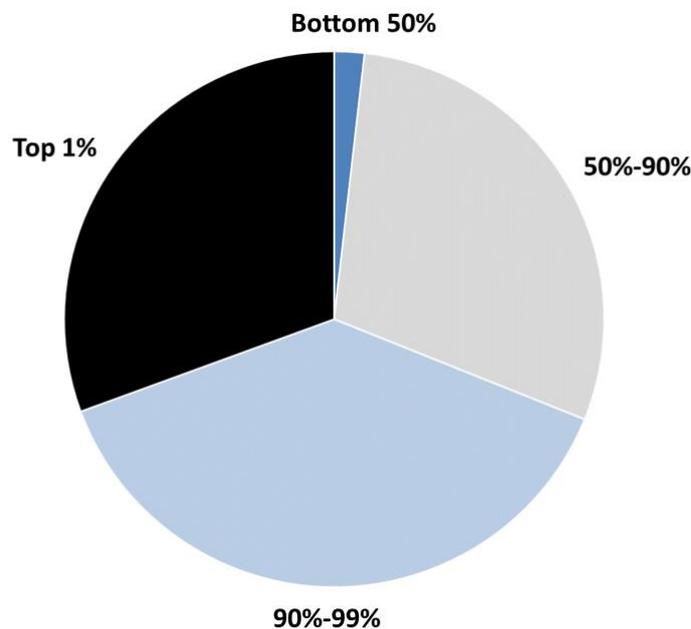
Gini coefficients may also be calculated for the distribution of wealth rather than income. This distribution, which depends on what people own in assets, tends to be much more unequal than income distribution. Many lower-income people have almost no net wealth, and even people with middle-class income levels often have only a relatively small amount of wealth. It is even possible to have *negative* net wealth. This happens when the value of a person’s debts (e.g., the amount they owe on their car, house, credit cards, and other loans) is higher than the value of her assets. For people in the middle class, the equity that they have in their house is often their most significant asset. By contrast, those who do own substantial wealth are generally in a position to put much of it into assets that increase in value over time or yield a flow of income and dividends—which can in turn be invested in the acquisition of still more assets.

The distribution of wealth is, however, less frequently and less systematically recorded than the distribution of income—in part because wealth can be hard to measure. Much wealth is held in the form of unrealized **capital gains**. A household realizes—turns into actual dollars—capital gains if it sells an appreciated asset, such as shares in a company, land, or antiques, for more than the price at which it purchased the asset. An asset can appreciate in value for a long time before it is actually sold. No one, however, will know exactly how much such an asset has really gained or lost in value until the owner actually *does* sell it, thus “realizing” the capital gain. Another reason why it is harder to get information on wealth is that while governments normally require people to report their annual income from wages and many investments for tax purposes, most governments do not require everyone to regularly report their asset holdings. Finally, wealth consists not only of financial assets but also commodities, paintings, real estate, and the like. Such disparate forms of wealth make it difficult to obtain reliable estimates of aggregate wealth statistics.

**capital gains:** increase in the value of an asset at the time it is sold compared to the price at which it was originally purchased by the same owner

These caveats notwithstanding, reasonable estimates of the U.S. Gini coefficient for wealth have been made, with Credit Suisse estimating it to be 0.85 for 2020—significantly higher than the income Gini coefficient of 0.49.<sup>14</sup> While the top 10 percent of U.S. households by income receive about 45 percent of all income, as shown in Figure 10.6 the top 10 percent by wealth own 70 percent of all wealth. The top 1 percent own 31 percent of all wealth, about the same as the bottom 90 percent combined. Note that the bottom half of Americans own very little of the national wealth—only about 2 percent. For an interesting study of Americans’ perceptions of current wealth inequality, see Box 10.1.

**Figure 10.6. The Distribution of Wealth in the United States, 2020**



Source: United States Federal Reserve, 2021.

Just as income inequality has been increasing in recent decades, so has wealth inequality. A plot of the wealth shares owned by the top groups in the United States over time looks much like the income shares in Figure 10.5. According to one study, the share of national wealth owned by the top 1 percent was over 50 percent prior to the Great Depression, declined to less than 25 percent by the late 1970s, but then steadily increased to around 45 percent more recently.<sup>15</sup>

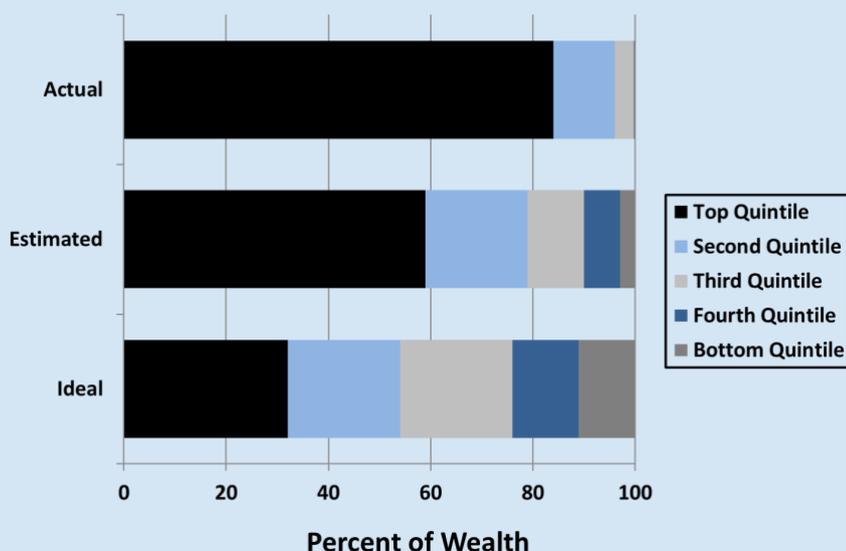
Contemplating such vast wealth inequality brings us back to the question of opportunity. Do those with little or even negative wealth have the opportunity to achieve an adequate level of well-being? In addition, great wealth often confers upon its owners both economic and political power. When the ownership of wealth is highly uneven, the ability to direct the operations of businesses and to influence government policy through campaign contributions and the like may become concentrated in the hands of relatively few. They may then use this power to maintain or exacerbate existing inequalities. We return to this point again later in the chapter.

### BOX 10.1. WEALTH INEQUALITY IN THE UNITED STATES

Figure 10.6 presents data on the actual distribution of wealth in the United States. However, political debates about inequality are often based upon perceptions rather than facts. A 2011 study surveyed people regarding their perceptions of wealth inequality in the U.S.<sup>16</sup> Specifically, respondents were asked to estimate what percentage of total wealth was actually owned by each wealth quintile. Further, people were also asked to construct their ideal distribution of wealth, again assigning a percentage of total wealth to each quintile.

The results are presented in Figure 10.7, along with the actual distribution of wealth in the U.S. We see, for example, that the top quintile actually owns 84 percent of all wealth in the U.S. according to the paper. (Note that the “actual” distribution of wealth in Figure 10.7 differs somewhat from the distribution given in Figure 10.6—the two figures rely upon different data sources and apply to different years.) However, respondents estimated that the top quintile only owned 59 percent of all wealth. But most respondents thought that even this estimated concentration of wealth was excessive. On average, their ideal wealth distribution allocated only 32 percent of all wealth to the top quintile.

**Figure 10.7. Actual, Estimated, and Ideal Distribution of Wealth in the United States**



Source: Norton and Ariely, 2011.

Looking at the other end of the wealth spectrum, the bottom quintile actually owns only 0.1 percent of wealth in the United States. Respondents estimated that the bottom quintile owns about 3 percent of wealth. According to their ideal distribution, the bottom quintile should own about 11 percent of all wealth.

The results clearly illustrate the difference between reality, perceptions, and subjective preferences. The study authors draw two primary messages from the results:

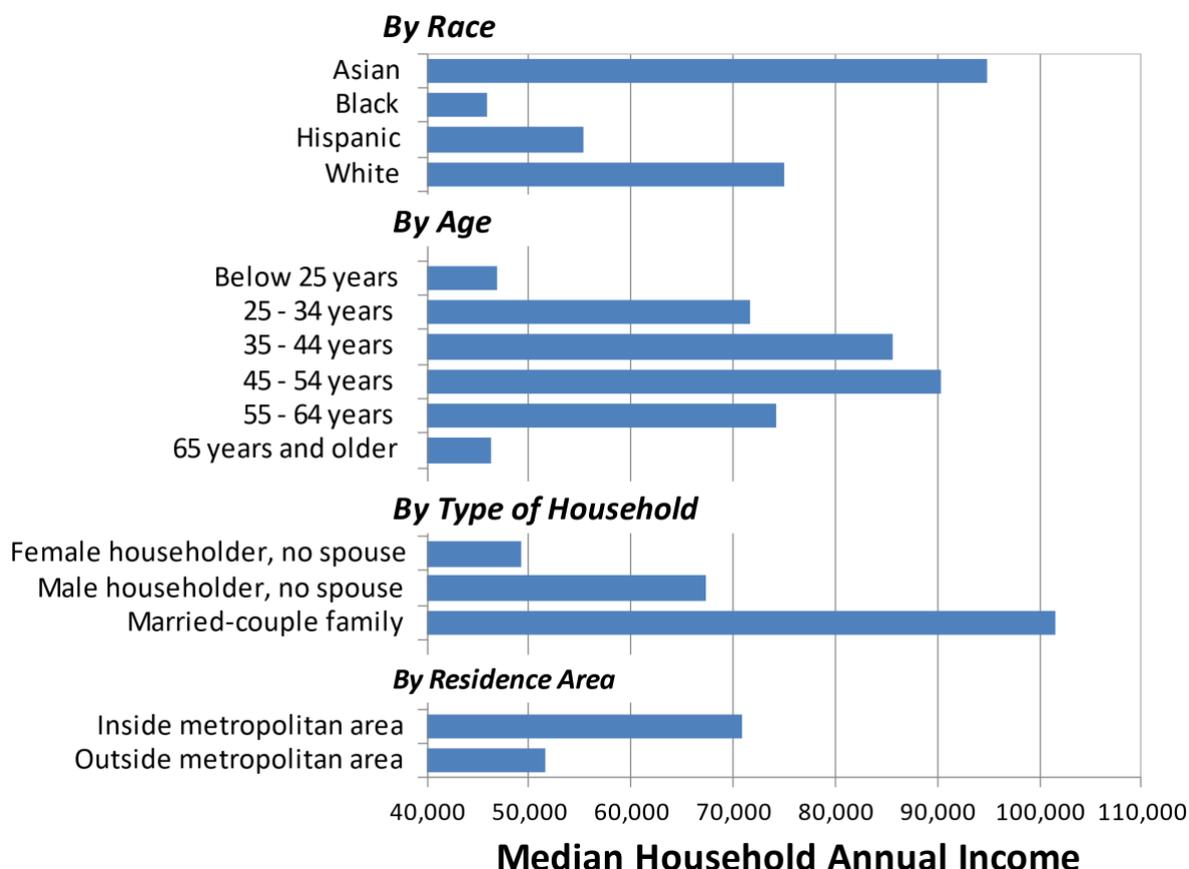
First, a large nationally representative sample of Americans seems to prefer to live in a country more like Sweden than like the United States. Americans also construct ideal distributions that are far more equal than they estimated the United States to be—estimates which themselves were far more equal than the actual level of inequality. Second, there was much more consensus

than disagreement across groups from different sides of the political spectrum about this desire for a more equal distribution of wealth, suggesting that Americans may possess a commonly held “normative” standard for the distribution of wealth despite the many disagreements about policies that affect that distribution, such as taxation and welfare.<sup>17</sup>

### 2.3 FURTHER PERSPECTIVES ON ECONOMIC INEQUALITY

So far we have documented the extent of income and wealth inequality in the United States. But we need to delve a little further to better understand what drives inequality. For example, income inequality is clearly related to race in the United States, as shown in Figure 10.8. Asian households have the highest median annual income, about \$95,000, while black households have the lowest at only \$46,000. Median income also changes with age, increasing up to middle age, and then declining as people retire. Married couples, with the potential for two adult workers, have higher incomes than households with just one adult male or female. Further, households with one adult headed by males have a median income 37 percent larger than a household headed by a single female. Finally, households in metropolitan areas have median incomes about 37 percent higher than those outside of metropolitan areas.

**Figure 10.8. Median Household Income in the United States by Select Characteristics, 2020**



Source: Shrider *et al.*, 2021, Table A-1.

Economic inequalities based on race, age, and other demographic factors are even more pronounced when we consider household wealth. Figure 10.9 presents data on the median value of household assets for different types of households.<sup>18</sup> In some cases, we can see how inequalities arising due to differences in income are magnified when it comes to wealth. While white households' incomes are 63 percent higher than the incomes of black households, the assets of white households are more than 13 times higher than those of black households. Hispanic households also have little in assets, only about \$32,000. The median value of household assets tends to rise with age. So while older households (aged 65 and older) have relatively low income as seen in Figure 10.8, they have comparatively high assets. While married couples have incomes nearly twice as high as households with just one adult, their assets are more than 6 times larger. We also see that education has a significant impact on household assets. For example, those with a college degree have nearly five times as much household wealth as those with only a high school diploma. Finally, those owning their own homes (including those still paying a mortgage) have 75 times the assets of renters. This demonstrates the importance of real estate equity in building household wealth.

Economic inequality is also evident in the United States beyond the categories currently considered by the Census Bureau. For example, households with one or more disabled members (someone with ambulatory, vision, cognitive, or other difficulties) are more likely than other households to face income poverty and have over 40 percent less in household assets.<sup>19</sup> Similarly, individuals that identify as lesbian, gay, bisexual, or transgender (LGBT) are more likely to face income poverty and have lower assets than those that identify as straight. LGBT adults were twice as likely to report that they experienced discrimination in 2019 than non-LGBT adults.<sup>20</sup>

## 2.4 ECONOMIC MOBILITY

Figures 10.8 and 10.9 suggest that some inequality is to be expected in any society, given that people's incomes and assets tend to increase as they become older and more established in their careers. At any point in time in a country, we are likely to have younger people with relatively low incomes and few assets, middle-aged people with higher incomes and more assets, and retirees who tend to have relatively low incomes but relatively high assets. Thus we have people moving from lower income groups to higher income groups, and vice versa. This possibility for people or households to change their economic status, for better or worse, is called **economic mobility**. For a given level of economic inequality, we may be more tolerant if economic mobility is higher because it implies that people have the opportunity to improve their economic condition.

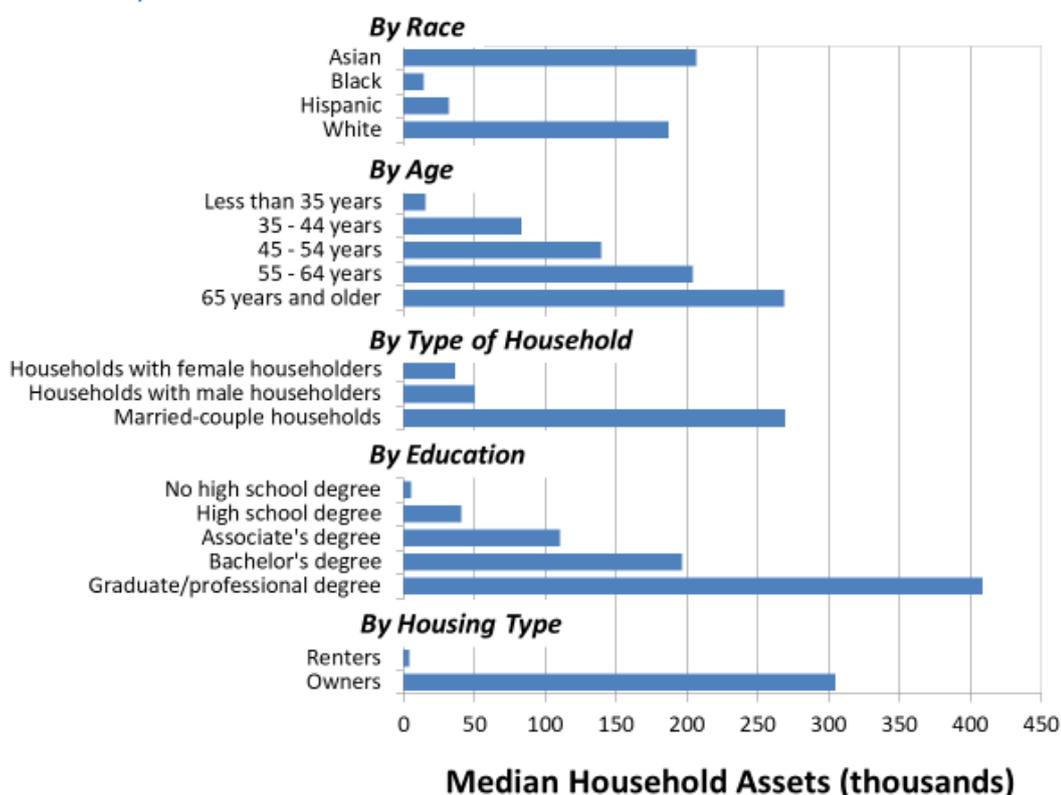
**economic mobility:** the potential for an individual or household to change its economic conditions (for better or worse) over time

A common way to measure economic mobility is to track the frequency with which individuals or households move into different income groups, especially in relation to the group in which they were raised. For example, a 2013 U.S. study looks at the income quintiles of people in their late 30s related to their "birth quintile"—the quintile where their parents were, at the same age.<sup>21</sup> For people raised in families from the bottom quintile, 44 percent are still in the bottom quintile as adults, 22 percent rise into the second quintile, and about 6 percent rise all the way to the top quintile.

Meanwhile, people raised in families from the top quintile are 47 percent likely to also be in the top quintile as adults, with about 25 percent in the fourth quintile and 7 percent falling all the way to the bottom quintile. So while some economic mobility exists, one’s background is clearly an important determinant of one’s adult income. A 2015 study summarized the situation:

[C]hildren raised in low-income families will probably have very low incomes as adults, while children raised in high-income families can anticipate very high incomes as adults. The differences are extreme: The expected income of children raised in well-off families (90th percentile) is about 200 percent larger than the expected income of children raised in poor families (10th percentile) and about 75 percent larger than that of children raised in middle-class families (50th percentile).<sup>22</sup>

**Figure 10.9. Median Value of Household Assets in the United States by Select Characteristics, 2019**



Source: U.S. Census Bureau, *Wealth, Asset Ownership, and Debt of Households Detailed Tables: 2019*. Table 1.

A different way to study economic mobility is to consider whether successive generations are, on average, better off than their parents. With consistent economic growth, each generation can look forward to higher average incomes. However, rising inequality raises the possibility that even if the overall economy is growing, fewer members of successive generations will experience a better economic outcome than their parents. As discussed in Box 10.2, recent research suggests that the “American Dream” of a steady improvement in economic conditions over time has been fading for many.

### BOX 10.2. THE FADING AMERICAN DREAM

One aspect of the “American Dream” is that each successive generation hopes it will be better off than the previous generation. This continual increase in living standards is referred to as “absolute income mobility.” While this was often taken for granted in the past, is this part of the American Dream still alive?

According to two recent analyses, the answer seems to be mostly “no.” A 2017 paper in the journal *Science* found that over 90 percent of children born in 1940 ended earning more than their parents (after adjusting for inflation).<sup>23</sup> But for children born in the 1980s, this percentage had dropped to 50 percent. A 2020 analysis by the World Economic Forum further considered the income level of one’s parents, as shown in Table 10.2.<sup>24</sup> We see that the largest change over time has been for people born with middle-income parents. Those born with middle-income parents in the 1940s and 1950s were over 80 percent likely to end up earning more than their parents (based on earnings at age 30). But for those born with middle-income parents in the 1980s, less than half ended up earning more than their parents.

Two explanations for the decline in absolute income mobility were proposed in the *Science* paper: lower GDP growth rates and greater income inequality. Of these two explanations, the paper concludes that:

most of the decline in absolute mobility is driven by the more unequal distribution of economic growth in recent decades, rather than by the slowdown in GDP growth rates. In this sense, the rise in inequality and the decline in absolute mobility are closely linked. Growth is an important driver of absolute mobility, but high levels of absolute mobility require broad-based growth across the income distribution. With the current distribution of income, higher GDP growth rates alone are insufficient to restore absolute mobility to the levels experienced by children in the 1940s and 1950s. If one wants to revive the “American dream” of high rates of absolute mobility, then one must have an interest in growth that is spread more broadly across the income distribution.<sup>25</sup>

**Table 10.2. Probability of Earning More than One’s Parents, United States**

Decade Born	Low-Income Parents	Middle-Income Parents	High-Income Parents
1940s	95%	93%	41%
1950s	90%	81%	15%
1960s	86%	62%	7%
1970s	90%	59%	16%
1980s	79%	45%	8%

Source: Lu, 2020.

### Discussion Questions

- 1 Were your parents better off economically than their parents? Do you believe that you will be better off than your parents? Do you think that this is true of most of your friends?

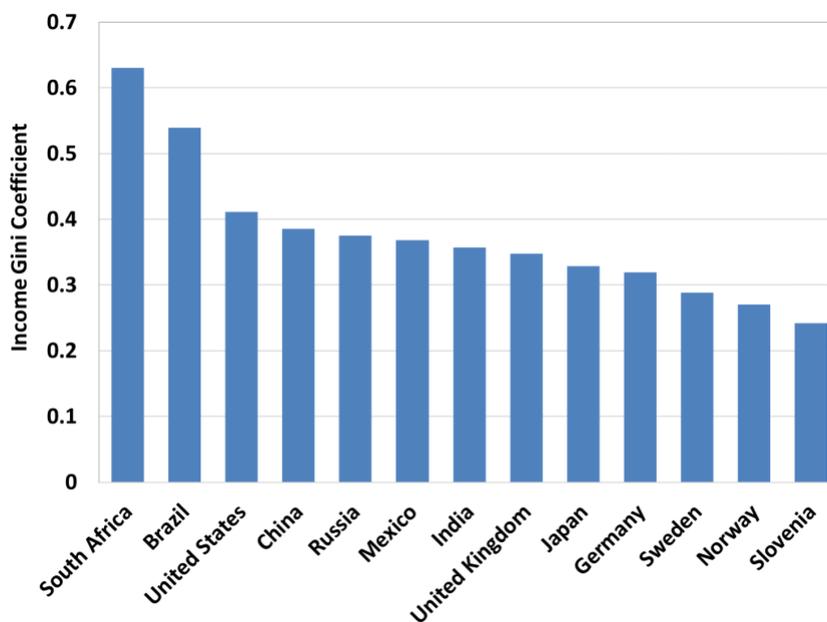
- 2 Make a list of the reasons that inequality can be considered desirable, and the ways in which inequality hurts social well-being. Is it possible to limit the negative consequences of inequality while still harnessing the positive aspects?

### 3. INTERNATIONAL DATA ON INEQUALITY

#### 3.1 CROSS-COUNTRY COMPARISONS

We can compare the U.S. data presented so far to data on income inequality, wealth inequality, and economic mobility in other countries. The Gini coefficient for the United States is higher than that of all other major industrialized countries, signifying that the country has a higher degree of income inequality. Figure 10.10 repeats the figure on international comparison of economic inequality presented in Chapter 0. South Africa, with a Gini coefficient of 0.63, has the highest degree of income inequality of any country. Slovenia, with a Gini coefficient of 0.24, has the lowest level of income inequality. While many of the countries with low levels of income inequality are high-income countries, inequality is also relatively low in countries such as Afghanistan, Iraq, and Bangladesh where poverty is widespread. Patterns across geographic regions are fairly consistent. Latin American countries, for example, tend to have relatively high degrees of inequality. In addition to Brazil, Colombia, Costa Rica, Guatemala, Honduras, and Panama all have Gini coefficients above 0.48. Asian countries are generally more economically equal, most with Gini coefficients between 0.3 and 0.4. African countries have the greatest variability, with Gini coefficients ranging from 0.33 (Tunisia) to 0.63 (South Africa).<sup>26</sup>

**Figure 10.10. Income Gini Coefficient for Select Countries**



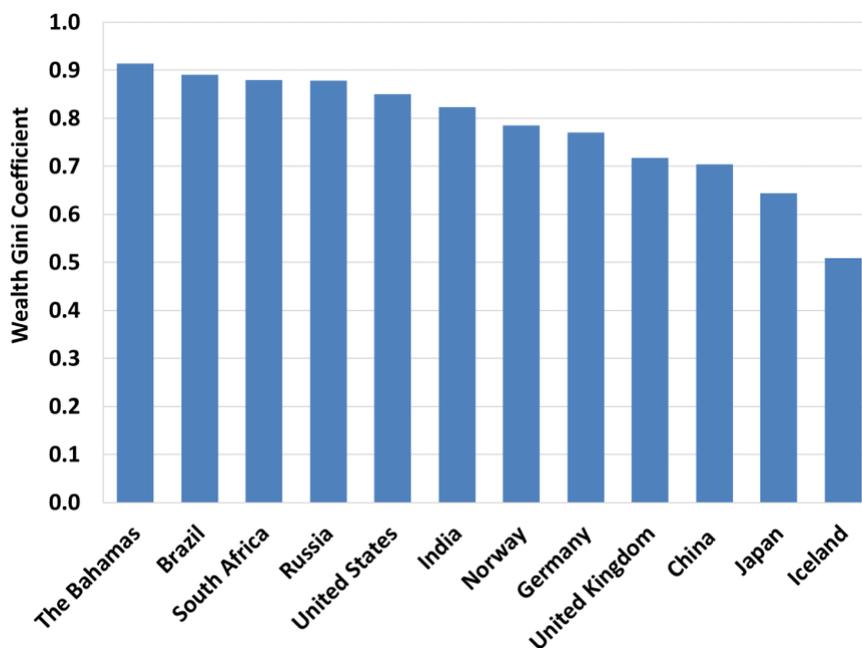
Source: CIA World Factbook, United States Central Intelligence Agency.  
 Note: Year of data varies.

Income inequality is increasing in some countries and decreasing in others. A 2020 analysis compared the Gini coefficients of 83 countries, covering 85 percent of the world's population, in 1990 and 2015.<sup>27</sup> The Gini coefficient for 43 countries

declined during this period, and it increased for 40 countries. While this suggests that national-level inequality has remained about constant, on average, it fails to account for differences in population across countries. Between 1990 and 2015 the Gini coefficient increased in each of the world’s five most populous countries: China, India, the United States, Indonesia, and Pakistan. The increase in inequality was particularly high in China, with its Gini coefficient rising from 0.35 to 0.50. India’s Gini coefficient also increase substantially, from 0.30 to 0.35. Thus, we can conclude that more people are living in countries where inequality has been increasing rather than decreasing.

As we saw previously for the United States, wealth tends to be more unevenly distributed than income. Figure 10.11 presents the wealth Gini coefficients for select countries. National wealth Gini coefficients range from 0.52 in Iceland to 0.91 in the Bahamas.

**Figure 10.11. Wealth Gini Coefficient for Select Countries**



Source: Credit Suisse, 2021.

Finally, we consider economic mobility in various countries. A 2016 analysis measured mobility by the strength of the relationship between a son’s and father’s income—a strong link would suggest a low degree of economic mobility.<sup>28</sup> The results found that mobility was the lowest in Peru, South Africa, China, and Brazil. Among developed countries, mobility was the lowest in Italy, the United Kingdom, and the United States. Economic mobility was the highest in Demark, Norway, and Finland.

Note that countries with high economic inequality tend to have low economic mobility. Analysis by the OECD supports a negative correlation between income inequality and economic mobility, apparently a result of differences in educational opportunities.<sup>29</sup> Specifically, low-income groups in societies with high inequality tend to underinvest in education, reducing their mobility and perpetuating inequalities. Recommended policies focus on improving access to education for low-income groups, not just during youth but access to job-training and formal education throughout one’s working life. We’ll further consider the role of education in reducing inequality in the last section of this chapter.

## 3.2 GLOBAL INEQUALITY

### *Global Income Inequality*

Some surprising results are found when we consider economic inequality at the global level. Just as a Gini coefficient can be calculated for an individual nation by constructing a Lorenz curve, some economists have estimated the global Gini coefficient for income. Obviously, this requires various assumptions due to a lack of complete data, and different studies have produced slightly different values. Branko Milanovic, one of the leading researchers on global inequality, estimated the global income Gini coefficient to be around 0.63 in 2021.<sup>30</sup> Another study estimated the global income Gini coefficient as 0.67 in 2020.<sup>31</sup>

Suppose the global Gini coefficient is around 0.65. If we compare this with the values in Figure 10.10 we notice that the global Gini coefficient is higher than that for any individual country. While you might expect that the global Gini coefficient would be approximately an average of the coefficients for each country, this is clearly not true. How can it be that the global Gini coefficient is higher than the value for any one country?

To resolve this seeming paradox, we must realize that the incomes found in most countries do not cover the full range from the world's poorest to the world's richest. For example, in many developed countries such as Germany and Switzerland there are virtually no people living below the World Bank's measure of absolute poverty of \$1.90 per day. The United States is an exception; the World Bank estimates that more than 3 million Americans live below the global poverty line.<sup>32</sup> Meanwhile, more than 50 percent of people in some developing countries live in absolute poverty, with very few high-income earners by global standards. When we calculate the global Gini coefficient we bring together the full diversity of incomes, comparing the 700 billion living in absolute poverty to global top 0.1 percent earning more than \$1 million per year.

Another way to understand the extremely unequal global income distribution is to consider what income is necessary to reach the top 1 percent in different countries. In the United States, an annual income of about \$500,000 puts one in the top 1 percent nationally. An income of around \$220,000 is sufficient to make it to the top 1 percent in France. But the threshold for the top 1 percent is only \$107,000 in China and \$77,000 in India.<sup>33</sup> One way to interpret these findings is that the median household income in the United States, around \$68,000/year, would be considered quite well-off in much of the world.

The country in which one is born largely determines one's economic fate.<sup>34</sup> Some scientists refer to a global "birth lottery," whereby if:

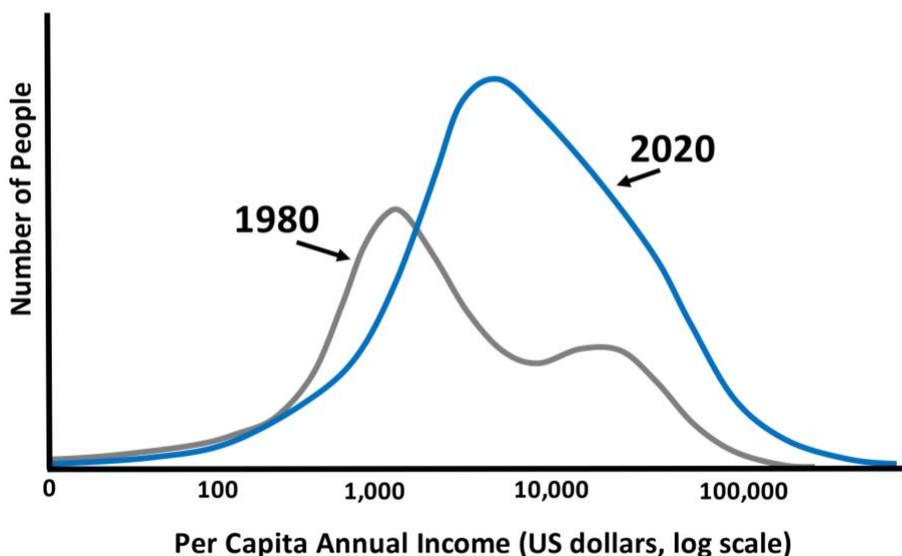
you are lucky enough to be born in a wealthy country, you will more likely enjoy the great fortunes and opportunities that come from being a citizen of that country. Conversely, if you "lose" the birth lottery, and you are born in a poor country, your life chances and circumstances will mostly likely suffer accordingly.<sup>35</sup>

As mentioned previously, income inequality is increasing in the world's most populous countries, particularly China and India. You might then conclude that the global Gini coefficient is also increasing. But we now come to our second surprising result—the global Gini coefficient has generally been declining in recent years. While the global Gini coefficient generally increased during the latter half of the 20<sup>th</sup> century, it fell from about 0.72 in 2000 to 0.67 in 2020.<sup>36</sup>

As mentioned at the start of the chapter, the COVID-19 pandemic most likely increased global income inequality, and it clearly increased the number of people living in absolute poverty. However, analysis by Nobel Prize-winning economist Angus Deaton shows that the impact of the pandemic on global inequality has been comparatively small.<sup>37</sup> The percentage decline in GDP per capita due to the pandemic has generally been larger in high-income nations than in low-income nations, with India being the major exception. In fact, Deaton concludes that global income inequality would have continued to decline even during the pandemic except for the significant reduction of economic growth in India. However, it is unclear what the longer-term impacts of the pandemic will be on global inequality.

Considering the broad trend of declining global inequality in recent decades, how can the Gini coefficient for most countries be increasing while the global Gini coefficient is declining? Essentially, the growth of the global middle class is reducing global inequality even as it increases national-level inequality in many countries. Consider that several decades ago nearly all people in China and India—the world’s two most populous countries—had very low incomes by global standards. Recent economic growth in these countries has increased national-level inequality, specifically between relatively high incomes in urban areas and the still-low incomes in rural areas. But economic growth in these two countries has led to a surge in the number of people classified in the global middle class. This emerging global middle class is reducing global inequality.

**Figure 10.12. Global Income Distribution, 1980 and 2020**



Source: Chancel *et al.*, 2021.

Note: Income adjusted for inflation and purchasing power.

We can see evidence of this shift in Figure 10.12, which shows the global distribution of income in 1980 and 2020. Note that this income distribution graph is different from our Lorenz curve graphs, as the y-axis shows shares of the world’s population at various income levels, and the x-axis presents income levels using a nonlinear scale. In 1980 we see a distribution with two “peaks”: one around \$1,000 per person per year and another around \$15,000. Thus there were two large concentrations of people in 1980—those who were very poor and those who were

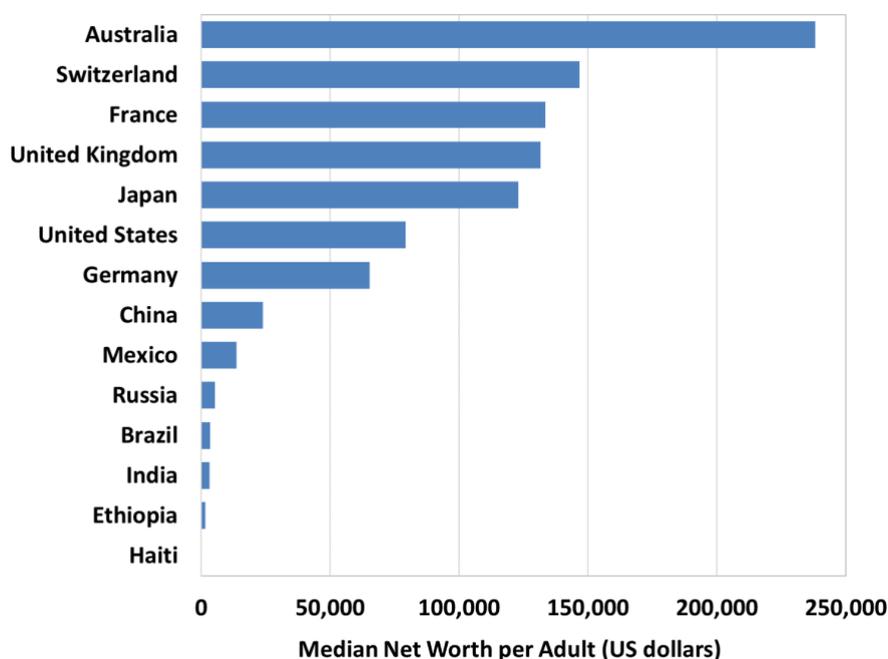
relatively well-off, with comparatively few people in the middle. But in 2020 we see that the “valley” has been filled in as the percentage of people with incomes between \$5,000 and \$15,000 per year has grown. This largely represents the emerging global middle class in China, India, and other rapidly developing countries. While relatively few people were considered middle-class by global standards in 1980, now the global middle-class has become the dominant group. This corresponds to a dramatic reduction in the number of people considered poor by global standards—from 44 percent of the world’s population in 1980 to less than 10 percent now, according to the World Bank.<sup>38</sup>

### Global Wealth Inequality

As you might expect, the global wealth Gini coefficient, around 0.89, is higher than the global income Gini coefficient.<sup>39</sup> About 76 percent of the world’s wealth is held by the richest 10 percent. Further, the top 1 percent own 38 percent of the world’s wealth. Meanwhile, the bottom half of people globally own only 2 percent of all wealth.

Similar to global income inequality, the evidence indicates that global wealth inequality has generally been declining in recent decades. Over the period 1995 to 2020, the collective wealth of the world’s poorest 90 percent has increased by 3.7 percent per year while the wealth owned by the top 10 percent has grown at a lower rate of 3.0 percent per year. However, the growth of wealth has been particularly large at the very top. The wealth of the world’s top 0.1 percent has grown by 4 percent per year, and the top 0.01 percent has benefited from growth of 5 percent per year.<sup>40</sup>

**Figure 10.13. Median Net Worth per Adult, Select Countries, 2020**



Source: Credit Suisse, 2021.

Median wealth levels vary considerably across countries, as shown in Figure 10.13. Australia has the highest median net worth per adult, at nearly \$250,000. The median adult in Switzerland, France, the United Kingdom, and Japan has more than \$100,000 in net assets. The United States has a comparatively modest median net worth of around \$80,000, ranking 26<sup>th</sup> globally behind such countries as Spain, Israel,

South Korea, and Canada. However, the United States has a high *average* net worth of about \$500,000 per adult, ranking second globally behind Switzerland. The large difference between median and average net worth in the U.S. further illustrates its high degree of wealth inequality; it indicates that a few very wealthy people raise the average wealth considerably. Median net worth in China is about \$24,000 per adult, which has increased by a factor of twelve between 2000 and 2020. Meanwhile, India’s median wealth has grown by a factor of four from 2000 to 2020, to \$800 per person. Median net worth in the world’s poorest countries is less than \$1,000 per person.

### Discussion Questions

- 1 What do you think are the reasons that the United States is more unequal than other developed countries, and has lower economic mobility? What policies might be used to address this issue?
- 2 What are the main trends in global inequality? Do these seem to be positive or negative in terms of human well-being?

## 4. CAUSES AND CONSEQUENCES OF INEQUALITY

The question of why inequality has been increasing in the United States, China, and many other countries is a source of much debate. We now consider several of the explanations proposed by economists, recognizing that rising inequality is something that cannot be attributed to a single cause. We then turn to a discussion of the consequences of a high degree of inequality in a society.

### 4.1 CAUSES OF INEQUALITY

#### *Inequality in the United States and Other Developed Countries*

One point on which economists appear to agree is that some of the increase in inequality in the United States and many other industrialized nations is due to changing demographics. As people worldwide live longer on average, the proportion of the population that is elderly increases. As elderly people tend to have relatively low incomes, this demographic trend pushes incomes down on the low end. Another trend increasing the share of the population with low incomes is an increase in the rate of single parenthood. Single-parent households in the United States are much more likely to have low incomes, as we saw in Figure 10.8. At the other end of the income spectrum, the increasing number of women entering the labor force has helped boost the income of married-couple households. A similar factor separating households is the increase in “assortive mating”—the tendency of people to marry partners who have a similar earning potential to themselves. For example, based on U.S. data men with undergraduate degrees are now about twice as likely to marry women with undergraduate degrees as they were in 1960. A 2014 study concludes that the U.S. Gini coefficient would be significantly lower (0.34 as opposed to 0.43) if people married randomly rather than selecting mates who are similar to themselves in terms of earnings potential.<sup>41</sup>

The recent trend of increased inequality, however, cannot be explained simply by demographic changes. A major factor that helps explain growing inequality is that the wage “share” of the income “pie” has diminished over time. Wages and salaries make up the majority of **labor income**, which includes the implicit value of fringe benefits. **Capital income** includes rents, profits, and interest. “**Rent**,” as economists

use the term, refers not just to rent for housing but to payments for the use of any capital asset, such as machinery or an e-mail list. (See Box 10.3 on “rent-seeking.”) In general, higher-income households receive a larger portion of their total income from capital income. Increases in wealth and income inequality are strongly related to patterns of capital ownership, with those who have little or no capital failing to capture economic gains.

**labor income:** payment to workers, including wages, salaries, and fringe benefits

**capital income:** rents, profits, and interest

**rent:** payments for the direct or indirect use of any capital assets

### BOX 10.3. RENT SEEKING AND INEQUALITY

“Rent seeking” refers to the act of expending money, time, or other resources in the hope of extracting value that already exists somewhere, instead of using those resources to produce new economic value. In other words, a rent seeker will try to bring about redistribution of existing wealth in his or her favor instead of generating new wealth.

One example of rent seeking is when lobbyists try to convince government officials to adopt policies favorable to the interests they represent, at the expense of other economic actors. This is considered rent seeking because, even though such lobbying can produce benefits for the lobbyists’ employers, it does not generate new economic value. One could even make the case that it subtracts from value creation in an “opportunity cost” sense: by diverting potentially useful or productive resources (including the effort and intelligence of the lobbyists) for the purpose of some zero-sum gain.

The effect of rent seeking can be to exacerbate inequality, because those who are already rich and powerful are most effective at directing government support and subsidies to themselves. The economist Mancur Olson has proposed a depressing scenario in which countries tend to grow less competitive and efficient over time, as organized interest and lobby groups gain in importance, and are increasingly able to influence government.<sup>42</sup>

Clearly, the motivation of groups who criticize the dominance of the top “1 percent” is based on a perception that much of the wealth of those at the very top is based on rent-seeking activities rather than genuine economic productivity.

Among developed countries, the labor share of total income has generally been declining since the 1970s.<sup>43</sup> Generally, a declining labor share over time suggests that wage growth, if present, is not keeping up with overall productivity growth. Real median wages in the United States, for example, only grew by 11.6 percent from 1979 to 2018—that’s not annual growth, but total growth over 40 years! Meanwhile, real productivity in the United States grew by 70 percent over this same time period.<sup>44</sup> In other words, there has been significant economic growth, but little of that growth is going to the average worker.

The critical question is *why* this has been happening, and on this there is no universal agreement. In what follows, we consider the four most prominent explanations for the increase in income inequality in many developed nations:

1. globalization and trade
2. technological changes

3. the declining power of labor unions
4. domestic policy changes

The first likely factor in increased inequality is globalization and the growth in trade that it produces. Globalization is hypothesized to contribute to both the stagnation of middle-class wages and the loss of middle-class jobs in developed nations. Jobs are lost due to globalization when transnational corporations shift production facilities to developing countries to take advantage of low-cost labor, commonly contracting out production to foreign companies. Trade puts downward pressure on middle-class wages when producers in richer countries face greater competition from imports from poorer countries. In many instances, the price of such imports is significantly lower than that for the domestically produced good, compelling the producer either to lower prices (and therefore wages, too) or simply leave the business. Competition from imports has indeed eliminated many industrial jobs—in textiles and automobiles, for example—that formerly fell in the middle of the wage distribution in developed countries. The replacement of such jobs by lower-income service and retail jobs has contributed to the increase in inequality, although economists disagree about the extent to which globalization is responsible for the increase in inequality in developed nations. Even economists who believe the effects are significant, such as Nobel prize winner Paul Krugman, note that isolating the impact of globalization on inequality is difficult.<sup>45</sup> A review of the literature on the relationship between trade and inequality concludes that:

. . . the effects of trade on wage inequality are . . . nuanced and depend on the specific country in question, the nature of trade liberalization and/or the type of trade that countries engage in. Most labour and trade economists agree that trade in final goods . . . cannot account for the increases in growing wage inequality since the 1980s.<sup>46</sup>

While there is debate about the impact of globalization on middle-class outcomes in developed nations, recent research suggests globalization is a major factor in the growth of top incomes. A 2017 analysis of executive compensation in the United States found that executive salaries increased at a higher rate in companies more exposed to trade. Further, the rise in salaries cannot be explained based on the executive's talent, but seems to be related to their ability to take advantage of poor-governance settings in developing countries. The researchers conclude that “globalization has played a more central role in the rapid growth of executive compensation and U.S. inequality than previously thought, and that rent capture is an important part of this story.”<sup>47</sup>

The second factor accounting for growing inequality has been the advent of rapid technological change. Many economists conclude that technological change is a dominant force driving the increase in inequality in developed nations.<sup>48</sup> New technologies related to computers, biotechnology, and other fields have become more important, increasing the income of skilled workers who understand and use the new techniques and equipment, while leaving behind the less-skilled workers who remain in low-technology occupations. The income of the skilled workers has risen relative to those of the less skilled simply because their skills are relatively scarce. Recalling our discussion of the labor market in Chapter 9, labor resembles other commodities in the sense that the more scarce it is (i.e., there is less supply), the higher its “price.” The less-skilled workers are, in contrast, relatively abundant, depressing their average wage or “price.” In 1979 those with a college degree in the United States earned 35

percent more than those with just a high school degree. But by 2021 this differential had risen to 67 percent.<sup>49</sup>

The third likely cause of rising income inequality is the progressive weakening of labor unions. Government policy in many developed countries has become decidedly less supportive of unions and low-wage workers, and the rate of union participation has declined markedly, as discussed in Chapter 9. Recall that labor union membership in the United States declined from a peak of around 35 percent in the 1950s to only about 11 percent today. Labor union membership has also been falling recently in Germany, Japan, Sweden, Australia, the United Kingdom, and most other wealthy nations.<sup>50</sup> A 2015 analysis by the International Monetary Fund finds that weaker unions increase income inequality, but more by fostering higher incomes at the top rather than depressing wages in the middle.<sup>51</sup> A 2021 study of European labor unions concludes that:

Workers need strong collective mechanisms and bargaining power to countervail the bargaining power of employers, obtain a fair wage share and limit wage inequality. ... And if union density continues to decline in the great majority of EU countries and/or bargaining coverage continues to fall in an important number of them, inequality is bound to continue to increase.<sup>52</sup>

The final reason proposed to explain rising inequality is that policies have been instituted that, intentionally or unintentionally, have led to higher inequality. In the United States there has, for example, been a series of tax cuts—during the 1980s under Ronald Reagan, during the 2000s under George W. Bush, and during the 2010s under Donald Trump—that primarily reduced the tax burden on the wealthiest groups (though some of these tax cuts were reversed during the presidencies of Bill Clinton and Barack Obama). A 2015 study finds that the income share of the top 1 percent increased the most in those countries that lowered their top marginal tax rates by the most percentage points.<sup>53</sup>

Another policy change has been reduction in support for lower-income workers. The federal minimum wage in the United States (\$7.25 as of 2022) has fallen significantly behind inflation, lowering the purchasing power of the lowest-income workers. In addition to the negative effect on minimum wage workers, this trend also adversely affects other workers' bargaining power reducing the "floor" against which other wages are set.

A major problem associated with increased inequality is that those who gain a greater share of total wealth are able to translate it into greater political power. This plays out, particularly in the United States, through the system of campaign finance, in which candidates for political office can accept disproportionate donations from wealthy individuals or large corporations with an interest in, say, keeping taxes low for the rich or minimizing regulations on the financial sector. This is another example of "rent-seeking" activity that does not produce any economic value but, rather, redistributes it, accentuating other trends towards greater income inequality.

Policy choices also affect the impact of other changes such as globalization. According to one analysis:

The standard framing presents globalization, like technological process, as an exogenous force, something that happens *to us*. In reality, globalization is a complex process of integrating capital, product, and labor markets, where almost every characteristic of those newly integrated markets is the subject of, or should be the subject of, political and regulatory debate. Over the last 30

years we have indeed “chosen” a particular form of globalization in the United States—a form that benefits corporations and their owners at the expense of workers and their communities. If we had chosen globalization on different terms, however, economic integration would not have required rising inequality.<sup>54</sup>

This perspective suggests that it may be possible to reduce inequality through deliberate policy actions even while accepting an overall trend towards globalization.

### *Inequality in Developing Countries*

As we mentioned earlier, income inequality is increasing in the most populous middle- and low-income countries—China, India, Indonesia, and Pakistan. This is largely as result of rapid economic growth that has reduced the number of people living in absolute poverty, allowing many to enter the global middle-class. Yet the economic gains in these countries have not benefited everyone. Economic growth has been concentrated in urban areas in these countries, while poverty remains prevalent in rural areas. For example, the poverty rate in China is five times higher in rural areas than in urban areas.<sup>55</sup>

The inequality situation in other developing and transitional nations is more mixed. Based on a sample of 67 such countries, between 1990 and 2015 inequality decreased in 42 countries and increased in 25 countries.<sup>56</sup> In countries such as Rwanda, Ghana, and Sri Lanka, income inequality has increased significantly as, similar to China and India, rapid economic growth has not been evenly distributed. In other nations, including Brazil, Chile, and Kenya, inequality has been decreasing since the 1990s, largely the result of “pro-poor” policies, which we’ll discuss later in the chapter. There are some regional trends evident. Income inequality is generally decreasing in Latin American countries, with 13 of 16 countries experiencing a falling Gini coefficient from 1990 to 2015. In Asia inequality is generally increasing, while in Africa 15 out of 23 countries experienced a reduction in inequality between 1990 and 2015.

The high levels of inequality found in many developing countries, particularly in Latin America and sub-Saharan Africa, is commonly traced to a historical context of colonialism and racial divisions. Development economists Darren Acemoğlu and James Robinson explain that European colonizers set up “extractive institutions” in such regions based on the collection of natural resource rents from indigenous peoples.<sup>57</sup> Inequality persisted even as countries gained independence because economic elites gained control of important export industries such as agricultural products and minerals, setting up an “internal form of colonialism.”<sup>58</sup> As most developed countries established social welfare systems to reduce inequality during the 20<sup>th</sup> century, many developing countries lacked the institutional capacity to collect sufficient taxes to fund similar systems, along with “appalling” rates of tax evasion.<sup>59</sup> Further, some developing countries were pushed toward pro-market policies that maintained levels of inequality by international institutions such as the World Bank and International Monetary Fund. Only recently has inequality began to fall in most countries in Latin America and Africa as democratic and economic institutions improved.

## 4.2 INEQUALITY AND ECONOMIC GROWTH

Economists have long debated the relationship between economic growth and inequality. The **Kuznets curve hypothesis** emerged in the 1950s arguing that inequality initially increases with economic development as industrialization causes a migration of workers away from agriculture into cities, seeking higher-paying jobs. As wages remain low in rural areas, a large urban–rural income gap develops. However, with further economic growth inequality peaks and then declines as a country becomes more democratic and implements welfare state policies. Plotted over time (on the x-axis) as a country develops, a country’s Gini coefficient (plotted on the y-axis) would first rise and then fall, creating a curve with an inverted-U shape.

**Kuznets curve hypothesis:** the theory that economic inequality in a country initially increases during the early stages of economic development, but eventually decreases with further development

The Kuznets curve hypothesis, if valid, carries a rather powerful policy implication—that rising inequality might be tolerated during the initial stages of development and that the key to reducing inequality in the long run is to keep promoting economic growth. Broad acceptance of the Kuznets curve hypothesis, based on early empirical studies in the 1960s and 1970s led many economists to accept it as an “iron law.”<sup>60</sup> Subsequent studies, however, using more sophisticated models and better data have generally refuted the hypothesis as a general rule. Instead of a general pattern of increasing and then decreasing inequality, these studies indicate that inequality changes over time are contextual, dependent upon within-country historical and policy conditions, as well as international factors.<sup>61</sup>

A 2017 analysis of China suggests that inequality may have peaked there around 2010, slightly declining since then.<sup>62</sup> The decline is attributed to various factors including public investment in rural infrastructure, minimum wage laws, and expansion of social programs—factors that are consistent with the Kuznets curve hypothesis. But the recent increase in inequality in most developed countries, linked to international factors and within-county policies, demonstrates that economic growth is no guarantee of declining inequality.

We can also consider the relationship between inequality and economic growth in the other direction—do high levels of inequality promote or impede economic growth? A 2014 study published by the International Monetary Fund presents perhaps the most comprehensive analysis of the relationship between inequality and economic growth, based on data from 153 countries from 1960 to 2010.<sup>63</sup> The study found that high inequality can indeed result in reduced economic growth and that “it would be a mistake to focus on growth and let inequality take care of itself, not only because inequality may be ethically undesirable but also because the resulting growth may be low and unsustainable.”<sup>64</sup> Further, the authors analyzed the impacts of redistributive policies, such as taxes and transfers. Their results suggest that redistributive policies can simultaneously reduce inequality and promote higher growth:

Extreme caution about redistribution—and thus inaction—is unlikely to be appropriate in many cases. On average, across countries and over time, the things that governments have typically done to redistribute do not seem to have led to bad growth outcomes, unless they were extreme. And the resulting narrowing of inequality helped support faster and more durable growth, apart from ethical, political, or broader social considerations.<sup>65</sup>

A 2019 book by American economist Heather Boushey argues that excessive inequality hampers economic growth largely because economic elites use their political power for rent seeking purposes (see Box 10.3) rather than supporting policies that foster broad-based growth such as public investments in schools and infrastructure.<sup>66</sup> Further, powerful business interests suppress the wages of ordinary workers, reducing their purchasing power and creating economic instability. She argues for three main policies to reduce inequality: institute wealth taxes, promote market competition, and reform political finance and lobbying rules. We'll discuss these policies in more detail in the next section.

The hypothesis that excessive inequality can allow elites to weaken economic and political institutions to benefit themselves is also explored in a 2012 book *Affluence and Influence*, by Princeton University professor of politics Martin Gilens. He analyzes decades of data on the relationship between the policy preferences of Americans at different income levels (based on opinion surveys) and actual policy outcomes.<sup>67</sup> He concludes that:

What I find is hard to reconcile with the notion of political equality . . . The American government does respond to the public's preferences, but that responsiveness is strongly tilted toward the most affluent citizens. Indeed, under most circumstances, the preferences of the vast majority of Americans appear to have essentially no impact on which policies the government does or doesn't adopt.<sup>68</sup>

### Discussion Questions

- 1 If you could change a single one of the “causes” of inequality described above, on which would you choose to focus? Why?
- 2 Do you think rising inequality in a rapidly developing low-income country is necessarily a problem? How might you approach the issue of high economic inequality differently in a developing versus a developed country?

## 5. RESPONDING TO INEQUALITY

While there is no consensus regarding the “right” amount of inequality in a society, as we mentioned at the beginning of the chapter, to many people there is something disturbing about the current degree of inequality in the United States and other countries. We now consider what policies might be instituted to respond to inequality.

### 5.1 TAX AND TRANSFER POLICIES

Inequality needs to be addressed somewhat differently in developed and developing countries. We will mostly focus on inequality policies in developed countries, mainly the United States. But we will also consider addressing inequality in developing countries as well. Three basic policy approaches to reducing inequality are considered:

1. tax and transfer policies
2. minimum wage policies
3. public spending and regulatory policies

One way of reversing the trend toward greater inequality is through the tax system. By shifting more of the overall tax burden to high-income households, after-tax income inequality can be reduced. In other words, a more progressive tax system will, *ceteris paribus*, reduce a country's after-tax Gini coefficient. A 2018 analysis by the International Monetary Fund documents an overall decline in tax progressivity in OECD countries, particularly in the 1980s and 1990s, that likely contributed to rising inequality in many countries. The authors conclude that “making a tax system more progressive does have a real impact on market economy outcomes by reducing inequality”.<sup>69</sup>

Given that the United States has the highest income inequality among developed nations, you may assume that the U.S. has a less progressive tax system compared to other high-income countries. But according to analysis by the OECD the United States has one of the *most progressive* tax systems of any industrialized country.<sup>70</sup> While most European countries have high overall taxes relative to the United States, their tax systems are rather proportional, largely due to their reliance on value-added taxes (as we'll discuss in Chapter 11). In other words, European countries do not use their tax systems to significantly reduce economic inequality. The tax system in the United States is slightly progressive overall, mainly due to a highly progressive federal income tax. As mentioned earlier, a trend toward declining tax progressivity in recent decades in the United States is partly responsible for increasing inequality.

Another tax policy to reduce inequality is to provide low-income households with tax credits or rebates. In the United States, the earned income credit, which provides a tax benefit to lower-income workers, has proven to be effective in reducing poverty and inequality.<sup>71</sup> A 2020 analysis found the tax credit to be particularly effective at reducing child poverty in the U.S.<sup>72</sup>

At the other end of the income spectrum, wealth taxes are a highly progressive form of taxation to address wealth inequality. Four countries, Colombia, Norway, Spain, and Switzerland, levy annual wealth taxes on high-asset households. For example, Norway's wealth tax rate is 0.85 percent assessed on net assets above about \$180,000 for single individuals and \$360,000 for married couples.<sup>73</sup> A 2019 analysis argues that wealth taxes can be particularly effective at reducing inequality related to rent seeking (see Box 10.3), and recommends spending the revenues from wealth taxes on productivity-enhancing investments such as infrastructure and human capital.<sup>74</sup>

Inequality of wages is widespread in developed nations. Considering inequality based solely on **market income**—income before any taxes or government benefits—the United States has a similar Gini coefficient as countries such as France, Germany, Belgium, and Finland, as shown in Figure 10.14. So why does the United States end up with a higher Gini coefficient than all other industrialized countries?

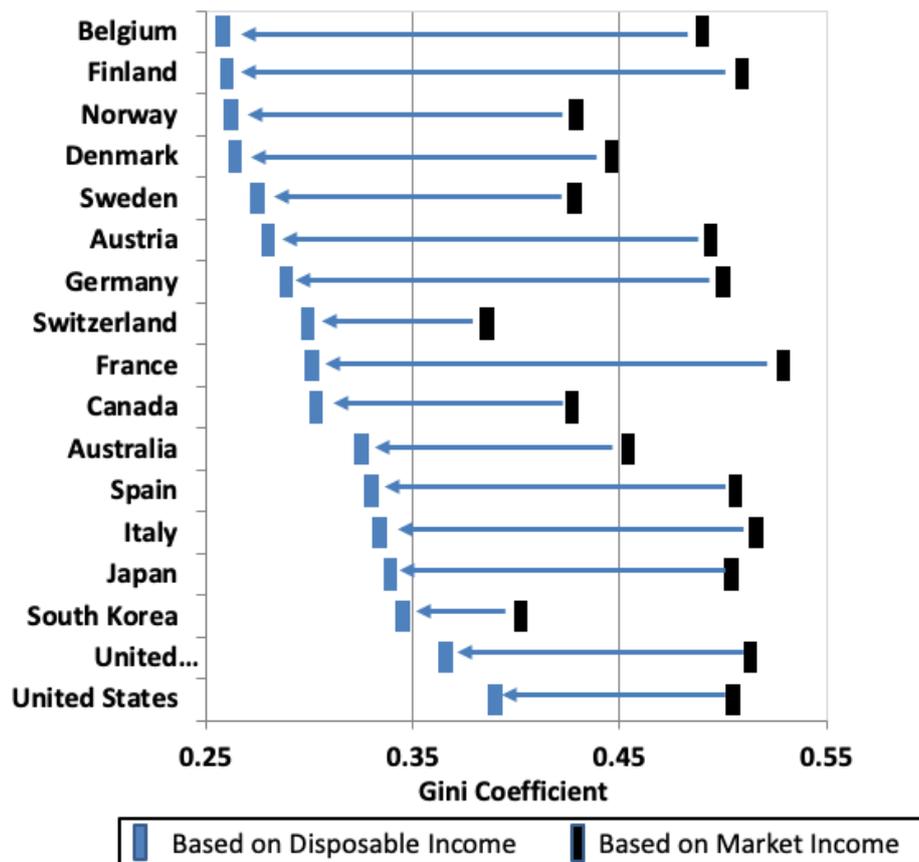
While tax systems in European countries aren't particularly progressive, their high overall tax rates provide a source of public revenues that can be used to address inequality. These revenues are used by most European countries to fund a broad system of transfer programs. Government transfers include social security payments, the monetary value of medical benefits, unemployment insurance, food subsidies, and other cash and non-cash benefits. A country's Gini coefficient based on **disposable income**, which includes adjustments for both taxes and transfers, is the common metric used to compare income inequality across countries.

**market income:** income including wages, salaries, self-employment income, and capital income, but excluding any taxes or transfers

**disposable income:** income after subtracting all taxes paid from market income, and then adding the monetary value of cash and non-cash transfers

Figure 10.14 shows how the adjustment for taxes and transfers changes various countries' Gini coefficients. We see that only two countries, South Korea and Switzerland, start off with a market-income Gini coefficient below 0.42. Most countries rely upon taxes and transfers (but again, primarily transfers), to substantially lower their final disposable-income Gini coefficient. The length of each country's arrow represents the extent to which taxes and transfers lower their Gini coefficient. Belgium, for example, starts off with a market-income Gini coefficient of 0.49, about the same as the United States. But after taxes and transfers its disposable-income Gini coefficient falls to 0.26, a reduction of 0.23 points. The largest Gini coefficient reduction, 0.25 points, occurs in Finland. The Gini coefficient reduction in the United States of 0.12 points is among the lowest in the figure. The only two countries that do less than the United States to reduce inequality through taxes and transfers, South Korea and Switzerland, start off with a relatively equal distribution of market income.

**Figure 10.14. Market- and Disposable-Income Gini Coefficients, Select OECD Countries**



Source: OECD, OECD.Stat, Income Distribution Database.  
 Note: Data for most countries are from 2017 or 2018.

The policy implication of this analysis is that the countries with the lowest disposable-income Gini coefficients achieve this not necessarily through an equitable market-income distribution or highly progressive tax systems, but through substantial and progressive transfer systems. For example, cash transfers, including old-age,

unemployment, and disability payments, comprise an average of 25 percent or more of household income in countries such as France, Finland, Sweden, and Denmark, but only about 10 percent of income in the United States.<sup>75</sup> Some countries rely heavily on the provision of public services (including health care and education) to lower disposable-income inequality, particularly Belgium, France, and the United Kingdom. Thus most industrialized countries' success at lowering income inequality can be largely attributed to the use of cash and non-cash transfers. Of course, policymakers can seek to reduce disposable-income inequality by making tax systems more progressive, but the evidence demonstrates that industrialized countries reduce inequality mostly by progressive transfer systems rather than progressive tax systems.

Perhaps the most ambitious proposal to use transfers to reduce economic inequality is a **universal basic income (UBI)**. A UBI is a periodic (e.g., monthly) cash payment to all citizens (or all adult citizens) regardless of income. Under most proposals, a UBI would replace current government transfer systems based on income and employment criteria, such as unemployment benefits and food assistance, reducing administrative complexity. In addition to addressing inequality, a UBI has been proposed as a response to predicted widespread job losses due to automation, such as robotic manufacturing and driverless cars.

**universal basic income (UBI):** a periodic cash payment to all citizens (or all adult citizens) regardless of income

The main concern about implementing a UBI is that it may be prohibitively expensive if it were to provide everyone with a sufficient income to meet basic needs, especially as it could create a disincentive for working that would lower tax collections. The World Bank estimates that a comprehensive UBI program set at the national poverty level would cost about 20 percent of GDP in low-income nations and about 5 percent of GDP in upper-middle-income countries.<sup>76</sup> A 2017 paper modeled UBI programs in four European countries, setting total UBI payments equal to current transfer payments. It found that such a UBI could be fully funded in Finland and Italy, but not in France and the United Kingdom, as long as UBI payments were taxed as regular income and existing tax loopholes were eliminated. However, the analysis concluded that the UBI programs would not reduce, and could significantly increase, poverty rates in these countries as existing transfer payments are highly targeted at low-income households.<sup>77</sup>

No UBI currently exists at the national level (Iran briefly instituted a UBI in 2011 after significantly cutting energy and food subsidies), although numerous regional-scale UBI experiments are in place in several countries, including Kenya, Germany, Spain, and the United States. A 2020 article by the World Economic Forum argues for implementing UBI systems as a response to vulnerabilities exposed during the COVID-19 pandemic:

[A] new social contract needs to emerge from this crisis that rebalances deep inequalities that are prevalent across societies. To put it bluntly: The question should no longer be whether resources for effective social protection can be found – but how they can be found. UBI promises to be a useful element of such a framework.<sup>78</sup>

The authors argue that UBI programs could be funded through tax reforms, particularly regarding the taxation of multinational corporations, and elimination of fossil fuel subsidies.

## 5.2 MINIMUM WAGE POLICIES

Raising the minimum wage is often proposed as a way to reduce income inequality. Minimum wages in European countries are generally higher than the minimum wage in the United States. The current U.S. federal minimum wage is \$7.25 per hour, while it is about \$15/hr. in Australia, \$12/hr. in France, and \$11/hr. in the United Kingdom.<sup>79</sup> However, it is worth noting that Switzerland does not have any minimum wage, yet it still has a low market-income Gini coefficient (see Figure 10.14). Inequality is low in Switzerland primarily due to a strong public education system, effective labor unions, and low unemployment rates.<sup>80</sup>

The U.S. federal minimum wage has not kept up with inflation. If the minimum wage in the late 1960s is adjusted for inflation, in current dollars it comes to more than \$10 per hour. Many believe that the current \$7.25/hour minimum wage is insufficient even to provide for the basic necessities of a family. In several U.S. states, “living wage” campaigns have advocated passing legislation at the state or municipal level that requires a minimum wage higher than the federal standard. About 30 states have a higher minimum wage than \$7.25, the highest minimum wage as of 2022 being \$14.49/hour in Washington state.

While raising the minimum wage can be justified for other reasons, economists generally find that minimum wage increases only slightly reduce overall income inequality.<sup>81</sup> Much more of the increase in income inequality in the United States is linked to changes in the top of the income spectrum. Analysis by the OECD found that raising the minimum wage in Europe would have a negligible impact on the income ratio of the 90th to 10th percentiles.<sup>82</sup> One problem is that the benefits of higher minimum wages do not necessarily go primarily to poor households. According to a 2014 study, only 13 percent of minimum wage earners in the United States live in households below the poverty line. Even further, 45 percent of those making the minimum wage live in households that have a total household income at least three times the federal poverty level, which would place them in the top half of the income spectrum.<sup>83</sup> This implies that a significant share of minimum wage workers are younger workers living in non-poor households, or workers who rely on other family members for the majority of household income.

Other analyses focus on the impact of minimum wage increases on workers who are paid above the minimum wage. Raising the minimum wage creates pressure on employers already paying slightly above the minimum wage to also increase wages, which can lead to further pressure moving up the income scale in a ripple effect. According to analysis by the Brookings Institution, increasing the minimum wage could raise the wages of about 30 percent of the U.S. workforce, even though only about 3 percent of American workers are actually paid the minimum wage.<sup>84</sup> A similar 2017 analysis concluded that gradually raising the U.S. federal minimum wage to \$15/hour by 2024 would primarily increase wages for full-time adult workers making above the minimum wage, and lead to disproportionate wage increases for women and minority workers.<sup>85</sup>

Raising the minimum wage reduces inequality most effectively when the benefits are targeted toward low-income adult earners, rather than younger non-poor workers. One country that has used a creative approach to target the benefits of minimum wages to adult workers is Australia. For those over 21 years old, the minimum wage is equivalent to about US\$15/hour. But for younger workers, the minimum wage is lower. For example, for workers 18 years old the minimum wage is around US\$10/hour.<sup>86</sup>

### 5.3 PUBLIC SPENDING AND REGULATORY POLICIES

Other proposals for reducing economic inequality focus on public spending priorities. Research has found that a strong public sector, particularly in the provisioning of public goods such as public transportation and education services, can reduce income inequality.<sup>87</sup>

Reducing educational inequalities is often presumed to lead to reductions in earnings inequality, although the empirical evidence is somewhat mixed. A 2015 study looking at the United States found that about 20 percent of U.S. income inequality could be linked to differences in education.<sup>88</sup> The authors then considered how income inequality would change if educational attainment increased. In an extreme scenario where *everyone* received a college degree, inequality would be substantially reduced. But under more plausible scenarios where 10 percent of people achieved higher levels of educational attainment (e.g., going from a high school degree to a college degree), the impact on inequality was found to be “very modest.” A similar analysis also concluded that increasing the share of people who have a college degree by 10 percent in the United States would not significantly impact overall earnings inequality, but that it would reduce inequality in the lower half of the income spectrum.<sup>89</sup> Recent analysis by the IMF based on data from a sample of developed countries also found no relationship between the share of workers with higher education and inequality.<sup>90</sup>

One limitation of these studies is that they do not consider educational inequalities that start well before college. Policies such as universal pre-kindergarten or more effective public schools may have a greater impact on reducing inequalities. A 2014 study based on European data tracked people from primary school over 30 years to identify how educational reforms ultimately led to changes in income inequality.<sup>91</sup> This analysis concluded that “educational policies have an impact on the income and earnings distribution” and that “educational policies can be part of an effective strategy” to reduce economic inequality.

Other potential ways to use public spending to reduce inequalities include funding career skills training, housing assistance, and health care. In addition to reducing overall inequality, such policies may be particularly effective at reducing racial economic inequalities. For more on reducing racial inequalities, see Box 10.4.

Government policies that provide labor unions with more bargaining power may be successful at reducing income inequality. As mentioned earlier, the declining power of labor unions is generally recognized as one factor that has caused inequality to increase in developed countries. Research by the IMF suggests that stronger labor unions may be able to reduce inequality primarily by restraining the growth of top executive salaries.<sup>92</sup>

Other ideas that have been proposed by economists to reduce inequality focus on employment policies. The Federal Reserve in the United States has traditionally prioritized price stability (i.e., low inflation) over reducing unemployment. Overall, policies that lower unemployment even at the expense of higher inflation will tend to help lower-income households as they are the most likely to be unemployed.<sup>93</sup> Even further, the government could serve as an “employer of last resort” to achieve full employment, directly hiring people to work on infrastructure projects, natural resource conservation, and other public projects.

Finally, research by the OECD finds that reducing the gap in job protection between regular and temporary workers would be the most effective government policy in reducing inequality—more effective than increasing labor union membership, minimum wages, and educational attainment.<sup>94</sup> Part-time and temporary workers not only tend to receive lower pay and benefits, but have little job stability (recall our

discussion of dual labor markets from last chapter). And as more workers shift to jobs in the “gig economy,” income unpredictability is likely to become a problem for an increasing share of people, and exacerbate income inequality.<sup>95</sup> In Europe, more than half of all new jobs created since 2010 are based on temporary contracts.<sup>96</sup> Some countries, including Norway, France, and Sweden, have laws mandating that employers must provide equal pay and benefits to temporary workers.<sup>97</sup>

#### **BOX 10.4. POLICY RESPONSES TO RACIAL ECONOMIC INEQUALITY IN THE UNITED STATES**

As we saw in Figures 10.8 and 10.9, racial economic inequality, particularly for wealth, is substantial in the United States. Essentially no progress has been made in reducing the wealth gap between white and black households in the U.S. since the 1950s.<sup>98</sup> The persistence of the gap is explained by current and historical patterns of racial injustice, particularly regarding access to housing loans, employment opportunities, and education.<sup>99</sup> For example, the practice of “redlining” systematically declined government-subsidized mortgages to black and other non-white households during the middle of the 20<sup>th</sup> century.

No single policy can fully address racial economic inequality in the U.S. An important component would be to reduce educational inequities by investing in public education and ensuring that college is affordable to all. Raising the minimum wage would also reduce racial inequality, as black and Hispanic workers are more likely than white workers to be paid wages at or near the minimum wage.<sup>100</sup> Other proposals include financial assistance for first-time house buyers, universal health care, and student loan forgiveness.

An idea that allows young minorities to accumulate wealth is to distribute “baby bonds”. These would be government-funded investment accounts set up at birth and managed to grow over time. The accounts could be accessed once an individual reaches adulthood. One analysis finds that if baby bonds were implemented 40 years ago, the white-Hispanic wealth gap would have been completely eliminated and the white-black wealth gap would have been reduced by 82 percent.<sup>101</sup>

These policies will require additional public revenues. A 2020 Brookings Institution report argues that closing the racial wealth gap will require “a program of heavy and highly progressive taxation aimed at the very wealthiest Americans.”<sup>102</sup> Money could also be directed away from the criminal justice system, which has historically discriminated against minorities.

A final proposal to address racial inequities is to provide descendants of slaves with reparations. While reparations could in the form of funding for public projects and social services, most advocates argue for direct cash payments. According to one analysis, reparations for African Americans would amount to at least \$11 trillion.<sup>103</sup> In addition to a moral justification, reparations are found to be the only policy that could fully close the racial wealth gap. A 2019 analysis estimated that implementing five policies—baby bonds, free college tuition, eliminating housing discrimination, creating equal access to financial services, and instituting universal retirement savings plans—would collectively still leave black households with only 52 percent of the wealth of white households in 2060.<sup>104</sup> A bill (H.R. 40) has been proposed in the U.S. Congress to create a commission to study reparations, yet as of 2022 it has not been voted on.

## 5.4 ADDRESSING INEQUALITY IN DEVELOPING AND TRANSITIONAL COUNTRIES

As the Kuznets curve hypothesis has fallen out of favor, a consensus has emerged that it is possible for a country to develop economically without increasing inequality. While the Kuznets curve hypothesis posits inequality as an outcome of economic growth in the initial stages of development, a growing body of evidence finds that high levels of inequality actually impede economic development. Further, high levels of inequality reduce the potential for a developing country to lower absolute poverty, given a constant amount of economic growth.<sup>105</sup>

Many of the ways developing countries can address inequality through national policies are the same ones developed countries can use, such as increasing public spending, strengthening labor unions, and implementing progressive taxation.<sup>106</sup> But certain policies may be more effective in developing countries starting at a lower level of worker protection and public provisioning. Evidence from China suggests that strong minimum wage laws are effective at reducing inequality in the lower end of the income spectrum.<sup>107</sup> In 2004 China mandated that local governments must increase their minimum wages at least every two years, and the real minimum wage nearly doubled from 2004 to 2012. Investments in higher education may also be more effective at reducing inequality in developing countries, as shown in a 2016 study of Africa.<sup>108</sup>

Brazil is often touted as a country that has made significant progress in reducing its inequality. Brazil's Gini coefficient has fallen from about 0.60 in 2000 to around 0.50 now. A central component of Brazil's efforts to reduce inequality has been its Bolsa Familia program, initiated in 2003. The program provides families with cash transfers as long as their children are enrolled in school and receive preventative health care including vaccinations. About one-quarter of Brazil's population is covered by the program. According to the World Bank, Bolsa Familia "is widely seen as a global success story, a reference point for social policy around the world."<sup>109</sup> The program has significantly increased school attendance, particularly for girls. Brazil also significantly increased its minimum wage, which increased nearly 100 percent in real terms from 2001 to 2020.<sup>110</sup> Research finds that raising the minimum wage was a major factor in reducing inequality in Brazil, while it had a negligible impact on employment and actually increased productivity as it allocated workers towards more efficient firms.<sup>111</sup> The OECD notes Brazil's success in reducing inequality but recommends further progress by increasing the progressivity of taxes, investing more in education, and using the national pension system as a means of redistribution.<sup>112</sup>

According to a 2019 report, West Africa is suffering from an "inequality crisis" that could have been avoided:

Inequality and poverty are not preordained: they are the products of political choices and public policy. Tackling inequality is critical to the fight against extreme poverty. Indeed, unless countries significantly close the gap between the richest and the rest, ending extreme poverty will remain just a dream.<sup>113</sup>

Again, some policies to reduce inequality in West Africa largely mimic those proposed for developed nations: increase spending on public services, institute progressive taxation, and strengthen labor rights. In addition, the report advocates for government support for small-scale agriculture and strengthening the land rights of poor people to prevent land grabbing by wealthy interests.

Other recommendations for addressing inequality in Africa include ending fossil fuel subsidies that primarily benefit the wealthy, increasing access to financial services, and expanding rights for women. In several African countries, including Cameroon, Niger, and Sudan, married women can't start a job without her husband's consent.<sup>114</sup> Advancing women's rights in Africa would not only reduce economic inequality, it would also provide an increase in economic growth of up to 10 percent by 2025.<sup>115</sup>

## 5.5 CONCLUDING THOUGHTS

It is evident that current levels of income and wealth inequality across the world limit the economic opportunities and well-being of many. While economists disagree to some extent on the causes of inequality, the evidence is clear that policy options exist to reduce inequality. These could include a more progressive tax structure, higher minimum wages, public infrastructure and service investments, and strong workers' rights. The robust transfer systems found in many European countries appear to be highly effective in reducing inequality, resulting in some of the world's lowest disposable-income Gini coefficients. Full-employment policies and job protections for temporary and part-time workers also seem important as a policy response to high levels of inequality.

Reducing inequality is as much a political challenge as an economic challenge. High economic inequality tends to foster excessive concentration of political power, which in turn maintains the status quo and makes reform more difficult. We will consider the challenge posed by the concentration of economic and political power in our conclusion to the book in Chapter 17.

### Discussion Questions

- 1 Do you generally believe that raising taxes on the rich is an appropriate approach for reducing economic inequality? What level of taxation on the rich do you think is fair? (Note that we will also consider this topic in the next chapter.)
- 2 Do you think the spending priorities of the government should be changed in order to reduce economic inequality? Beyond the suggestions in the text, can you think of any other ways that government spending priorities could be changed?

### REVIEW QUESTIONS

1. About what share of aggregate income does each quintile of households receive in the United States?
2. How is a Lorenz curve constructed? What does it measure?
3. What is the Gini coefficient (or ratio)? What does a higher value of the coefficient signify?
4. What effect do taxes and transfer payments have on the distribution of U.S. household income?
5. What tends to be more unequal—the distribution of income or wealth? Why?
6. How has income inequality in the United States changed in recent decades?
7. How does income and wealth vary by race?
8. What is economic mobility?
9. How does economic mobility in the United States compare to that in other industrialized countries?

10. How does economic inequality in the United States compare to other countries?
11. How is it that the global Gini coefficient for income is higher than the Gini coefficient for any single country?
12. How is it that the global Gini coefficient is declining but the Gini coefficients in most countries are increasing?
13. How do median wealth levels in the United States compare to other industrialized countries?
14. What are the four main reasons proposed to explain growing inequality in the United States and other developed countries?
15. What is the Kuznets curve hypothesis? Does the research generally support the theory?
16. What are some of the consequences of inequality?
17. How can tax and transfer policies be used to reduce inequality?
18. What is the difference between market and disposable income?
19. Does economic research generally support the view that increasing the minimum wage will reduce income inequality?
20. How can government spending policies and other regulations impact inequality?
21. What are some policies that have been effective at reducing income inequality in developing countries?

## EXERCISES

1. Statistics from the World Bank indicate the household income distribution in Thailand for 2019 was:

Group of Households	Share of Aggregate Income
Poorest quintile	7.7%
Second quintile	11.5%
Third quintile	15.7%
Fourth quintile	22.3%
Richest quintile	42.8%

- a. Create a carefully labeled Lorenz curve describing this distribution. (Be precise about the labels on the vertical axis.)
  - b. Compare this distribution to the distribution in the United States. Would you expect the Gini ratio for Thailand to be higher, lower, or about the same? Why?
2. You can access the World Bank’s World Development Indicators database online to download income share data for various countries, and construct Lorenz curves. Choose two countries you are interested in and construct their Lorenz curves on the same graph. Note that the WDI database does not have data for all countries, or for the most recent years. Also, the database provides income shares for the top and bottom 10 percent, in addition to each quintile—include the data points for the top and bottom 10 percent in your graph. Which one of your two countries seems to have a more unequal distribution of income?

2. Match each concept in Column A with a definition or example in Column B.

Column A	Column B
a. Economic mobility	1. A very unequal income distribution
b. Kuznets curve hypothesis	2. Wages, salaries, and fringe benefits

Column A	Column B
c. Capital gain	3. Income not adjusted for taxes and transfers
d. Quintile	4. Payments for the use of an asset
e. Labor income	5. A very equal income distribution
f. A Gini ratio close to 1	6. A group containing 20 percent of the total
g. Disposable income	7. Changes in one's economic status over time
h. A Gini ratio close to 0	8. An increase in the value of an asset at the time of sale
i. Rent	9. Inequality first increases, then decreases, with development
j. Market income	10. Income adjusted for taxes and transfers

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## NOTES

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<sup>2</sup> Peterson-Withorn, 2021.

<sup>3</sup> Ferreira, 2021.

<sup>4</sup> Congressional Research Service, 2021.

<sup>5</sup> Data from the United Nations Development Programme, Human Development Reports database.

<sup>6</sup> Dynarski and Micheltore, 2017.

<sup>7</sup> World Economic Forum, 2021.

<sup>8</sup> Godwin *et al.*, 2016.

<sup>9</sup> Diffenbaugh and Burke, 2019.

<sup>10</sup> Vidal, 2013.

<sup>11</sup> Taconet *et al.*, 2020.

<sup>12</sup> Ortiz-Ospina, 2020.

- 13 Schneider, 2016.
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- 15 Saez and Zucman, 2016.
- 16 Norton and Ariely, 2011.
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- 18 Note that the categories presented in Figures 10.8 and 10.9 slightly differ, as the data come from two different U.S. Census Bureau reports.
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- 58 Hoffman and Centeno, 2003.
- 59 Ibarra and Byanyima, 2016.
- 60 Moran, 2005.
- 61 Moran, 2005; Wade, 2011.
- 62 Kanbur *et al.*, 2017.
- 63 Ostry *et al.*, 2014.
- 64 *Ibid*, p. 25.
- 65 *Ibid*, p. 26.
- 66 Boushey, 2019.
- 67 Gilens, 2012.
- 68 *Ibid.*, p. 1.
- 69 Gerber *et al.*, 2018.

- <sup>70</sup> OECD, 2008.
- <sup>71</sup> Hoynes and Patel, 2018.
- <sup>72</sup> Rothstein and Zipperer, 2020.
- <sup>73</sup> Bunn, 2021.
- <sup>74</sup> Mattauch, 2019.
- <sup>75</sup> Joumard *et al.*, 2012.
- <sup>76</sup> World Bank, 2019.
- <sup>77</sup> Browne and Immervoll, 2017.
- <sup>78</sup> Wignaraja and Horvath, 2020.
- <sup>79</sup> [https://en.wikipedia.org/wiki/List\\_of\\_countries\\_by\\_minimum\\_wage](https://en.wikipedia.org/wiki/List_of_countries_by_minimum_wage).
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- <sup>81</sup> Autor *et al.*, 2016.
- <sup>82</sup> OECD, 2012.
- <sup>83</sup> Neumark, 2014.
- <sup>84</sup> Harris and Kearney, 2014.
- <sup>85</sup> Cooper, 2017.
- <sup>86</sup> See <https://www.australianunions.org.au/factsheet/minimum-wages/>.
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- <sup>89</sup> Hershbein *et al.*, 2015.
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- <sup>91</sup> Checchi and van de Werfhorst, 2014.
- <sup>92</sup> Jaumotte and Buitron, 2015.
- <sup>93</sup> Matthews, 2012.
- <sup>94</sup> OECD, 2012.
- <sup>95</sup> Ambrosino, 2016.
- <sup>96</sup> Alderman, 2017.
- <sup>97</sup> See <https://projects.propublica.org/graphics/temps-around-the-world>.
- <sup>98</sup> Kuhn *et al.*, 2018.
- <sup>99</sup> Mineo, 2021.
- <sup>100</sup> Derenoncourt *et al.*, 2020.
- <sup>101</sup> Collins *et al.*, 2019.
- <sup>102</sup> Williamson, 2020.
- <sup>103</sup> Darrity, 2021.
- <sup>104</sup> Weller, 2019.
- <sup>105</sup> Ravallion, 2014.
- <sup>106</sup> UNDP, 2013.
- <sup>107</sup> Lin and Yun, 2016.
- <sup>108</sup> Shimeles, 2016.
- <sup>109</sup> See <http://www.worldbank.org/en/news/opinion/2013/11/04/bolsa-familia-Brazil-quiet-revolution>.
- <sup>110</sup> OECD, OECD.Stat, Real Minimum Wages.
- <sup>111</sup> Engbom and Moser, 2018.
- <sup>112</sup> OECD, 2015b.
- <sup>113</sup> Hallum and Obeng, 2019, p. 5.
- <sup>114</sup> Nord, 2021.
- <sup>115</sup> Moodley *et al.*, 2019.