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Trends in Inequality

In this chapter, we first take a brief look at longer-run trends in income inequality before delving into a more in-depth analysis of the recent trends. After describing the trends in household and individual income inequality since the 1980s, we discuss what these trends could imply for inequality of opportunity. The discussion refers to the U.S. case, but we present some comparisons to other developed countries as well.

Long-Run Trends in Inequality

In broad (and perhaps overly simplistic) terms, reductions in inequality during the most of the 20th century were marked by increases in the *levels* of accumulation of assets—most notably education and skills—by large swaths of the population. That is to say, inequality fell during these periods because income and wealth at the middle and bottom of the distribution increased substantially in both absolute and relative terms. In contrast, increases in inequality since the 1980s have been driven mostly by a change in *returns to those assets*, particularly the returns to education and skill. We discuss the likely causes of the changes in returns in Appendix A.

Kuznets (1955) hypothesized that inequality would first rise and then decline as a country developed; this is commonly known as the Kuznets inverted-U curve. Our simple framework can illustrate Kuznets' hypothesis. Individuals possess capital, which can be employed to produce a return (for example, investing capital in the stock market, or using skills to earn wages). In a very primitive society, production depends mostly on unsophisticated labor. Increases in productivity create the opportunity for asset accumulation, which in turn creates the opportunity for inequality. The first individuals who accumulate assets drive inequality up. In Kuznets' original exposition, the economic shift from agriculture to industry drove such an increase in inequality. Once the majority of people have moved from agriculture to higher-paid employment in industry, additional movers to industry result in reduced inequality.

Up until the 1980s, Kuznets' prediction about the relationship between growth and inequality held up fairly well for the United States and many other (now-developed) countries. Historical investigations show inequality being relatively low in preindustrial societies (Milanovic, Lindert, and Williamson, 2007) and increasing as countries industrialized. Meanwhile, Atkinson, Piketty, and Saez (2011) and Piketty (2014) show a decrease in the income shares

going to top percentiles of earners (particularly the top 1 percent but also the top 5 percent) during the early-to-mid 20th century.¹

During the late 18th and 19th centuries, while the United States was industrializing, inequality increased steadily (Lindert and Williamson, 2012). Inequality reached its peak at the turn of the 20th century and started decreasing after that, amid further industrialization and growth. Countries that started industrializing later saw their inequality rising later, and it started declining later as well (for example, Brandolini and Vecchi, 2011, compare the historical patterns for Italy and Spain).

In the United States, during most of the 20th century, educational opportunities expanded throughout the population, contributing to further growth and less inequality (Goldin and Katz, 2010). Though there are no estimates of the trends in intergenerational transmission of income measures, or other proxy measures for equality of opportunity, it is important to note that growth and reductions of inequality were strongly affected by the accumulation of human capital by the broader population. The share of families with at least one college graduate grew substantially during the postwar period (Goldin and Katz, 2001 and 2010). Because of the relationship between education and income, this trend suggests that inequality of opportunity was decreasing concurrently with inequality of income. The same pattern can be seen in most developed countries, with those that developed earlier reaching their inequality peak earlier.²

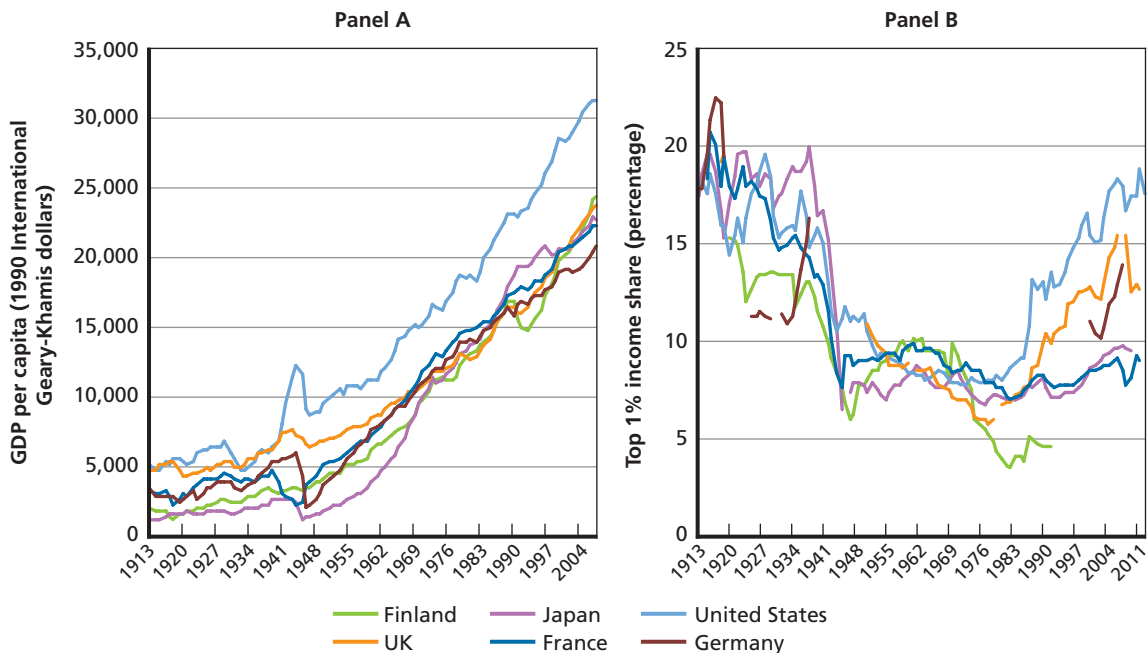
Inequality in the United States and most other developed nations has risen significantly since the 1980s. Panel B of Figure 3.1 shows how inequality in developed nations started to climb in the 1980s, while gross domestic product (GDP) per capita continued to rise (Panel A).³ Though the rise in inequality since the 1980s in the United States has been one of the steepest, it is not the only country experiencing this phenomenon. The next sections contain a discussion of the trends in the income distribution since 1980 and the implications these trends have had on opportunity. We then discuss trends in the proxy measures of inequality of opportunity over this period.

¹ This was marked in particular by a reduction of capital income (and the share of capital income from total income), as well as a deconcentration of capital and wealth.

² It is interesting to note that the Kuznets hypothesis also goes a long way toward explaining “global inequality”—understood as inequality not across countries, but across all individuals in the world—over the last two centuries. Due to the large cross-country differences in global inequality, patterns are driven more by mean differences in income across countries than by changes in distribution within each country. It is estimated that the world in the early 1800s was much more equal—though almost uniformly poor—until industrialization in developed countries increased global inequality. Between the early 1900s and about 1980, global inequality increased as the income of rich countries grew (even though inequality was decreasing within rich countries, global inequality rose, because even low-income families in rich countries are at the top of world income distributions). In the last few decades, global inequality has decreased again with the growth of relatively poor countries, particularly China (van Zanden et al., 2014; Bourguignon and Morrisson, 2002). Lakner and Milanovic (2013) calculated global inequality and estimated that the Gini coefficient (and inequality) fell from about 0.73 to 0.71 between 1988 and 2008.

³ Latin America has been the notable exception in the world and has achieved reductions in inequality (Lopez-Calva and Lustig, 2010). This can only partially be explained by social policy marked by the growth of pro-poor Conditional Cash Transfers. A decline in the skilled versus unskilled wage differential has played a major role in that region.

Figure 3.1
Long-Term Inequality in Developed Countries



SOURCES: Panel A: The Maddison Project, 2013 version; Panel B: World Top Income Database.

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Trends in Income Inequality Since the 1980s

Although, as discussed above, the level of inequality in the United States was stable or declining for the first few decades of the postwar period, this trend reversed at some point around 1980. This pattern is similar for income and consumption inequality at both the individual and household levels. For the United States, Cutler and Katz (1992) and Karoly (1992) show that, under a complete set of measures, inequality of labor earnings increased substantially during the 1980s, as did household income inequality. Similar patterns in income inequality hold for most countries in the developed world.

Household Income Inequality

Disposable household income inequality has increased since the mid-1970s.⁴ Figure 3.2 shows that the Gini coefficient went from 0.31 in 1979 to 0.38 in 2013, according to the Luxembourg

⁴ The Luxembourg Income Study bottom codes the inequality at 1 percent of mean equivalized income and top codes the median of the nonequivalized income. This creates a downward bias in the measures of inequality (tending to show as more equal than they really are). Furthermore, because top 1-percent incomes have grown faster than the rest, this coding also underestimates the rise in inequality in the last 4.5 decades. This bias is likely substantive in light of the substantial increase in the top 1-percent income share shown below: calculations from Atkinson, Piketty, and Saez (2011) show that, if the Gini coefficient for the rest of the population is 40 percent, a rise of 14 percentage points in the top share would cause a rise of 8.4 percentage points in the overall Gini. Thus, the increase shown in the series here would be more than twice as pronounced if we accounted for top 1-percent income growth.

Wealth Accumulation and Inequality

In his 2014 book, *Capital in the Twenty-First Century*, Thomas Piketty describes the historical trends of wealth concentration and shows that, following the same pattern of overall inequality, wealth concentration in developed countries has steadily increased since the later decades of the 20th century, after declining between the 1930s and 1960s. The decline in wealth concentration in the interwar periods, which was particularly marked in continental Europe, can be explained by a combination of factors, including the destruction of physical capital and public policy (such as higher tax rates). The increase in wealth concentration since the 1980s mirrors the rise of income inequality (analyzed in detail in the following section). The analysis of Saez and Zucman (2014) estimates that in 2012 the top 10 percent of households in the United States owned more than 75 percent of all household wealth. Returns on wealth or capital constitute approximately one-third of the income in the economy. This return to capital generally consists of rents, dividends, capital gains, and so on (though, in some cases, entrepreneurial income contains elements of both labor and capital income). Thus, capital income is an important source of income for wealthy households.

Given the distribution of wealth, it is unsurprising that the percentage of income derived from labor (and hence capital) varies substantially across the income distribution. In 2013, labor provided most of total market income for those on the bottom rungs of the income ladder, but it decreases at the very top: 75 percent of income for those in the top 10 percent, 55 percent for the top 1 percent, 42 percent for the top 0.1 percent, and 33 percent for the top 0.01 percent, according to the World Top Income Database (WTID), based on Internal Revenue Service data on tax filers.

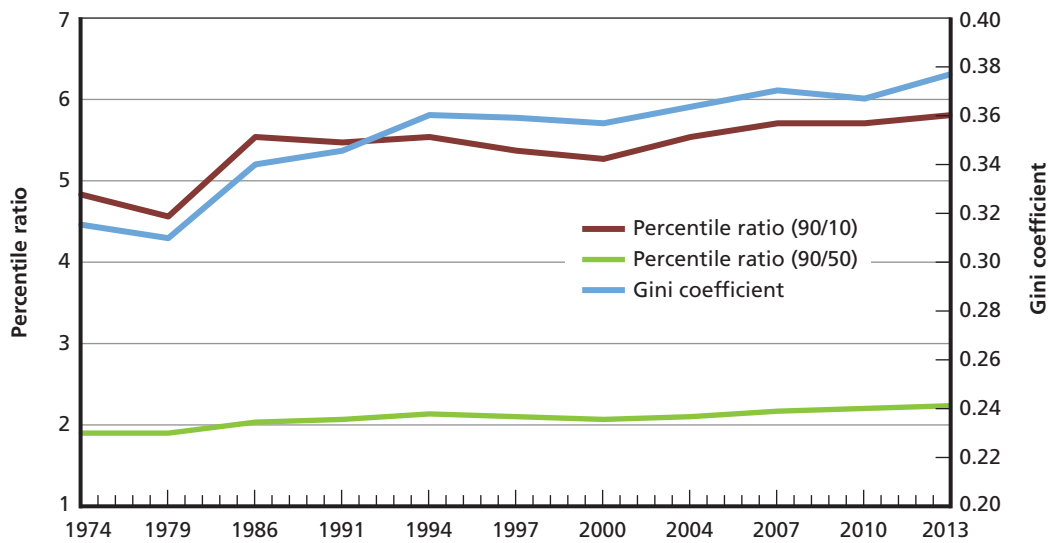
Piketty (2014) argues that concentration of capital relative to overall income growth in developed countries will likely increase in the future, particularly when the economy is growing slowly. His argument is that, when the return to capital is higher than the overall rate of economic growth, capital owners will see their fortunes grow faster than the economy, which will result in further capital concentration. Whether this holds true, however, depends on several factors in addition to growth, including the effect of future technological change on the relative demand for different types of skill and capital; public policies, including tax rates; and overall growth in educational attainment.

Income Study. Income of those in the top decile went from 4.5 times the income of those in the 10th percentile in 1979 to 5.8 times in 2013.

Panel A of Figure 3.3 shows the average market income of families⁵ at different percentile levels, according to the WTID. There are some relatively small fluctuations as part of business cycles, but the general trends are clear. Income of the top 5 percent of households roughly doubled, while income of the bottom 90 percent remained mostly stable during the same period.

⁵ Families are defined as tax units in this data series. The tax data used are available only for “tax-filing units” (in a few cases, members of the same family or household may file separate tax returns). However, the trends observed in this series are roughly corroborated by census and survey data, as shown later.

Figure 3.2
U.S. Income Inequality Measures Since the Mid-1970s



SOURCE: Luxembourg Income Study for Gini coefficient at the household level.

NOTE: The figure shows Gini coefficients (on the left axis) and income shares (on the right axis).

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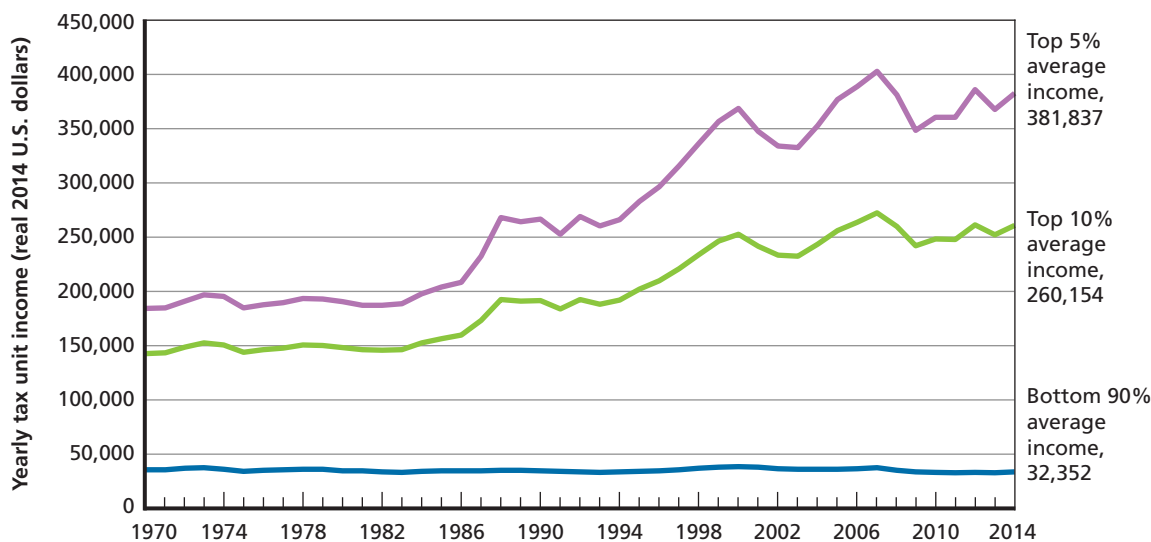
Thus, while the average income of households in the top 5 percent was approximately five times the amount of the average of households in the bottom 90 percent in 1970, it was close to 10 times in 2014. Income growth within the top 1 percent was more rapid, with incomes nearly tripling (180 percent growth) over the period. Panel B shows the growth rates of incomes within the top 1 percent. Panel B also shows market income excluding capital gains, though the pattern would be similar (though slightly steeper) if they were included.⁶

The lack of market income growth for the bottom 90 percent, as shown in Figure 3.3, does not necessarily mean that the welfare of those at the bottom has not improved; these estimates do not account for changes in household size or changes in nontaxable income (including monetary and in-kind transfers from public programs). To get a more consistent measure of income over time, the Congressional Budget Office (CBO) produces a statistical series that compares equivalized income across households of different sizes: Each household's income is divided by the square root of the number of household residents. Using this measure, growth in the bottom quintile equaled 23.2 percent instead of -2 percent.⁷

⁶ It is customary to use the series excluding capital gains, since including them increases the year-to-year variation in income. The reason for this is that tax filers can often choose when to declare the capital gains and will likely do so when it is advantageous for tax purposes. Thus, some years tend to concentrate an artificially high proportion of reported capital gains. For long-term trends, however, this does not cause substantial differences.

⁷ Another difference with the measures presented above is that the CBO's measure of before-tax income inequality includes all market income reported on tax returns, plus other sources of cash income (in addition to Census and WTID data sets, such as child support and employees' contributions to 401(k) retirement plans). It can also be argued (Deaton, 2013) that price indexes do not fully take into account technological improvements that did not exist decades ago. Thus, even in periods when income did not increase, some could argue that welfare still increased for most of the population. In addition, though income has stagnated for the bottom parts of the population, when government benefits are fully accounted for, poverty has actually fallen (see subsection "Inequality at the Bottom of the Distribution: Public Transfers

Figure 3.3
Household Market Income Growth for Top and Bottom Households
Panel A. Average Income



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Panel B. Growth of Market Income Excluding Capital Gains

| Income Cohort | 1970s (%) | 1980s (%) | 1990s (%) | 2000–2014 (%) | 1970–2014 (%) |
|---------------|-----------|-----------|-----------|---------------|---------------|
| Top 0.01% | 24.4 | 205.4 | 85.1 | 3.6 | 728.3 |
| Top 0.1% | 14.9 | 140.5 | 73.2 | -0.8 | 374.7 |
| Top 1% | 4.6 | 73.9 | 51.2 | 2.2 | 180.8 |
| Top 5% | 3.6 | 40.0 | 38.6 | 3.8 | 108.6 |
| Top 10% | 4.1 | 29.4 | 32.1 | 3.3 | 83.9 |
| Bottom 90% | -2.2 | -0.2 | 10.7 | -12.4 | -5.3 |

SOURCE: World Top Income Database.

NOTE: Total income excluding capital gains.

Table 3.1 shows the 1980–2011 cumulative growth in income for the bottom quintile, according to U.S. Census data (nonequivalized) and the CBO's definition of equivalized income. After correction for household size, there has actually been some growth in market income for the bottom percentiles. However, this correction does not affect the major trend of an increase in inequality. The Gini coefficient has grown by about the same amount, irrespective of the CBO's correction.

Burkhauser, Larrimore, and Simon (2012) deconstruct the 1979–2007 differences in changes in inequality observed when using pretax, pretransfer income (the most unequal

and Poverty"). This does not invalidate, however, the point that top family incomes have risen much more than bottom ones.

Table 3.1
Inequality and Income Growth of the Bottom 20 Percent of Households Using Alternative Income Measures

| | Census (nonequivalized market income) | CBO (equivalized market income) |
|---|---------------------------------------|---------------------------------|
| Cumulative growth (lowest quintile, bottom 20%) 1979–2010 | –2.0% | 23.2% |
| Gini coefficient 1979 | 0.404 | 0.48 |
| Gini coefficient 2011 | 0.477 | 0.59 |
| Percentage growth in Gini | 18.1% | 22.9% |

SOURCE: U.S. Census, 2014, and CBO, 2014.

versus household-size-adjusted posttax and transfer income, using Current Population Survey data. Their findings confirm that the negative growth observed when using pretax and transfer income at the tax-filing unit level (–33 percent) disappears when looking at household-size-adjusted income and is larger when looking, in addition, at posttax and posttransfer income (+15 percent). Similarly, the close to zero growth in market income for the middle-quintile tax-filing unit (2.2 percent) becomes substantial when adjusting for household size, and even larger when looking at after-tax and posttransfer income (29.5 percent). However, this correction also applies to households in the top quintiles, so that inequality grew substantially regardless of the income series used. They estimate the Gini coefficient grew by roughly 10 percent, from 0.52 to 0.57, using the tax unit market income series, and by about 14 percent, from 0.35 to 0.40, using the after-tax and -transfer, household-size-adjusted measure. In addition, they show that if the increase in the cost of health insurance is added to household income, the growth rates of all income quintiles are larger (though again, the trend in inequality remains the same).

The rise in household income inequality has increased largely through inequality of earnings from the labor market. However, there are other factors that affect household-level inequality. An important one is the trend in female labor force participation and earnings. Karoly and Burtless (1995) show that from 1959 through the 1980s the rising percentage of working women reduced the overall Gini coefficient. However, the correlation of women's earnings with family income affected inequality differently in different decades. Up to the 1980s, the correlation was negative (meaning women who were increasingly entering the labor force tended to be in poorer families and therefore tended to reduce inequality). During the 1980s, the correlation was positive (women were entering the workforce in the upper ranks of the distribution, and thus their inclusion tended to increase inequality). Chen, Förster, and Llena-Nozal (2014) used panel data on household and individual measures of inequality from 23 Organisation for Economic Co-operation and Development (OECD) countries and showed that the most important factor driving household inequality from the mid-1980s to the mid-2000s was increasing inequality of individual male labor earnings (while the equalizing effect of women's rising employment roughly offset the contrary effect from the rising correlation in spouse earnings due to marital sorting and changes in household structure).

Inequality in Labor Market Earnings

Not surprisingly, given that labor income is the most important income component, the observed increase in inequality is largely attributable to the increase in wage inequality. In

particular, it has been noted that wages (and, more generally, earnings) started diverging in the 1980s (Cutler and Katz, 1992; Karoly, 1992) and rose faster for those with higher levels of education. The growth of wage inequality was reinforced by changes in nonwage compensation, leading to a large increase in total compensation inequality (Hamermesh, 1999; Pierce, 2001).

If changes in the composition of the workforce were driving the trends in the measures of inequality, this trend would be erased by controlling for these compositional effects. However, early decomposition analyses have shown that this is not the case. For instance, Karoly (1992) showed that the increase in inequality of individual earnings in the 1980s was not driven by shifts in the sex, age, education, or industry composition of the labor force. Thus, the growth in inequality cannot be attributed to demographic or compositional shifts.

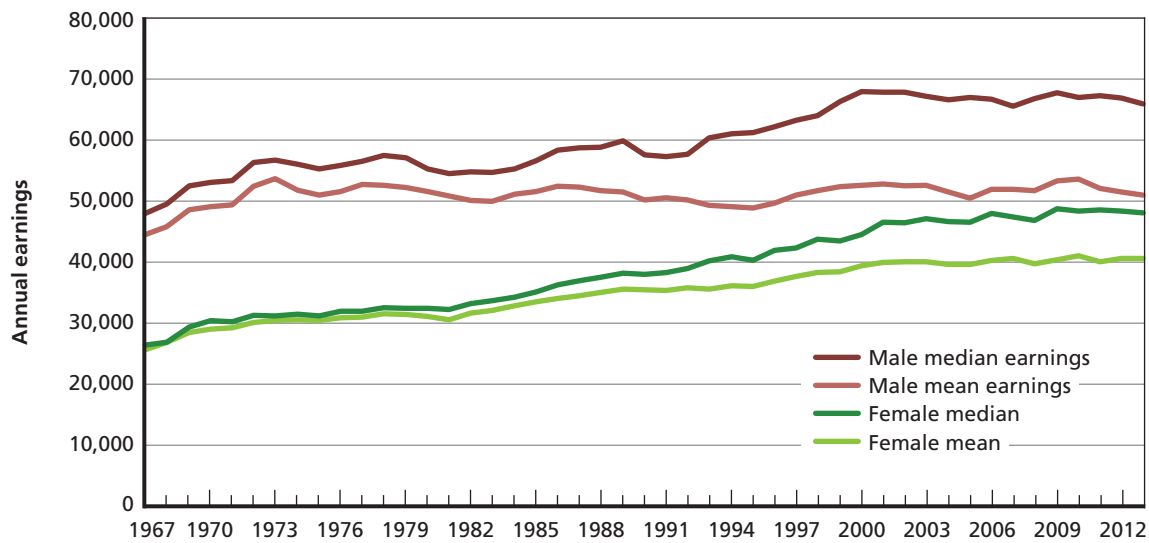
One potential caveat to the stated increase in inequality is that inequality measures that take a snapshot of only one point in time may not capture inequality of lifetime earnings. As workers become more mobile between jobs, their earnings fluctuate more from year to year, which may explain part of the increases in measured inequality. Lifetime inequality, however, is not measurable in real time, and one must wait until a worker's death to measure it. However, studies have used panel data measuring income over multiple years and extrapolated that to even longer periods. The conclusion of these studies is that income volatility cannot explain much of the change in inequality. For instance, Auten and Gee (2009) show that, though there was considerable variation within individual incomes between 1996 and 2005,⁸ the degree of relative income mobility was roughly unchanged from the prior decade (1987–1996). Thus, if we could compute the Gini coefficient or some other inequality indicator for permanent income, we would find it to be lower than the one based on yearly income data; however, it does not seem that it would point to a different trend from that estimated with yearly income data. Mitchell (2014) uses a panel data set of earnings for men born between 1940 and 1974 that allows him to compare lifetime earnings (or at least up to age 40 in the youngest cohort) of college versus high school graduates. He finds that the differences in lifetime earnings among these groups are in fact *larger* than yearly differences. Thus, the yearly income inequality numbers understate cumulative inequality.

Median wages have not increased in real terms since the 1980s for full-time male employees, while wages at the bottom of the distribution have declined. Figure 3.4 shows that male median earnings have stagnated, even while mean earnings have been pulled by rising wages in the top quintiles of the distribution. Though female median earnings have increased, they have not climbed as much as mean earnings, indicating that top wages have increased more quickly.

Several factors are behind the divergence between wages in the top half of the distribution and median. A large fraction of it can be explained by increased returns to schooling, which in turn can be explained by technological changes that caused an increase in the demand for highly skilled workers (this phenomenon is referred to *skill-biased technological change* [SBTC]). Other factors have included increased international trade, which has depressed demand for workers in certain industries. In addition, wages at the bottom of the distribution were affected by institutional factors (such as the real erosion of statutory minimum wages) that also contributed to the rise of inequality. The evidence for these causes is reviewed in Appendix A.

⁸ About half (56 percent relative to the total population) of taxpayers in the bottom income quintile in 1996 moved to a higher income group by 2005. The composition of the very top income groups also changed substantially over time. Less than half (39 percent or 42 percent by different measures) of those in the top 1 percent in 1996 were still in the top 1 percent in 2005.

Figure 3.4
Median and Mean Labor Market Yearly Earnings for Full-Time Employed



SOURCE: U.S. Census Bureau, 2014; Current Population Survey, Annual Social and Economic Supplements.
 NOTE: People 15 years old and over. Earnings in 2013 dollars.

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However, these factors cannot easily explain the fact that most of the increases of earnings have concentrated among the very top earners (within the top 1 percent), which we discuss next.

Inequality at the Top of the Distribution

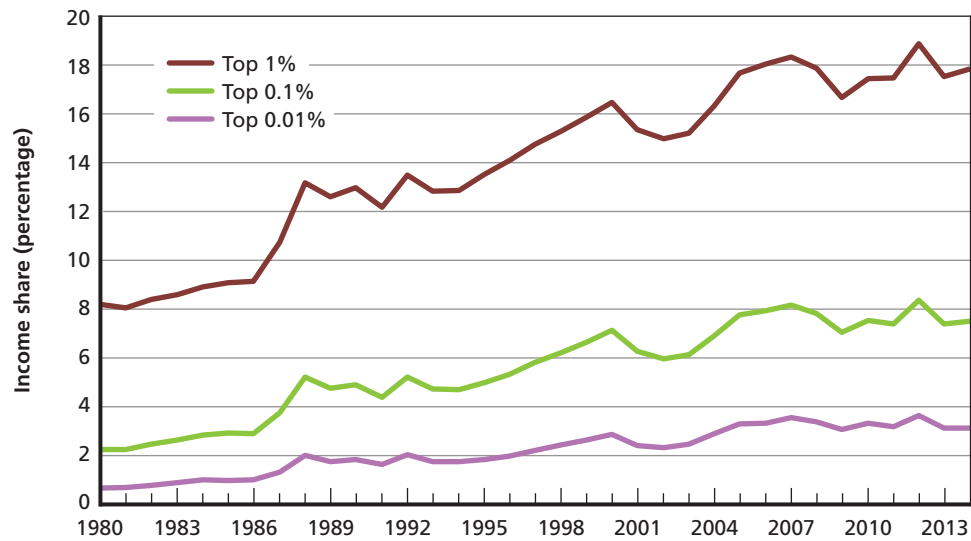
Analyzing trends in the Gini coefficient, or in the average difference in earnings between highly and less educated workers, though important, fails to capture the fact that much of the increase is concentrated in a very small fraction of the population. Between 1976 and 2012, the income share of the top 0.1 percent of earners in the United States quadrupled, from 2 percent to 8 percent.⁹ The increase in labor earnings among top earners has been even more rapid. Not only has the overall income share of the top 1 percent increased (Figure 3.5), but the combination of labor earnings (and entrepreneurial income) share of the income in the top 1 percent has also grown more than other sources of income (see Appendix A).

As with the general pattern of skill-biased technological change, the phenomenon of the increase in labor income among top earners occurred across developed countries. However, in this case, the magnitudes of labor income inequality growth in some countries have been much more pronounced than in others. The rise in the top 0.1 percent's income share in Britain was about as pronounced as in the United States (from just above 1 percent in the late 1970s to above 5 percent in the 2010s). In Canada and Australia, it was somewhat less pronounced (from around 2 percent and 1 percent, respectively, to above 4 percent and 3 percent); in France and Japan, it went from nearly 1.5 percent to 2.5 percent; and, in Sweden, from 1 percent to 2 percent (WTID).

Though technology and globalization may partially explain these trends, a standard model of demand and supply cannot explain the significant changes in this part of the distri-

⁹ WTID.

Figure 3.5
Growth of Earnings at the Top of the Distribution



SOURCE: World Top Income Database.

NOTE: Earnings exclude capital gains.

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tribution without accounting for a particularly strong rise of demand for very special skills among a narrow segment of the population. The phenomenon—sometimes referred to as the “superstar effect,” explained as small differences in talents or initial success translating into large differences in final market share for services—is aided by the rise of technology and globalization. As firms grow and internationalize, some managers supervise larger firms and can command larger compensation packages. The same phenomenon can occur within other professions. This is consistent with evidence that, in large firms, wages are higher (Oi and Idson, 1999) and wage schedules are wider (Mueller, Ouimet, and Simintzi, 2015), even after controlling for job and industry characteristics. Further discussion of the reasons behind the rapid growth of earnings at the top percentiles of the income distribution is presented in Appendix A.

Inequality at the Bottom of the Distribution: Public Transfers and Poverty

President Lyndon Johnson’s declaration of an “unconditional war on poverty” in the 1960s initiated a series of cash and in-kind transfers designed to reduce absolute poverty, including the Social Security Act, Medicare and Medicaid, the Food Stamp Act, and the Child Nutrition Act, which still exist today (Bitler and Karoly, 2015). Since then, government spending on income support, subsidized or free health care and housing, early childhood education, higher education grants, loans, and job training—so-called entitlement spending—has been on the rise. Entitlement spending reached 5 percent of GDP in 1960 and 11 percent in 1976. In recent years, it peaked at 18 percent of GDP in 2010 in the aftermath of the Great Recession of 2007–2009.¹⁰ The progressive U.S. federal income tax policies support the redistributive role of government spending: Among poor households, public transfers received exceed the amount

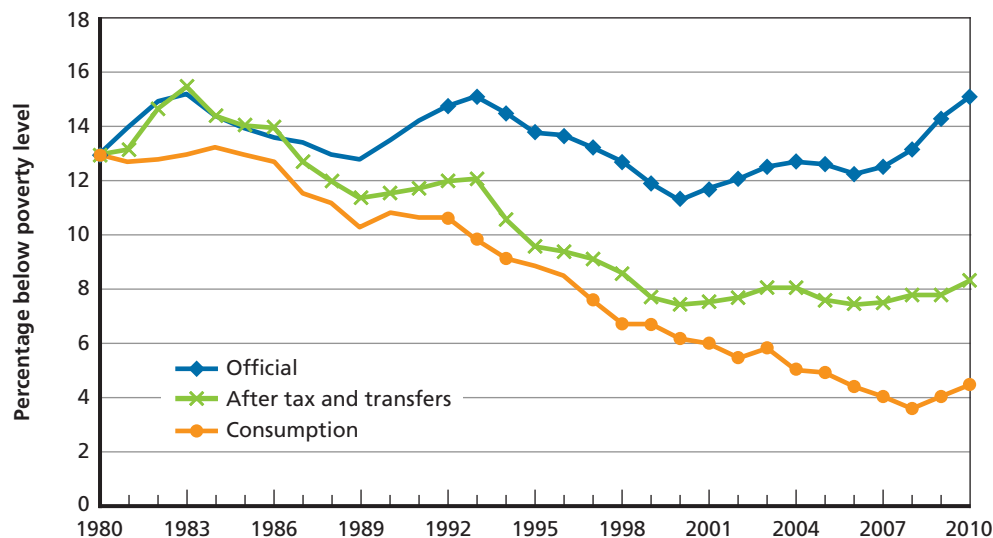
¹⁰ Chantrill, undated.

of taxes paid, whereas among richer households, the opposite is true.¹¹ In Chapter Five, we describe the links through which these policies can affect not only income inequality but also measures of inequality of opportunity.

Though the U.S. government has pursued redistributive fiscal policies over the last four decades, these policies have not entirely offset the increase in market income inequality over the same period, as we saw in the previous section.¹² Market income inequality, measured by the before-tax and -transfer Gini coefficient from the OECD series, reached 51 percent in 2012, ten percentage points higher than in 1974. The difference in the Gini coefficient before versus after tax and transfers has remained fairly constant: between 9 and 12 percentage points. Even accounting for the government spending, posttax and posttransfer Gini still increased by 7 percentage points, from 32 percent in 1974 to 39 percent in 2012. As we will see, however, some benefits of the U.S. program are not paid directly in cash, so they are not reflected in this measure. Once we account for the benefits to those in the bottom of the distribution, poverty rates, measured after taxes and transfers, have declined (though overall inequality has still increased).

Focusing solely on the lower end of the income and consumption distribution, the redistributive effect of transfers appears to make a difference in poverty rates. Comparing official measures of poverty, which do not include taxes and transfers, with measures that account for

Figure 3.6
Official and Posttax and -Transfer Poverty Rates, and Consumption Poverty Rate



SOURCES: U.S. Census Bureau, 2014; Meyer and Sullivan, 2012.

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¹¹ According to Tax Foundation calculations, in 2012 the typical family in the lowest 20 percent of earnings paid \$6,331 in total taxes on average and received \$33,402 in spending from all levels of government. Thus, the average amount of redistribution to a typical family in the bottom quintile is estimated to be \$27,071. At the other end of the income scale, the top quintile paid \$87,076 more in taxes per family than it received in government spending. These families paid an average of \$122,217 in taxes to all levels of government and received \$35,141 worth of spending in return (Prante and Hodge, 2013).

¹² This is in part due to large decreases in the top marginal tax rates over this time frame. Though redistributive policies have been implemented for the poor, the progressivity of the tax code was reduced through the reduction of top tax rates.

taxes and transfers provides an estimate of the poverty-reducing effect of fiscal policy at the federal level. Figure 3.6, based on Meyer and Sullivan (2012), shows the percentage of the U.S. population with incomes below the official poverty level, the percentage below the poverty level when taxes and transfer programs are taken into account, and the percentage of the population consuming below the poverty threshold.¹³ The official poverty rate based on income has drifted between 11 percent and 15 percent since the 1980s. In contrast, when poverty measures account for federal taxes and transfer programs, poverty continued to decline until around 2000. The decline is steeper when estimates are based on consumption measures, which are more sensitive to benefits paid in-kind.

Given the lack of growth in wages at the bottom of the distribution, government programs, rather than earnings, have been responsible for much of the decline in poverty. Analysis in Meyer and Sullivan (2012) cites Social Security and tax changes, such as the Earned Income Tax Credit, for reductions in poverty during the 1990s.¹⁴

Summary of Income Inequality Trends and Their Implications for Welfare and Intergenerational Mobility

During the 20th century, most American families accumulated human and physical capital, which helped the economy not only grow but also grow in a way that benefited large swaths of the population. Broad capital accumulation reduces inequality and grows the economy in two ways: First, the accumulation of skill means that people at the middle and bottom of the distribution amass profitable assets and thus increase their incomes, closing the inequality gap with higher-income families that possess more of those skills. Second, the accumulation of skills reduces the return to skill (increase in supply), which helps counteract the tendency for the economy to grow due to technological change. The large reductions in inequality based on the accumulation of human capital imply an increase in opportunities for large sectors of the population.¹⁵

However, an acceleration of technological change and a deceleration of skill accumulation caused the returns to skill to grow since the 1980s (skill-biased technological change). In addition to SBTC, globalization resulted in an increased dispersion in returns to skill.¹⁶ Though these effects do not directly imply reduced opportunity, increased inequality of parental income implies inequality of the capacity to invest in children's skills.

¹³ The official poverty rate compares income, including primarily earnings from employment or retirement benefits, to a specific threshold to assess the share of the population in poverty. The rate after taxes and transfers includes the net effect of federal taxes as well as federal transfer programs. Consumption measures the share of households that spend less than the poverty threshold.

¹⁴ Internal Revenue Service, 2014.

¹⁵ Though available data do not allow us to estimate intergenerational mobility with income data, a recent study (Hilger, 2015) uses parental-child correlations in years of education to estimate intergenerational mobility and finds that it was increasing for cohorts entering the labor market between 1940 and 1980.

¹⁶ Increased returns to skill, typically measured as earning differences between college graduates and the rest, raise inequality by increasing the income gap between the more and less educated. Increased dispersion in the return to skill, on the other hand, raises inequality by increasing the gap between those earning the highest and lowest amounts within the more educated group (basically, increases inequality among top earners).

Inequality at the very top has increased the most. Advantages could be transmitted for the children of this group (reduced mobility), particularly since very high incomes allow them to save and transmit the resulting wealth¹⁷ to the following generation. Thus, we may expect less mobility into and out of the top percentiles. However, since measures of intergenerational mobility are captured throughout the whole distribution, changes in mobility for a small sector of the population may have little effect on the common proxy measures of inequality of opportunity. Moreover, the share of *labor* income within total income is increasing in the top percentile, and this effect could increase mobility; unlike capital income, there is more mobility in labor incomes.

Government programs can blunt the impact of increased income inequality on welfare and mobility at the bottom of the distribution. Despite the stagnation of salaries at the bottom, poverty has actually fallen in the last several decades, once taxes and transfers are taken into account, and income at the bottom has increased slightly.

Recent increases in inequality have been driven by changes in the returns to schooling, rather than by changes in the distribution of education, and to the extent the direct “skill-to-skill” transmission mechanism dominates intergenerational transmission, the effect of these increases on opportunity may be lower. In the next chapter, we examine the relationship between different measures of income inequality and inequality of opportunity or IGTI; though these concepts are correlated across countries, increases in income inequality are not always accompanied by increases in IGTI.

¹⁷ This is what is captured in the “rentiers” prediction in Piketty (2014).

