

# INCOME INEQUALITY

The Stanford Center on Poverty and Inequality

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## KEY FINDINGS

- The Great Recession had a mixed effect on inequality: Although it brought about an increase in standard household income-based measures (e.g., the Gini coefficient), it led to a flattening of consumption inequality as well as a decline in the income share going to top-income households.
- In the recovery period since mid-2009, all of these measures now show inequality is rising. By 2012, the share of income of the top one percent had rebounded, nearly returning to the high levels from before the Great Recession.
- The tax, transfer, and other economic policies adopted to fight the Great Recession did blunt the impact of job losses on income and consumption. Not all populations were shielded by these measures equally, however: For example, most measures of post-tax and transfer income inequality fell among the overall population during the Great Recession, whereas the same measures were either flat or slightly rising for non-elderly households.

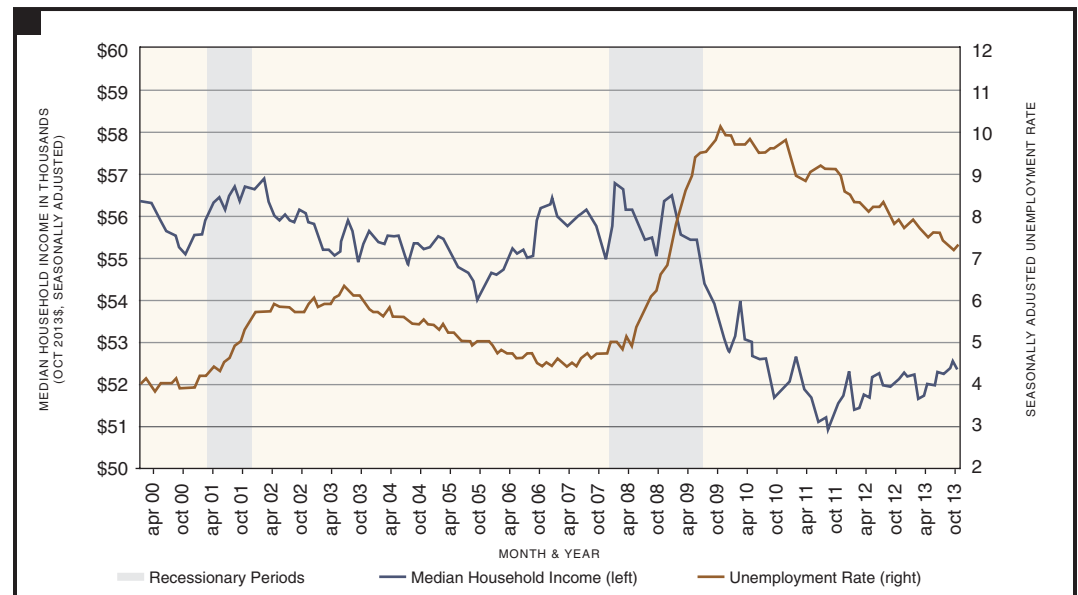
The takeoff in income inequality over the last four decades is by now well-known. By contrast, the public is perhaps less familiar with changes in the income distribution over the last decade, a period marked by a financial crisis, the Great Recession, and the tepid recovery. The main purpose of our brief is to review this more recent record.

The economic crisis of 2008-09 resulted in millions of lost jobs and billions in lost wealth, caused poverty to rise dramatically, and led to a fall in household incomes. Now four and a half years after the end of the Great Recession, the ensuing recovery has left unemployment high for an extended period and has been slow to restore income growth for most households, especially

those in the middle of the distribution. This brief not only reexamines this recent record but also considers the impact of recent policies on inequality and speculates on where inequality may be heading from here.

As will be shown, the record is perhaps more complicated than is often appreciated, with different measures of inequality yielding different conclusions about the effects of the Great Recession. We will lay out the discrepancies and conclude by suggesting that they arose, in part, from the highly targeted effects of the policy response to the Great Recession, and, also in part, because the capital income sources so important to affluent households declined sharply in the Great Recession.

FIGURE 1. Median Household Income and Unemployment Rate: Jan. 2000 to Oct. 2013



Source: John Coder and Gordon Greene, Sentier Research, Annapolis Maryland, 2013

**Median Household Income**

It is useful to begin by considering recent changes in the central tendency of the income distribution. As shown in Figure 1, median household income started to deteriorate after the labor market fell into recession in 2008. Shortly before the official onset of the Great Recession, in July of 2007, the seasonally adjusted unemployment rate was 4.7 percent, and median household income was \$56,100. Two years later, the recession was determined to be over, as GDP growth and other economic indicators had recovered, but unemployment remained high, at 9.5 percent, and median household income was \$54,250.

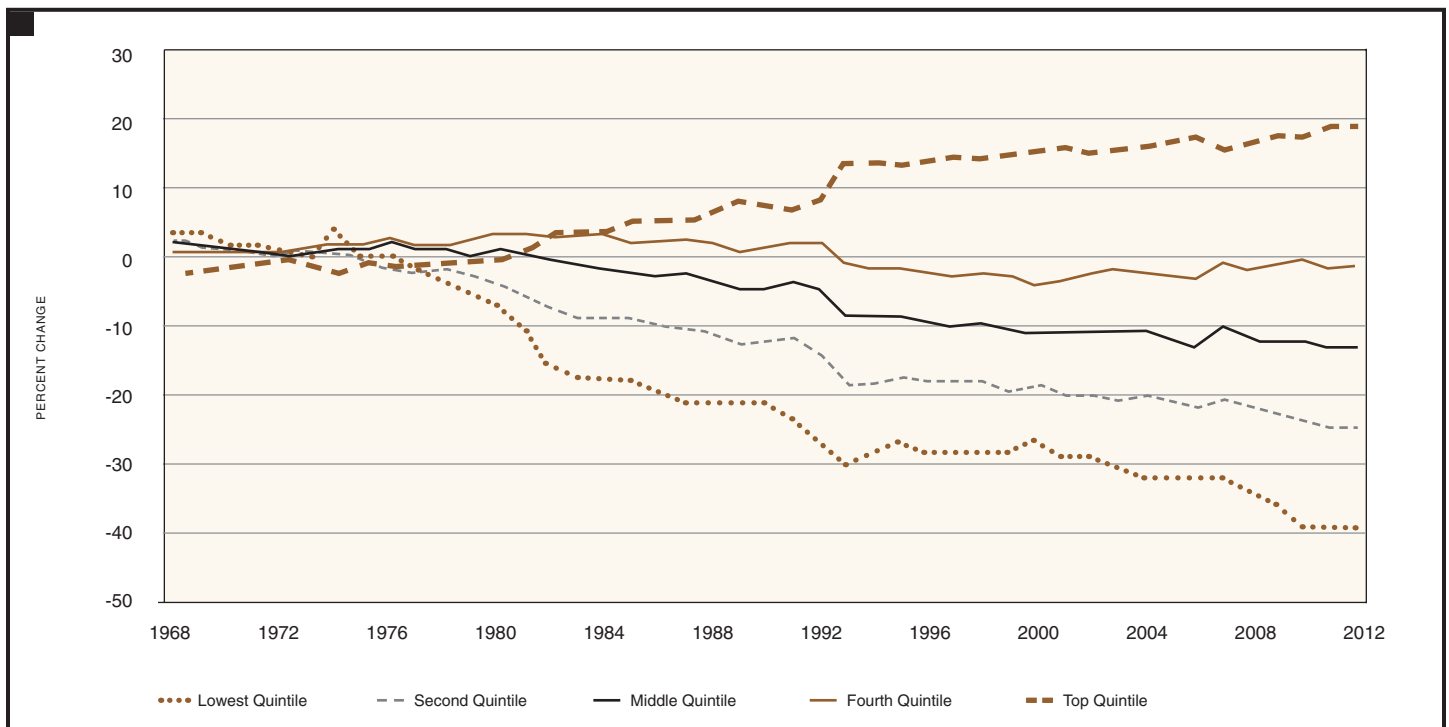
How has median income fared in the recovery period? As unemployment remained stubbornly high (above 9 percent) for most of 2010 and 2011, median household income continued to fall. It hit a low-point in mid-2011, roughly ten percent lower than pre-recession levels. After mid-2011, the unemployment rate drifted down toward eight and then seven percent, and median household income began to slowly grow. By October 2013, however, nearly five years after the end of the Great Recession, median income remains seven percent below pre-recession levels, at \$52,300.

**The Distribution of Income**

Median income declined in the Great Recession and has only slowly recovered since, but the experience of the typical household was not shared by all households. Figure 2 presents income shares of all five quintiles from 1967 to 2012 using household-size adjusted data from the Census Bureau. The figure is anchored at 100 percent in 1967 to highlight changes in income shares over time.

Figure 2 tells a tale of divergence during the period from 2007 to 2010. The share of income received by the bottom three quintiles of the distribution declined between 2007 and 2010 by at least 10 percent; the fourth quintile barely held its own; and the share of the top quintile continued to rise. The largest declines during this period were experienced at the bottom of the distribution: the share of the lowest-income quintile fell from 3.8 percent to 3.4 percent, and the share of the second quintile fell from 9.5 percent to 9.2 percent. In 2009-10 the bottom three quintiles reached all-time lows. The fourth quintile showed little change, but the top quintile's share rose from 48.5 to 49.2 percent of total income in 2010. The shifting income shares in the Great Recession, mainly due to job losses that most dramatically damaged income at the bottom of the distribution, accelerated long-term trends that have been unfolding since the 1980s.

FIGURE 2. Percent Change in Shares of Adjusted Household Income by Quintile (Share of Income of Each Quintile Relative to Share in 1967)



Source: DeNavas-Walt, Proctor, and Smith (2013), Table A-2, pages 40-44.

Do the same trends continue during the three post-recession years? Indeed this general pattern of rising inequality continues even during the recovery. The middle three quintiles saw small declines in their share of income between 2010 and 2012, while the share of the top quintile rose from 49.2 percent to 49.9 percent.<sup>1</sup>

The data presented in Figure 2 are instructive, but it is well to bear in mind their limitations. Most importantly, the Current Population Survey (CPS) definition of “Money Income” includes cash transfers but does not exclude taxes, which means that it understates available resources for poorer families by virtue of ignoring near-cash transfers and refundable tax credits, yet overstates them for some families by virtue of ignoring taxes. This series also does not allow us to identify changes occurring at the very top of the distribution. In the following sections, we present other data series that address some of these limitations.

### Gini Coefficients for Income and Consumption

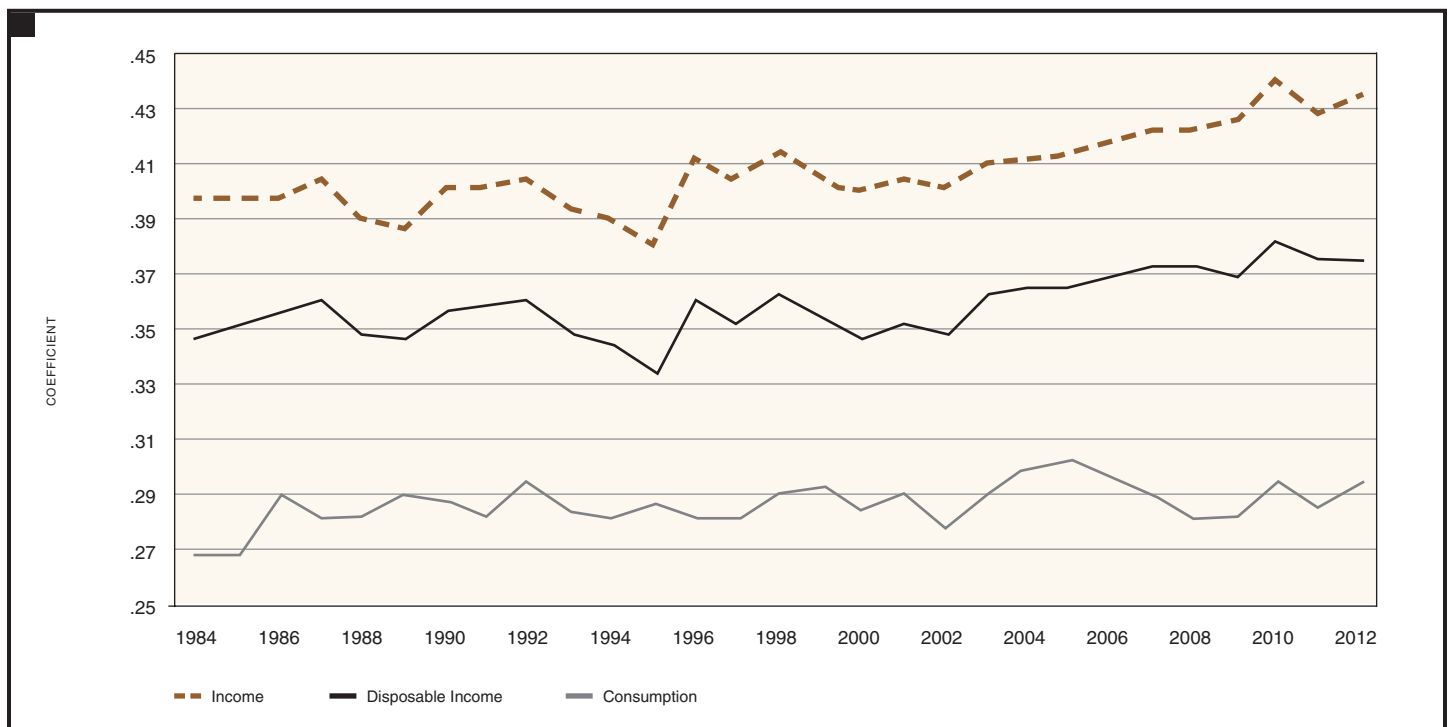
The Gini coefficient, the most commonly used income distribution statistic, is of course important to consider as well. It is reassuring that this measure also indicates that the inequality of pre-tax income rose in the Great Recession. Using CPS “Money Income,” the Gini rose from .463 to .468 between 2007 and 2009, and then continued to rise in 2012, reaching .477.<sup>2</sup>

Figure 3 presents additional time series of Gini coefficients based on data from the Consumer Expenditure Survey (CEX). This survey is useful because it allows us to compare income and consumption measures of inequality. As Figure 3 shows, the Gini coefficient for CEX income rises from .423 to .427 between 2007 and 2009, and climbs to .435 by 2012.<sup>3</sup>

The story to this point has thus been a straightforward one of mainly rising inequality during the recession and recovery. If we instead focus on disposable income, which includes transfer income and subtracts federal and state taxes paid, we find that inequality did *not* rise in the Great Recession.<sup>4</sup> The Gini coefficient for disposable income fell slightly from .372 to .370 between 2007 and 2009. It then rose after 2009, but the increase was only half as large as the increase in pre-tax income. The same caveat holds for consumption inequality: The Gini coefficient for consumption, again drawn from the CEX, fell from .291 to .283 between 2007 and 2009 (see Figure 3).

The various series on inequality thus diverge somewhat in the story they tell about the time period near the Great Recession. They do not diverge to the same extent for other time periods. As Fisher, Johnson, and Smeeding note,<sup>5</sup> the consumption and income inequality measures track very closely between 1985 and 2006, at which point they diverge. It is only

FIGURE 3. Gini Coefficients for Income and Consumption (Fisher, Johnson, and Smeeding, 2013a)



Source: Fisher, Johnson, and Smeeding (2013) based on analysis of CEX data, updated

immediately prior to and during the Great Recession that the income and consumption measures give a different impression of the trajectory of inequality, owing in great measure to a decline in spending at the top of the distribution. In the recovery after the Great Recession, the cross-series consensus has returned, with both income and consumption measures showing rising inequality.

**Top Shares of Income**

We now turn to measures of inequality using the share of income captured by the very top of the distribution. The key conclusion from these measures: The trend during and after the Great Recession is similar to that which we have just seen for consumption inequality.

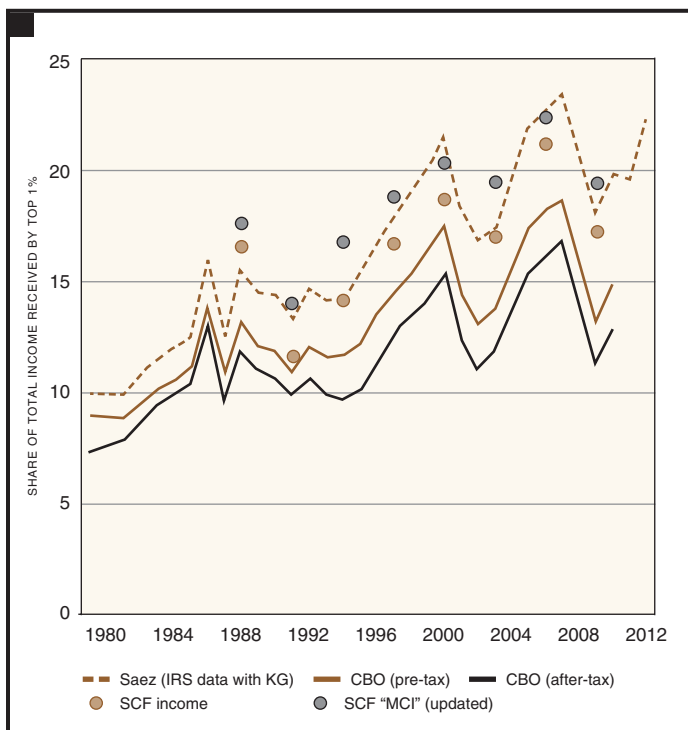
Figure 4 shows trends in the share of income received by the top one percent of income using three different data sources with different income definitions. The top line in Figure 4, drawn from the research of Emmanuel Saez,<sup>6</sup> relies on Internal Revenue Service (IRS) tax statistics. It shows that, after rising over most of the preceding three decades, the taxable income share (including capital gains) of the richest one-percent declined from 23.5 percent in 2007 to 18.1 percent in 2009. This drop reflects the massive drop in stock values, earnings, and profits; falling business and asset income,

including capital gains, accounts for 80 percent of the decline in income for the top one percent between 2007 and 2009.<sup>7</sup> As the economy and the stock market recovered, top income shares have rebounded, rising to 22.5 percent in 2012. Taxable incomes of the top one percent grew 31 percent from 2009 to 2012, while the income of the rest of the distribution grew only by 0.4 percent. It follows that the top one percent captured 95 percent of all income growth in the first three years of the recovery, as profits and equities rebounded strongly, but not wages.<sup>8</sup>

Using data from the triennial Survey of Consumer Finances (SCF), with a sampling strategy designed specifically to reach high net-worth households, Thompson and Smeeding<sup>9</sup> also find that the income share of the top one-percent rose in the 1990s and fell sharply in the Great Recession. The top one percent share of SCF income fell from 21.3 percent in 2006 to 17.2 percent in 2009 (see the brown dots in Figure 4).

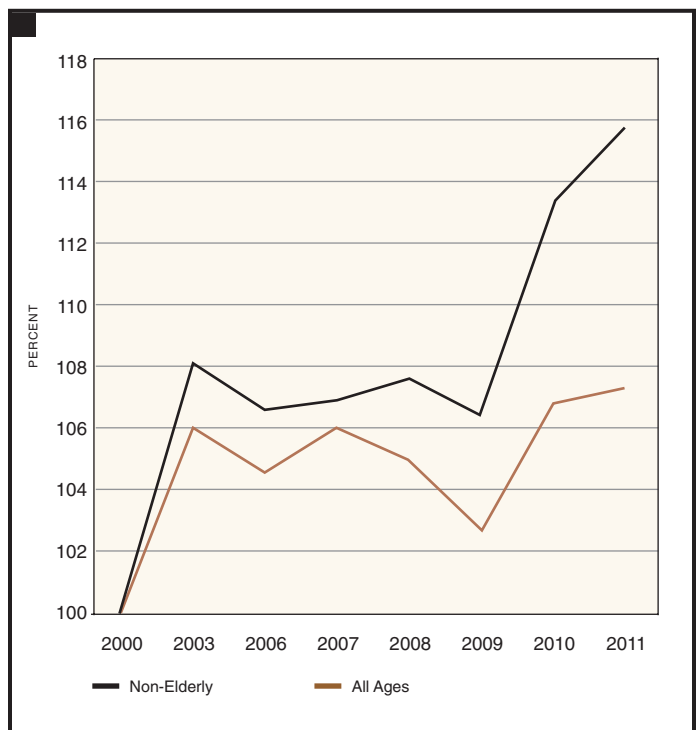
Like the tax data analyzed by Emmanuel Saez, SCF income also includes capital gains income. Neither income measure, however, includes any of the unrealized gains resulting from the ownership of assets. These gains might be relevant for the distribution of income, as most gains are not realized every year, and the ownership of assets is even more unequally

FIGURE 4. Top 1 Percent Share (1979-2012) Using Different Income Concepts (Thompson and Smeeding, 2013)



Source: Emmanuel Saez (2013), Congressional Budget Office (2013), Smeeding and Thompson (2011) updated.

FIGURE 5. P90/P10 Ratio for All Ages and Non-elderly (indexed 2000=100) Using Disposable Household Income ("equivalized" for household size) (Thompson and Smeeding, 2013)



Source: Thompson and Smeeding (2013), authors' analysis of CPS.

distributed than income. To take such gains into account, Smeeding and Thompson develop a method that estimates unrealized income flows to the assets recorded in the SCF.<sup>10</sup> This “More Complete Income” (MCI) concept indicates that the top-income shares are larger once flows to wealth are accounted for, but the trend is largely similar to SCF income and taxable income from the IRS. The top one percent share of MCI declined from 22.4 percent in 2006 to 19.4 percent in 2009 (see Figure 4).

The remaining series in Figure 4 pertain to the “comprehensive income” measure developed by the Congressional Budget Office (CBO). This measure does not include unrealized capital income, but it does include estimated values for employer-provided health insurance benefits as well as the in-kind health insurance benefits received through the Medicare and Medicaid programs.<sup>11</sup> The top one percent share of the CBO (pre-tax) income fell from 18.7 percent in 2007 to 13.3 percent in 2009, before rebounding to 14.9 in 2010. Overall, the CBO measure has followed the same longer-term (and cyclical) trends as the IRS and SCF-based measures, but has not risen as much over time because the increasing costs of health care are incorporated into their “comprehensive income” measure.

### Impact of Policies on Inequality

An important effect of tax and transfer policies is that they equalize the distribution of income. The effect of taxes can be seen directly in Figure 4, where the top one percent share of CBO comprehensive income is between one and two percentage points lower each year once federal taxes paid are subtracted.<sup>12</sup> The bottom of the income distribution *benefits* from tax and transfer policy. In an analysis of the March CPS, Larrimore, Burkhauser, and Armour find that taxes and transfers offset more than half of the market losses experienced by the lowest-income quintile in the Great Recession.<sup>13</sup>

These tax and transfer policies also influenced inequality trends in recent years. As seen above in Figure 3, the Gini coefficient for income (using the Consumer Expenditure Survey data) rose nearly three percent between 2007 and 2012, while the Gini for disposable income rose less than one percent.<sup>14</sup>

Tax and transfer policies were more effective in restraining the growth in inequality for some groups than for others. As Thompson and Smeeding show, the transfer income of the

elderly plays an important part in the decline in the overall disposable income measures; among non-elderly households inequality of disposable income did not fall.<sup>15</sup> Figure 5 reveals that the income ratio between the ninth and first deciles (i.e., the P90/P10 ratio) was unchanged during the Great Recession for non-elderly households, but declined nearly three percent once elderly households were included.<sup>16</sup> In the recovery period, between 2009 and 2011, the divergence is even more dramatic, as the P90/P10 ratio rose four percent for all households, but nine percent among the non-elderly.

### Looking Forward

This brief has shown that the effects of the Great Recession on income inequality differ across different measures of inequality. Although the Great Recession brought about an increase in inequality for standard household income measures, it led to a flattening in consumption inequality as well as a decline in the income share going to top-income households during the Great Recession period. The decline in consumption inequality is partly attributable to declining consumption at the top of the distribution, as high-income households worked to rebuild assets that were lost in the financial crisis, and to tax and transfer policy that especially benefited the poor.<sup>17</sup>

If there is cross-series disagreement about the effects of the Great Recession, there is no disagreement about what is happening in the recovery period. Since mid-2009, all measures show that inequality is rising. For example, the share of income of the top one percent had rebounded by 2012, indeed it nearly returned to the high levels from before the Great Recession. The latest, but still early, evidence on the recovery from the Great Recession also points to a very slow rebound of median incomes (see Figure 1).

Why, it might be asked, is there a divergence in the time series during the Great Recession? Part of the answer is that, for measures that encompass the effects of tax and transfer policy, the especially strong equalizing effect of those policies during the Great Recession worked to offset the ongoing and underlying press toward growing inequality. Also, the business and asset income so important to high-income households declined sharply in 2008 and 2009. As the ambitious set of tax and transfer policies was relaxed in the recovery, and business and asset incomes recovered with capital markets, the longer-term trend toward higher levels of inequality has returned. ■

## NOTES

1. See DeNavas-Walt, Proctor, and Smith, 2013, Table A-2.
2. See DeNavas-Walt, Proctor, and Smith, 2013, page 40.
3. This figure updates Fisher, Johnson, and Smeeding, 2013.
4. Disposable income removes federal and state income taxes and FICA taxes, and adds the value of food stamps and refundable federal tax credits in addition to the other transfer income collected in the survey. State and local sales taxes, however, are not removed. Consumption is spending on all goods and services for current consumption measured in the Consumer Expenditure Survey, excluding life insurance, pension, and cash contributions. For auto and housing purchases, the service flow or rental equivalence are used. See Fisher, Johnson, and Smeeding, 2013, for details.
5. See Fisher, Johnson, and Smeeding, 2013a; 2013b.
6. See Saez, 2013.
7. Authors' calculations based on Saez, 2013.
8. For details, see Saez, 2013, Figure 2.
9. See Thompson and Smeeding, 2013.
10. We first subtracted reported property income from the SCF, then systematically added back the returns on financial wealth, retirement assets, housing, other investments (including real estate), and business income for owners and proprietors. See Smeeding and Thompson, 2011, for more details.
11. The CBO income measure includes all types of cash and noncash income, employee benefits, realized capital gains, and the burden of all taxes, including tax rebates. See CBO, 2013, for more details.

12. The CBO removes all federal taxes, including the share of corporate taxes attributed to owners of capital, but does not remove any state or local taxes.

13. For details, see Larrimore, Burkhauser, and Armour, 2013. It should be noted that they do not include state and local sales taxes in their measures. This absence is common to all of the other after-tax measures included in this brief, but it does have implications for the after-tax distribution of income, as the effective sales tax burden is greater on lower-income households. Furthermore, in the Great Recession, state governments were most likely to turn to sales and excise tax increases to close budget shortfalls. See Johnson, Collins, and Singham, 2010.

14. See Fisher, Johnson, and Smeeding, 2013a; 2013b.

15. See Thompson and Smeeding, 2013. They also adjust for household size, dividing income by the square root of the number of household members.

16. These ratios are for the top ends of the ninth and first deciles, the ninetieth percentile (P90), and the tenth percentile (P10).

17. Fisher, Johnson, and Smeeding, 2013b.

## ADDITIONAL RESOURCES

Congressional Budget Office. 2013. Trends in the Distribution of Household Income Between 1979 and 2010. Washington DC: U.S. Government Printing Office.

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