Income Inequality

The Stanford Center on Poverty and Inequality

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KEY FINDINGS

- All states have experienced an increase in income inequality since 1980.
- There is also increasing cross-state dispersion in the amount of income inequality, with states like California and New York experiencing a 19-percentage-point growth in the share of income held by the top 10%, while states like Delaware and West Virginia experienced only a 9-percentage-point growth.
- Inter-state differences in income inequality are also substantial under a standard-of-living measure that includes government taxes and transfers. There is a 13-percentage-point difference between the lowest-inequality jurisdiction (West Virginia) and the highest-inequality jurisdiction (Washington, D.C.).

In this report, we examine the level and trend in interstate inequality in the United States just after the end of the Great Recession.

Why focus on inequality across states? It is largely because states are important arenas in which inequality-relevant policy is developed or implemented. The President and Congress have long been at a policy impasse, a state of affairs that will likely worsen given differential party control of the White House and Congress. If major new federal policy thus seems unlikely, states remain, by contrast, an important source of policy change and policy action. Even in one clear case where the federal government has taken the lead, the Affordable Care Act (ACA), it is states and localities that have implemented the policies and tailored them to their own liking. States have also shown great capacity to innovate with existing policy, such as state-level adjustments for SNAP eligibility and take-up, state-level Earned Income Tax Credits (EITC), and state-mandated increases in the minimum wage.[1] It is states that implement education policies, states that reform preschool systems, states that implement policies to increase high school and university graduation rates, and states that set up better community colleges and coordinated school-to-work programs in career and technical education.[2]

This is all to suggest, then, that we would do well to monitor state-level differences and trends in inequality. Although we will not attempt here to tease out the net effects of state policy, we can at least monitor the total effects of all the forces, including policy, that affect inequality at the state level. It is perhaps surprising that there are relatively few state-level analyses of inequality. Although scholars routinely analyze state differences in poverty, social mobility, health insurance coverage, and taxes,[3] there is less research on state differences in inequality, even though the necessary data are available.

We proceed with two different types of income measures. The first measure allows us to measure the standard of living by adjusting for tax credits, near-cash benefits, work-related expenses, out-of-pocket medical expenses, and housing expenses. The objective in using this measure, which is based on data from the Current Population Survey (CPS), is to better represent discretionary capacities for reaching different standards of living. This measure adjusts, for example, for (a) the benefits (e.g., tax credits) that allow people to maintain a standard of living in excess of their earnings, (b) the effects of area-specific housing costs on the standard of living, and (c) differential consumption needs that vary with family size and composition. When a pure income measure is used instead, it ignores such effects and does not as directly index the standard of living.

The second measure presented here, which is more widely used in other research, examines top income shares with tax data from the Internal Revenue Service (IRS). This is a very standard approach to measuring taxable income and does not need any special explanation here.

We begin by showing basic trends across the 50 states.[4] This is followed by a focus on the five largest states: California (CA), Texas (TX), Florida (FL), New York (NY), and Illinois (IL). In both sets of analyses, we examine inequality over the Great Recession and beyond, with the objective of determining how the recession and recovery have played out differently in different states.

The results indicate that the top end of the taxpaying distribution, as reflected in the tax return data, has bounced back furthest and strongest from the recession, thus continuing the 30-year rise in American inequality. By contrast, when we use our standard-of-living measure, we find much more variance in inequality trends across the states. This variance may reflect not just differences across states in antipoverty policies but also differences across states in how hard the recession hit and how quickly the recovery developed.

Measuring Inequality

As noted above, we use income data from two different sources, the Current Population Survey (CPS) and the taxable incomes data from the IRS. We describe these in more detail now.

A standard-of-living measure. The standard-of-living measure is based on the protocol used to define the Supplemental Poverty Measure (SPM). Although the definition of SPM income and poverty thresholds was developed to measure poverty, it may also be used to explore the distribution of income-to-SPM thresholds to reflect concerns with taxes and benefits, as do other broader distributional measures at the national level.[5] The interest in exploiting these measures for the purpose of studying income inequality, as well as poverty, arises from a concern with living standards above the poverty line, but below the median.[6] That is, the SPM protocol allows us to take into account resources and expenses that affect the discretionary standard of living of families above the poverty line, such as refundable tax credits, direct income and payroll taxes at both the state and federal level, near-cash benefits, out-of-pocket medical expenses, the cost of working, household size, and cost of living differences across the United States. These affect real levels and trends in economic self-sufficiency and well-being for moderate-income families.[7]

Although the Census Bureau does not provide estimates of SPM resources prior to 2009, one can impute such resources in ways consistent with earlier research. We follow the approach outlined in the Appendix. The measure (a) is based on poverty units (which are units that share incomes, food, and rental expenses); (b) applies different needs adjustment standards depending on whether the home is rented, owned outright, or has a mortgage; and (c) adjusts for cost-of-living differences across the United States. The official Census cash income measure does none of these. It is clear, then, that our standard-of-living measure is very different from a pre-tax cash income measure, with especially important differences in the family unit, the thresholds, and the measure of resources and expenses. We will calculate inequality using a measure that is adjusted for poverty-unit size ("equivalized") and that divides the poverty unit's disposable income by the SPM poverty line (for each state and year).

The top incomes data. Standard household income surveys, such as the CPS, are not able to provide accurate estimates of the incomes of households in the upper tail of the income distribution owing to both sampling errors (i.e., relatively few rich households in the population) and non-sampling errors (non-response and underreporting). The only household survey designed to effectively sample high-income and wealthy households, the Survey of Consumer Finances, is representative at the national level, but not the state level.

FIGURE 1. Standard-of-Living Inequality by State, Pre-Recession and Post-Recession

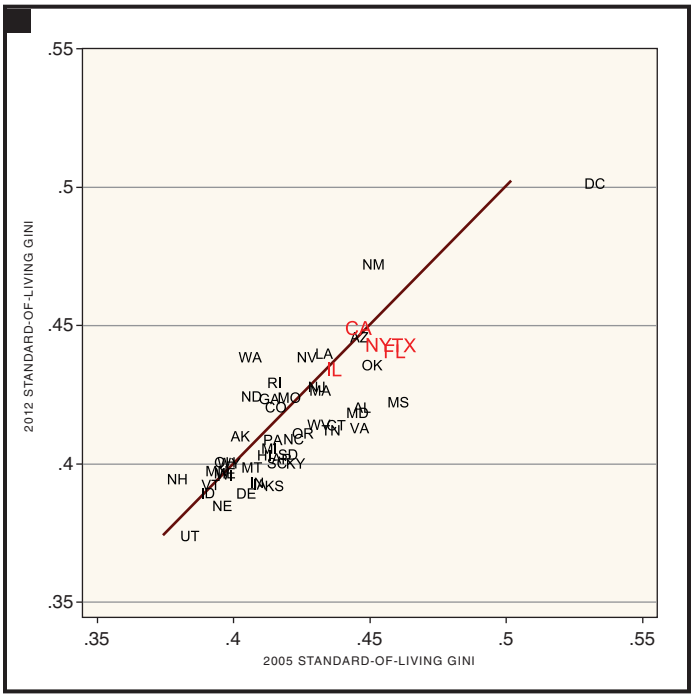
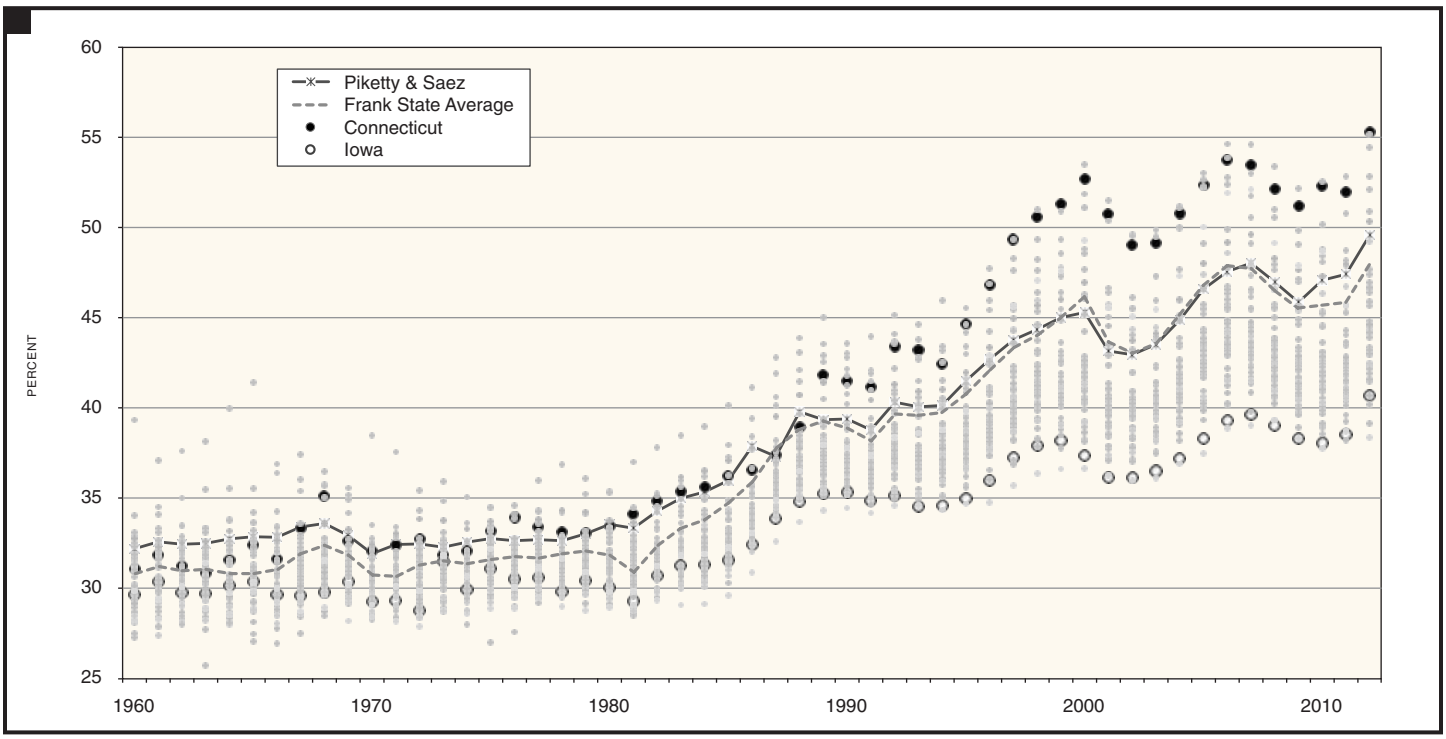
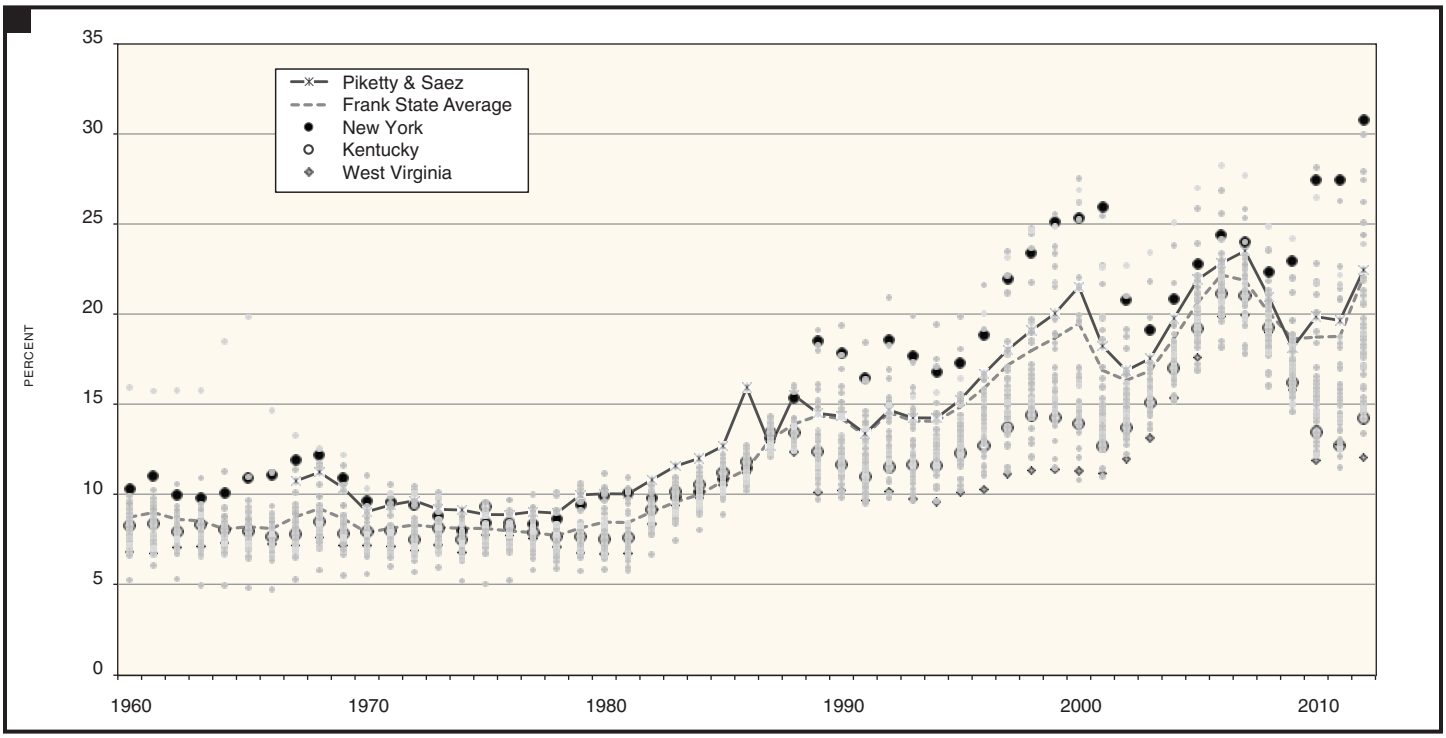


FIGURE 2. Top 10 Percent IRS Income Shares



Note: Each "dot" represents the top share for each state each year, with larger dots representing the highlighted states (CT & IA). Frank's (2014) state-level income shares are calculated from state-level income and tax distribution tables produced by the IRS, while Piketty & Saez calculate the national totals with the underlying IRS administrative data files.

FIGURE 3. Top 1 Percent IRS Income Shares



Note: Each "dot" represents the top share for each state each year, with larger dots representing the highlighted states (NY, KY & DE). Frank's (2014) state-level income shares are calculated from state-level income and tax distribution tables produced by the IRS, while Piketty & Saez calculate the national totals with the underlying IRS administrative data files.

The implication is that, to analyze high incomes at the state level, the key resource is income data collected by the IRS. In their research, Piketty and Saez and their various co-authors[8] use pre-tax and transfer income data provided by the IRS and calculate top income shares at the national level. These data are based on tax units and are limited to before-tax incomes, so they are not strictly comparable to our standard-of-living data, but they do offer a more accurate picture of how the top end of the distribution is trending.[9] While Piketty and Saez use data that include or exclude capital gains or losses, we employ the top share series without capital gains or losses.

Similar, though less detailed, IRS data are made available at the state level as well and have been used to calculate state-level top shares by Mark Frank.[10] Jeffrey Thompson and Elias Leight use the data to explore the impacts of rising top shares on economic and household-level growth in income.[11]

Basic Patterns

We begin by examining overall inequality in standard of living for two time points: a pre-recession point based on pooled 2004–2006 data, and a post-recession time point based on pooled 2011–2013 data (Figure 1).[12] We identify outliers and provide blue markings for the five largest states: California (CA), Texas (TX), Florida (FL), New York (NY), and Illinois (IL), all of which we will analyze separately below. Before examining the change in inequality, it is striking to note the large variance in inequality across states. Including Washington, D.C., there is a 13-percentage-point difference between the lowest-inequality state (Utah = 0.374) and the highest-inequality state (Washington, D.C. = 0.502). Excluding Washington, D.C., there is still a 10-percentage-point difference between the top and bottom.

Inequality has increased in 26 states by the standard-of-living measure (those to the left of the 45-degree line). States as varied as Rhode Island, Nevada, Minnesota, New Hampshire, and Georgia have clearly experienced rising inequality. While Illinois and California show slightly higher inequality post-recession, Florida, New York, and Texas do not by the standard-of-living measure. We also see evidence of falling overall inequality in some high-inequality states (Mississippi, Virginia) and several smaller low-inequality states. Because the sample size at the state level is relatively small, and because we have relied on imputations for the standard of living measure prior to 2009, all due caution is of course in order. It is nonetheless striking that our measure suggests a central tendency of roughly stable state inequality over the period studied here.

The pattern of inequality in the top income series are longer run, and while there are clear state patterns of difference which we examine more fully below, the states nonetheless tend to move in the same inequality-increasing direction. In Figure 2, we see that the top 10 percent have consistently gained shares, certainly over the longer run. The pooled national-level measure shows that inequality in 2012 exceeds that of the 2004–2006 period, whereas the cross-state average shows that the 2012 level is roughly equal to that of the 2004–2006 period. In both cases, the Great Recession registers as a small "speed bump" in the trend, certainly not an enduring reversal. This observation is consistent with both international evidence[13] and recent evidence on full-time worker earnings inequality by education group.[14] In Figure 3, we see a similar pattern for the top 1 percent data, but with a slower recovery from the recession, owing in particular to the high fraction of incomes from financial sources (e.g., stocks, bonds, profits, and more generally capital income at the top reaches of the IRS data).[15] The results for New York and other states suggest a widening variance in top incomes, as capital income becomes a larger share of total income in the United States and across rich countries more generally (even after excluding capital gains).

We conclude this section with a chart showing the correlation between standard-of-living inequality and top 10 percent inequality in 2012 (Figure 4). While there is clear variance horizontally or vertically, there is a positive slope (R^2 = 0.30), implying that states with higher top shares also had higher

FIGURE 4. Standard-of-Living Inequality versus Top 10 Percent Shares: 2012

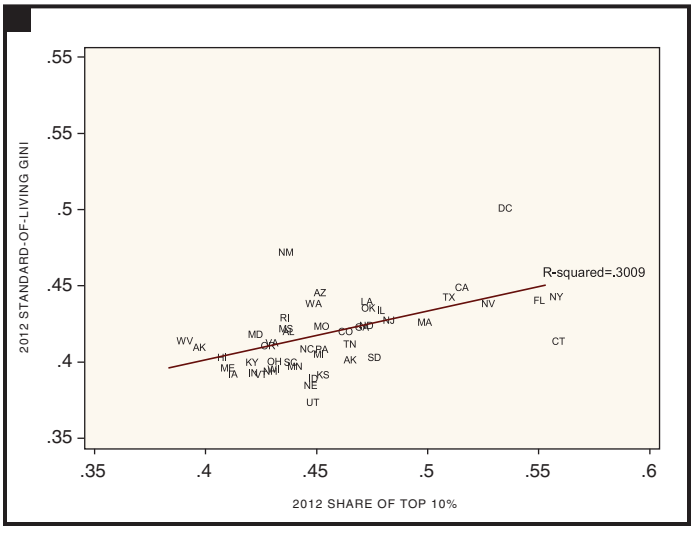
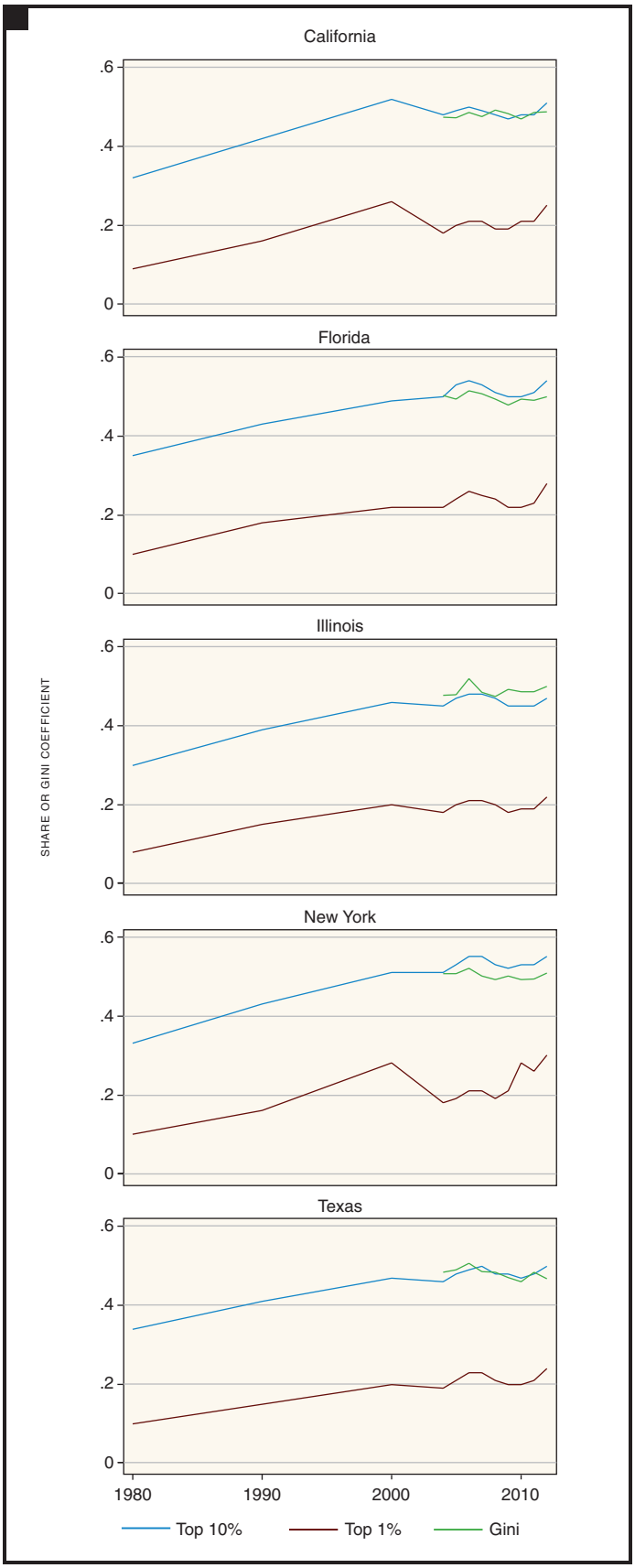


FIGURE 5. Standard-of-Living, Top 10 Percent, and Top 1 Percent Shares in the Five Largest U.S. States: 1980–2012



standard-of-living inequality (excluding Wyoming; see Note 4). There is some variability in how much taxes and transfers in the standard-of-living measure affect state-level inequality. In New Mexico and Washington, D.C., the standard-of-living measure is especially high relative to the top 10 percent share. But it is not clear that state policies cause these differences. While states may administer programs differently, the biggest transfers and taxes occur at the federal level.

The Five Big States

The sample size of the Current Population Survey (i.e., 65,000 households interviewed each year) precludes in-depth annual analysis of most states. But the largest five states contain more than a third of the U.S. population (113.7 million of 308.7 million residents) and are sufficiently represented in each year of the CPS to explore in greater detail here. The largest state, California, has a population of 37.3 million, while the smallest state, Illinois, has a population of 12.8 million.

In Figure 5, we plot the trends in inequality using the standard-of-living measure (2004–2012) and the top 10 percent and top 1 percent IRS samples (1980–2012). The long-term trends are toward greater inequality in all three statistics, although the standard-of-living data suggest a somewhat flatter trend than the top 10 or top 1 percent shares. The top 1 and top 10 percent shares mirror each other, though with greater volatility in the top 1 percent shares than in the top 10 percent shares, suggesting that those who "fall" from the top 1 percent do not fall too much farther down the distribution.

The trends in the top shares are steepest in New York and California until 2000, mirroring the rise and fall of the dot-com bubble in California and the performance of the finance industry in New York. Florida, Texas, and Illinois have flatter and less cyclical rises in all three measures. It appears that top income shares in all five states have either returned to previous high levels or reached new levels that eclipse previous highs in top-end inequality (see also Table 1).

The exact figures for the top shares are found in Table 1 below and suggest that growth in top incomes in the five biggest states has mostly followed the rest of the nation.[16] New York and Florida are the exceptions, with top shares growing faster than average. For both the top 10 and top 1 percent statistics, New York and Florida had income concentration measures no different from the national average in 1980, but by 2012 both states had top-share levels considerably higher than those found in most states.

In summary, these data suggest that the march toward greater inequality in top incomes continues in most states and especially in the five largest ones. Had the IRS data included capital gains (which are also not reported in the CPS data), the changes would have been more volatile and shown greater gains at the top end than are seen here (especially if 2013 and 2014 could have been included in the IRS series). Moreover, income inequality in standard-of-living and top shares are positively correlated in 2012, suggesting that top-end inequality is pulling up overall inequality. The standard-of-living measure shows less upward trend since 2004–2006, but even with this measure inequality is on the rise in half of the states.

What Can Policy Do?

The patterns seen above suggest an ever widening of top-end income inequality in most states and especially in the five largest ones since 1980. No doubt the finance, insurance, and real estate occupations, which now make up almost 8 percent of GDP,[17] drove most of the spectacular rise in top-end inequality in New York. This increase was driven in part by personal-tax advantages for income from capital (at the federal level), which means that federal policies to tax capital gains and dividends at slightly higher rates might accordingly reduce the rise of top income shares.[18]

There is also relevant federal policy at the other end of the income tax system. Here, income tax reformers have pledged to increase the value of the child exemption, but also limit its refundability. The most recent bills raising these exemptions would also cut the current refundable child tax credit (or CTC), which is of immense value to low-income workers with children and adds to the effects of the EITC in reducing inequality and poverty. Unless the refundable CTC is continued in 2017, it will fall back to earlier less generous levels.[19]

The immigration of Latinos, especially Mexicans, has also likely increased inequality at the bottom end in these same states. Legalization of immigration for many U.S. residents would pull many who are now working off the books onto the IRS tax rolls, increasing collections of payroll taxes and also leading to increases in the EITC and reductions in inequality.

Immigration policy is almost wholly a federal government issue. And state-level efforts to address rising top-end inequality through the tax code will face important limitations. So what policy options are available to states? In the near term, raising the minimum wage in combination with expanding the Earned Income Tax Credit (EITC) will produce complementary benefits, both helping more families to climb out of poverty and to achieve economic security. Differences in work supports and family-leave polices across states will also make it easier for low-income mothers of young children to both earn and parent.[20]

TABLE 1: Top 10 Percent and Top 1 Percent Shares in the Five Largest U.S. States: 1980–2012

Top 10 Percent Income Share						
	US (Piketty & Saez)	CA	FL	IL	NY	TX
1980	0.34	0.32	0.35	0.30	0.33	0.34
1990	0.39	0.42	0.43	0.39	0.43	0.41
2000	0.45	0.52	0.49	0.46	0.51	0.47
2004	0.45	0.48	0.50	0.45	0.51	0.46
2005	0.47	0.49	0.53	0.47	0.53	0.48
2006	0.48	0.50	0.54	0.48	0.55	0.49
2007	0.48	0.49	0.53	0.48	0.55	0.50
2008	0.47	0.48	0.51	0.47	0.53	0.48
2009	0.46	0.47	0.50	0.45	0.52	0.48
2010	0.47	0.48	0.50	0.45	0.53	0.47
2011	0.47	0.48	0.51	0.45	0.53	0.48
2012	0.50	0.51	0.54	0.47	0.55	0.50

Top 1 Percent Share						
	US (Piketty & Saez)	CA	FL	IL	NY	TX
1980	0.10	0.09	0.10	0.08	0.10	0.10
1990	0.14	0.16	0.18	0.15	0.16	0.15
2000	0.22	0.26	0.22	0.20	0.28	0.20
2004	0.20	0.18	0.22	0.18	0.18	0.19
2005	0.22	0.20	0.24	0.20	0.19	0.21
2006	0.23	0.21	0.26	0.21	0.21	0.23
2007	0.24	0.21	0.25	0.21	0.21	0.23
2008	0.21	0.19	0.24	0.20	0.19	0.21
2009	0.18	0.19	0.22	0.18	0.21	0.20
2010	0.20	0.21	0.22	0.19	0.28	0.20
2011	0.20	0.21	0.23	0.19	0.26	0.21
2012	0.22	0.25	0.28	0.22	0.30	0.24

In the longer term, states control most of the policy levers for increasing investment in human capital through education and training, from early childhood through college and graduate school.[21] Indeed, because a relatively small fraction of U.S. workers have college and post-secondary degrees, earnings differ substantially across education levels.[22] It is here that states can make straightforward changes to their policy on human-capital investment that can raise middle-class incomes and reduce inequality. ■

NOTES

1. Baron, 2014.

2. For example, see Dougherty, 2014.

3. See ACS, 2014, and DeNavas-Walt et al., 2014, for two such sets of estimates discussed below. The news media, especially the *New York Times*'s "Upshot" section, continue to show interactive state and local graphs on various social phenomena; see, for example, http://www.nytimes.com/2014/06/26/upshot/where-are-the-hardest-places-to-live-in-the-us.html.

4. We do not include Wyoming in our top 1 percent data because it is an extreme outlier in 2012, most likely because of the large share of income going to owners of oil-producing enterprises.

5. For example, CBO, 2014.

6. Short and Smeeding, 2012.

7. See United Way of Michigan's ALICE Report, 2014; Short and Smeeding, 2012.

8. Piketty and Saez, 2003.

9. Morelli et al., 2015.

10. The IRS reports the state-level data after grouping households into income bins. Top shares are calculated from the income bins using statistical techniques to locate the top-share "cut points" within the income bin. The shares are calculated and made available by Mark Frank at http://www.shsu.edu/eco_mwf/inequality.html and are discussed in Frank, 2014. The income concept used by Frank excludes capital gains.

11. See Thompson and Leight, 2012.

12. Because of small sample sizes in the smaller states, we averaged the standard-of-living Gini over three years to improve the accuracy of these states. The largest five states, which we investigate below, are quite accurately reflected by a single year's data.

13. Morelli, 2014.

14. Autor, 2014.

15. Though not shown here, the recovery of financial wealth, especially in terms of stocks in 2013 and 2014, accounts for the recovery from the Great Recession for the top 1 percent.

16. The Appendix tables (Tables A1 and A2) show the top 1 percent share and top 10 percent share for all states.

17. SelectUSA, 2014.

18. See Verschoor, 2013, and Burman, 2012, for balanced discussions of these issues.

19. For more on this debate and its importance for income tax progressivity, see Sawhill, 2014, and Ponnuru, 2014. For more on the effects of the EITC and CTC on child poverty, see Heinrich and Smeeding, 2014.

20. Baron, 2014.

21. Heinrich and Smeeding, 2014.

22. Autor, 2014.

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