Income Inequality and the Safety Net in California

May 2016
Sarah Bohn and Caroline Danielson
With research support from Monica Bandy
SUMMARY

Income inequality has been growing for decades and remains higher than at any point before the Great Recession. This is true both in the United States as a whole and in California, although trends are more pronounced here. In recent years—as the economy has recovered and income polarization has continued—inequality has become a major focus of public discussion and debate, both in California and across the country. In this report, we present the latest data on the distribution of family incomes in California and look at long-term trends, factoring in the role of social safety net programs in mitigating inequality.

We find that

- Pre-tax cash incomes in California have been diverging for decades, and economic cycles have reinforced the longer-term trend. Top incomes are 40 percent higher than they were in 1980, while middle incomes are only 5 percent higher and low incomes are 19 percent lower.
- Post-recession improvements in incomes have somewhat lessened income inequality, but it remains historically high.
- In addition to reducing poverty, social safety net programs shrink income inequality substantially (by 40%).
- Safety net programs are especially helpful to families with young children and single-parent families—but even so, incomes for these families remain relatively low.
- On average, the majority of family resources come from work, even for very low-income families. Strengthening the employment and wages of workers today and in the future holds promise for restricting growth in inequality.

The income distribution is shaped by a wide range of factors—from individual choice to international trade. While policy cannot recalibrate inequality at will, policymakers and the public can take action to influence the factors that drive the polarization of income and/or to mitigate the consequences of that polarization. Our aim is to inform the public discussion about economic inequality and the role of policy in addressing it.
The growth of inequality implies that the rungs of the “economic ladder” are spreading further apart, so that top, middle, and bottom incomes are increasingly polarized.
We begin by updating earlier PPIC research on trends in the income distribution in California (Bohn and Schiff 2011; Reed 1999). We then delve into the role of social safety net programs in mitigating inequality both among all Californians and particularly for certain subgroups, such as children. Throughout, we draw on the California Poverty Measure (CPM) research, which is a joint effort of PPIC and the Stanford Center on Poverty and Inequality (Bohn et al. 2013; Wimer et al. 2015).

In the first section we focus solely on the cash that families have on hand before they pay taxes—from earnings, investment or business, Social Security or retirement accounts, cash assistance (including Supplemental Security Income, General Assistance, or CalWORKs), and other sources (such as unemployment insurance, workers’ compensation, alimony, and child support). This is the definition of income used to generate national statistics on both poverty and inequality. We show how such cash incomes have spread apart over the period from 1980 to 2014 in California. In the sections that follow, we assess the extent to which this picture is modified by, first, income and payroll taxes, and second, the social safety net programs provided by federal, state, and local governments—in other words, not only cash assistance but also tax credits, nutrition assistance, and housing assistance. We use this more comprehensive measure of income to assess the placement of subgroups along the income spectrum, including families with children and those with low levels of education or who lack full-time employment. We conclude with some thoughts on the implications of these findings for state policy.

Poverty and inequality—what do we mean?

Traditionally, poverty and inequality are assessed by combining the incomes of family members who live together and by comparing that family’s income to a standard of need (in the case of poverty) or to other family incomes (in the case of inequality).

We assess the spread of incomes by comparing families at the low, middle, and high end of the distribution. We use percentiles to describe where families stand relative to each other. A family with an income at the 10th percentile has economic resources greater than only 10 percent of all California families. The precisely middle-income family is at the 50th percentile (or median). Top earning families have incomes at the other extreme. For example, the 90th percentile family has income higher than 90 percent of families. Families at or above the 90th percentile are the top 10 percent. The dollar amounts that correspond to these percentiles shift over time as family incomes increase or decrease and as the composition of families in the state changes.

Disparity in income levels is a common way to measure income inequality, and it is useful to have a few summary metrics to track inequality over time. For this, we rely on several ratios. The “90/10” ratio is the income level at the 90th percentile divided by the income at the 10th percentile, giving us a measure of the gap between high and low incomes. Numerous similar ratios are possible and describe differences between other parts of the income distribution. The “80/20” ratio is a less extreme measure of the gap between high and low incomes; the “90/50” ratio measures the gap between high and middle incomes; and the “50/10” ratio describes the divide between middle and low incomes. In this report we do not focus on the extremes of the distribution (e.g., the 99th percentile or even the 99.9th percentile).

Additional detail is provided online in our technical appendices.
Income Distribution Since 1980

Over the past three decades, the distribution of pre-tax cash income in California has been driven by broad, long-term economic forces—although economic booms and busts also figure in. We can track changes in the spread of incomes since 1980 by measuring family incomes at the top, middle, and bottom of the ladder (see sidebar).

Top income levels (at the 90th percentile) were 39.7 percent higher in 2014 than they were in 1980, while low incomes (at the 10th percentile) were 18.6 percent lower. The middle-income level (at the 50th percentile) in California is a mere 5 percent higher than it was in 1980 (Figure 1). California’s economy has experienced a number of boom-and-bust cycles in the past three decades, and incomes across the spectrum have clearly been affected by the gains and losses of these cycles. However, their effects have been uneven. Top incomes have contracted in bust periods, but they have typically rebounded fairly quickly and have gained additional ground. Over the long term, top incomes have increased well beyond 1980 levels. Middle incomes gained some ground in the late 1990s and early 2000s, rising roughly 10 percent above 1980 levels, but these gains disappeared during the last recession. Low incomes declined the most during each of
the major recessions since 1980 (early 1980s, early 1990s, and late 2000s) and did not rise above 1980 levels during recovery periods. In 2006, after the growth period of the late 1990s and early 2000s, the 10th and 20th percentiles of income had rebounded to 1980 levels, but the Great Recession took hold soon after. These trends at the bottom, middle, and top of the income ladder add up to a long-term divergence of family incomes in California.

According to the most recent data (from 2014), the median family income before taxes and adjusted to represent a family of four in California is about $69,000. Incomes at the bottom are $15,000 or less, while the top incomes are $198,000 or more (Table 1).4

All levels of family income declined from their pre-recession peak to the low point, two years after the official end of the Great Recession (2007–2011). Top incomes fell 6 to 7 percent; median income shrank by 13 percent; and low incomes dropped 18 percent to 24 percent. Incomes have risen since the low point of the Great Recession but remain below where they were before the recession started. However, middle and top incomes have recovered about a third of the ground lost during the recession, while bottom incomes have gained back only about 10 percent of recession losses.

These recent fluctuations echo long-term trends in the distribution of income across the state. In other words, economic booms and busts have reinforced income polarization that is driven by factors other than the business cycle.

How do these income trends affect inequality? Although income levels are increasingly polarized across the entire spectrum, disparities between the highest and lowest incomes account for most of the increase in inequality.5 As of 2014, the gap between high and low incomes (the 90/10 ratio) is twice as large as it was in 1980. The 90th percentile family had 12.9 times the income of the

### Table 1. Incomes have recovered modestly in recent years, remaining below their pre-recession peak

<table>
<thead>
<tr>
<th></th>
<th>10th percentile</th>
<th>20th percentile</th>
<th>50th percentile</th>
<th>80th percentile</th>
<th>90th percentile</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007 (pre-recession peak)</td>
<td>$20,000</td>
<td>$33,000</td>
<td>$76,000</td>
<td>$152,000</td>
<td>$208,000</td>
</tr>
<tr>
<td>2011 (recession low point)</td>
<td>$15,000</td>
<td>$27,000</td>
<td>$66,000</td>
<td>$141,000</td>
<td>$195,000</td>
</tr>
<tr>
<td>Change during recession (2007–2011)</td>
<td>-23.8%</td>
<td>-17.6%</td>
<td>-13.1%</td>
<td>-7.2%</td>
<td>-6.2%</td>
</tr>
<tr>
<td>2014 (most recent)</td>
<td>$15,000</td>
<td>$27,000</td>
<td>$69,000</td>
<td>$145,000</td>
<td>$198,000</td>
</tr>
<tr>
<td>Change during recovery (2011–2014)</td>
<td>2.2%</td>
<td>2.6%</td>
<td>4.2%</td>
<td>2.6%</td>
<td>1.7%</td>
</tr>
<tr>
<td>Net change since 2007</td>
<td>-22.1%</td>
<td>-15.5%</td>
<td>-9.4%</td>
<td>-4.8%</td>
<td>-4.6%</td>
</tr>
</tbody>
</table>

**SOURCE:** Authors’ calculations from ACS for California.

**NOTES:** Dollar amounts are rounded to the nearest $1,000. Table shows pre-tax cash income. This includes income received from earnings, business, investment, retirement, unemployment insurance, cash welfare programs (SSI, CalWORKs, General Assistance) and other sources and does not account for taxes paid or tax credits received. See the technical appendices for additional detail. These amounts are calculated at the family level, adjusted for inflation to 2014 dollars, and normalized for a family of four. Technical appendix Table C1 provides estimates for the rest of the U.S.
10th percentile family in the state in 2014; this ratio has increased 22.5 percent since before the recession (Table 2). The growing gap comes both from top incomes pulling away from middle incomes (the 90/50 ratio) and from low incomes falling relative to middle incomes (the 50/10 ratio), although the increase in recent years in the 50/10 ratio has been larger. The gap between families at somewhat less extreme points on the distribution (the 80th percentile and 20th percentile) is also up by 12.6% since 2007. Nonetheless, the 80/20 ratio is far lower: families at the 80th percentile have 5.3 times the income of families at the 20th percentile.

Even during boom periods, the gap between high and low incomes has continued to climb in California. In the past two years, low incomes have been growing at a faster pace than high incomes, which has reduced income inequality slightly. However, there is no indication that income inequality will depart from its long-term trend of increasing slowly and steadily. The large gap between high and low incomes is not unique to California, but it is somewhat larger here than in the rest of the country.

Across the state, incomes vary substantially and so does income inequality (Table 3). At the extreme, Bay Area incomes at the bottom, middle, and top are roughly twice that of incomes in the Central Valley and Sierra region. In general, coastal areas tend toward higher incomes at all levels, while inland and northern counties typically have lower incomes. The Sacramento region and Los Angeles County most closely reflect the overall statewide trend in the distribution of income.

The gap between high- and low-income families across regions of the state does not move in lockstep with differences in income levels. However, inequality tends to be higher in regions where incomes are lower across the board—for example, the ratio of high to low incomes is largest in the Central Valley and Sierra and the northern regions of California (14.1 and 13.9, respectively). Both top and bottom incomes are higher in most of coastal California—and the gap between the two in that region is among the lowest in the state. Top income families earn between 11.0 to 11.6 times more than low-income families in Orange County, San Diego County, and the Bay Area.

Across the state, income inequality is at least 9.9 percent higher today than it was in 2007, just before the recession. But this increasing polarization has not been evenly distributed. The gap
Table 2. Inequality is higher than before the Great Recession

<table>
<thead>
<tr>
<th></th>
<th>90/10 ratio</th>
<th>80/20 ratio</th>
<th>90/50 ratio</th>
<th>50/10 ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007 (pre-recession peak)</td>
<td>10.6</td>
<td>4.7</td>
<td>2.7</td>
<td>3.8</td>
</tr>
<tr>
<td>2011 (post-recession low point)</td>
<td>13.0</td>
<td>5.3</td>
<td>3.0</td>
<td>4.4</td>
</tr>
<tr>
<td>Change during recession (2007–2011)</td>
<td>23.1%</td>
<td>12.6%</td>
<td>7.9%</td>
<td>14.1%</td>
</tr>
<tr>
<td>2014 (most recent)</td>
<td>12.9</td>
<td>5.3</td>
<td>2.9</td>
<td>4.5</td>
</tr>
<tr>
<td>Change during recovery (2011–2014)</td>
<td>-0.5%</td>
<td>0.0%</td>
<td>-2.4%</td>
<td>1.9%</td>
</tr>
<tr>
<td>Net change since 2007</td>
<td>22.5%</td>
<td>12.6%</td>
<td>5.3%</td>
<td>16.3%</td>
</tr>
</tbody>
</table>

SOURCE: Authors’ calculations from American Community Survey for California.
NOTES: Table entries calculated using pre-tax cash income. This includes income received from earnings, business, investment, retirement, unemployment insurance, cash welfare programs (SSI, TANF, GA) and other sources and does not account for taxes paid or tax credits received. See the technical appendices for more detail. These amounts are calculated at the family level, adjusted for inflation to 2014 dollars, and normalized for a family of four. Due to top coding of income amounts in the survey data, the highest percentile of income we can measure is the 95th. Technical appendix Figure C2 and Table C1 provide estimates for the rest of the US.

Table 3. Income—and income inequality—varies dramatically across the state

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Northern</td>
<td>$12,000</td>
<td>$58,000</td>
<td>$163,000</td>
<td>13.9</td>
<td>32.2%</td>
</tr>
<tr>
<td>Sacramento region</td>
<td>$15,000</td>
<td>$71,000</td>
<td>$194,000</td>
<td>12.6</td>
<td>36.8%</td>
</tr>
<tr>
<td>Bay Area</td>
<td>$22,000</td>
<td>$98,000</td>
<td>$252,000</td>
<td>11.6</td>
<td>9.9%</td>
</tr>
<tr>
<td>Central Valley and Sierra</td>
<td>$10,000</td>
<td>$49,000</td>
<td>$147,000</td>
<td>14.1</td>
<td>25.9%</td>
</tr>
<tr>
<td>Central Coast</td>
<td>$16,000</td>
<td>$69,000</td>
<td>$198,000</td>
<td>12.1</td>
<td>14.5%</td>
</tr>
<tr>
<td>Inland Empire</td>
<td>$13,000</td>
<td>$58,000</td>
<td>$159,000</td>
<td>12.2</td>
<td>41.3%</td>
</tr>
<tr>
<td>Los Angeles County</td>
<td>$15,000</td>
<td>$60,000</td>
<td>$184,000</td>
<td>12.5</td>
<td>13.4%</td>
</tr>
<tr>
<td>Orange County</td>
<td>$20,000</td>
<td>$82,000</td>
<td>$223,000</td>
<td>11.0</td>
<td>16.7%</td>
</tr>
<tr>
<td>San Diego County</td>
<td>$18,000</td>
<td>$76,000</td>
<td>$203,000</td>
<td>11.5</td>
<td>15.4%</td>
</tr>
</tbody>
</table>

SOURCE: Authors’ calculations from American Community Survey for California.
NOTES: Table entries calculated using pre-tax cash income. This includes income received from earnings, business, investment, retirement, unemployment insurance, cash welfare programs (SSI, TANF, GA) and other sources and does not account for taxes paid or tax credits received. These amounts are calculated at the family level, adjusted for inflation to 2014 dollars rounded to nearest $1,000 and normalized for a family of four. Regions are listed north to south: Northern: Butte, Colusa, Del Norte, Glenn, Humboldt, Lake, Lassen, Mendocino, Modoc, Nevada, Plumas, Shasta, Sierra, Siskiyou, Tehama, and Trinity; Sacramento area: El Dorado, Placer, Sacramento, Sutter, Yolo, and Yuba; Bay Area: Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Santa Cruz, Solano, and Sonoma; Central Valley and Sierra: Alpine, Amador, Calaveras, Fresno, Inyo, Kern, Kings, Madera, Mariposa, Merced, Mono, San Joaquin, Stanislaus, Tulare, and Tuolumne; Central Coast: Monterey, San Benito, San Luis Obispo, Santa Barbara, and Ventura; Inland Empire: Imperial, Riverside, and San Bernardino; Los Angeles, Orange and San Diego Counties are shown separately. Technical appendix Table C3 provides county-level inequality metrics.
between the highest and lowest incomes grew 10 to 40 percent between 2007 and 2014. Inland parts of the state saw the largest increases in inequality between 2007 and 2014, while families in coastal regions have seen reductions in income inequality since 2011. This wide variation reflects the different experiences of the economic recovery across the income distribution and across California’s regions.

What Drives Inequality—and Spurs Public Concern about It?

There is a large body of research devoted to understanding the causes of rising income inequality. The bulk of the evidence points to broad forces such as technological change and international trade that have polarized economic opportunities by accelerating wages at the top, dragging down wages at the bottom, and eliminating many middle-income jobs. A classic example is the elimination of middle-income manufacturing line jobs, replaced by computer-based technology operated by relatively fewer but more-highly-skilled (and better compensated) workers. Jobs in manufacturing, historically a major provider of middle-income work, have been in a decline that is projected to continue for some time to come (Bohn 2015).

The recent recession and recovery provide a strong picture of the polarization of job opportunities in the state. California lost more than 1.3 million jobs during and after the Great Recession and did not regain that lost ground until 2014. Job recovery in the state has been led by strong growth in service sectors, but growth is highly polarized. At the low end, accommodation and food service jobs have grown 23 percent since the low point of the downturn, but these jobs offer only around $16 per hour, on average. Job growth in the highly skilled professional service sector (including engineering, math, and computer science jobs) has also been strong; wages in this sector are around $36 per hour. This disparity reflects economic demand for very disparate types of goods and services—those produced by workers at either end of the skill spectrum.

Because income disparity is driven to some extent by individual choices in jobs, schooling, and the like, it is not easy to determine what level of income inequality is preferable or acceptable. Many would argue that income inequality spurs individual efforts to move up the income ladder. But higher levels of income inequality have been found to have negative consequences for both economic mobility (Sawhill 2012; Chetty and Hendren 2015) and overall economic growth (OECD 2008; Boushey and Price 2014). The point at which inequality stops acting as an incentive and becomes detrimental is much less clear. Certainly, public opinion and political debate point to the conclusion that the current level of income inequality is problematic.

What may be most problematic is not the level or even the growth of inequality in itself—rather, it is the growth in inequality during a long period of rising economic productivity. Since 1997, the per capita gross domestic product (GDP) has increased by more than 30 percent in California. Over this same period, top incomes have grown at more than double the rate of low and middle incomes. This seems contrary to the idea that “a rising tide lifts all boats.”

Refining Our Thinking about Family Resources

Pre-tax cash income—the basis for official statistics on income in the United States—provides one window into the issue of inequality. To fully understand economic inequality in California, we need to look at more than just pre-tax cash resources. Family income at all levels is affected by income and payroll taxes. For high-income families, taxes paid substantially reduce disposable
incomes; low-income families can receive credits beyond what they pay in taxes through the federal Earned Income Tax Credit (EITC) or the Child Tax Credit (CTC). Some families also obtain government benefits that supplement their earnings by providing food assistance (CalFresh, WIC, or school breakfast and school lunch) or federally supported rental housing assistance. While they do not come in the form of cash, these programs are important factors in many family budgets. All of these elements likely factor into individual and family decision making about economic security, and as such are essential to a comprehensive understanding of income inequality in California.

In the next section, we move from a historical view of pre-tax cash income and inequality to examining current levels of inequality in family resources—what we term “comprehensive income.”

Factoring in Taxes and the Social Safety Net

Social safety net programs (tax-based, in-kind, and cash) boost incomes at the lower end of the income ladder, and taxes paid reduce incomes at the upper end. If we assess family resources by counting only income that families have from work and—for those who are retired—Social Security and retirement funds, incomes are about $13,000 or less for families in the lowest 10 percent and about $222,000 or more for families in the top 10 percent (Figure 2). Importantly, this is income before deductions taken for state and federal income taxes and payroll taxes.

Figure 2. A comprehensive assessment of economic resources shifts low incomes up and high incomes down

SOURCE: Authors’ calculations from the 2012–13 CPM.
NOTES: Dollar amounts are rounded to the nearest $1,000. Deciles are computed separately for each of the three income distributions. For details about sources of income included in the three categories, see the technical appendices. Estimates shown in the figure are provided in more detail in technical appendix Table C4.
Once we take these taxes into account, bottom incomes range up to about $12,000 while top incomes are $169,000 and up. In other words, the spread between top and bottom incomes narrows and does so mainly because top incomes are 24 percent lower. Middle incomes are also reduced due to taxes paid, but by roughly half as much as high incomes (11%). Income and payroll taxes do reduce incomes in the lower half of the distribution, but only by 5 percent to 9 percent.

Resources from the social safety net improve absolute economic well-being at the low end of the economic ladder. Calculating family resources using a comprehensive definition of income—including work and retirement income and taxes paid, as well as cash, in-kind, and tax-based social safety net resources (see sidebar)—shows bottom incomes to be fully 66 percent higher than they are under the restricted definition (or $21,000). Looking across the spectrum of incomes in California, social safety net programs boost family incomes in the lower half of the distribution between 4 percent and 66 percent; they have a negligible effect on incomes in the top half of the income distribution.

In short, successively more comprehensive estimates of economic resources lower the top rungs of the income ladder and raise the lowest rungs. The net result for low incomes (those at the 10th, 20th, and 30th percentiles) is positive, while the net result for middle and high incomes is negative.

The Social Safety Net Boosts Absolute Economic Well-Being

Table 4 provides additional detail about the contributions that safety net programs make to family resources among those on the lower rungs of the economic ladder. It is important to note that income from employment nonetheless makes up the majority of resources at all levels, ranging between 65.8 percent (for families in the lowest income group) and 96.1 percent (for those with middle incomes).

Next to earnings, food assistance programs (CalFresh, school meals, and WIC together) on average provide the largest share (17.5%) of total resources to those in the lowest income group, and SSI provides the next largest share (7.2%). CalWORKs and GA, federal housing assistance, and federal tax credits each provide about 3 percent on average. For families in the next-to-lowest income group (between the 10th and 20th percentiles), food assistance and SSI each make up about 7 percent of comprehensive income on average, while tax credits and housing assistance make up somewhat smaller amounts.

Comprehensive income and resources

The traditional measure of family resources combines cash income from work and retirement (and miscellaneous) and cash income from government safety net programs, all measured before taxes.

- Cash income from work and retirement: earnings from jobs and self-employment, along with retirement savings, Social Security, unemployment insurance for those who have lost jobs, and child support paid by a non-custodial parent
- Cash income from government safety net programs: CalWORKs cash assistance, General Assistance (GA), and Supplemental Security Income (SSI) for the blind, elderly, and disabled
- In-kind resources from government programs:
  - Federally provided rental housing assistance
  - Food assistance from the Supplemental Nutrition Assistance Program (SNAP)—known as CalFresh in California—school breakfast program and school lunch programs (school meals), and the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC)
  - Tax-based safety net programs: the federal Earned Income Tax Credit (EITC) and the refundable portion of the Child Tax Credit (CTC)
- Taxes paid: federal and state income taxes and payroll taxes

In order to isolate the full impact of safety net policy, in some analyses we examine only work and retirement income (sources listed in the first bullet above) or only work and retirement income after taxes paid (sources listed in the first and last bullets above).

Further detail about our data sources is available online in Technical Appendices A and B.
(5%–6%) and cash assistance provides less than 3 percent of comprehensive income. Among families between the 20th and 30th percentiles—who are still well below middle income—safety net resources range from 2 percent to 5 percent of income. For families between the 40th and 50th percentiles, safety net programs make up negligible shares (roughly 1% or less) of income.

**How Much Does the Social Safety Net Mitigate Inequality?**

Turning back to the summary of measures of inequality, we find that top incomes—after we factor in income and payroll taxes but before we include social safety net resources—are 13.5 times as large as bottom incomes (Table 5). Once we factor in safety net resources, the top incomes are 8.1 times as large as the bottom incomes. This represents a 40.1 percent decrease in inequality. The gap between incomes at somewhat less extreme positions on the spectrum (the 80/20 ratio) is far smaller to begin with (4.9%); counting social safety net resources reduces the gap by 20.8 percent, or half as much. Not surprisingly, the gap between top and middle incomes is essentially unaffected by the inclusion of safety net resources, while the ratio of middle to low incomes is greatly moderated.

**Table 4. On average, most family resources come from work**

<table>
<thead>
<tr>
<th></th>
<th>Low 1st decile</th>
<th>Low 2nd decile</th>
<th>Low 3rd decile</th>
<th>Low 4th decile</th>
<th>Low 5th decile</th>
<th>Middle 1st decile</th>
<th>Middle 2nd decile</th>
<th>Middle 3rd decile</th>
<th>Middle 4th decile</th>
<th>Middle 5th decile</th>
</tr>
</thead>
<tbody>
<tr>
<td>After-tax income</td>
<td>65.8%</td>
<td>73.2%</td>
<td>81.3%</td>
<td>90.8%</td>
<td>96.1%</td>
<td>65.8%</td>
<td>73.2%</td>
<td>81.3%</td>
<td>90.8%</td>
<td>96.1%</td>
</tr>
<tr>
<td>work and retirement</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>65.8%</td>
<td>73.2%</td>
<td>81.3%</td>
<td>90.8%</td>
<td>96.1%</td>
</tr>
<tr>
<td>CalFresh, WIC, and</td>
<td>17.5</td>
<td>6.6</td>
<td>4.6</td>
<td>2.6</td>
<td>1.0</td>
<td>17.5</td>
<td>6.6</td>
<td>4.6</td>
<td>2.6</td>
<td>1.0</td>
</tr>
<tr>
<td>school meals</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>17.5</td>
<td>6.6</td>
<td>4.6</td>
<td>2.6</td>
<td>1.0</td>
</tr>
<tr>
<td>SSI</td>
<td>7.2</td>
<td>7.1</td>
<td>3.8</td>
<td>1.9</td>
<td>1.3</td>
<td>7.2</td>
<td>7.1</td>
<td>3.8</td>
<td>1.9</td>
<td>1.3</td>
</tr>
<tr>
<td>CalWORKs, GA</td>
<td>3.3</td>
<td>2.5</td>
<td>1.6</td>
<td>0.9</td>
<td>0.4</td>
<td>3.3</td>
<td>2.5</td>
<td>1.6</td>
<td>0.9</td>
<td>0.4</td>
</tr>
<tr>
<td>EITC/Child tax credit</td>
<td>3.2</td>
<td>4.8</td>
<td>4.9</td>
<td>2.9</td>
<td>1.2</td>
<td>3.2</td>
<td>4.8</td>
<td>4.9</td>
<td>2.9</td>
<td>1.2</td>
</tr>
<tr>
<td>Rental housing</td>
<td>3.0</td>
<td>5.7</td>
<td>3.8</td>
<td>0.9</td>
<td>0.1</td>
<td>3.0</td>
<td>5.7</td>
<td>3.8</td>
<td>0.9</td>
<td>0.1</td>
</tr>
</tbody>
</table>

**Source:** Authors’ calculations from the 2012–13 CPM.

**Notes:** Percentages shown are within-decile means of the share that each source of income makes up of comprehensive income. For additional detail, see technical appendix Table C9.

**Table 5. The social safety net reduces inequality between top and bottom—and middle and bottom—incomes**

<table>
<thead>
<tr>
<th>Income inequality metric</th>
<th>After-tax work and retirement income ratio</th>
<th>Comprehensive income ratio</th>
<th>Percent change</th>
</tr>
</thead>
<tbody>
<tr>
<td>90/10</td>
<td>13.5</td>
<td>8.1</td>
<td>-40.1%</td>
</tr>
<tr>
<td>80/20</td>
<td>4.9</td>
<td>3.9</td>
<td>-20.8%</td>
</tr>
<tr>
<td>90/50</td>
<td>2.7</td>
<td>2.6</td>
<td>-1.9%</td>
</tr>
<tr>
<td>50/10</td>
<td>5.0</td>
<td>3.1</td>
<td>-38.9%</td>
</tr>
</tbody>
</table>

**Source:** Authors’ calculations from the 2012–13 CPM.

**Notes:** See the sidebar on opposite page.
Across the state, the social safety net lowers income inequality, but it does not do so evenly. Social safety net programs reduce the 90/10 ratio by as much as 53 percent in the Central Valley and Sierra region and as little as 26 percent in Orange County. As discussed earlier, safety net programs boost resources among the lowest-income families. Because relatively low family incomes are lower in some parts of the state than in others (see Table 3), it is not surprising that the social safety net cuts inequality more in lower-income regions. Nonetheless, safety net programs compress the income distribution both across the state and within regions, resulting in less variation in inequality overall.

It is important to note that if safety net resources ceased to exist, families would look for other ways to make ends meet. In essence, the inequality-reducing effects of the safety net discussed here disregard behavioral responses to policy changes.

Although the social safety net boosts the incomes of low-income families, high levels of inequality persist in California. We estimate that, on average, 8.9 percent of families lived in deep poverty and 22.8 percent of families lived in poverty in 2012–13. To better understand the connection between poverty and inequality, we calculate the level of inequality that would exist if the incomes of all families in poverty were raised just to the poverty line. In this scenario, all families with two adults and two children, for example, would have resources of $29,969 or more (the average CPM threshold for that family size for 2012–13)—perhaps through an expansion of social safety net programs or a boost in poor families’ work income. We estimate that increasing family resources to this basic standard of need would lower the ratio of top to bottom incomes from 8.1 to 5.9, or by 27 percent. In other words, enhancing absolute economic well-being by eliminating poverty would substantially reduce, but not eliminate, current levels of inequality.

**Which Social Safety Net Programs Matter Most?**

As discussed above, inequality drops by 40 percent when we factor in major safety net programs. But because these programs vary substantially in their eligibility requirements and benefit amounts, they have differing effects on inequality. Figure 3 shows the extent to which cash, nutrition, housing, and tax programs separately reduce inequality. CalWORKs and GA (together) play the smallest role, shrinking the 90/10 ratio by just under a point. Federal tax credits (EITC/CTC) play a somewhat larger role, lowering inequality 1.4 points. Federal housing assistance and nutrition assistance programs both cut inequality by about 2 points. Among safety net programs, SSI reduces inequality by the largest amount (2.5 points). Because these programs often work in conjunction to assist low-income families, their combined effect is smaller than the sum of the individual program effects.

**Which Californians Are Helped Most?**

By definition, 20 percent of all families fall in the bottom quintile of the income distribution. Looking exclusively at after-tax income from work and retirement, 26 percent of families with children under the age of 5 are in the lowest quintile—implying that, among all families in the state, families with young children are overrepresented in this low-income group. Specifically, families with young children are 1.3 times as likely to be in the bottom quintile relative to all families (Figure 4). In contrast, families with children age 6 to 12 are more or less proportionately represented at the low end of the income ladder; and families with teenage children are less likely than all families to be in the bottom quintile. Of course, parents of young children are likely to be younger themselves, and thus expected to earn less than older adults.
Figure 3. The gap between high and low incomes narrows substantially after social safety net resources are accounted for.

SOURCE: Authors’ calculations from the 2012–13 CPM.
NOTES: Each bar shows the 90/10 ratio within the distribution of income as defined at left. Each program (or set of programs) is evaluated individually. Additional detail is proved in technical appendix Table C9.

Figure 4. Families with young children and single-parent families are more economically disadvantaged.

SOURCE: Authors’ calculations from the 2012–13 CPM.
NOTES: Bottom quintile computed using work and retirement income. Additional estimates are provided in technical appendix Table C10.
When we look at families in a different way, we see that single parent families are greatly overrepresented by more than 100 percent. In other words, such families are 2.2 times as likely as all families to fall in the bottom quintile of income statewide. Single adult families are also overrepresented, although to a lesser extent (1.4 times as likely to be in the bottom quintile). Families with two or more adults and children are proportionately represented at the bottom of the income spectrum; and families with multiple adults and no children are 0.4 times as likely to be in the bottom 20 percent. In other words, they are sharply underrepresented.28

Education and employment are also strongly related to clustering in the bottom part of the economic spectrum. In fact, those who have a high school degree or less and who are not working full-time are quite starkly overrepresented in the bottom fifth of the statewide income distribution. Families in which adults lack a high school degree, are not in the labor force, or are unemployed are between 2.6 and 2.9 times as likely as all families to have incomes in the bottom 20 percent (Figure 5).29

Safety net resources move all families from the bottom of the income spectrum toward the middle.30 To what extent does the safety net move families that are particularly overrepresented at the bottom of the economic distribution higher up?

Figure 6 shows the extent to which safety net resources improve the economic standing of selected family types relative to all families. These resources boost the incomes of families with young children and single-parent families more than those of other economically disadvantaged groups. The overrepresentation of families with children age 5 or under in the bottom quintile shrinks by 34 percent after safety net resources are accounted for. Single-parent families are 25 percent less likely to be overrepresented, and families with lower levels of education are slightly less likely to be overrepresented (by 4%). In contrast, single adult families and families who lack full-time work benefit less from safety net resources than families overall—relative to all families, they are actually more likely to be overrepresented in the lowest quintile when safety net resources are included (although, like all families, these families do see an absolute increase in resources from the social safety net).31

The implication of this analysis is that single-parent families and families with young children are particularly helped by the social safety net in California. While families in which adults have less education or adults are not fully employed are also exceptionally disadvantaged, their relative standing is less affected by social safety net programs. This is not surprising, given that many of these programs explicitly aid children and the working poor. Changes to the eligibility criteria of certain programs, or expansion of current programs that do not target adults in the workforce and children would be required in order for the social safety net to assist other economically disadvantaged groups substantially more.
Figure 5. Families with less education and who lack full-time employment are more economically disadvantaged

SOURCE: Authors’ calculations from the 2012–13 CPM.
NOTES: Education and work are categorized using the maximum level among adults in the family. For employment, families with no adults age 25 to 64 are excluded from the calculations. Bottom quintile computed using work and retirement income. Additional estimates are provided in technical appendix Table C10.

Figure 6. Safety net resources help families with young children and single-parent families relatively more

SOURCE: Authors’ calculations from the 2012–13 CPM.
NOTES: Bars measure the percentage change in representation in the bottom quintile for each group before and after accounting for safety net resources. Specifically, we measure the representation of families with given characteristic in the bottom quintile of the after-tax work and retirement income distribution by dividing their share by the share of all families in the quintile (20%). We then calculate the percentage change in this representation ratio after including safety net resources. Technical appendix Table C10 provides additional detail.
Table 6. Even after safety net resources are factored in, family incomes vary markedly

<table>
<thead>
<tr>
<th>Median comprehensive income</th>
<th>Percent of families</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Statewide</strong></td>
<td>$64,000</td>
</tr>
<tr>
<td><strong>Youngest child</strong></td>
<td></td>
</tr>
<tr>
<td>Age 5 or under</td>
<td>$52,000</td>
</tr>
<tr>
<td>Between ages 6 and 12</td>
<td>$58,000</td>
</tr>
<tr>
<td>Between ages 13 and 17</td>
<td>$64,000</td>
</tr>
<tr>
<td><strong>Family composition</strong></td>
<td></td>
</tr>
<tr>
<td>One adult, one or more children</td>
<td>$41,000</td>
</tr>
<tr>
<td>Two or more adults, one or more children</td>
<td>$60,000</td>
</tr>
<tr>
<td>One adult, no children</td>
<td>$49,000</td>
</tr>
<tr>
<td>Two or more adults, no children</td>
<td>$92,000</td>
</tr>
<tr>
<td><strong>Level of education</strong></td>
<td></td>
</tr>
<tr>
<td>No high school diploma</td>
<td>$32,000</td>
</tr>
<tr>
<td>High school diploma</td>
<td>$43,000</td>
</tr>
<tr>
<td>Some college</td>
<td>$57,000</td>
</tr>
<tr>
<td>College degree or higher</td>
<td>$102,000</td>
</tr>
<tr>
<td><strong>Employment status</strong></td>
<td></td>
</tr>
<tr>
<td>Not in the labor force</td>
<td>$28,000</td>
</tr>
<tr>
<td>Unemployed</td>
<td>$29,000</td>
</tr>
<tr>
<td>Part-time work</td>
<td>$38,000</td>
</tr>
<tr>
<td>Full-time work</td>
<td>$80,000</td>
</tr>
<tr>
<td><strong>Race/Ethnicity</strong></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>$81,000</td>
</tr>
<tr>
<td>Latino</td>
<td>$45,000</td>
</tr>
<tr>
<td>Asian</td>
<td>$75,000</td>
</tr>
<tr>
<td>Black</td>
<td>$53,000</td>
</tr>
<tr>
<td>Other race/ethnicity</td>
<td>$62,000</td>
</tr>
<tr>
<td><strong>Region</strong></td>
<td></td>
</tr>
<tr>
<td>Northern</td>
<td>$54,000</td>
</tr>
<tr>
<td>Sacramento region</td>
<td>$64,000</td>
</tr>
<tr>
<td>Bay Area</td>
<td>$82,000</td>
</tr>
<tr>
<td>Central Valley and Sierra</td>
<td>$51,000</td>
</tr>
<tr>
<td>Central Coast</td>
<td>$62,000</td>
</tr>
<tr>
<td>Inland Empire</td>
<td>$59,000</td>
</tr>
<tr>
<td>Los Angeles County</td>
<td>$58,000</td>
</tr>
<tr>
<td>Orange County</td>
<td>$75,000</td>
</tr>
<tr>
<td>San Diego County</td>
<td>$66,000</td>
</tr>
</tbody>
</table>

**Source:** Authors’ calculations from the 2012–13 CPM.

**Notes:** Dollar amounts reflect comprehensive income estimates, rounded to nearest $1,000. Dollar amounts are adjusted to represent a four-member family in 2013. The last column shows percent of families within a category. Families with no children are excluded from youngest-child category and families with no adult age 25–64 are excluded from employment-status category. Citizenship and race/ethnicity pertain to the oldest family member. Education pertains to the adult with the highest education attainment, and employment status pertains to the adult with the most employment. Technical appendix Table C11 provides additional estimates.
Where Do Family Incomes Fall after Safety Net Resources Are Accounted For?

While social safety net resources help certain disadvantaged groups more than others, median incomes after accounting for resources from publicly provided programs are still quite polarized across demographic characteristics. In other words, although the safety net boosts resources and reduces inequality, large differences remain. For example, even after safety net resources are factored in, single-parent families and families with young children have starkly lower resources than other families. Families with children age 0 to 5 make up about 45 percent of all families with children in California; their median comprehensive income is about $52,000, as compared to a statewide median comprehensive income of $64,000 (Table 6). Single-parent families, who make up only about 5 percent of all families, have a median income of roughly $41,000.

Furthermore, median comprehensive income among families headed by a college graduate is more than two times that of families headed by a high school graduate ($102,000 vs. $43,000). White and Asian families have higher median incomes—$75,000 or above—than other racial or ethnic groups. And, finally, regional income differences persist even after safety net programs are accounted for. Median comprehensive income is highest in the Bay Area and Orange County and lowest in the northern and Central Valley/Sierra regions.

Conclusion

In this report, we have documented the polarization of incomes in California: top incomes are more than eight times the size of bottom incomes. We have also shown that income inequality is about 40 percent higher before we take account of resources from cash, nutrition, housing, and tax programs that assist families in the lower part of the economic spectrum. Resources from these programs assist families with young children and single-parent families particularly, although they do not boost resources for these families enough so that they are on par with all families.

At the same time, we have noted that some degree of economic inequality is expected. What level of income inequality is “acceptable” or “economically optimal”? This is to some extent a decision that Californians must make. At the individual or family level, concerns about inequality often have more to do with poverty and opportunity. Inequality may not be problematic if (1) no one lives below a basic level of well-being; and (2) all children have the opportunity to move up the economic ladder.

Given the decline in low pre-tax cash incomes over the past several decades, the issues of poverty and inequality are intertwined in California. As we have documented in this report and elsewhere, the social safety net ameliorates both inequality and poverty (Bohn, Danielson, and Bandy 2015). However, the social safety net does not currently erase poverty. Because families at all income levels typically rely most on earnings, policies that help bring families at the low end of the economic spectrum more fully into the labor force and increase their earnings hold special promise for further reducing poverty and inequality. It is also worth noting, however, that the programs that benefit bottom income families the most—nutrition programs and SSI—are for the most part not directly contingent on work. These programs appear to be essential to particularly low-income Californians.32
On the topic of opportunity, if the goal is to ensure access to upward mobility, longer-term strategies of boosting skills hold promise, although their payoffs might be delayed and perhaps intergenerational. In the shorter term, ensuring that education is coupled with job placement, career training, or programs that support work (e.g., publicly supported child care), may help to narrow income gaps.

Although it is not the subject of this report, long-term economic mobility—or lack thereof—underlies much of the concern about inequality. If mobility across generations is high, then disparity in incomes today may be of less concern. However, it may be the case that children “inherit” their rung on the income ladder. Recent research has pushed the frontier of what is known about mobility by comparing the current generation of adults to their parents’ generation. Most American children of the previous generation—a higher share than in other Western countries—are at or near the income level of their parents today as adults (Chetty et al. 2014a). Furthermore, researchers have found that the level of inequality in a neighborhood is strongly correlated with mobility—areas with higher inequality have lower rates of upward mobility and vice versa (Chetty et al. 2014b). This new research validates the focus on reducing income inequality.

It is clear that safety net programs in their current state do mitigate inequality. To the extent that these same programs—or future reshaping of social safety net programs—also improve educational attainment or supports for work, policy has the potential to not just lessen inequality but to improve economic mobility. While it is unlikely that California policymakers can singlehandedly reverse income polarization, state policies that enhance Californians’ education and work prospects hold great promise for improving both absolute and relative economic well-being.
NOTES

1 There is recent evidence from an analysis of earnings nationwide that local areas with higher earnings inequality see lower economic mobility across generations (Chetty and Hendren 2015).

2 Additionally, there is a growing body of evidence that correlates inequality with adverse individual health outcomes, another mechanism by which income inequality may hamper individual mobility and overall economic productivity (Lochner et al. 2001; Kahn et al. 2000).

3 Note that the final data point in Figure 1 (corresponding to income in 2014) is not strictly comparable to previous years. This is because the 2014 Annual Social and Economic Supplement to the Current Population Survey (CPS-ASEC) asked new questions about income levels. Mitchell and Renwick (2015) find that this revision yielded higher aggregate amounts of income reported, but poverty rates remained unchanged for most demographic subgroups. This suggests that the increase is due to higher amounts reported at the middle and high, but not the low, ranges of the income distribution. In addition, the 2013 CPS-ASEC income estimates are subject to larger error because only 62.5 percent of the sample was given the historically comparable income question (the rest answered the new income question). In this section we use the CPS-ASEC to observe long-term trends in the income distribution, but turn to the American Community Survey (ACS) for 2007–2014 to obtain more precise estimates based on income questions that did not change over the period. In the following sections we also use the ACS for 2012–2013 to address more detailed questions about income in recent years. Technical appendix Figure C4 provides comparisons between ACS and CPS-ASEC income measures.

4 Looking even higher in the income spectrum, family income at the 95th percentile was $256,000 in 2014. Due to top coding of income amounts in the survey data, this is the highest percentile of income we can measure. Here and throughout the report, all estimates are adjusted to represent a family of four.

5 This differential growth appears even more stark looking at very top incomes; the top 1 percent of families, or even the top 0.1 percent, receive a share of income that is greater than their share of the population—11 percent and 1.5 percent of wage income, respectively, according to Piketty and Saez 2003; (see also tables and figures updated to 2014, available in Excel format on Saez’s UC Berkeley web page analysis of tax return data. Alternatively, the full top 10 percent of income in California based on IRS records (not counting capital gains or losses) increased from 32 percent in 1980 to 51 percent in 2012; and the top 1 percent share increased from 9 percent to 25 percent (Fisher et al. 2015).

6 See technical appendix Figure C2 for more detail.

7 The 90/10 ratio for the rest of the US is 11.6, also about twice the size of the gap in 1980. See Technical Appendix C for a more detailed comparison of income between California and the rest of the country. In addition, California’s income inequality ranks higher than in most other states, based on a revised Gini coefficient metric and based on the share (and growth) of income going to top 10 percent of earners (Fisher, Thompson, and Smeeding 2015).

8 Reidenbach et al (2016) show that these regional differences are quite different if one examines the gap between the very highest incomes—top 1 percent—and the rest of the distribution. For example, the top 1 percent of Bay Area households earns 44 times as much as the rest of the families there. That same ratio for Central Valley counties is between 14 and 18. This reflects, in part, the trend of soaring incomes at the very top of the distribution, an important component of changes in income inequality.


10 This is not to say that middle-income jobs have permanently shrunk. Some of the projected growth in the health care industry and other service sectors points to potential middle-income jobs of the future.

11 Author analyses of BLS data from the Occupational Employment Statistics Survey (September 2015) for California, and EDD employment data by industry.

12 See Bureau of Economic Analysis Regional GDP. A break in GDP data occurred in 1997 when the economy-wide industry classification system shifted from the Standard Industrial Classification (SIC) to the North American Industry Classification System (NAICS). For this reason, we choose to focus only on the most recent series.

13 Specifically, based on CPS data, low and middle incomes (the 10th, 25th and 50th percentiles) increased roughly 4 percent between 1997 and 2014, while high incomes (75th, 90th, 95th percentiles) increased 10 percent to 11 percent.

14 In fact, the estimates presented above include some elements of social safety net resources—specifically, the cash-based programs (CalWORKs, GA, and SSI)—in family income. This approach to calculating official income
and poverty statistics is not particularly comprehensive. Social Security income is also counted in the prior estimates, which for many recipients functions as a safety net program. Because our focus is on means-tested safety net programs, we do not count Social Security as part of the safety net. See technical appendix Table C2 for more detail and a presentation of income trends with income from cash assistance programs excluded. Low incomes are markedly more volatile when those programs are not counted.

Other research has similarly expanded the view of family resources beyond the official pre-tax cash income definition. Like our approach, some add taxes and social safety net programs (Bitler and Hoynes, 2014). Others approximate the value of employer-provided health insurance or other elements of compensation (Congressional Budget Office 2011). Another approach is to examine well-being through a different lens, such as how much families consume (Meyer and Sullivan 2013). These various approaches can lead to different conclusions about the level of poverty or resources. However, most approaches find an increase in the gap between families at the high and low ends of the spectrum.

In collaboration with researchers at the Stanford Center on Poverty and Inequality, we have built a comprehensive database of family income and resources based in the American Community Survey (ACS) that we have used to calculate the California Poverty Measure (CPM), which substantially improves the calculation of how many Californians live in poverty (Bohn et al. 2013; Wimer et al. 2015). Fisher, Thompson, and Smeeding (2015), relying on the CPS, use a similar definition of resources and examine inequality in the US as a whole and in the five most populous states, including California. However, in contrast to the approach in this report, that research subtracts work-related expenses and medical-out-of-pocket expenses from cash and in-kind resources.

This definition of income taxes does not subtract mortgage interest deduction from families’ tax bills, which reduce taxes paid for homeowners—which implies a smaller effect on upper incomes than shown. We are also unable to include sales and property taxes in this analysis. Generally speaking, sales taxes are considered regressive—that is, lower-income families pay a higher percentage of their incomes than do higher income families. In this sense, subtracting sales taxes from family income would result in higher measured inequality.

By “taxes paid” we mean income and payroll taxes before the refundable EITC and CTC.

Note that this definition of comprehensive income does not account for assets. We also do not include the value of Medi-Cal or other government-provided health insurance as a family resource and likewise we do not include the value of subsidized child care. In our poverty research, we do subtract medical out-of-pocket expenses and work-related child care costs paid by families from resources before gauging whether a family falls above or below the poverty line (e.g., Bohn, Danielson, and Bandy 2015).

See technical appendix Table C9 for additional detail about incomes in the top half of the distribution.

Note that these averages are calculated for all families within an income group; the share of resources from the social safety net varies widely for any particular family.

Before taxes, the ratio of top-to-bottom work and retirement incomes is 17 to 1. See technical appendix Table C5. Note that these ratios are not comparable to those presented in the previous section because official income excludes taxes but includes government-provided cash assistance benefits.

Additional regional-level detail is provided in technical appendix Table C6.

The research literature indicates a sizeable behavioral response to the federal EITC, but smaller responses to changes in SNAP and TANF (Hoynes and Patel 2015; Hoynes and Schanzenbach 2016; Grogger and Karoly 2005). This evidence suggests that behavioral responses to the EITC and TANF further reduce inequality, while the behavioral response to SNAP increases inequality.

These family-level estimates differ from estimates of the number of individuals in poverty, the more typical way of presenting poverty statistics. See Bohn, Danielson, and Bandy (2015) for poverty rates calculated for individuals.

This scenario also assumes no other changes to income throughout the distribution.

The discussion in this paragraph is based on technical appendix Table C8.

Estimates here and throughout the report are adjusted by family size, implying that differing family size is not driving the results.

Any individual family may have all of the demographic characteristics discussed in this section, and several are highly correlated. For example, adults with less education are more likely to be unemployed or out of the labor force. Regression adjusted estimates of placement in the work and retirement income distribution, the after-tax
work and retirement income distribution, and the comprehensive income distribution are presented in technical appendix Table C12.

30 The calculations in this paragraph and the next come from technical appendix Table C10. The calculations compare families’ comprehensive income to percentiles of the after-tax work and retirement income distribution.

31 Technical appendix Table C13 presents regression-adjusted estimates of these demographic factors, showing, the odds of family comprehensive income falling in the first quintile of the after-tax work and retirement income distribution as compared to both the 3rd–5th deciles and the 9th–10th deciles.

32 Given data limitations, in this report we are unable to address the temporal aspects of safety net programs—for example, in stabilizing family economic circumstances temporarily with potentially long-term beneficial effects on child and adult trajectories.

REFERENCES


Reed, Deborah. 1999. *California’s Rising Income Inequality: Causes and Concerns.* Public Policy Institute of California.

Sawhill, Isabel. 2012. *Are We Headed to a Permanently Divided Society?* Brief no. 48, Center on Children and Families at Brookings.

ABOUT THE AUTHORS

Sarah Bohn is a research fellow at the Public Policy Institute of California. A labor economist, she focuses on how policy affects individual and family economic well-being, with particular attention to low-income and vulnerable populations. Her research areas include poverty, inequality, higher education, and immigration. Her work has been covered by major media outlets including the New York Times, The Economist, and the Washington Post and has been published in academic journals including the American Economic Review, Demography, and the Review of Economics and Statistics. She holds a PhD in economics from the University of Maryland, College Park.

Caroline Danielson is a senior fellow at the Public Policy Institute of California. Her research focuses on multiple dimensions of the social safety net, including its role in mitigating poverty, program access and enrollment, and the integration and governance of programs. Her work has been published in numerous academic journals, including the Journal of Policy Analysis and the Social Service Review. Before coming to PPIC, she was a principal analyst at the University of California’s Welfare Policy Research Project and a faculty member in the Department of Politics at the State University of New York, Potsdam. She holds a PhD in political science from the University of Michigan and a master’s degree in policy analysis from the Pardee RAND graduate school.

ACKNOWLEDGMENTS

In preparing this report we benefited from input from a number of colleagues both inside and outside of PPIC. They include Mia Bird, Hilary Hoynes, Shannon McConville, Mary Severance, Lynette Ubois, Evangelos Vasilakis, Christopher Wimer, and Ryan Woolsey. This report is grounded in California Poverty Measure data produced as part of an ongoing collaboration with the Stanford Center on Poverty and Inequality—in particular Jonathan Fisher, Sara Kimberlin, Beth Mattingly, and Christopher Wimer. Any errors of fact or interpretation are the authors’ alone.
BOARD OF DIRECTORS

DONNA LUCAS, CHAIR
Chief Executive Officer
Lucas Public Affairs

MARK BALDASSARE
President and CEO
Public Policy Institute of California

RUBEN BARRALES
President and CEO
GROW Elect

MARÍA BLANCO
Executive Director
Undocumented Student
Legal Services Center
University of California
Office of the President

LOUISE HENRY BRYSON
Chair Emerita, Board of Trustees
J. Paul Getty Trust

A. MARISA CHUN
Partner
McDermott Will & Emery LLP

PHIL ISENBERG
Former Chair
Delta Stewardship Council

MAS MASUMOTO
Author and Farmer

STEVEN A. MERKSMER
Senior Partner
Nielsen, Merksamer, Parrinello, Gross & Leoni, LLP

GERALD L. PARSKY
Chairman
Aurora Capital Group

KIM POLESE
Chairman
ClearStreet, Inc.

GADDI H. VASQUEZ
Senior Vice President, Government Affairs
Edison International
Southern California Edison
The Public Policy Institute of California is dedicated to informing and improving public policy in California through independent, objective, nonpartisan research.
Income Inequality and the Safety Net in California

Technical Appendices

CONTENTS

Appendix A: Data Sources 2
Appendix B: Methodology 4
Appendix C: Detailed Estimates 7

Sarah Bohn and Caroline Danielson
with research support from Monica Bandy
Appendix A: Data Sources

We rely on detailed survey data from the US Census and Bureau of Labor Statistics to estimate the distribution of income in California and to examine the demographic characteristics of families across the distribution. The core survey micro-data we analyze comes from the Current Population Survey (CPS) from 1980–2015 and the American Community Survey (ACS) from 2005–2014. The CPS is fielded between February and April of each year and asks respondents about their income in the previous calendar year. The ACS is fielded on a rolling basis and asks respondents’ income in the previous twelve months. As is usual practice, we treat responses to the 2015 CPS as referring to 2014, while responses to the 2014 ACS refer to 2014.

In addition, we use an augmented version of the ACS data for 2012–2013 which underlies the California Poverty Measure research, a joint effort between PPIC and the Stanford Center on Poverty and Inequality (Bohn, Danielson, Levin, Mattingly, and Wimer, 2013; Wimer, Mattingly, Kimberlin, Danielson, and Bohn, 2015). Each of these three main data sources is described below.

Current Population Survey

We use the Annual Social and Economic Supplement (ASEC) of the CPS, which is administered by the US Census Bureau and the Bureau of Labor Statistics (BLS). The CPS is a representative sample of the noninstitutionalized civilian population. Although administered only once per year, the CPS-ASEC includes relatively detailed questions focusing on annual income and labor market experiences. It is administered between February and April of each year, and the results are released towards the end of the same calendar year. We access the CPS via the Integrated Public Use Microdata series CPS data (IPUMS-CPS) published by the Minnesota Population Center at the University of Minnesota (King et al. 2015). These data are harmonized, meaning that the variable names and coding are consistent over time.

Since the CPS is designed to be cross-sectional, rather than longitudinal, we are unable to follow individuals or families over time. For this reason, we can only make inferences based on representative populations or cohorts across the cross-sections of the CPS. The CPS is designed to be representative of state-level populations but does not permit robust analysis within more narrowly defined regions or subgroups. The advantage of the CPS for our purposes is that its long time series that allows us to track income and labor market activity over more than three decades.

As described in the text, the CPS-ASEC redesigned questions on income and health insurance between the 2014 and 2015 surveys (pertaining to income for the previous calendar years 2013 and 2014, respectively). Survey questions were changed to better capture income and health insurance use, especially among low income families. As a result, our calculations of the income distribution in 2014 are not directly comparable to previous years. Furthermore, the 2014 CPS-ASEC sample was split into two subsamples that were asked either the new or old income and health insurance questions. Calculations of the income distribution from either subsample have larger standard errors as a result. For these reasons, we interpret changes in the income distribution based on the CPS between 2012–2014 with caution, and we rely more heavily on the consistent data series and larger sample size from the ACS.

---

1 A smaller subsample of the CPS is surveyed multiple times over the course of 16 months, but the small sample size does not permit analysis of the entire income distribution in enough detail for our purposes.
American Community Survey

The ACS is a large-scale population survey administered by the US Census Bureau that represents roughly a 1 percent sample of US residents. We exclude those living in group quarters. The resulting California sample is over 350,000 observations annually. The ACS provides detailed economic and demographic information on individuals and households. The ACS asks less detailed questions about program participation and income sources than the CPS-ASEC, and is only available from 2005–2014. However, the ACS has the significant advantage of very large sample sizes, allowing us to perform detailed analyses within socioeconomic subgroups in California. Like the CPS, the ACS is a cross-sectional survey representing snapshots of the California population at various points in time. As with the CPS, we access harmonized ACS data published by the Minnesota Population Center at the University of Minnesota (Ruggles et al. 2015).

California Poverty Measure Data

Our third major source of data comes from the California Poverty Measure (CPM) research, a joint effort between PPIC and Stanford’s Center on Poverty and Inequality (Bohn et al., 2013 and Wimer et al., 2015). These data are built upon the ACS with enhancements using other survey and administrative data to more accurately estimate the range of resources and expenses for families in California. This research is based upon the methodology of the Census Bureau’s Supplemental Poverty Measure, with California-specific improvements (for more detail see Bohn et al., 2013 and Wimer et al., 2015). The CPM data are available for 2011–2013. We use the most recent two years of CPM data, pooling the years to increase the robustness of our detailed calculations. Because economic conditions did not change drastically between 2012 and 2013, we lose little information in pooling the data. This pooled 2012–2013 data forms the basis for our analysis of the distribution and inequality of income for California families, as well as the mitigating impact of taxes and government programs.
Appendix B: Methodology

In this section, we discuss key methodological choices adopted for this research. These include: 1. How income and resources are defined; 2. The level at which we perform our analyses (the family); 3. How these values are standardized over time and across families; and 4. Metrics used to measure inequality.

Definition of Income and Resources

In this report, we use a number of different measures of income and resources. Indeed, one of the goals of this work is to highlight the difference between official income and poverty statistics and those based on a more comprehensive definition. We make use of four primary definitions: “official income,” “pre-tax work and retirement income,” “after-tax work and retirement income,” and “comprehensive income.” Table B1 describes the categories of cash and near-cash resources included in each definition.

Official income is comprised of all cash income received before taxes paid or tax credits received. As described in the text, this measure of income is what is commonly used in official income and poverty statistics reported by the US Census Bureau and other agencies. It incorporates all of the income sources recorded in the major population surveys used for wide-ranging purposes in the US.

TABLE B1

<table>
<thead>
<tr>
<th>Income definitions</th>
<th>Official income and poverty statistics</th>
<th>Pre-tax work and retirement income (WRI)</th>
<th>After-tax WRI</th>
<th>CPM Comprehensive income</th>
</tr>
</thead>
<tbody>
<tr>
<td>Income from work, investments, UI, business, retirement, and miscellaneous</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>State and federal payroll and income taxes paid</td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Tax credits received</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Social Security</td>
<td>X</td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Supplemental Security Income (SSI)</td>
<td>X</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>CalWORKs (TANF) and General Assistance</td>
<td>X</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>CalFresh (SNAP)</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Free and reduced price school breakfast and school lunch</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>WIC</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Federal rental assistance</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

Official income measures some sources of income—such as all cash income from working and all cash income from retirement sources—but not others. Hence we define the second category as “work and retirement income,” which is comprised of income from work and retirement, as well as other work-related sources such as unemployment insurance, business income, as well as other cash from investments and miscellaneous sources. Although more precision in this measure might also be appealing, we must create a definition that is feasible to measure in available data. Because we are also interested in the entire income distribution, not only income received by people currently employed, we choose to combine income from working as well as from Social Security and retirement in this measure. The third measure of income subtracts state and federal income and payroll taxes and paid. Due to data limitations, we are unable to measure sales taxes or property taxes.
Our last measure is referred to as “comprehensive income.” Official income and poverty statistics fall short in providing a comprehensive estimate of resources families have to meet their needs. In particular, the official income statistics do not account for taxes paid or tax credits received, nor do they account for the cash value of in-kind benefits like CalFresh (California’s Supplemental Nutrition Assistance Program) and housing subsidies. The Earned Income Tax Credit (EITC) and CalFresh are today the largest social safety net programs. Therefore, failing to account for their impact on family economic well-being is problematic. However, all of these resources are not currently measured in the ACS. For this reason, in our CPM research we have built these major categories of resources into the California sample of the ACS. Included in our measure of “comprehensive income” are all the categories of income counted in the official income and poverty statistics as well as taxes paid less tax credits received (EITC and refundable Child Tax Credit), CalFresh, WIC, school breakfast and lunch, and federal rental assistance.

**Standardization of Income and Resource Measures**

To compare income and resources over time and across families, it is necessary to make a number of adjustments. We summarize these adjustments here.

**Units of analysis**

Our analysis of income centers on the family rather than the individual. This allows us to take account of virtually all Californians rather than only those who are employed. Individuals share resources within families or relationships of their choosing, and these relationships are captured to a reasonable extent in the survey data on which our analysis is based. We assume that individuals share resources with family members they reside with. In the analyses using the CPM, the concept of family is broadened to include cohabiting partners and foster children (for more detail, see Bohn et al. 2013). Our unit of analysis can range from single adult units to multigenerational families. For some analyses we examine characteristics of the head of the family, defined as the oldest member with the lowest roster number. For some analyses we examine characteristics of all members of the family, such as how many are employed or the number of adults and number of children.

**Normalization for family size and other adjustments**

Families vary substantially in size and composition. This means their income is likely to vary as well. For example, because California families are on average larger than families in the rest of the country (2.94 persons compared to 2.63, respectively\(^2\)), not adjusting for family size can understate income differences. This is especially true for median-income families and below, where the size differences between families in California and elsewhere are largest. To facilitate the analysis, we adjust family income to be comparable across various sizes. We normalize family income to be representative of a common family size: two adults and two children. Our adjustment factor uses federal poverty thresholds, which provide equivalent standard of living for families of different sizes. Specifically, we apply a factor equal to the ratio of the threshold for a family of four to the threshold for a given family size. The dollar value for normalized family income used throughout the study represents the total family income for a family of four with two children.

**Inflation adjustment**

We adjust our data for inflation, using the CPI-U Research Series. We adjust all dollar amounts to the latest year available, which is either 2013 or 2014, depending on the analysis. In addition, ACS responses are adjusted.

\(^2\) Census Bureau Quick Facts 2009-2013.
globally using a Census-provided variable that roughly translates the responses from the rolling reference period of the survey into calendar year amounts.

**Handling top-coded income values**

Extremely high income values are recoded by the Census Bureau in the CPS and ACS to preserve the privacy of respondents in the public use micro data we rely upon. In the ACS, incomes higher than the 99.5th percentile are top-coded with the average value of incomes above that threshold for California. In the 2014 ACS, the top-coded value for individual wages was $455,000. This prevents us from analyzing the very highest levels of the income distribution. Top-coding in the CPS is more restrictive, permitting no detailed analysis beyond the 95th percentile.

**Approaches to Calculating Inequality**

Researchers use a number of metrics to measure income inequality. Our goal is to assess the income distribution widely speaking, and not just a single metric of inequality. Thus, we prefer to describe the distribution of income using percentiles and income deciles. This lends itself naturally to using income ratios as our primary measure of income inequality. We examine ratios of income at a number of points in the distribution, but most often report 90/10 ratio, 90/50 and 50/10 ratios. These ratios have the additional benefit of being straightforward to interpret: the 90/10 ratio is simply the 90th percentile income divided by the 10th percentile income, and likewise for the other ratios we report. Other common inequality measures such as the Gini coefficient are much less intuitive.

**Simulations of Inequality**

We re-estimate the income distribution and measures of inequality under two counterfactual scenarios in which poverty and deep poverty are eliminated. These provide context for understanding how shifts in the factors related to inequality may change the picture of income in California. To do this, however, requires a number of assumptions. We briefly discuss the methodological approach here.

We model how the income distribution would shift if poverty or deep poverty were eliminated. To do this, we add resources to family comprehensive income to bring all those in poverty (or deep poverty) to precisely the poverty level income as measured by their CPM poverty threshold (or one-half of the threshold). We then recalculate percentiles of the appropriate income distributions and comprehensive income ratios. This method holds constant the income of all other families at or above the poverty (or deep poverty) line. Note also that these simulations do not take into account necessary expenses (related to work and medical costs), which are subtracted from family resources before calculating CPM poverty status.
Appendix C: Detailed Estimates

Historical Trends in the Income Distribution

This section provides additional background on the long term trends in family income based on the 1980–2015 CPS and the 2005–2014 ACS. Both surveys contain information on income through 2014.

The first set of figures use CPS data; they complement Figure 1 in the text. Figure C1 provides historical trends in the income distribution for the US excluding California. Figure C2 plots income ratios for both California and the rest of the US (based on Figure 1 of the report and Figure C1).

Compared to 1980, family incomes have grown more outside California than within California. Top incomes outside California (the 90th percentile) were 51 percent higher in 2014 than in 1980, compared to a 40 percent increase in California. Low incomes outside California (the 10th percentile) were 5 percent lower in 2014 than in 1980, compared to 19 percent lower in California. While the gap between high and low incomes has trended upwards throughout the country (Figure C2), increases—especially during recession periods—have been larger in California. However, gaps between middle and low income families (the 50/10 ratio) or middle and high income families (the 90/50 ratio) are relatively similar in the US and California.

FIGURE C1
Historical trend in income distribution for the US excluding California

SOURCE: Author’s calculations from Current Population Survey ASEC for the US excluding California.

NOTE: Chart shows changes in pre-tax cash or “official” income at the family level. This includes income received from earnings, business, investment, retirement, unemployment insurance, cash welfare programs (SSI, TANF, GA) and other sources and does not account for taxes paid or tax credits received. See Appendix B for additional detail. These amounts are calculated at the family level, adjusted for inflation to 2014 dollars, and normalized for a family of four. In 2014 the CPS-ASEC used revised income questions, so the most recent year of data is not strictly comparable to previous years and should thus be interpreted with caution. See note 3 of the report.
FIGURE C2
Income inequality in California and the rest of the US

The next set of tables and figures use ACS data to document differences between California and the US as well as differences across various measures of income in survey data.

First, Table C1 summarizes changes in official income and income inequality for the US excluding California, complementing Table 1 of the report. As of 2014, income levels are roughly similar in the US and California up through the middle of the distribution. Top incomes are lower in the rest of the country than they are in California. However, California’s families had higher income levels across the board in 2007 than families in the rest of the country. Table C2 shows the same calculations, but bases them on work and retirement income instead of official income.
TABLE C1
Official income and income inequality in the US outside of California

<table>
<thead>
<tr>
<th>Year</th>
<th>10th percentile</th>
<th>20th percentile</th>
<th>50th percentile (median)</th>
<th>80th percentile</th>
<th>90th percentile</th>
<th>90/10</th>
<th>80/20</th>
<th>90/50</th>
<th>50/10</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007 (pre-recession peak)</td>
<td>$18,000</td>
<td>$32,000</td>
<td>74,000</td>
<td>$136,000</td>
<td>$181,000</td>
<td>10.3</td>
<td>4.2</td>
<td>2.4</td>
<td>4.2</td>
</tr>
<tr>
<td>2011 (recession low point)</td>
<td>$15,000</td>
<td>$27,000</td>
<td>68,000</td>
<td>$130,000</td>
<td>$173,000</td>
<td>11.7</td>
<td>4.7</td>
<td>2.6</td>
<td>4.6</td>
</tr>
<tr>
<td>Change during recession (2007–2011)</td>
<td>-16.0%</td>
<td>-14.4%</td>
<td>-8.2%</td>
<td>-4.6%</td>
<td>-4.0%</td>
<td>14.3%</td>
<td>11.4%</td>
<td>4.5%</td>
<td>9.4%</td>
</tr>
<tr>
<td>2014 (most recent)</td>
<td>$15,000</td>
<td>$28,000</td>
<td>69,000</td>
<td>$134,000</td>
<td>$179,000</td>
<td>11.6</td>
<td>4.7</td>
<td>2.6</td>
<td>4.5</td>
</tr>
<tr>
<td>Change during recovery (2011–2014)</td>
<td>3.7%</td>
<td>3.2%</td>
<td>1.7%</td>
<td>3.2%</td>
<td>3.0%</td>
<td>-0.7%</td>
<td>-0.0%</td>
<td>1.3%</td>
<td>-1.9%</td>
</tr>
<tr>
<td>Net change since 2007</td>
<td>-12.9%</td>
<td>-11.7%</td>
<td>-6.6%</td>
<td>-1.6%</td>
<td>-1.1%</td>
<td>13.5%</td>
<td>11.4%</td>
<td>5.9%</td>
<td>7.2%</td>
</tr>
</tbody>
</table>

SOURCES: Authors’ calculations from American Community Survey for the US excluding California.
NOTES: Dollar amounts are rounded to the nearest $1,000. Table shows pre-tax cash or “official” income. This includes income received from earnings, business, investment, retirement, unemployment insurance, cash welfare programs (SSI, TANF, GA) and other sources and does not account for taxes paid or tax credits received. See appendix for more detail. These amounts are calculated at the family level, adjusted for inflation to 2014 dollars, and normalized for a family of four.

TABLE C2
Work and retirement income, California and the rest of the US

<table>
<thead>
<tr>
<th>Year</th>
<th>10th percentile</th>
<th>20th percentile</th>
<th>50th percentile (median)</th>
<th>80th percentile</th>
<th>90th percentile</th>
<th>90/10</th>
<th>80/20</th>
<th>90/50</th>
<th>50/10</th>
</tr>
</thead>
<tbody>
<tr>
<td>California</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2007 (pre-recession peak)</td>
<td>$17,000</td>
<td>$31,000</td>
<td>$75,000</td>
<td>$152,000</td>
<td>$208,000</td>
<td>12.1</td>
<td>4.8</td>
<td>2.7</td>
<td>4.4</td>
</tr>
<tr>
<td>2011 (recession low point)</td>
<td>$12,000</td>
<td>$25,000</td>
<td>$65,000</td>
<td>$141,000</td>
<td>$195,000</td>
<td>16.5</td>
<td>5.6</td>
<td>3.0</td>
<td>5.5</td>
</tr>
<tr>
<td>Change during recession (2007–2011)</td>
<td>-30.8%</td>
<td>-20.0%</td>
<td>-13.6%</td>
<td>-7.3%</td>
<td>-6.2%</td>
<td>35.5%</td>
<td>15.9%</td>
<td>8.7%</td>
<td>24.8%</td>
</tr>
<tr>
<td>2014 (most recent)</td>
<td>$13,000</td>
<td>$26,000</td>
<td>$68,000</td>
<td>$145,000</td>
<td>$198,000</td>
<td>15.7</td>
<td>5.6</td>
<td>2.9</td>
<td>5.4</td>
</tr>
<tr>
<td>Change during recovery (2011–2014)</td>
<td>6.4%</td>
<td>3.0%</td>
<td>4.2%</td>
<td>2.7%</td>
<td>1.5%</td>
<td>-4.6%</td>
<td>-0.3%</td>
<td>-2.6%</td>
<td>-2.1%</td>
</tr>
<tr>
<td>Net change since 2007</td>
<td>-26.3%</td>
<td>-17.6%</td>
<td>-10.0%</td>
<td>-4.8%</td>
<td>-4.7%</td>
<td>29.3%</td>
<td>15.5%</td>
<td>5.8%</td>
<td>22.2%</td>
</tr>
<tr>
<td>Rest of US</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2007 (pre-recession peak)</td>
<td>$16,000</td>
<td>$31,000</td>
<td>$74,000</td>
<td>$136,000</td>
<td>$181,000</td>
<td>11.2</td>
<td>4.3</td>
<td>2.4</td>
<td>4.6</td>
</tr>
<tr>
<td>2011 (recession low point)</td>
<td>$13,000</td>
<td>$27,000</td>
<td>$67,000</td>
<td>$129,000</td>
<td>$173,000</td>
<td>13.8</td>
<td>4.9</td>
<td>2.6</td>
<td>5.4</td>
</tr>
<tr>
<td>Change during recession (2007–2011)</td>
<td>-22.6%</td>
<td>-15.3%</td>
<td>-8.5%</td>
<td>-4.8%</td>
<td>-4.2%</td>
<td>23.8%</td>
<td>12.4%</td>
<td>4.8%</td>
<td>18.2%</td>
</tr>
<tr>
<td>2014 (most recent)</td>
<td>$13,000</td>
<td>$27,000</td>
<td>$69,000</td>
<td>$133,000</td>
<td>$178,000</td>
<td>13.9</td>
<td>4.9</td>
<td>2.6</td>
<td>5.4</td>
</tr>
<tr>
<td>Change during recovery (2011–2014)</td>
<td>2.6%</td>
<td>2.8%</td>
<td>2.0%</td>
<td>3.2%</td>
<td>3.1%</td>
<td>0.4%</td>
<td>0.3%</td>
<td>1.1%</td>
<td>-0.6%</td>
</tr>
<tr>
<td>Net change since 2007</td>
<td>-20.6%</td>
<td>-12.9%</td>
<td>-6.6%</td>
<td>-1.6%</td>
<td>-1.1%</td>
<td>13.5%</td>
<td>11.4%</td>
<td>5.9%</td>
<td>7.2%</td>
</tr>
</tbody>
</table>

SOURCES: Authors’ calculations from American Community Survey.
NOTES: Dollar amounts are rounded to the nearest $1,000. Table shows pre-tax cash or “official” income. This includes income received from earnings, business, investment, retirement, unemployment insurance, cash welfare programs (SSI, TANF, GA) and other sources and does not account for taxes paid or tax credits received. See Appendix B for more detail. These amounts are calculated at the family level, adjusted for inflation to 2014 dollars, and normalized for a family of four.
Figure C4 compares inequality metrics for California computed in the CPS and in the ACS for the years 2005–2014. These ratios are generally somewhat larger when computed in ACS. The differences are most pronounced in 2013 and 2014, the years in which the income questions and sample sizes are in flux in the CPS. Additional years of data will clarify how enduring this divergence is.

**FIGURE C4**
Income inequality in California, measured in CPS and ACS

![Graph showing income inequality in California, measured in CPS and ACS](image)


**NOTE:** Income ratios calculated based on "official" or pre-tax cash income. This includes income received from earnings, business, investment, retirement, unemployment insurance, cash welfare programs (SSI, TANF, GA) and other sources and does not account for taxes paid or tax credits received. These amounts are calculated at the family level, adjusted for inflation to 2014 dollars, and normalized for a family of four. See Appendix B for more detail. In 2014, the CPS-ASEC revised survey questions regarding income, which means that the most recent year of data is not strictly comparable to previous years, and should thus be interpreted with caution. See note 3 of the report for more details.

Last, Table C3 provides official income distribution and inequality estimates by county (or county group), complementing Table 3 of the report. In order to reduce the margin of error on these estimates, we pool 2013 and 2014 ACS data for these tabulations, and (in the last column) compare to 2006–2007 pooled estimates.

---

3 Counties shown grouped are not individually identifiable in the 2013 and 2014 ACS.
<table>
<thead>
<tr>
<th>County/County group</th>
<th>10th percentile</th>
<th>Median</th>
<th>90th percentile</th>
<th>90/10 ratio</th>
<th>Change in median since 2006–07</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alameda</td>
<td>$19,000</td>
<td>$90,000</td>
<td>$233,000</td>
<td>12.1</td>
<td>-3.8%</td>
</tr>
<tr>
<td>Alpine-Amador-Calaveras-Inyo-Marioposa-Mono-Tuolomne</td>
<td>12,000</td>
<td>71,000</td>
<td>82,000</td>
<td>15.2</td>
<td>-3.9%</td>
</tr>
<tr>
<td>Butte</td>
<td>12,000</td>
<td>55,000</td>
<td>156,000</td>
<td>13.0</td>
<td>-7.7%</td>
</tr>
<tr>
<td>Colusa-Glenn-Tehama-Trinity</td>
<td>16,000</td>
<td>57,000</td>
<td>159,000</td>
<td>9.9</td>
<td>-3.0%</td>
</tr>
<tr>
<td>Contra Costa</td>
<td>23,000</td>
<td>97,000</td>
<td>237,000</td>
<td>10.5</td>
<td>-8.0%</td>
</tr>
<tr>
<td>Del Norte-Lassen-Moc-Plumas-Siskiyou-Nevada-Sierra</td>
<td>10,000</td>
<td>61,000</td>
<td>163,000</td>
<td>17.1</td>
<td>-10.1%</td>
</tr>
<tr>
<td>El Dorado</td>
<td>20,000</td>
<td>91,000</td>
<td>224,000</td>
<td>11.2</td>
<td>-10.2%</td>
</tr>
<tr>
<td>Fresno</td>
<td>9,000</td>
<td>44,000</td>
<td>144,000</td>
<td>16.5</td>
<td>-19.5%</td>
</tr>
<tr>
<td>Humboldt</td>
<td>11,000</td>
<td>52,000</td>
<td>149,000</td>
<td>13.6</td>
<td>-12.6%</td>
</tr>
<tr>
<td>Imperial</td>
<td>6,000</td>
<td>45,000</td>
<td>133,000</td>
<td>21.0</td>
<td>-4.7%</td>
</tr>
<tr>
<td>Kern</td>
<td>10,000</td>
<td>49,000</td>
<td>149,000</td>
<td>14.6</td>
<td>-8.0%</td>
</tr>
<tr>
<td>Kings</td>
<td>0</td>
<td>41,000</td>
<td>128,000</td>
<td>n/a</td>
<td>-14.3%</td>
</tr>
<tr>
<td>Lake-Mendocino</td>
<td>12,000</td>
<td>51,000</td>
<td>161,000</td>
<td>13.8</td>
<td>-13.2%</td>
</tr>
<tr>
<td>Los Angeles</td>
<td>15,000</td>
<td>60,000</td>
<td>186,000</td>
<td>12.8</td>
<td>-8.3%</td>
</tr>
<tr>
<td>Madera</td>
<td>5,000</td>
<td>45,000</td>
<td>125,000</td>
<td>23.1</td>
<td>-9.8%</td>
</tr>
<tr>
<td>Marin</td>
<td>24,000</td>
<td>126,000</td>
<td>311,000</td>
<td>13.0</td>
<td>-2.5%</td>
</tr>
<tr>
<td>Merced</td>
<td>11,000</td>
<td>42,000</td>
<td>129,000</td>
<td>11.3</td>
<td>-17.4%</td>
</tr>
<tr>
<td>Monterey-San Benito</td>
<td>14,000</td>
<td>57,000</td>
<td>178,000</td>
<td>12.8</td>
<td>-16.5%</td>
</tr>
<tr>
<td>Napa</td>
<td>24,000</td>
<td>83,000</td>
<td>224,000</td>
<td>9.4</td>
<td>-0.1%</td>
</tr>
<tr>
<td>Orange</td>
<td>20,000</td>
<td>82,000</td>
<td>220,000</td>
<td>11.2</td>
<td>-9.3%</td>
</tr>
<tr>
<td>Placer</td>
<td>26,000</td>
<td>101,000</td>
<td>219,000</td>
<td>8.5</td>
<td>-3.5%</td>
</tr>
<tr>
<td>Riverside</td>
<td>15,000</td>
<td>61,000</td>
<td>163,000</td>
<td>10.6</td>
<td>-13.7%</td>
</tr>
<tr>
<td>Sacramento</td>
<td>15,000</td>
<td>65,000</td>
<td>182,000</td>
<td>12.5</td>
<td>-15.3%</td>
</tr>
<tr>
<td>San Bernardino</td>
<td>12,000</td>
<td>55,000</td>
<td>155,000</td>
<td>13.2</td>
<td>-18.4%</td>
</tr>
<tr>
<td>San Diego</td>
<td>17,000</td>
<td>74,000</td>
<td>200,000</td>
<td>11.9</td>
<td>-9.6%</td>
</tr>
<tr>
<td>San Francisco</td>
<td>19,000</td>
<td>100,000</td>
<td>283,000</td>
<td>14.9</td>
<td>3.3%</td>
</tr>
<tr>
<td>San Joaquin</td>
<td>13,000</td>
<td>57,000</td>
<td>157,000</td>
<td>12.0</td>
<td>-16.1%</td>
</tr>
<tr>
<td>San Luis Obispo</td>
<td>10,000</td>
<td>73,000</td>
<td>196,000</td>
<td>20.4</td>
<td>-5.9%</td>
</tr>
<tr>
<td>San Mateo</td>
<td>30,000</td>
<td>114,000</td>
<td>278,000</td>
<td>9.4</td>
<td>-1.2%</td>
</tr>
<tr>
<td>Santa Barbara</td>
<td>10,000</td>
<td>61,000</td>
<td>203,000</td>
<td>20.2</td>
<td>-10.3%</td>
</tr>
<tr>
<td>Santa Clara</td>
<td>25,000</td>
<td>107,000</td>
<td>263,000</td>
<td>10.7</td>
<td>-2.7%</td>
</tr>
<tr>
<td>Santa Cruz</td>
<td>13,000</td>
<td>76,000</td>
<td>217,000</td>
<td>16.8</td>
<td>-9.8%</td>
</tr>
<tr>
<td>Shasta</td>
<td>13,000</td>
<td>59,000</td>
<td>153,000</td>
<td>11.9</td>
<td>-10.7%</td>
</tr>
<tr>
<td>Solano</td>
<td>16,000</td>
<td>79,000</td>
<td>190,000</td>
<td>11.7</td>
<td>-8.4%</td>
</tr>
<tr>
<td>Sonoma</td>
<td>22,000</td>
<td>81,000</td>
<td>206,000</td>
<td>9.3</td>
<td>-10.1%</td>
</tr>
<tr>
<td>Stanislaus</td>
<td>14,000</td>
<td>55,000</td>
<td>153,000</td>
<td>11.1</td>
<td>-17.6%</td>
</tr>
<tr>
<td>Sutter-Yuba</td>
<td>16,000</td>
<td>54,000</td>
<td>138,000</td>
<td>8.8</td>
<td>-13.5%</td>
</tr>
<tr>
<td>Tulare</td>
<td>10,000</td>
<td>40,000</td>
<td>124,000</td>
<td>12.5</td>
<td>-17.7%</td>
</tr>
<tr>
<td>Ventura</td>
<td>21,000</td>
<td>84,000</td>
<td>212,000</td>
<td>9.9</td>
<td>-9.8%</td>
</tr>
<tr>
<td>Yolo</td>
<td>4,000</td>
<td>62,000</td>
<td>191,000</td>
<td>n/a</td>
<td>-16.4%</td>
</tr>
</tbody>
</table>

SOURCES: Authors’ calculations from American Community Survey for California.

NOTES: Dollar amounts are rounded to the nearest $1,000. Table shows “official” or pre-tax cash income from earnings, business, investment, retirement, unemployment insurance, cash welfare programs (SSI, TANF, GA) and other sources and does not account for taxes paid or tax credits received. These amounts are calculated at the family level, adjusted for inflation to 2014 dollars, and normalized for a family of four. See Appendix B for more detail. Counties shown in groups cannot be individually identified in the ACS.
Detailed Estimates of Family Resources, 2012–2013

This section provides detailed estimates for the work and retirement income (WRI), after-tax WRI, and comprehensive income (CI) distributions as calculated in the 2012–2013 CPM. These detailed estimates underlie or complement analyses in the report.

The first set of tables and figures provide detailed estimates for Figure 2 of the report. Table C4 shows percentiles of the income distribution using the three income definitions. At the low end of the CI distribution benefits from safety net programs shift the distribution up. Beginning at the 40th percentile, the CI distribution is compressed relative to the WRI distribution; this reflects the effect of taxes. The after-tax WRI distribution shows the effect of taxes alone on work and retirement income. The histograms (Figure C5 and Figure C6) plot the first and last distributions (WRI and CI) in more detail, first showing all families below the 90th percentile (for scale) and then showing all families up to the median of income.

**TABLE C4**
Distributions of work and retirement income, after-tax work and Retirement income, and comprehensive income

<table>
<thead>
<tr>
<th>Percentile</th>
<th>Work and retirement Income (WRI)</th>
<th>After-tax WRI</th>
<th>Comprehensive income</th>
</tr>
</thead>
<tbody>
<tr>
<td>10th</td>
<td>$13,000</td>
<td>$12,000</td>
<td>$21,000</td>
</tr>
<tr>
<td>20th</td>
<td>$27,000</td>
<td>$25,000</td>
<td>$32,000</td>
</tr>
<tr>
<td>30th</td>
<td>$39,000</td>
<td>$37,000</td>
<td>$41,000</td>
</tr>
<tr>
<td>40th</td>
<td>$54,000</td>
<td>$49,000</td>
<td>$51,000</td>
</tr>
<tr>
<td>50th</td>
<td>$71,000</td>
<td>$63,000</td>
<td>$64,000</td>
</tr>
<tr>
<td>60th</td>
<td>$92,000</td>
<td>$78,000</td>
<td>$79,000</td>
</tr>
<tr>
<td>70th</td>
<td>$118,000</td>
<td>$97,000</td>
<td>$98,000</td>
</tr>
<tr>
<td>80th</td>
<td>$155,000</td>
<td>$123,000</td>
<td>$123,000</td>
</tr>
<tr>
<td>90th</td>
<td>$222,000</td>
<td>$169,000</td>
<td>$169,000</td>
</tr>
</tbody>
</table>

**SOURCES:** Authors’ calculations from pooled 2012 and 2013 CPM data

**NOTES:** All dollar amounts are rounded to the nearest $1,000, adjusted to 2013 dollars and normalized to represent a four member family. Percentile of the distribution is calculated at the family level.
FIGURE C5
Distribution of income up to the 90th percentile

SOURCES: Authors’ calculations from pooled 2012 and 2013 CPM data.
NOTES: All dollar amounts are adjusted to 2013 dollars and normalized to account for family size. Percentile of the distribution is calculated at the family level.

FIGURE C6
Distribution of income up to the 50th percentile

SOURCES: Authors’ calculations from pooled 2012 and 2013 CPM data.
NOTES: All dollar amounts are adjusted to 2013 dollars and normalized to account for family size. Percentile of the distribution is calculated at the family level.
Table C5 presents within-decile mean amounts and mean shares of CI from safety net programs and groups of programs. Due to top coding in the data, means are not calculated for the 10th decile. These estimates supplement Table 4 of the report.

**TABLE C5**

Mean dollar amounts and mean share of comprehensive income from grouped income sources

<table>
<thead>
<tr>
<th>Decile:</th>
<th>1st</th>
<th>2nd</th>
<th>3rd</th>
<th>4th</th>
<th>5th</th>
<th>6th</th>
<th>7th</th>
<th>8th</th>
<th>9th</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mean amount</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>After-tax work and retirement (WRI)</td>
<td>$7,000</td>
<td>$19,500</td>
<td>$29,500</td>
<td>$42,000</td>
<td>$55,000</td>
<td>$70,500</td>
<td>$87,500</td>
<td>$109,000</td>
<td>$142,500</td>
</tr>
<tr>
<td>EITC / CTC</td>
<td>$500</td>
<td>$1,500</td>
<td>$2,000</td>
<td>$1,500</td>
<td>$500</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
</tr>
<tr>
<td>SSI</td>
<td>$1,000</td>
<td>$2,000</td>
<td>$1,500</td>
<td>$1,000</td>
<td>$500</td>
<td>$500</td>
<td>$500</td>
<td>$500</td>
<td>$500</td>
</tr>
<tr>
<td>Nutrition assistance</td>
<td>$1,000</td>
<td>$2,000</td>
<td>$1,500</td>
<td>$1,000</td>
<td>$500</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
</tr>
<tr>
<td>Rental assistance</td>
<td>$500</td>
<td>$1,500</td>
<td>$1,500</td>
<td>$500</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
</tr>
<tr>
<td>CalWORKs / GA</td>
<td>$500</td>
<td>$500</td>
<td>$500</td>
<td>$500</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
</tr>
</tbody>
</table>

| **Mean share** |     |     |     |     |     |     |     |     |     |
| After-tax work and retirement (WRI) | 65.8% | 73.2% | 81.3% | 90.8% | 96.1% | 98.3% | 99.0% | 99.4% | 99.6% |
| EITC/CTC | 3.2% | 4.8% | 4.9% | 2.9% | 1.2% | 0.4% | 0.1% | 0.0% | 0.0% |
| SSI | 7.2% | 7.1% | 3.8% | 1.9% | 1.3% | 0.8% | 0.6% | 0.4% | 0.3% |
| Nutrition assistance | 17.5% | 6.6% | 4.6% | 2.6% | 1.0% | 0.4% | 0.2% | 0.1% | 0.0% |
| Rental assistance | 3.0% | 5.7% | 3.8% | 0.9% | 0.1% | 0.0% | 0.0% | 0.0% | 0.0% |
| CalWORKs, GA | 3.3% | 2.5% | 1.6% | 0.9% | 0.4% | 0.2% | 0.1% | 0.1% | 0.0% |

SOURCES: Authors’ calculations from the 2012–2013 CPM.

NOTES: Means are calculated for comprehensive incomes within each decile. Due to top coding in the data, the 10th decile is not shown. All dollar amounts are rounded to the nearest $500, adjusted to 2013 dollars and normalized to represent a four member family. Percentages may not sum to 100. Nutrition assistance includes CalFresh, the school breakfast program, the National School Lunch Program, and WIC.

Next, Table C6 provides inequality metrics (90/10, 80/20, 90/50, and 50/10 ratios) for the three income concepts. The last two columns present the percent change in these metrics, comparing the WRI to the after-tax WRI and the after-tax WRI to the CI distributions. These estimates supplement Table 5 of the report.

**TABLE C6**

Inequality metrics for the work and retirement income, after-tax work and retirement income, and comprehensive income distributions

<table>
<thead>
<tr>
<th>Inequality metric</th>
<th>Work and Retirement Income (WRI)</th>
<th>After-Tax WRI</th>
<th>Comprehensive Income</th>
<th>Change, WRI to After-Tax WRI</th>
<th>Change, After-Tax WRI to CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>90/10</td>
<td>17.0</td>
<td>13.5</td>
<td>8.1</td>
<td>-20.4%</td>
<td>-40.1%</td>
</tr>
<tr>
<td>80/20</td>
<td>5.8</td>
<td>4.9</td>
<td>3.9</td>
<td>-16.8%</td>
<td>-20.8%</td>
</tr>
<tr>
<td>90/50</td>
<td>3.1</td>
<td>2.7</td>
<td>2.6</td>
<td>-14.3%</td>
<td>-1.9%</td>
</tr>
<tr>
<td>50/10</td>
<td>5.4</td>
<td>5.0</td>
<td>3.1</td>
<td>-7.2%</td>
<td>-38.9%</td>
</tr>
</tbody>
</table>

SOURCES: Authors’ calculations from pooled 2012 and 2013 CPM data

NOTES: All dollar amounts are rounded to the nearest $1,000, adjusted to 2013 dollars and normalized to represent a four member family. Percentile of the distribution is calculated at the family level.
Table C7 shows percentiles of the after-tax WRI and CI distributions and inequality metrics within the three largest counties (Los Angeles, Orange, and San Diego) and six groups of the remaining 55 counties.

### TABLE C7
After-tax work and retirement and comprehensive income distributions and inequality within regions

<table>
<thead>
<tr>
<th>Region</th>
<th>10th percentile</th>
<th>20th percentile</th>
<th>Median</th>
<th>80th percentile</th>
<th>90th percentile</th>
<th>90/10 ratio</th>
<th>80/20 ratio</th>
<th>50/10 ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A. After-tax work and retirement income</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Northern Region</td>
<td>$9,000</td>
<td>$21,000</td>
<td>$52,000</td>
<td>$99,000</td>
<td>$133,000</td>
<td>14.6</td>
<td>4.7</td>
<td>5.7</td>
</tr>
<tr>
<td>Sacramento Area</td>
<td>$11,000</td>
<td>$25,000</td>
<td>$63,000</td>
<td>$117,000</td>
<td>$155,000</td>
<td>13.6</td>
<td>4.6</td>
<td>5.5</td>
</tr>
<tr>
<td>Bay Area</td>
<td>$17,000</td>
<td>$33,000</td>
<td>$81,000</td>
<td>$153,000</td>
<td>$212,000</td>
<td>12.2</td>
<td>4.6</td>
<td>4.7</td>
</tr>
<tr>
<td>Central Valley and Sierra</td>
<td>$9,000</td>
<td>$19,000</td>
<td>$48,000</td>
<td>$96,000</td>
<td>$129,000</td>
<td>14.8</td>
<td>5.0</td>
<td>5.5</td>
</tr>
<tr>
<td>Central Coast Region</td>
<td>$13,000</td>
<td>$26,000</td>
<td>$61,000</td>
<td>$122,000</td>
<td>$165,000</td>
<td>12.2</td>
<td>4.7</td>
<td>4.5</td>
</tr>
<tr>
<td>Inland Empire</td>
<td>$13,000</td>
<td>$25,000</td>
<td>$57,000</td>
<td>$109,000</td>
<td>$145,000</td>
<td>11.5</td>
<td>4.4</td>
<td>4.5</td>
</tr>
<tr>
<td>Los Angeles County</td>
<td>$11,000</td>
<td>$22,000</td>
<td>$56,000</td>
<td>$114,000</td>
<td>$158,000</td>
<td>14.9</td>
<td>5.1</td>
<td>5.3</td>
</tr>
<tr>
<td>Orange County</td>
<td>$17,000</td>
<td>$31,000</td>
<td>$74,000</td>
<td>$138,000</td>
<td>$189,000</td>
<td>11.4</td>
<td>4.5</td>
<td>4.5</td>
</tr>
<tr>
<td>San Diego County</td>
<td>$13,000</td>
<td>$28,000</td>
<td>$66,000</td>
<td>$124,000</td>
<td>$167,000</td>
<td>13.0</td>
<td>4.4</td>
<td>5.1</td>
</tr>
<tr>
<td><strong>B. Comprehensive income</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Northern Region</td>
<td>$18,000</td>
<td>$27,000</td>
<td>$54,000</td>
<td>$99,000</td>
<td>$133,000</td>
<td>7.4</td>
<td>3.7</td>
<td>3.0</td>
</tr>
<tr>
<td>Sacramento Area</td>
<td>$21,000</td>
<td>$32,000</td>
<td>$64,000</td>
<td>$118,000</td>
<td>$156,000</td>
<td>7.5</td>
<td>3.7</td>
<td>3.1</td>
</tr>
<tr>
<td>Bay Area</td>
<td>$25,000</td>
<td>$38,000</td>
<td>$82,000</td>
<td>$153,000</td>
<td>$212,000</td>
<td>8.6</td>
<td>4.1</td>
<td>3.3</td>
</tr>
<tr>
<td>Central Valley and Sierra</td>
<td>$19,000</td>
<td>$28,000</td>
<td>$51,000</td>
<td>$96,000</td>
<td>$129,000</td>
<td>6.9</td>
<td>3.5</td>
<td>2.7</td>
</tr>
<tr>
<td>Central Coast Region</td>
<td>$19,000</td>
<td>$30,000</td>
<td>$62,000</td>
<td>$122,000</td>
<td>$165,000</td>
<td>8.8</td>
<td>4.0</td>
<td>3.3</td>
</tr>
<tr>
<td>Inland Empire</td>
<td>$21,000</td>
<td>$31,000</td>
<td>$59,000</td>
<td>$109,000</td>
<td>$145,000</td>
<td>6.9</td>
<td>3.5</td>
<td>2.8</td>
</tr>
<tr>
<td>Los Angeles County</td>
<td>$20,000</td>
<td>$30,000</td>
<td>$58,000</td>
<td>$114,000</td>
<td>$158,000</td>
<td>7.9</td>
<td>3.8</td>
<td>2.9</td>
</tr>
<tr>
<td>Orange County</td>
<td>$23,000</td>
<td>$36,000</td>
<td>$75,000</td>
<td>$139,000</td>
<td>$189,000</td>
<td>8.4</td>
<td>3.9</td>
<td>3.3</td>
</tr>
<tr>
<td>San Diego County</td>
<td>$20,000</td>
<td>$33,000</td>
<td>$66,000</td>
<td>$124,000</td>
<td>$167,000</td>
<td>8.4</td>
<td>3.7</td>
<td>3.3</td>
</tr>
</tbody>
</table>

SOURCES: Authors’ calculations from the 2012–2013 CPM.

NOTES: Regions defined as Northern: Butte, Colusa, Del Norte, Glenn, Humboldt, Lake, Lassen, Mendocino, Modoc, Nevada, Plumas, Shasta, Sierra, Siskiyou, Tehama, Trinity; Central Valley & Sierra: Alpine, Amador, Calaveras, Fresno, Inyo, Kern, Kings, Madera, Mariposa, Merced, Mono, San Joaquin, Stanislaus, Tulare, Tuolumne; Sacramento: El Dorado, Placer, Sacramento, Sutter, Yolo, and Yuba; Bay Area: Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Santa Cruz, Solano, Sonoma; Central Coast: Monterey, San Benito, San Luis Obispo, Santa Barbara, Ventura; Inland Empire: Imperial, Riverside, San Bernardino. Los Angeles, Orange and San Diego counties shown separately. All dollar amounts are adjusted to 2013, rounded to the nearest $1,000, and normalized to represent a four member family. For definitions of income, see Appendix B.

Table C8 provides details of the deep poverty and poverty simulations, which are discussed in the third section of the report. The first column shows baseline percentiles and income ratios for the CI distribution. The next two columns provide results from two simulations. Both of these scenarios are static or “accounting” simulations, that assume no other changes to family resources except for the one considered.

In the first simulation, families with CI below half the poverty threshold (in deep poverty) are allocated exactly enough additional resources to raise them to the deep poverty CPM threshold. Note that we do not count expenses against total resources in this simulation although CPM poverty rates are calculated by comparing net resources (total resources minus child care, commuting, and out-of-pocket medical expenses) to a poverty threshold. If we did include expenses, the amount necessary to raise a family to the relevant threshold would be higher. The second column shows that boosting the resources of families below the deep poverty threshold would not change the distribution of CI as measured by the 10th percentile and above. In other words, families in deep poverty have...
income below the 10th percentile. At the same time, on average families living below half of the CPM poverty threshold are allocated $5,000 in this simulation (bottom row). Although this simulation allocates substantial resources to families in deep poverty, because it affects a small share of all families in the state, it does not alter inequality as measured by several standard metrics.

The final column repeats this simulation, but allocates enough resources to boost all families below 100 percent of the CPM poverty threshold to precisely poverty level. This simulation affects more families and does increase the 10th and 20th percentiles of the CI distribution, as well as lower income ratios. On average, families below poverty are allocated $8,000 to boost them exactly to the poverty threshold.

**TABLE C8**
Simulations: Allocation of resources to move all families to deep poverty and to poverty threshold

<table>
<thead>
<tr>
<th></th>
<th>Comprehensive income (actual)</th>
<th>Raise those below half the poverty threshold to half the poverty threshold</th>
<th>Raise those in poverty to poverty threshold</th>
</tr>
</thead>
<tbody>
<tr>
<td>90th percentile</td>
<td>$169,000</td>
<td>$169,000</td>
<td>$169,000</td>
</tr>
<tr>
<td>80th percentile</td>
<td>$123,000</td>
<td>$123,000</td>
<td>$123,000</td>
</tr>
<tr>
<td>Median</td>
<td>$64,000</td>
<td>$64,000</td>
<td>$64,000</td>
</tr>
<tr>
<td>20th percentile</td>
<td>$32,000</td>
<td>$32,000</td>
<td>$34,000</td>
</tr>
<tr>
<td>10th percentile</td>
<td>$21,000</td>
<td>$21,000</td>
<td>$29,000</td>
</tr>
<tr>
<td>90/10 ratio</td>
<td>8.1</td>
<td>8.1</td>
<td>5.9</td>
</tr>
<tr>
<td>80/20 ratio</td>
<td>3.9</td>
<td>3.9</td>
<td>3.6</td>
</tr>
<tr>
<td>50/10 ratio</td>
<td>3.1</td>
<td>3.1</td>
<td>2.2</td>
</tr>
<tr>
<td>Mean amount transferred</td>
<td>–</td>
<td>$5,000</td>
<td>$8,000</td>
</tr>
</tbody>
</table>

**SOURCES:** Authors’ calculations from the 2012–2013 CPM.

**NOTES:** Percentiles of comprehensive income shown. All dollar amounts are rounded to the nearest $1,000, adjusted to 2013 dollars and normalized to represent a 4 member family. Percentiles are calculated at the family level. Scenarios assume no changes in the income distribution aside from the amounts assigned to those in poverty and in deep poverty.
Table C9 undergirds Figure 3 of the report, providing more detail on how individual social safety net programs affect the income distribution. The table shows percentiles of the income distribution and inequality metrics beginning with WRI and then adding individual safety net programs or groups of programs (one at a time rather than additively). These calculations are static or “accounting” in the sense that we add or subtract program benefits from family resources and do not take into account any behavioral or dynamic responses.

### TABLE C9
Income distributions for varying income concepts

<table>
<thead>
<tr>
<th>After-tax work and retirement income (WRI)</th>
<th>10th percentile</th>
<th>20th percentile</th>
<th>Median</th>
<th>80th percentile</th>
<th>90th percentile</th>
<th>90/10 ratio</th>
<th>80/20 ratio</th>
<th>50/10 ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>After-tax WRI + CalWORKs, GA</td>
<td>$13,000</td>
<td>$26,000</td>
<td>$63,000</td>
<td>$123,000</td>
<td>$169,000</td>
<td>12.6</td>
<td>4.7</td>
<td>4.7</td>
</tr>
<tr>
<td>After-tax WRI + rental housing assistance</td>
<td>$14,000</td>
<td>$26,000</td>
<td>$63,000</td>
<td>$123,000</td>
<td>$169,000</td>
<td>11.7</td>
<td>4.7</td>
<td>4.4</td>
</tr>
<tr>
<td>After-tax WRI + EITC/CTC</td>
<td>$14,000</td>
<td>$27,000</td>
<td>$63,000</td>
<td>$123,000</td>
<td>$169,000</td>
<td>12.2</td>
<td>4.5</td>
<td>4.5</td>
</tr>
<tr>
<td>After-tax WRI + CalFresh, WIC, and school meals</td>
<td>$15,000</td>
<td>$27,000</td>
<td>$63,000</td>
<td>$123,000</td>
<td>$169,000</td>
<td>11.4</td>
<td>4.5</td>
<td>4.3</td>
</tr>
<tr>
<td>After-tax WRI + SSI</td>
<td>$15,000</td>
<td>$26,000</td>
<td>$63,000</td>
<td>$123,000</td>
<td>$169,000</td>
<td>11.1</td>
<td>4.7</td>
<td>4.1</td>
</tr>
<tr>
<td>Comprehensive Income</td>
<td>$21,000</td>
<td>$32,000</td>
<td>$64,000</td>
<td>$123,000</td>
<td>$169,000</td>
<td>8.1</td>
<td>3.9</td>
<td>3.1</td>
</tr>
</tbody>
</table>

**SOURCES:** Authors’ calculations from the 2012–2013 CPM.

**NOTES:** All dollar amounts are rounded to the nearest $1,000, adjusted to 2013 dollars and normalized to represent a four member family. Percentiles are calculated separately for each income concept shown in the table and are calculated at the family level. Nutrition assistance includes CalFresh, the school breakfast program, the National School Lunch Program, and WIC.

Table C10 provides additional information to complement Figures 4, 5, and 6 of the report. The table shows various estimates of overrepresentation in the low end of the income distribution among sub-groups of families with specified socioeconomic characteristics. Column 1 shows the share of each type of family with after-tax WRI that places them in the bottom quintile (below the 20th percentile) of the distribution. By construction, 20 percent of all families statewide are in the first quintile. However, some sub-groups are overrepresented in the bottom quintile and some are underrepresented. The most overrepresented groups are single parents, families with less than a high school education, and families with adults who are either not in the labor force or who are unemployed. The most underrepresented groups are families with multiple adults and no children, families with a college degree or higher, and families with full-time work.

Column 2 of Table C10 then judges families’ placement in the after-tax WRI distribution by comparing their CI to the after-tax WRI distribution. In effect, this holds the after-tax WRI distribution constant while adding resources from the social safety net to family incomes. We note that this exercise simply takes into account additional resources from the social safety net as families actually use it in California. It assumes no change in the social safety net (e.g., expansion, higher take-up, etc.) or dynamic response (e.g., more or less earnings). Because resources from the social safety net are either zero or positive, families can only move up in the after-tax WRI in this exercise. Because social safety net programs essentially assist only families in the bottom half of the income distribution, we focus on shifts up from the first quintile.

Column 2 indicates that social safety net resources move 6 percent (rounded) of all families that start the first quintile above the first quintile of the after-tax WRI distribution. Column 3 categorizes the change for each sub-
group as either more than that for all families (105% or greater the percent change for all families), the same as for all families (95%–105% of the all families percent change), or less than that for all families (under 95% of the all families percent change). Columns 4 and 5 indicate whether families in a particular sub-group are overrepresented in the first quintile of the after-tax WRI distribution when judged by their after-tax WRI, and whether families in a particular sub-group are overrepresented in the first quintile of the after-tax WRI distribution when judged by their CI.
<table>
<thead>
<tr>
<th>TABLE C10</th>
<th>Overrepresentation of families in the bottom quintile of WRI distribution, by selected characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(1) Share in first quintile of the after-tax WRI distribution</td>
</tr>
<tr>
<td>All families</td>
<td>20%</td>
</tr>
<tr>
<td><strong>Youngest child</strong></td>
<td></td>
</tr>
<tr>
<td>Age 5 or under</td>
<td>26%</td>
</tr>
<tr>
<td>Between ages 6 and 12</td>
<td>21%</td>
</tr>
<tr>
<td>Between ages 13 and 17</td>
<td>17%</td>
</tr>
<tr>
<td><strong>Family composition</strong></td>
<td></td>
</tr>
<tr>
<td>One adult, one or more children</td>
<td>44%</td>
</tr>
<tr>
<td>One adult, no children</td>
<td>28%</td>
</tr>
<tr>
<td>Two or more adults, one or more children</td>
<td>19%</td>
</tr>
<tr>
<td>Two or more adults, no children</td>
<td>9%</td>
</tr>
<tr>
<td><strong>Level of education (highest within family)</strong></td>
<td></td>
</tr>
<tr>
<td>Less than high school</td>
<td>52%</td>
</tr>
<tr>
<td>High school graduate</td>
<td>31%</td>
</tr>
<tr>
<td>Some college</td>
<td>21%</td>
</tr>
<tr>
<td>College degree or higher</td>
<td>8%</td>
</tr>
<tr>
<td><strong>Employment status (among adults age 25–64)</strong></td>
<td></td>
</tr>
<tr>
<td>Not in the labor force (NILF)</td>
<td>57%</td>
</tr>
<tr>
<td>Unemployed</td>
<td>58%</td>
</tr>
<tr>
<td>Part-time work</td>
<td>40%</td>
</tr>
<tr>
<td>Full-time work</td>
<td>7%</td>
</tr>
<tr>
<td><strong>Immigration status (oldest family member)</strong></td>
<td></td>
</tr>
<tr>
<td>Immigrant non-citizen</td>
<td>33%</td>
</tr>
<tr>
<td>Citizen born in the United States</td>
<td>17%</td>
</tr>
<tr>
<td>Naturalized citizen or born abroad citizen</td>
<td>18%</td>
</tr>
<tr>
<td><strong>Race/ethnicity (oldest family member)</strong></td>
<td></td>
</tr>
<tr>
<td>White, not Latino</td>
<td>14%</td>
</tr>
<tr>
<td>Black, not Latino</td>
<td>30%</td>
</tr>
<tr>
<td>Latino, any race</td>
<td>28%</td>
</tr>
<tr>
<td>Asian, not Latino</td>
<td>18%</td>
</tr>
<tr>
<td>Other, not Latino</td>
<td>24%</td>
</tr>
<tr>
<td>Geographic region</td>
<td>(1)</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>-----</td>
</tr>
<tr>
<td>Share in first quintile of the after-tax WRI distribution</td>
<td>24%</td>
</tr>
<tr>
<td>Share in first quintile of after-tax WRI distribution after adding social safety net resources (Comprehensive Income)</td>
<td>20%</td>
</tr>
<tr>
<td>Share in first quintile of after-tax WRI distribution after adding social safety net resources (Comprehensive Income)</td>
<td>15%</td>
</tr>
<tr>
<td>Share in first quintile of after-tax WRI distribution after adding social safety net resources (Comprehensive Income)</td>
<td>27%</td>
</tr>
<tr>
<td>Share in first quintile of after-tax WRI distribution after adding social safety net resources (Comprehensive Income)</td>
<td>20%</td>
</tr>
<tr>
<td>Share in first quintile of after-tax WRI distribution after adding social safety net resources (Comprehensive Income)</td>
<td>21%</td>
</tr>
<tr>
<td>Share in first quintile of after-tax WRI distribution after adding social safety net resources (Comprehensive Income)</td>
<td>23%</td>
</tr>
<tr>
<td>Share in first quintile of after-tax WRI distribution after adding social safety net resources (Comprehensive Income)</td>
<td>16%</td>
</tr>
<tr>
<td>Share in first quintile of after-tax WRI distribution after adding social safety net resources (Comprehensive Income)</td>
<td>18%</td>
</tr>
</tbody>
</table>

SOURCE: Authors’ calculations from pooled 2012 and 2013 CPM data.

NOTE: Quintile cut points defined using statewide WRI distribution. In column 3, "more" indicates change that is greater than 1.05 times the overall change, and "less" indicates change that is less than 0.95 times as much the overall change.
Table C11 provides median income based on the three main concepts for each socioeconomic sub-group we
analyze, which complements the preceding table as well as Table 6 of the report. Overall, WRI median income is
highest ($71,000), while after-tax WRI and CI median incomes are quite similar ($64,000 vs. $63,000). Across
sub-groups CI is markedly higher than after-tax WRI for groups with relatively low median incomes. Judged by
CI, median income for the sub-groups we consider ranges down to $28,000 for those who are unemployed or out
of the labor force and up to $102,000 for those with a college degree or higher.

**TABLE C11**

<table>
<thead>
<tr>
<th>Median Income within Demographic Groups</th>
<th>Work and retirement income (WRI)</th>
<th>After-tax WRI</th>
<th>Comprehensive income</th>
</tr>
</thead>
<tbody>
<tr>
<td>All persons</td>
<td>$71,000</td>
<td>$64,000</td>
<td>$63,000</td>
</tr>
<tr>
<td><strong>Youngest child</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age 5 or under</td>
<td>52,000</td>
<td>48,000</td>
<td>52,000</td>
</tr>
<tr>
<td>Between ages 6 and 12</td>
<td>62,000</td>
<td>56,000</td>
<td>58,000</td>
</tr>
<tr>
<td>Between ages 13 and 17</td>
<td>71,000</td>
<td>63,000</td>
<td>64,000</td>
</tr>
<tr>
<td><strong>Family composition</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>One adult, one or more children</td>
<td>33,000</td>
<td>31,000</td>
<td>41,000</td>
</tr>
<tr>
<td>One adult, no children</td>
<td>54,000</td>
<td>48,000</td>
<td>49,000</td>
</tr>
<tr>
<td>Two or more adults, one or more children</td>
<td>64,000</td>
<td>58,000</td>
<td>60,000</td>
</tr>
<tr>
<td>Two or more adults, no children</td>
<td>105,000</td>
<td>91,000</td>
<td>92,000</td>
</tr>
<tr>
<td><strong>Level of education (highest within family)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No high school diploma</td>
<td>26,000</td>
<td>24,000</td>
<td>32,000</td>
</tr>
<tr>
<td>High school diploma</td>
<td>42,000</td>
<td>39,000</td>
<td>43,000</td>
</tr>
<tr>
<td>Some college</td>
<td>61,000</td>
<td>55,000</td>
<td>57,000</td>
</tr>
<tr>
<td>College degree or higher</td>
<td>125,000</td>
<td>102,000</td>
<td>102,000</td>
</tr>
<tr>
<td><strong>Employment status (among adults age 25–64)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not in the labor force</td>
<td>19,000</td>
<td>19,000</td>
<td>28,000</td>
</tr>
<tr>
<td>Unemployed</td>
<td>19,000</td>
<td>19,000</td>
<td>29,000</td>
</tr>
<tr>
<td>Part-time work</td>
<td>36,000</td>
<td>33,000</td>
<td>38,000</td>
</tr>
<tr>
<td>Full-time work</td>
<td>96,000</td>
<td>79,000</td>
<td>80,000</td>
</tr>
<tr>
<td><strong>Immigration status (oldest family member)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Immigrant non-citizen</td>
<td>40,000</td>
<td>37,000</td>
<td>41,000</td>
</tr>
<tr>
<td>Citizen born in the United States</td>
<td>82,000</td>
<td>72,000</td>
<td>73,000</td>
</tr>
<tr>
<td>Naturalized citizen or born abroad citizen</td>
<td>72,000</td>
<td>64,000</td>
<td>65,000</td>
</tr>
<tr>
<td><strong>Race/ethnicity (oldest family member)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White, not Latino</td>
<td>94,000</td>
<td>80,000</td>
<td>81,000</td>
</tr>
<tr>
<td>Black, not Latino</td>
<td>55,000</td>
<td>49,000</td>
<td>53,000</td>
</tr>
<tr>
<td>Latino, any race</td>
<td>46,000</td>
<td>41,000</td>
<td>45,000</td>
</tr>
<tr>
<td>Asian, not Latino</td>
<td>87,000</td>
<td>74,000</td>
<td>75,000</td>
</tr>
<tr>
<td>Other, not Latino</td>
<td>69,000</td>
<td>61,000</td>
<td>62,000</td>
</tr>
</tbody>
</table>

**SOURCES:** Authors’ calculations from the 2012–2013 CPM.

**NOTES:** All dollar amounts are adjusted to 2013 dollars, rounded to the nearest $1,000, and normalized to represent a four member family. Calculations are at the family level. Median income within geographic regions is shown in Table C7.
The final two tables (Table C12 and Table 13) provide results of a multivariate assessment of (1) the over- or under-representation of families in each income distribution and (2) the association family between socioeconomic characteristics and the odds of being in the bottom quintile. Essentially, these models test whether the socioeconomic characteristics of families examined above, taken together, lead to different conclusions than when taken one by one. We find little evidence of that, and for the sake of simplicity have presented univariate results in the report (Figures 4–6).

Table C12 shows the results of OLS models that regress demographic characteristics and indicators for region of residence on percentile in each of the three income distributions we consider. Percentiles are measured as 0–95 rounded to whole numbers. The samples are identical across the three distributions and include families in the 95 percentile and lower of the WRI distribution.

In general, coefficients do not vary markedly across the three models. Holding other included characteristics constant, single parent families are 6–13 percentile points lower down in the distribution than families with no children or with at least two adults and children. At the same time, families with younger children are not markedly lower in the three distributions than families with older children; the estimates are substantively small and are insignificantly different from zero for four of the six estimates.

As compared with those employed full-time, families with part-time work, who are unemployed, and who are out of the labor force are placed substantially lower in the three distributions (by 20 to 33 percentile points). Similarly, those with less than a college degree are 13 to 24 percentile points lower down in the three distributions, holding other factors constant. Looking across race/ethnicity and citizenship status, families with oldest members who are not citizens are 9–10 percentile points lower in the three distributions, while naturalized citizens are placed 5–6 percentile points lower. Families with younger adults and that have more members are lower down in the three distributions than families with fewer members and older adults. There are differences across regions in the state, but the regression-adjusted estimates are smaller than for many of the demographic variables in the models, ranging between -3 percentile points lower for Northern counties as compared with Los Angeles and +5 percentile points for the Bay Area as compared with Los Angeles.
### TABLE C12
Linear regression models of percentile in the WRI, after-tax WRI, and comprehensive income distributions

<table>
<thead>
<tr>
<th></th>
<th>(1) WRI</th>
<th>(2) After-tax WRI</th>
<th>(3) Comprehensive income</th>
</tr>
</thead>
<tbody>
<tr>
<td>One adult, no children</td>
<td>12.0*</td>
<td>10.6*</td>
<td>6.48*</td>
</tr>
<tr>
<td></td>
<td>(0.31)</td>
<td>(0.31)</td>
<td>(0.31)</td>
</tr>
<tr>
<td>Two or more adults, children</td>
<td>9.95*</td>
<td>10.0*</td>
<td>7.86*</td>
</tr>
<tr>
<td></td>
<td>(0.24)</td>
<td>(0.24)</td>
<td>(0.24)</td>
</tr>
<tr>
<td>Two or more adults, no children</td>
<td>12.9*</td>
<td>13.3*</td>
<td>11.1*</td>
</tr>
<tr>
<td></td>
<td>(0.27)</td>
<td>(0.27)</td>
<td>(0.27)</td>
</tr>
<tr>
<td>Youngest child 5 or under</td>
<td>-0.78*</td>
<td>-0.53</td>
<td>0.54*</td>
</tr>
<tr>
<td></td>
<td>(0.21)</td>
<td>(0.21)</td>
<td>(0.21)</td>
</tr>
<tr>
<td>Youngest child age 6–12</td>
<td>-0.37</td>
<td>-0.16</td>
<td>0.19</td>
</tr>
<tr>
<td></td>
<td>(0.21)</td>
<td>(0.21)</td>
<td>(0.21)</td>
</tr>
<tr>
<td>Family members: 2</td>
<td>8.47*</td>
<td>8.33*</td>
<td>7.38*</td>
</tr>
<tr>
<td></td>
<td>(0.20)</td>
<td>(0.21)</td>
<td>(0.21)</td>
</tr>
<tr>
<td>Family members: 3</td>
<td>5.20*</td>
<td>5.46*</td>
<td>5.44*</td>
</tr>
<tr>
<td></td>
<td>(0.17)</td>
<td>(0.17)</td>
<td>(0.17)</td>
</tr>
<tr>
<td>Family members: 5</td>
<td>-5.01*</td>
<td>-5.13*</td>
<td>-4.69*</td>
</tr>
<tr>
<td></td>
<td>(0.20)</td>
<td>(0.20)</td>
<td>(0.19)</td>
</tr>
<tr>
<td>Family members: 6–8</td>
<td>-8.71*</td>
<td>-8.86*</td>
<td>-7.84*</td>
</tr>
<tr>
<td></td>
<td>(0.22)</td>
<td>(0.22)</td>
<td>(0.22)</td>
</tr>
<tr>
<td>Family members: 9 or more</td>
<td>-14.0*</td>
<td>-14.3*</td>
<td>-12.1*</td>
</tr>
<tr>
<td></td>
<td>(0.52)</td>
<td>(0.52)</td>
<td>(0.53)</td>
</tr>
<tr>
<td>Family work status: no adults 25–64</td>
<td>-21.1*</td>
<td>-18.2*</td>
<td>-17.6*</td>
</tr>
<tr>
<td></td>
<td>(0.23)</td>
<td>(0.23)</td>
<td>(0.23)</td>
</tr>
<tr>
<td>Family work status: not in labor force</td>
<td>-33.1*</td>
<td>-31.0*</td>
<td>-28.9*</td>
</tr>
<tr>
<td></td>
<td>(0.19)</td>
<td>(0.19)</td>
<td>(0.19)</td>
</tr>
<tr>
<td>Family work status: unemployed</td>
<td>-30.9*</td>
<td>-29.5*</td>
<td>-28.3*</td>
</tr>
<tr>
<td></td>
<td>(0.26)</td>
<td>(0.26)</td>
<td>(0.26)</td>
</tr>
<tr>
<td>Family work status: part time</td>
<td>-21.1*</td>
<td>-20.3*</td>
<td>-20.2*</td>
</tr>
<tr>
<td></td>
<td>(0.14)</td>
<td>(0.14)</td>
<td>(0.15)</td>
</tr>
<tr>
<td>Highest Education: less than high school</td>
<td>-23.9*</td>
<td>-24.0*</td>
<td>-22.9*</td>
</tr>
<tr>
<td></td>
<td>(0.18)</td>
<td>(0.18)</td>
<td>(0.18)</td>
</tr>
<tr>
<td>Highest education: high school</td>
<td>-19.1*</td>
<td>-19.1*</td>
<td>-18.4*</td>
</tr>
<tr>
<td></td>
<td>(0.15)</td>
<td>(0.15)</td>
<td>(0.15)</td>
</tr>
<tr>
<td>Highest education: some college</td>
<td>-13.2*</td>
<td>-13.0*</td>
<td>-12.7*</td>
</tr>
<tr>
<td></td>
<td>(0.12)</td>
<td>(0.12)</td>
<td>(0.12)</td>
</tr>
<tr>
<td>Citizenship: oldest person is immigrant, non-citizen</td>
<td>-8.57*</td>
<td>-8.75*</td>
<td>-9.89*</td>
</tr>
<tr>
<td></td>
<td>(0.16)</td>
<td>(0.16)</td>
<td>(0.16)</td>
</tr>
<tr>
<td>Citizenship: oldest person is citizen born abroad or naturalized</td>
<td>-5.02*</td>
<td>-5.15*</td>
<td>-5.11*</td>
</tr>
<tr>
<td></td>
<td>(0.15)</td>
<td>(0.15)</td>
<td>(0.15)</td>
</tr>
<tr>
<td>Black, not Latino</td>
<td>-6.84*</td>
<td>-7.02*</td>
<td>-4.38*</td>
</tr>
<tr>
<td></td>
<td>(0.21)</td>
<td>(0.21)</td>
<td>(0.20)</td>
</tr>
<tr>
<td>Latino, any race</td>
<td>-5.23*</td>
<td>-5.24*</td>
<td>-5.49*</td>
</tr>
<tr>
<td></td>
<td>(0.14)</td>
<td>(0.14)</td>
<td>(0.14)</td>
</tr>
<tr>
<td>Asian, not Latino</td>
<td>-2.74*</td>
<td>-2.87*</td>
<td>-2.42*</td>
</tr>
<tr>
<td></td>
<td>(0.18)</td>
<td>(0.18)</td>
<td>(0.18)</td>
</tr>
<tr>
<td>Other, not Latino</td>
<td>-4.35*</td>
<td>-4.46*</td>
<td>-3.80*</td>
</tr>
<tr>
<td></td>
<td>(0.31)</td>
<td>(0.31)</td>
<td>(0.31)</td>
</tr>
<tr>
<td>Age of oldest member: under 25</td>
<td>-21.9*</td>
<td>-22.9*</td>
<td>-24.3*</td>
</tr>
<tr>
<td></td>
<td>(1) WRI</td>
<td>(2) After-tax WRI</td>
<td>(3) Comprehensive income</td>
</tr>
<tr>
<td>--------------------------------------</td>
<td>---------------</td>
<td>------------------</td>
<td>--------------------------</td>
</tr>
<tr>
<td></td>
<td>(0.27)</td>
<td>(0.27)</td>
<td>(0.28)</td>
</tr>
<tr>
<td>Age of oldest member: 25–34</td>
<td>-11.4*</td>
<td>-12.9*</td>
<td>-13.0*</td>
</tr>
<tr>
<td></td>
<td>(0.22)</td>
<td>(0.22)</td>
<td>(0.22)</td>
</tr>
<tr>
<td>Age of oldest member: 35–44</td>
<td>-5.60*</td>
<td>-6.81*</td>
<td>-7.05*</td>
</tr>
<tr>
<td></td>
<td>(0.20)</td>
<td>(0.20)</td>
<td>(0.20)</td>
</tr>
<tr>
<td>Age of oldest member: 45–54</td>
<td>-4.91*</td>
<td>-5.99*</td>
<td>-6.12*</td>
</tr>
<tr>
<td></td>
<td>(0.19)</td>
<td>(0.19)</td>
<td>(0.19)</td>
</tr>
<tr>
<td>Age of oldest member: 55–64</td>
<td>-4.10*</td>
<td>-4.91*</td>
<td>-4.87*</td>
</tr>
<tr>
<td></td>
<td>(0.18)</td>
<td>(0.19)</td>
<td>(0.19)</td>
</tr>
<tr>
<td>Northern counties</td>
<td>-3.46*</td>
<td>-3.30*</td>
<td>-3.61*</td>
</tr>
<tr>
<td></td>
<td>(0.28)</td>
<td>(0.28)</td>
<td>(0.28)</td>
</tr>
<tr>
<td>Sacramento Area</td>
<td>0.53*</td>
<td>0.68*</td>
<td>0.51</td>
</tr>
<tr>
<td></td>
<td>(0.20)</td>
<td>(0.20)</td>
<td>(0.21)</td>
</tr>
<tr>
<td>Bay Area</td>
<td>4.75*</td>
<td>4.87*</td>
<td>4.80*</td>
</tr>
<tr>
<td></td>
<td>(0.14)</td>
<td>(0.14)</td>
<td>(0.14)</td>
</tr>
<tr>
<td>Central Valley and Sierra</td>
<td>-0.90*</td>
<td>-0.87*</td>
<td>-0.87*</td>
</tr>
<tr>
<td></td>
<td>(0.17)</td>
<td>(0.17)</td>
<td>(0.17)</td>
</tr>
<tr>
<td>Central Coast</td>
<td>2.28*</td>
<td>2.43*</td>
<td>1.95*</td>
</tr>
<tr>
<td></td>
<td>(0.27)</td>
<td>(0.27)</td>
<td>(0.27)</td>
</tr>
<tr>
<td>Inland Empire</td>
<td>0.75*</td>
<td>0.87*</td>
<td>0.57*</td>
</tr>
<tr>
<td></td>
<td>(0.16)</td>
<td>(0.16)</td>
<td>(0.16)</td>
</tr>
<tr>
<td>Orange County</td>
<td>2.48*</td>
<td>2.61*</td>
<td>2.28*</td>
</tr>
<tr>
<td></td>
<td>(0.19)</td>
<td>(0.19)</td>
<td>(0.19)</td>
</tr>
<tr>
<td>San Diego County</td>
<td>0.65*</td>
<td>0.81*</td>
<td>0.48</td>
</tr>
<tr>
<td></td>
<td>(0.19)</td>
<td>(0.19)</td>
<td>(0.19)</td>
</tr>
<tr>
<td>Constant</td>
<td>64.3*</td>
<td>64.7*</td>
<td>67.1*</td>
</tr>
<tr>
<td></td>
<td>(0.36)</td>
<td>(0.36)</td>
<td>(0.36)</td>
</tr>
<tr>
<td>Observations</td>
<td>267,365</td>
<td>267,365</td>
<td>267,365</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.505</td>
<td>0.499</td>
<td>0.485</td>
</tr>
</tbody>
</table>

**SOURCE:** Authors’ calculations from the 2012–2013 CPM.

**NOTES:** Results from ordinary least squares regression models where the outcome variable is the percentile of each of the income distributions. Standard errors in parentheses. Significance of coefficients noted as * p<0.01. Omitted categories are single parent family, highest education in family is college, maximum work in family is full time, Los Angeles County, four member family, citizen oldest member of family, white oldest member of family, and age of oldest member is 65 years or older. Percentile of the distribution is calculated at the family level.

Table C13 presents results from logistic models of the odds of being in the first quintile of the after-tax WRI relative to the middle, and to the high quintiles. Columns 1 and 2 contrast the first quintile (0-20th percentile) and deciles 3–5 (30th percentile—median), while columns 3 and 4 contrast the first quintile and the fifth quintile (80th percentile and above). Because we expect safety net resources to shift families who are, roughly, in the bottom half of the income distribution up—but not families higher up in the distribution—we might expect that coefficients would become insignificantly different from 1 (e.g., an even odds) in column 2 as compared with column 1, but we would not expect this for column 4 as compared with column 3. This is in fact the case.

Focusing on the odds of being in the first quintile of the after-tax WRI distribution vs. the middle, the regression-adjusted odds of being in the bottom quintile are significant and less than one for families with multiple adults (both with and without children) as compared with single parents in column 1, but are insignificant in column 2. Relative to families with teenaged children, odds of being in the first quintile are significantly above one in...
column 1, but are insignificant in column 2. Looking at level of education, no differences remain for families with some college as compared to those with a college degree in column 2, and the higher than even odds for those with a high school degree or less than a high school degree are markedly smaller. The changes across columns 1 and 2 are quite small for the work status categories, and are fairly small for those with younger adults in the family and for families with immigrant adults. Holding other factors constant, Families with a black oldest member are more likely to be in the first quintile than white-headed families in column 1, but are significantly less likely to be in the first quintile 2. The differences between Asian and other-race families are above one in column 1, but are smaller (and, in the case of other-race families, insignificant) in column 2. Finally, the odds of being in the first quintile are even or significantly lower for all counties and regions (as compared with Los Angeles County) in both column 1 and column 2. Once safety net resources are taken into account, significant estimates for the Inland Empire, Orange County, and San Diego County turn insignificant (again as compared with Los Angeles).

**TABLE C13**

Logistic regression models, odds of having bottom quintile after-tax WRI income

<table>
<thead>
<tr>
<th></th>
<th>(1) Low vs. low-middle Comprehensive income</th>
<th>(2) Low vs. high Comprehensive income</th>
<th>(3) Low vs. high Comprehensive income</th>
<th>(4) Low vs. high Comprehensive income</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highest Education: less than high school</td>
<td>2.73* (0.079)</td>
<td>1.46* (0.046)</td>
<td>59.3* (4.73)</td>
<td>40.9* (3.52)</td>
</tr>
<tr>
<td>Highest Education: high school</td>
<td>1.67* (0.043)</td>
<td>1.14* (0.032)</td>
<td>19.4* (0.85)</td>
<td>14.1* (0.70)</td>
</tr>
<tr>
<td>Highest Education: some college</td>
<td>1.31* (0.030)</td>
<td>1.02 (0.026)</td>
<td>6.91* (0.22)</td>
<td>5.09* (0.18)</td>
</tr>
<tr>
<td>Family work status: no adults 25–64</td>
<td>11.2* (0.52)</td>
<td>9.83* (0.54)</td>
<td>19.3* (1.36)</td>
<td>29.3* (2.35)</td>
</tr>
<tr>
<td>Family work status: not in labor force</td>
<td>25.8* (0.79)</td>
<td>23.0* (0.74)</td>
<td>76.5* (3.99)</td>
<td>105.0* (6.04)</td>
</tr>
<tr>
<td>Family work status: unemployed</td>
<td>16.5* (0.60)</td>
<td>17.5* (0.85)</td>
<td>118.0* (9.67)</td>
<td>157.0* (13.6)</td>
</tr>
<tr>
<td>Family work status: part time</td>
<td>6.95* (0.16)</td>
<td>7.00* (0.19)</td>
<td>34.3* (1.59)</td>
<td>40.8* (2.05)</td>
</tr>
<tr>
<td>One adult, no children</td>
<td>0.81* (0.037)</td>
<td>2.37* (0.12)</td>
<td>0.37* (0.036)</td>
<td>0.76 (0.10)</td>
</tr>
<tr>
<td>Two or more adults, one or more children</td>
<td>0.82* (0.031)</td>
<td>1.01 (0.042)</td>
<td>0.36* (0.031)</td>
<td>0.39* (0.046)</td>
</tr>
<tr>
<td>Two or more adults, no children</td>
<td>0.50* (0.024)</td>
<td>1.13 (0.063)</td>
<td>0.077* (0.0076)</td>
<td>0.14* (0.018)</td>
</tr>
<tr>
<td>Youngest child 5 or under</td>
<td>1.79* (0.071)</td>
<td>1.12 (0.054)</td>
<td>1.99* (0.13)</td>
<td>1.44* (0.12)</td>
</tr>
<tr>
<td>Youngest child age 6–12</td>
<td>1.40* (0.057)</td>
<td>1.06 (0.053)</td>
<td>1.54* (0.10)</td>
<td>1.15 (0.099)</td>
</tr>
<tr>
<td>Citizenship: oldest person is immigrant, non-citizen</td>
<td>1.79* (0.046)</td>
<td>2.10* (0.060)</td>
<td>6.19* (0.30)</td>
<td>7.61* (0.43)</td>
</tr>
<tr>
<td>Citizenship: oldest person is naturalized</td>
<td>1.37* (0.036)</td>
<td>1.12* (0.033)</td>
<td>2.77* (0.12)</td>
<td>2.19* (0.11)</td>
</tr>
<tr>
<td>Age of oldest member: under 25</td>
<td>6.64* (0.33)</td>
<td>8.04* (0.45)</td>
<td>66.5* (10.7)</td>
<td>109.0* (18.5)</td>
</tr>
<tr>
<td>Age of oldest member: 25–34</td>
<td>2.80* (0.12)</td>
<td>3.38* (0.17)</td>
<td>6.16* (0.42)</td>
<td>9.30* (0.74)</td>
</tr>
<tr>
<td>Age of oldest member: 35–44</td>
<td>2.79* (0.11)</td>
<td>3.32* (0.17)</td>
<td>2.39* (0.15)</td>
<td>3.81* (0.29)</td>
</tr>
<tr>
<td></td>
<td>(1) Low vs. low-middle After-tax WRI</td>
<td>(2) Low-middle Comprehensive income</td>
<td>(3) Low vs. high After-tax WRI</td>
<td>(4) Low vs. high Comprehensive income</td>
</tr>
<tr>
<td>------------------------</td>
<td>-------------------------------------</td>
<td>------------------------------------</td>
<td>-------------------------------</td>
<td>-------------------------------------</td>
</tr>
<tr>
<td>Age of oldest member: 45–54</td>
<td>2.63* (0.10)</td>
<td>2.90* (0.14)</td>
<td>2.58* (0.16)</td>
<td>3.92* (0.28)</td>
</tr>
<tr>
<td>Age of oldest member: 55–64</td>
<td>2.05* (0.079)</td>
<td>2.18* (0.10)</td>
<td>2.05* (0.12)</td>
<td>2.68* (0.17)</td>
</tr>
<tr>
<td>Black, not Latino</td>
<td>1.69* (0.057)</td>
<td>0.57* (0.023)</td>
<td>3.50* (0.21)</td>
<td>1.65* (0.12)</td>
</tr>
<tr>
<td>Latino, any race</td>
<td>1.21* (0.029)</td>
<td>1.22* (0.032)</td>
<td>3.77* (0.16)</td>
<td>3.63* (0.17)</td>
</tr>
<tr>
<td>Asian, not Latino</td>
<td>1.49* (0.047)</td>
<td>1.15* (0.039)</td>
<td>1.51* (0.070)</td>
<td>1.32* (0.073)</td>
</tr>
<tr>
<td>Other, not Latino</td>
<td>1.52* (0.074)</td>
<td>1.10 (0.059)</td>
<td>2.17* (0.18)</td>
<td>1.79* (0.17)</td>
</tr>
<tr>
<td>Northern counties</td>
<td>0.95 (0.043)</td>
<td>1.01 (0.050)</td>
<td>1.66* (0.13)</td>
<td>1.57* (0.14)</td>
</tr>
<tr>
<td>Sacramento Area</td>
<td>0.84* (0.030)</td>
<td>0.89* (0.035)</td>
<td>0.98 (0.059)</td>
<td>0.92 (0.062)</td>
</tr>
<tr>
<td>Bay Area</td>
<td>0.76* (0.019)</td>
<td>0.80* (0.022)</td>
<td>0.51* (0.019)</td>
<td>0.53* (0.023)</td>
</tr>
<tr>
<td>Central Valley and Sierra</td>
<td>0.96 (0.027)</td>
<td>0.98 (0.030)</td>
<td>1.35* (0.073)</td>
<td>1.30* (0.079)</td>
</tr>
<tr>
<td>Central Coast</td>
<td>0.71* (0.034)</td>
<td>0.85* (0.045)</td>
<td>0.66* (0.056)</td>
<td>0.75* (0.070)</td>
</tr>
<tr>
<td>Inland Empire</td>
<td>0.85* (0.023)</td>
<td>0.96 (0.029)</td>
<td>1.01 (0.048)</td>
<td>1.04 (0.056)</td>
</tr>
<tr>
<td>Orange County</td>
<td>0.84* (0.029)</td>
<td>0.98 (0.037)</td>
<td>0.69* (0.037)</td>
<td>0.76* (0.046)</td>
</tr>
<tr>
<td>San Diego County</td>
<td>0.81* (0.027)</td>
<td>0.96 (0.035)</td>
<td>0.89 (0.049)</td>
<td>1.02 (0.064)</td>
</tr>
<tr>
<td>Constant</td>
<td>0.038* (0.0025)</td>
<td>0.012* (0.00096)</td>
<td>0.029* (0.0034)</td>
<td>0.0089* (0.0014)</td>
</tr>
<tr>
<td>Observations</td>
<td>131,818</td>
<td>129,152</td>
<td>113,193</td>
<td>96,836</td>
</tr>
</tbody>
</table>

SOURCE: Authors’ calculations from the 2012–2013 CPM.
NOTES: Standard errors in parentheses. Significance of coefficients noted as * p<0.01. All models based on deciles of the after-tax WRI distribution. Low vs. low-middle indicates first or second decile (1) vs. third through fifth deciles (0) while low vs. high indicates first or second decile (1) vs. ninth or tenth decile (0). After-tax WRI used to place families in columns 1 and 3; comprehensive income used to place families in columns 2 and 4. Omitted categories are single parent family, highest education in family is college, maximum work in family is full time, Los Angeles County, citizen oldest member of family, white oldest member of family, and age of oldest member is 65 years or older.
REFERENCES


The Public Policy Institute of California is dedicated to informing and improving public policy in California through independent, objective, nonpartisan research.