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The Stanford Center on Poverty & Inequality

## The Poverty and Inequality Report 2014

**The Stanford Center  
on Poverty and Inequality**

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# THE POVERTY AND INEQUALITY REPORT

## The Stanford Center on Poverty and Inequality

The Stanford Center on Poverty and Inequality (CPI), one of the country's three federally-funded poverty centers, is a nonpartisan organization dedicated to monitoring trends in poverty and inequality, examining what is driving those trends, and developing science-based policy on poverty and inequality. We present here our first annual report documenting trends across seven key domains and evaluating how the country is faring in its efforts to reduce poverty and inequality and equalize opportunity.

The purpose of establishing this annual series of reports is to ensure that the key facts on poverty and inequality enjoy the same visibility as other indicators of the country's health. As it stands, there are all manner of analyses that focus on particular aspects of poverty and inequality, including excellent studies that take on separately such issues as employment, income inequality, wealth inequality, health inequality, or educational access. This report instead provides a unified analysis that brings together evidence across seven key domains, thereby allowing a global assessment of where problems exist, where achievements are evident, and how a coordinated effort to reduce poverty and equalize opportunity might be undertaken. In future years, we plan to expand the domains that we cover, and we also hope that many states and cities will join in this annual assessment of how we are faring on core poverty and inequality indicators.

## Methodology

For each domain, top experts in the country have been asked to report on current conditions, the objective being to crisply characterize the best and most current evidence available. As a summary of their results, Table 1 presents *some* of the indicators relevant to the analyses, with a more detailed description of sources and definitions provided in the individual chapters. The rankings in Table 1 allow us to assess how each indicator stacks up across the 13 years since 2000 (with a ranking of 13th meaning that the current year is the very worst over this period).<sup>1</sup>

## The Big Picture

What, then, are the main conclusions of this report? It is difficult not to be struck by the sheer number of indicators in Table 1 for which the current year is one of very worst over the period we have covered. If an overall assessment is to be had, it is that *the country's economy and labor market remain in deep disrepair, whereas our various post-market institutions (e.g., the safety net, educational institutions, health institutions) have a mixed record of coping with the rising poverty and inequality that has been handed to them by a still-struggling economy and labor market.* The latter conclusion holds across a variety of indicators. For example, we will show that the economy continues to fall well short of providing enough jobs, whereas the safety net has “stepped up” by supplementing at least some of the foregone earnings and raising many above the poverty threshold. Although the safety net thus deserves credit for responding well to the jobs disaster, it still falls short of meeting all the rising need. It therefore deserves a mixed grade insofar as it is held to the very stringent standard of fully addressing the need that is generated even during times of profound economic distress.

The same characterization holds for the other post-market institutions that are covered in this report. As with the safety net, we again ask our health and educational institutions to perform rather the miracle, confronting as they do a population with high levels of poverty and inequality and all the health and educational problems that are thereby generated. This challenge has been met with only partial success. If one holds our health and educational institutions to the same high standard of fully rectifying the damage that the economy has wrought, then our report shows that they have fallen somewhat short and that much work remains to be done.

## Key Findings

This simple theme, that of a failing economy and struggling post-market institutions, plays out across many of the domains examined here. Although we will review some of the relevant results, we of course encourage readers to explore the far richer display of evidence within each chapter.

### A FAILING LABOR MARKET

- In November 2013, six years after the start of the Great Recession, the proportion of all 25-54 year olds who hold jobs (i.e., “prime age employment”) was almost five percent lower than it was in December 2007, both for men and women alike. The ratio for men, currently at 82.7, is the 10th worst ratio over the last 13 years, while the ratio for women, currently at 69.2, is the 12<sup>th</sup> worst ratio over the last 13 years.
- The long-term unemployment rate for men and women alike is near the all-time high for the period since 2000.

*Implication:* Although the Great Recession ended over four years ago, the economy is still not delivering enough jobs. In the past, recoveries have not produced substantial employment gains beyond the sixtieth month after the recession began, a result that suggests that full recovery from the latest recession will likely not occur absent major labor market reform and intervention.

### RISING POVERTY

- The official poverty rate increased from 12.5 percent in 2007 to 15.0 percent in 2012, and the child poverty rate increased from 18.0 percent in 2007 to 21.8 percent in 2012. The current poverty rates for the full population and for children rank among the very worst over the 13 years since 2000 (i.e., both are ranked 11th).
- The latter increases in poverty, although substantial, would have been yet larger had the effects of the labor market downturn not been countered with aggressive safety net programs. Absent any safety net benefits in 2012, the supplemental poverty measure would have been 14.5 percentage points higher.

*Implication:* In the recessions of the early 1980s and early 1990s, the poverty rate was also approximately 15 percent, even though these were more moderate downturns. Although the latest recession was more extreme than these prior ones, the rise in poverty has nonetheless been partly held in check by a responsive safety net.

**A RAMPED-UP SAFETY NET**

- In 2012, safety net programs in the U.S. provided 32 percent of the support that low-income households needed to reach 150 percent of the official poverty line, a level of “poverty relief” that is the third highest in the 13 years since 2000 (and also the third-highest over the last quarter-century). This support level is only slightly lower than the all-time high of 36 percent reached in 2010 as the Great Recession ended.
- The safety net is increasingly fashioned to incentivize market work. As the Earned Income Tax Credit expanded in the early 1990s, households that increased their market earnings were better protected from sharp declines in their safety net support, a reform that ramps up the incentive to pursue market earnings. This rate of “relief falloff” has continued to grow gradually smaller up to the present day. As a result, our safety net is now better fashioned to incentivize market work, which is precisely the type of safety net that many people want.

*Implication:* The safety net responded reasonably well to the challenges of the Great Recession. It delivered substantial poverty relief during the Great Recession because (a) a recessionary labor market generates precisely the type of need (e.g., unemployment) that our safety net is relatively well equipped to handle, and (b) the safety net was also modified in ways that responded well to the particular demands of this recession (e.g., extended unemployment benefits).

**RISING INCOME INEQUALITY**

- The Great Recession increased the amount of income inequality, but not the amount of consumption inequality or the share of total income going to the top one percent.
- After the Great Recession ended in mid-2009, income and consumption inequality increased, thus resuming what has been a nearly relentless growth in inequality over the last 30 years. The lowest income quintile secured only 3.4 percent of total income in 2012. In the 1990s, it appeared as if the long-standing decline in the lowest quintile’s share had been staunch, but that downward march has now resumed.

*Implication:* The equalizing effects of tax and transfer policy had a mild compressive effect on some forms of inequality in the Great Recession, but the longer-term trend towards growing inequality has resumed as more ambitious tax and transfer policies are relaxed. Likewise, the financial crisis had

an initial compressive effect (by reducing returns on assets that were disproportionately held by the advantaged), but that effect dissipated as capital markets recovered after the crisis.

**RISING WEALTH INEQUALITY**

- Wealth inequality rose for the first time since the early 1980s. The Gini coefficient for 2010, the latest available year, is higher than any level recorded in nearly three decades.
- The Great Recession reduced the net worth of blacks and Hispanics much more than it reduced the net worth of whites.

*Implication:* The decline in house values during the Great Recession increased wealth inequality because houses are the main asset of less advantaged groups. Although there are some new “safety net” programs oriented toward rectifying such losses in wealth (e.g., the Home Affordable Modification Program), these programs evidently did less compressive work than those programs offsetting declines in market income (e.g., extended unemployment insurance). It follows that wealth inequality, unlike income inequality, was not well held in check by our post-market response.

**A MIXED RECORD ON HEALTH INEQUALITY**

- Although there is improvement in some key health indicators, there is moderate deterioration in others. For example, 9.8 percent of Americans reported that they were in poor or fair health in 2012, an increase of 0.6 percentage points since 1997.
- Economic, racial, and ethnic disparities in health outcomes are often substantial and are sometimes increasing. The proportion of Blacks and Hispanics, for example, who could not afford necessary care rose at a faster rate during the Great Recession than did the corresponding proportion for Whites.
- Since 2000, the proportion of Americans who have any health insurance coverage has declined (to 84.6 percent in 2012), although there has been a slight reversal in this decline since 2010. The proportion of children, however, who are insured has increased during this same period and is now at the highest level since 2000.

*Implication:* The decline in some health outcomes likely reflects recent increases in the poverty rate and the characteristically poorer health outcomes of those in poverty. It remains an open question whether future increases in health insur-

ance coverage (under the Affordable Care Act) will reverse some of these trends. Because health outcomes are affected by many forces other than coverage alone, the sizable health disparities currently observed may be resistant to any dramatic change.

#### A MIXED RECORD ON EDUCATIONAL INEQUALITY

- The record on black-white educational inequality is mixed, with black-white disparities in academic achievement declining by approximately forty percent over the last four decades, while disparities in college completion have increased over the same period.
- The record on economic inequality is less favorable. The income gap, measured as the difference in average test scores between children whose families are at the 90<sup>th</sup> and 10<sup>th</sup> percentiles of the family income distribution, grew by forty percent across cohorts born in the early 1970s and late 1990s (although there are also hints of a more recent narrowing of this gap). This income gap is already very large when children enter kindergarten and grows only modestly thereafter.

*Implication:* Because income gaps are already well in place when children enter kindergarten, it is clear that out-of-school factors are implicated in their growth. The key open question is whether substantial headway in closing such gaps can nonetheless be made via school reform alone.

#### A Second War on Poverty?

The foregoing suggests a broadly deteriorating poverty and inequality landscape. As Table 1 summarizes, such deterioration is revealed across a host of key indicators, including prime-age employment, long-term unemployment, poverty, income inequality, wealth inequality, and even some forms of health inequality. The facts of the matter, when laid out so starkly, are quite overwhelming.

It is important to conclude by briefly discussing the choices that our country faces in addressing such rising poverty and inequality. Although one of our objectives is simply to document changes in poverty and inequality across a variety of domains, another is to ask whether the pattern of results tells us anything about how a second War on Poverty, were we to choose to wage one, might have the greatest chance of bringing about meaningful and permanent change.

The distinctively American approach is to blame our post-market institutions for the current state of affairs. The safety net is blamed for failing to make a dent in poverty; our schools

are blamed for failing to eliminate income or racial disparities; and our healthcare institutions are blamed for poor health among the poor. We accordingly propose all manner of narrow-gauge safety net reforms, narrow-gauge school reforms, and narrow-gauge health care reforms; and we imagine that, if only we could find the right such reforms, all would be well.

We should of course commit to getting our post-market institutions right, but that very same critical scrutiny might also be applied to our economic and labor market institutions. The results presented here reveal an economy that is failing to deliver the jobs, a failure that then generates much poverty, that exposes the safety net to demands well beyond its capacity to meet them, that produces too many children poorly prepared for school, and that places equally harsh demands on our healthcare, penal, and retirement systems. These are profound downstream costs that are challenging and costly to address in a piecemeal institution-specific fashion. Although we should continue to tinker with each of these institutions to better meet the challenges that an ailing economy generates, it is worth considering whether a no-holds-barred commitment to job-delivering reform might be a more efficient and sustainable way forward.

These are of course big and complicated questions. The current tendency, unfortunately, is to shirk them altogether and move directly to piecemeal discussions about piecemeal reform. If our second war on poverty is to be a real war founded on a real commitment to win it, it is important that we step back and ask just such big questions, no matter how daunting they may be. ■

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#### NOTE

1. For the labor market indicators, we have data extending into 2013. We have averaged values for 2012 and 2013 for this domain alone to make the number of observations (13) the same across domains and hence the rankings more nearly comparable. Also, the wealth inequality indicators only go up to 2010, thus for this domain a rank of 11<sup>th</sup> is the worst possible. In cases where there are ties across two or more years, our ranking algorithm assigns the best rank to the earliest year. We thank all of our contributors for sharing their data and especially thank Liana Fox, Irwin Garfinkel, Neeraj Kaushal, Jane Waldfogel, and Christopher Wimer for sharing their historical Supplementary Poverty series (see “Waging War on Poverty: Historical Trends in Poverty Using the Supplemental Poverty Measure,” 2013, CPRC Working Paper 13-02, <http://cupop.columbia.edu/publications/2013>). For methodological details on the measures, please consult the relevant domain reports.

TABLE 1. Selected List of Poverty and Inequality Indicators by Domain

Domain	Type of Measure	Subpopulation	Most Recent Value	Rank
Poverty	Official Poverty Rate	Full population	15.0	11
		Children	21.8	11
		Black non-Hispanic	27.0	11
		Hispanic	25.6	12
	Supplemental Poverty Rate (Hist.)	Full population	16.0	12
		Children	18.7	12
Labor Market	Official Unemployment Rate	Full population	7.8	10
		Men	8.0	10
		Women	7.5	10
		Black	13.5	10
		Hispanic	9.8	10
		Discouraged Workers (U-4 Rate)	Full population	8.3
	Marginally Attached (U-5 Rate)	Full population	9.2	10
	All Underutilization (U-6 Rate)	Full population	14.3	10
	Employment to Population Ratio	Men 25-54	82.7	10
		Women 25-54	69.2	12
		Black men 25-54	70.7	10
		Hispanic men 25-54	83.6	10
	Long Term Unemployment (as percent of unemployed)	Men	42.5	11
		Women	41.5	11
		Black	45.1	11
		Hispanic	36.6	11
Safety Net	Poverty Relief Ratio	Full Population	0.32	3
	Baseline Relief	Full Population	3.77	3
	Relief Falloff	Full Population	-0.09	2
Income Inequality	Household Income Share	Lowest Quintile	3.4	13
		Second Quintile	9.0	13
	Gini Coefficient	Household Income	0.44	12
		Disposable Income	0.38	11
		Consumption	0.29	10
Top 1 Percent Share	IRS	22.5	11	
Wealth Inequality	Gini Coefficient (to 2010 only)	Net Worth	0.87	11
	Mean Net Worth (to 2010 only)	Black/White	0.14	11
		Hispanic/White	0.15	11
Health Inequality	Poor or Fair Health	Poor/Rich	5.39	12
		Near Poor/Rich	4.07	12
		Middle Class/Rich	2.36	13
	Asthma (from 2001 only)	Black/White	2.03	10
		Hispanic/White	1.11	10
	Insurance Coverage	Full Population	0.85	10
		Children	0.91	1
	Delayed Care	Full Population	0.11	9
	Foregone Care	Full Population	0.08	9
		Black	0.12	9
	Hispanic	0.11	9	



## ROSTER OF EXPERTS

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**Sean Reardon**, Professor of Education, Stanford University

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Distinguished Professor of Public Affairs, University of Wisconsin

**Jeffrey Thompson**, Economist, Federal Reserve Board

**Katherine Weishaar**, National Poverty Fellow, Center on Poverty and Inequality,  
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## LABOR MARKETS

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The Stanford Center on Poverty and Inequality

BY MICHAEL HOUT AND ERIN CUMBERWORTH

## KEY FINDINGS

- Men's and women's prime-age employment declined more during and after the Great Recession than at any time since record keeping began in 1947 and shows only weak signs of recovery. In November 2013, six years after the start of the Great Recession, men's and women's prime-age employment ratios were almost five percent lower than they were in December 2007.
- Although job loss affected most sectors of the American society, people who lacked educational credentials bore a disproportionate burden. Over the course of the recession, the prime-age employment ratio dropped 15 points for men without a high school diploma compared to 10 points for men with high school diplomas and just 5 points for men with college degrees.
- Unemployment in industries that drove the recession, such as construction or financial services, rose from the onset of the recession until its end, but then almost fully recovered after the recession ended. "Bystander industries," such as public administration, education and health care, have failed to recover, implying that the austerity in public spending is delaying recovery.

Americans work for their living. For most people, a job is both an economic and moral imperative. The wages they earn fuel the rest of the economy. Employment begets the spending that begets more employment. In good times, it is a virtuous cycle reinforcing consumer-driven capitalism. Events like the financial crisis of 2007 and 2008 can reverse the cycle, spinning the economy downward with a momentum that can be hard to break. Job losses reduce spending, which kills more jobs, reducing spending even more.

The Great Recession of 2007 to 2009 played out these general principles of recession economics in every aspect, but with an uncommon intensity. The "housing bubble" burst, the financial sector tumbled, banks stopped lending, construction workers lost their jobs, sales of building materials and appliances plummeted, tax revenues fell, and the downward spiral threatened to spin ever lower. The government saved the banks and stimulus spending broke the fall in employment. But employment has barely kept pace with population growth since the recovery began in the summer of 2009. The U.S. economy enters 2014 with 7 percent of the labor force unemployed and millions more out of the labor force.

In this brief, our aim is to assess the current standing of the U.S. labor market, a task that inevitably requires us to address the enduring effects of the Great Recession. We will put the Great Recession in historical context, looking both at its overall impact and at how the burdens were distributed across

the population by gender, level of education, and industry.

**Historical Context**

The single best index of employment is the prime-age employment ratio—the ratio of employed 25-54 year-olds to the population of that age. The more familiar unemployment rate gives a reasonably accurate picture of employment during good times, but during recessions many people who would prefer to be working will stop looking. The unemployment rate does not count them so it makes the economy look better than it is. As a recovery starts, those people reenter the labor market, making unemployment look worse until they find a job. The prime-age employment ratio overcomes this "discouraged worker" problem by keeping tabs of everyone whether they are looking for work or not.

Figure 1 plots the prime-age employment ratio for men and women separately from the earliest to the most recent data, with recession months shaded gray. When the Great Recession began in December of 2007, 87.5 percent of American men 25-54 years old were employed; at the low point two years later, 80.4 percent were (a decline of 8.1 percent). The path upward from that low point has been very unsteady; by November of 2013, men's prime-age employment ratio was still a very low 82.8 percent (5.0 percent below its level at the onset of the recession). Women's employment declined more slowly but shows practically no sign of recovery. When the Great Recession began in December of 2007, 72.4 percent of prime-age

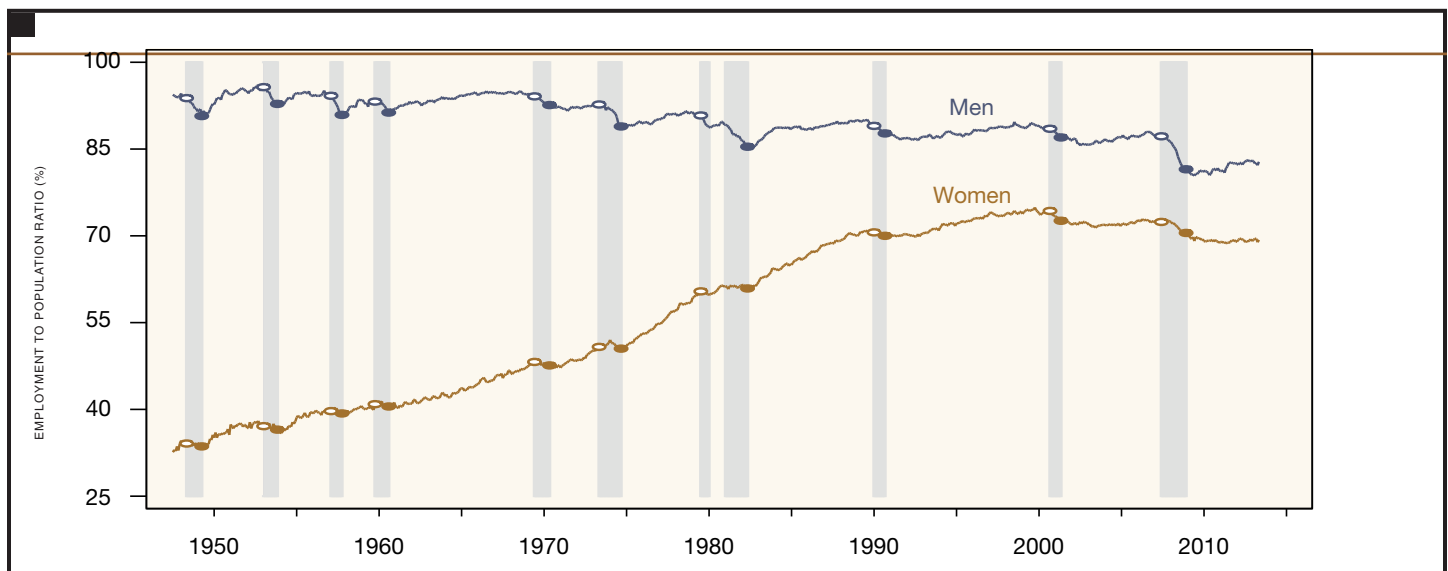
women were employed; women's employment bottomed out in November 2011 at 68.7 percent (5.1 percent below its level at the onset of the recession) and it had increased by barely one-half of a percentage point to 69.4 percent by November of 2013. At the bottom of the recession, men's prime-age employment was lower than at any time since the data were first collected in 1947; women's employment was lower than at any time in the last twenty-five years.

Men's and women's prime-age employment declined more during and after the Great Recession than at any time on record. For men, that record shows a net decline from a long-age peak of 96 percent in 1953 to the most recent 83 percent. Each postwar recession reduced prime-age employment, and since the 1970s post-recession employment always fell short of its pre-recession high. Women's employment increased so dramatically during the twentieth century that recessions more often slowed growth than reversed it. After the 2001 recession, however, women's prime-age employment failed to rebound to its pre-recession level for the first time on record; it has happened again after the Great Recession as women's most recent prime-age employment ratio is about where it was when the recession officially ended in the summer of 2009. The point estimate for November 2013 is one point lower than the point estimate for June 2009. Because the margin of error on each is 1.5 percentage points, we cannot say for sure that the ratio is lower now than then.

To learn more about the Great Recession and its aftermath, we align the prime-age employment ratios of three recessions by measuring time relative to the onset of the recession. We picked two recessions for our comparison: the double-dip recession of 1980-1982 and the recession of 2001. The 1980-1982 recession is interesting because until the Great Recession it was the most severe recession of the post-war era; it is useful to compare one strong recession with another. The 2001 recession is interesting because it was the first one in which women's employment failed to recover to pre-recession levels; some commentators referred to the post-recession period as a "jobless recovery."

Figure 2 shows, for women and men separately, the change in prime-age employment relative to its level at the onset of recession plotted against months since the recession started (actually starting the time series six months prior to the onset of recession). We smoothed the time series to remove the distraction of short-term fluctuations best ascribed to statistical sampling error. Men's prime-age employment fell almost 7 percent in the two years following the onset of the Great Recession, recovered two percentage points over the next two years, and changed little in the last two years. Women's prime-age employment fell less but longer so that today, six years after the Great Recession began, men's and women's prime-age employment ratios are both almost five percent lower than they were in December 2007.

FIGURE 1. Prime-age Employment Ratio by Month and Gender, 1947-2013.



Source: Bureau of Labor Statistics

Note: We used seasonally adjusted data for people who were 25 to 54 years old.

The 2001 recession lasted half as long and was much less severe than the Great Recession, but there were some similarities in the timing and gender patterns. Men’s prime-age employment fell for two years before rebounding but failing to reach its pre-recession level. Women’s employment fell slower but longer, and it too failed to recover to its pre-recession level.

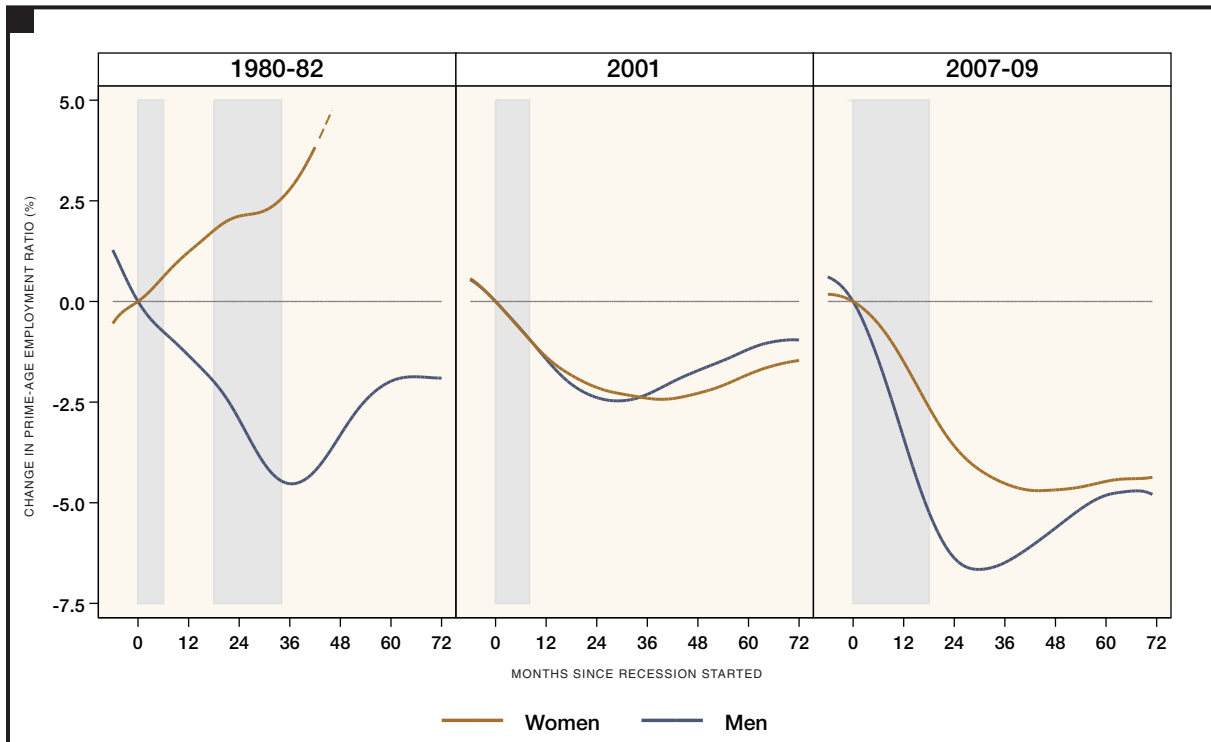
The double-dip recession of 1980-1982 lasted three years and raised the unemployment rate (not shown) to over 10 percent. Men’s prime-age employment fell throughout the recession but began to rebound almost immediately after the recession ended. Five years after the recession began, men’s employment was still almost two percent lower than it had been at the beginning in January 1980. Women’s employment was on a sharp upward path as the recession started. It slowed but did not fall during the first part of the recession, plateaued during the second, and then resumed its climb as soon as the recession ended.

There are at least three reasons why conditions following the 1980-1982 recession differed from those in recent years. First, deregulation of the savings and loan industry sparked a housing bubble that dramatically increased employment in

the construction industry. When that bubble burst in 1990, many savings and loan banks failed and the economy went into recession, but its immediate impact was to put men (especially) to work building new housing. Second, personal computers became popular. Most were made in the United States, increasing employment in manufacturing. Third, Chrysler and other car makers started making minivans and sport utility vehicles that revived American automobile manufacturing. Nothing of that sort has emerged in recent years to stimulate employment growth.

None of these recoveries (and none of the others we looked at but do not show) produced significant employment gains beyond the sixtieth month (i.e., five years) after the recession began. In the 1950s, 1960s, and 1970s, recessions were about five years apart. Since 1980, recessions have been less frequent, but no recovery has been sufficient to return prime-age employment to pre-recession levels. That strongly suggests that full recovery from the Great Recession will not occur unless and until the federal government enacts a second stimulus package. The political environment makes a stimulus highly unlikely, but the slack in the U.S. job market implies that the economy needs it.

FIGURE 2. Change in Prime-age Employment Ratio by Gender and Months Since the Beginning of the Recession, 1980-1986, 2001-2007, and 2007-2013.



Source: Authors’ calculations from seasonally adjusted data provided by the Bureau of Labor Statistics, 2013.  
 Note: Time series smoothed to reduce the influence of statistical sampling error. Women’s employment rose linearly from 2.5 at the end of the recession in 1982 to 10.0 in month 72. To highlight other aspects of the data we truncated the women’s time series at 5.0 and indicated that it continued with dashes.

**Human Capital**

Accounts of the recession in the popular media frequently feature struggling college graduates. The data suggest that this storyline may not be totally without foundation, but it is misleading and overstated.

Figure 3 shows that prime-age employment is more likely among the better-educated—in good times and bad. The recession has amplified college graduates’ advantages, not eroded them. The need to take a lower-paying job may make paying back college loans harder, but at least college graduates are getting jobs. The jobs college graduates now get typically go to high school graduates in tighter labor markets. It is high school graduates and high school dropouts who have borne the brunt of the Great Recession.

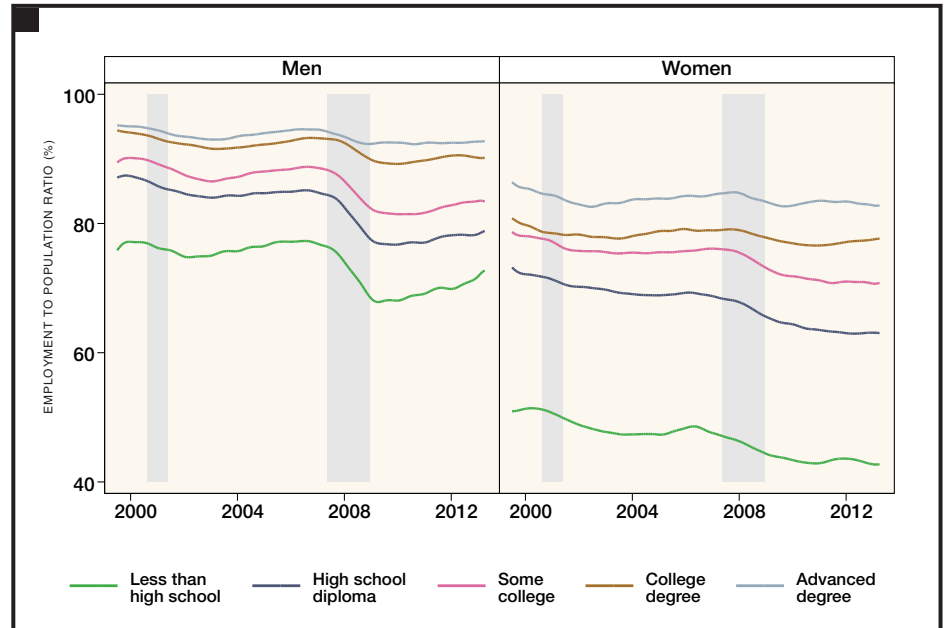
Prior to the recession, unemployment for people with less than a high school degree hovered around 7 percent, while unemployment for college graduates was only about 2 percent. As unemployment spread, the rate for each educational category rose more or less proportionally. At peak unemployment in 2010, the rate for people without a high school degree had increased from 7 to nearly 15 percent and the rate for college graduates had increased from 2 to about 4.7 percent. The baseline differences were so large that proportional increases raised unemployment most for the least-educated and least for the most-educated. Even though unemployment rose for everyone, people without a high school degree bore a much greater unemployment burden.

**Industry**

The Great Recession started with a financial crisis that pushed both banks and homeowners to the brink of insolvency. A federal bailout saved the banks and subsequent legislation helped some homeowners. But the immediate fallout was a credit crunch that reduced consumers’ ability to borrow money.

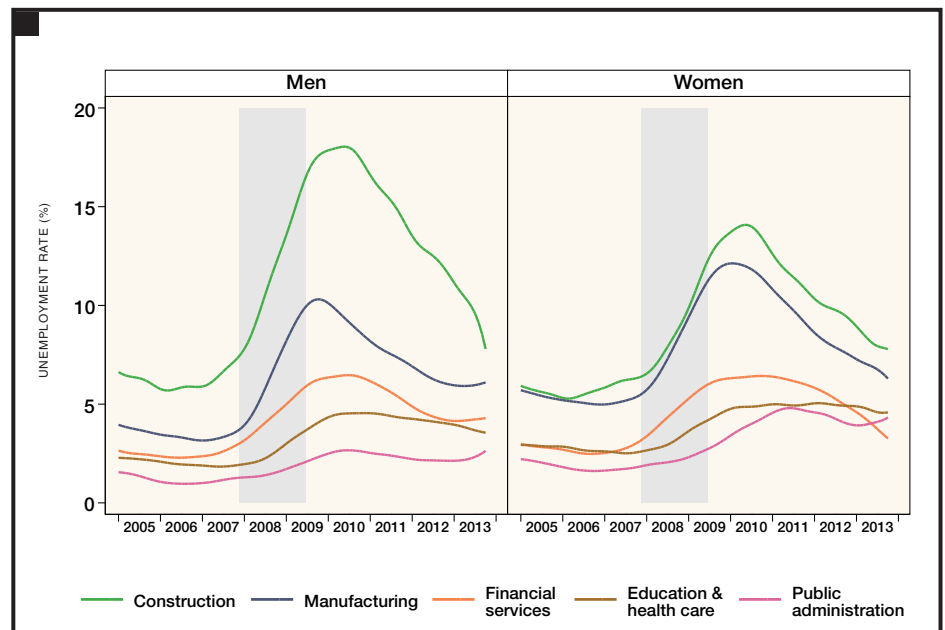
That, in turn, reduced the demand for manufactured goods. All of these changes affected employment. We should see the effects in data on employment in some industries more than others. For this analysis we switch from the prime-age employment ratio to the more conventional unemployment

FIGURE 3. Prime-age Employment Ratio by Month, Educational Attainment, and Gender, 2001-2013.



Source: Authors’ calculations from Bureau of Labor Statistics data, 2013.  
 Note: Time series smoothed to reduce the influence of statistical sampling error.

FIGURE 4. Unemployment Rate by Month, Industry, and Gender, 2005-2013.



Source: Authors’ calculations from Bureau of Labor Statistics data, 2013.  
 Note: Data restricted to persons 25-54 years old. Industries selected from a full set of 13. Time series smoothed to reduce the influence of statistical sampling error.

rate, though we do keep the age restriction and limit our attention to 25–54 year olds.

Figure 4 shows the unemployment rates in five key industries from January 2005 to November 2013. The recession months are marked in gray. Again we smooth the data because the relatively small sample sizes in specific industries produce substantial statistical sampling error.

Unemployment increased first in construction, manufacturing, and financial services—the three industries most affected by the financial crisis that precipitated the Great Recession. Construction workers typically live with spells of unemployment, so their unemployment rate was already 6.5 percent before the recession started. At its peak in the summer of 2010, the unemployment rate in construction was 15 percent for women and over 18 percent for men. Unemployment in manufacturing doubled for both women and men. Unemployment in financial services also rose from the onset of the recession until its end. Significantly, the unemployment rates in these three industries also started to decline almost as soon as the recession ended. The decline was faster for men than women, but the most recent data show that unemployment in all three of these most-affected industries is now only slightly higher than before the recession.

Unemployment in public administration and in education and health care increased later than it did in the industries that were directly affected by the recession. But these two industries show no signs of recovery. Unemployment is significantly lower in these industries than in construction or manufacturing in each year, but the lack of any recovery-based trend

since 2010 is telling. What it tells is the tale of austerity in public spending. The recession dramatically reduced tax revenues. Governments did not respond instantly, but once they did their cutbacks raised unemployment in education and public administration.

### Conclusions

The Great Recession was a jobs disaster that took unemployment to heights seen only once before in over fifty years—in 1982. In 2009 and 2010, the U.S. economy hit postwar highs in job loss, the portion of the labor force unable to find work, and the duration of unemployment spells.

The Great Recession was the sixth recession since 1970. In all six post-recession recoveries, men’s prime-age employment was lower four years into recovery than when the recession started; in the last two, women’s prime-age employment was also below the pre-recession level. It is almost as if the economy recovers because of job losses not despite them.

The latest employment data suggest that the consumer-driven private economy cannot spark an employment recovery on its own. Productivity increased, profits soared, and Wall Street recovered since 2009. But overall employment languishes at levels barely above recession lows.

Americans value work and need to work. The private sector economy seems incapable of delivering on that goal. The public sector seems incapable of anything but austerity. History and logic caution that full employment will not return without a private-sector breakthrough or a public sector stimulus. ■

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# POVERTY

January 2014

The Stanford Center on Poverty and Inequality

BY SHELDON DANZIGER AND CHRISTOPHER WIMER<sup>1</sup>

## KEY FINDINGS

- While the official poverty rate has declined from 22 percent to 15 percent since 1959, most of this progress occurred before the early 1970s. Since then, the direct connection between poverty and economic growth has weakened.
- Some subgroups, like young adults and less-educated Americans, have fared worse than others, as poverty rates for these subgroups have risen over time. Others, such as the elderly, have fared much better than others.
- The Official Poverty Measure masks important progress that has been made in fighting poverty because it doesn't count many of the antipoverty programs that have accounted for an increasing share of all safety net benefits in recent years.
- If the benefits from noncash programs like food stamps and the Earned Income Tax Credit are counted, the poverty rate would stand at about 11 percent today instead of 15.
- Poverty remains high primarily because the economy has failed the poor. The expanded safety net has kept poverty from being even higher than it is today.

What has happened since President Lyndon Johnson declared an unconditional War on Poverty in his January 8, 1964 State of the Union Address? There is no doubt that the United States has become a more affluent nation since that famous declaration: Real gross domestic product (GDP) per capita has in fact *doubled* over the past 50 years. Despite this growth, the official poverty rate for 2012 now stands at 15 percent, a full 4 percentage points higher than it was during the early 1970s. And the poverty rate is only 4 percentage points lower than the 19 percent rate of 1964.

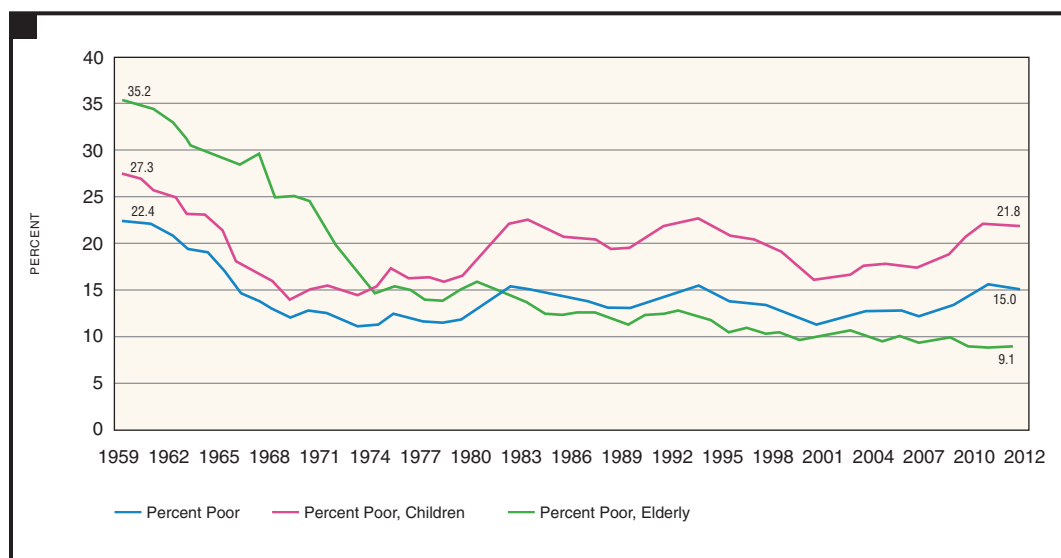
This apparent lack of progress against poverty cannot be blamed on the economic devastation wrought by the Great Recession, although that certainly increased poverty over the last five years. Rather, the direct connection between economic growth and

poverty reduction is now much weaker than in the past. Poverty remains high because many workers have not shared in the economic gains of the past 40 years; instead most of those gains have been captured by the economic elite.

Over these same decades, the official poverty measure has increasingly obscured some of the progress that *has* been made in reducing poverty because it fails to account for many government benefits the poor now receive, such as Food Stamps and the Earned Income Tax Credit. If these safety net benefits were counted as family income, today's official poverty rate would fall from 15 to about 11 percent.

The purpose of this research brief is to lay out where we now stand on the war on poverty. We first describe long-term trends in

FIGURE 1. Trends in Official Poverty



Source: U.S. Census Bureau, Historical Poverty Tables

poverty for the full population and for key subpopulations; we next examine why poverty has remained stubbornly high; we then discuss more appropriate ways to measure poverty that reveal how the modern safety net significantly reduces poverty. We conclude by discussing trends in extreme poverty and deep poverty. The theme throughout is that labor market failures—not safety net failure—is a main reason why progress against poverty has been so difficult.

**Key Trends in Poverty**

Figure 1 shows trends in the official poverty rate for all persons, the elderly, and children. In 1959, 22.4 percent of all persons were poor according to the official measure. This was cut in half by 1973 because of rapid economic growth and the expansion of safety net programs in the aftermath of the War on Poverty.<sup>2</sup>

But nothing much happened for the next four decades. The poverty rate has never fallen below the historic low of 11.1 percent reached in 1973, and only in the booming economy of the late 1990s did it come close to that mark. Instead, the trend over the past 40 years consists of ups during recessions and downs during economic recoveries, but no long-term progress. Most disturbing, the child poverty rate in 2012, 21.8 percent, was as high as it was in the mid-1960s.

Worse yet, some groups have experienced an increase in their poverty rates.<sup>3</sup> We examine the official poverty rate for adults

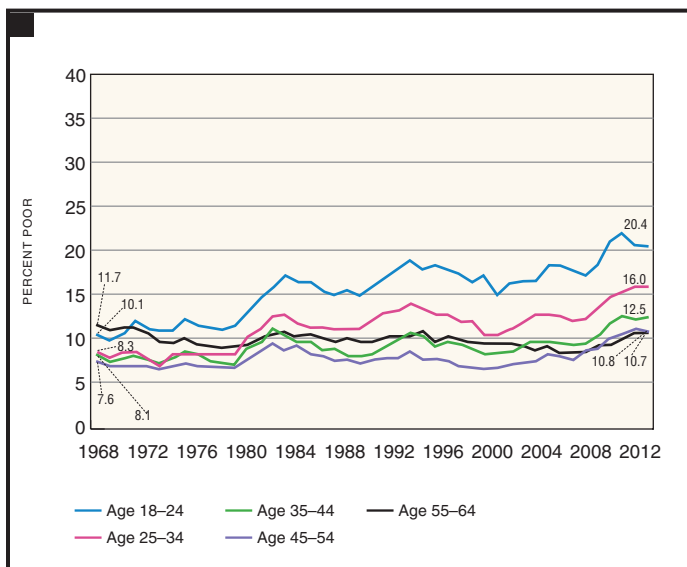
classified by age cohort (Figure 2), educational attainment (Figure 3), and race or ethnicity (Figure 4). As shown in Figure 2, the poverty rate for 18-24 year olds increased by about 11 percentage points and the rate for 25-34 year olds by about 5 points since 1968.<sup>4</sup> Figure 3 shows that adults without a college degree have fared badly, with the poverty rate for those without a high school degree increasing by almost 20 percentage points and the rate for high school graduates by about 10 points since 1968. Figure 4 shows that poverty rates for both Hispanics and White non-Hispanics are higher in 2012 than in 1970, while the rate for Black non-Hispanics is slightly lower.<sup>5</sup>

Clearly, the goals of the war on poverty have not been achieved. Although there have been many important successes (as will be discussed subsequently), much remains to be done. In the next section, we ask what went wrong as well as what went right, questions best addressed by taking an historical perspective.

**What Went Wrong? And What Went Right?**

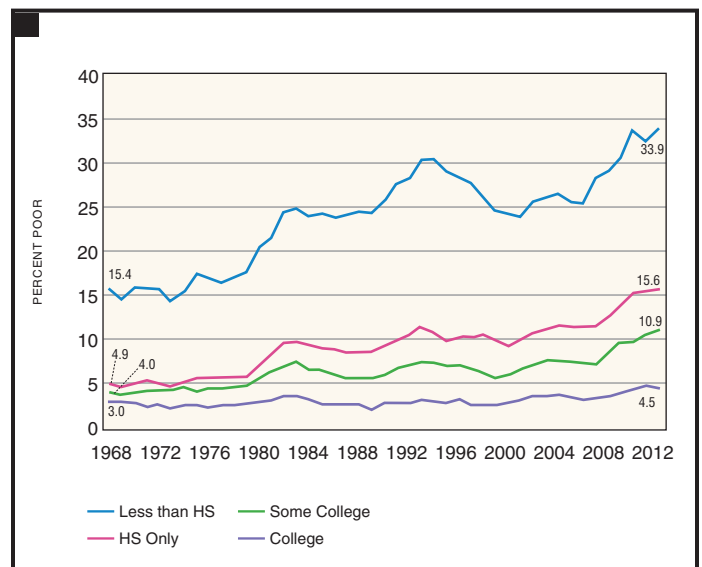
To understand recent trends in poverty, we begin with the economic situation in the quarter century after the end of World War II. Rapid economic growth at that time translated into more employment, higher earnings, and increasing family incomes for most Americans. Poverty fell as the living standards of the poor and the middle class increased as rapidly as they did for the rich.

FIGURE 2. Poverty Rates for Nonelderly Adults by Age Cohort 1968-2012



Source: Stanford Center on Poverty and Inequality calculations using March CPS microdata downloaded from IPUMS (King et al., 2010).

FIGURE 3. Poverty Rates by Educational Attainment, Persons Ages 25-64



Source: Stanford Center on Poverty and Inequality calculations using March CPS microdata downloaded from IPUMS (King et al., 2010).



Yet, many families were being left behind during this period of rapid growth, as careful observers such as Michael Harrington, John Kenneth Galbraith, and Robert Lampman pointed out. The paradox of “poverty amidst plenty” led President Johnson to declare “unconditional” war on poverty in his first State of the Union address on January 8, 1964. He emphasized that the fight against poverty could not rely solely on economic growth:

“Americans today enjoy the highest standard of living in the history of mankind. But for nearly a fifth of our fellow citizens, this is a hollow achievement. They often live without hope, below minimum standards of decency... . We cannot and need not wait for the gradual growth of the economy to lift this forgotten fifth of our nation above the poverty line. We know what must be done, and this Nation of abundance can surely afford to do it. ...Today, as in the past, higher employment and speedier economic growth are the cornerstones of a concerted attack on poverty... .But general prosperity and growth leave untouched many of the roots of human poverty.”

The Johnson administration proposed many strategies for reducing poverty. The 1964 *Economic Report of the President* argued for maintaining high levels of employment, accelerating economic growth, fighting discrimination, improving labor markets, expanding educational opportunities, improving health, and assisting the aged and disabled. Indeed, these remain important antipoverty priorities.

This last goal, assisting the aged and disabled, is widely accepted as the greatest achievement of the War on Poverty. Elderly poverty has fallen dramatically, from 35.2 percent in 1959 to 9.1 percent in 2012 (see Figure 1). Medicare and Medicaid, introduced in 1965, greatly expanded access to medical care and improved the health of the elderly and disabled. An expanded safety net raised their incomes and insulated them from both recessions and inflation, through the expansion and indexation of social security benefits and the introduction of the Supplemental Security Income program. The poverty rate for the elderly has been lower than the rate for working-age adults for the past two decades.

But the Johnson administration’s optimism that macroeconomic policies and an expanded social safety net could eliminate poverty for all persons had all but disappeared by the 1980s. Many observers focused on the limited progress that had been made in reducing poverty among the population as a whole. The War on Poverty programs came to be seen as the *cause* of the problem, to the point that in his 1988 State of the Union Address President Reagan declared:

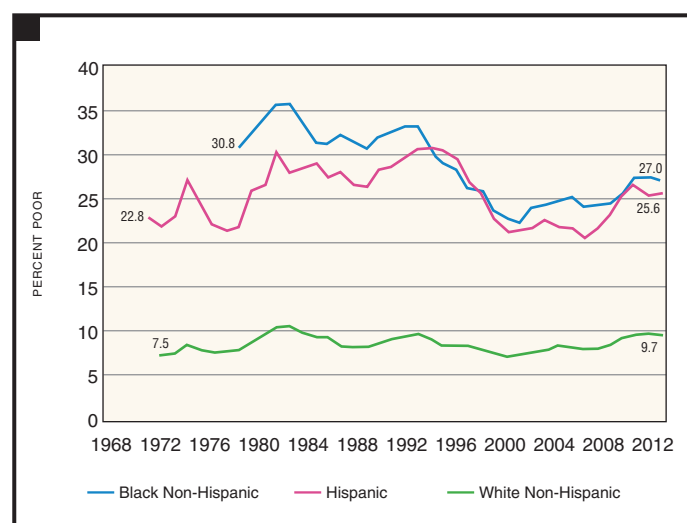
“In 1964, the famous War on Poverty was declared. And a funny thing happened. Poverty, as measured by dependency, stopped shrinking and actually began to grow worse. I guess you could say “Poverty won the War.” Poverty won, in part, because instead of helping the poor, government programs ruptured the bonds holding poor families together.”

Was President Reagan right? Are safety net programs to blame for the stagnation in the official poverty rate since the early 1970s? The short answer: No. A careful analysis reveals that the lack of progress results from two opposing forces—an economy that has increasingly left more of the poor behind and a safety net that has successfully kept more of them afloat.

The primary reason that poverty remains high is that the benefits of economic growth are no longer shared by almost all workers, as they were in the quarter century after the end of World War II. In recent decades, it has been difficult for many workers, especially those with no more than a high school degree (see Figure 3), to earn enough to keep their families out of poverty.

This economic trend represents a sharp break with the past. Inflation-adjusted median earnings of full-time year-round male workers grew 42 percent from 1960 to 1973. But, four decades later, median earnings were \$49,398 in 2012, four percent lower than the inflation-adjusted 1973 value,

FIGURE 4. Poverty Rates by Race/Ethnicity Persons Ages 18-64



Source: <http://www.census.gov/hhes/www/poverty/data/historical/people.html> and Stanford Center on Poverty and Inequality calculations using March CPS microdata downloaded from IPUMS (King et al., 2010).

\$51,670.<sup>6</sup> Men with no more than a high school degree fared even worse.

Further, men are less likely to be working today than in the past. The annual unemployment rate for men over the age of 20 was below 5 percent in 92 percent of the years between 1950 and 1974, but in only 37 percent of the years since (see the Labor Market brief for more details).

Stagnant earnings for the typical worker and higher unemployment represent a failure of the economy, not a failure of antipoverty policies. Most economists agree that several factors have contributed to wage stagnation and increasing earnings inequality. These include labor-saving technological changes, the globalization of labor and product markets, immigration of less-educated workers, the declining real value of the minimum wage, and declining unionization.

This evidence refutes President Reagan's view that poverty remains high because the safety net provided too much aid for the poor and thus encouraged dysfunctional behaviors. Studies do show that poverty would be somewhat lower if fewer low-skilled men had withdrawn from the labor market, if marriage rates had not declined so much, and if there had been less immigration of workers with little education. But these effects are small compared to the role of turbulent labor markets, slower growth, and rising inequality.

### (Mis)measuring Poverty

The poverty-fighting role of the safety net can only be revealed by using a more accurate poverty measure. The official poverty rate is so high in part because it does not actually *count* many of the benefits now provided to the poor, especially noncash benefits and refundable tax credits.

One reason that Reagan's critique of the safety net resonates with the public is that the official poverty measure, the main statistical tool to gauge progress against poverty, understates the effects of government programs. The official measure was adopted in the late-1960s to represent the income necessary to provide a minimally decent standard of living. The poverty line varies with family size. For example, in 2012, it was \$11,011 for an elderly person and \$23,283 for a married couple with two children.

Each year, this official statistic provides the main message to policymakers and the public about trends in poverty, even though many have questioned whether a minimally decent standard of living can mean the same thing today as in the mid-1960s.<sup>7</sup> Yet, the measure has not been updated for

almost 50 years.

Wherever the poverty line is set, however, the poverty rate should be based on a full accounting of family resources. Families are considered poor under the official measure if their *money income* from all sources and all family members falls below the line. Money income includes wages and salaries, interest, dividends, rents, cash transfers from the government, such as social security and unemployment insurance, and other forms of pretax cash income.

The official measure excludes non-cash benefits such as those from the Supplemental Nutrition Assistance Program (SNAP, formerly food stamps) and refundable tax credits such as the Earned Income Tax Credit (EITC). Noncash benefits were not common when the official poverty line was developed, but they have grown rapidly in recent decades.

The Census Bureau has developed a "Supplemental Poverty Measure"—or SPM—in response to the recommendations of a National Academy of Sciences panel on how to better measure poverty.<sup>8</sup> The SPM has been released for each year since 2009.<sup>9</sup> It does count *all* the resources we channel toward ameliorating poverty, such as SNAP and the EITC. According to the SPM, poverty has increased slightly from 15.1 in 2009 to 16.0 in 2012.

Recently, researchers at Columbia University estimated the SPM for every year from 1967 to 2012. They document the importance of counting all benefits the poor receive.<sup>10</sup> They estimate what the poverty rate would have been in the absence of (1) the cash safety net programs that are counted in the official measure (OPM); and (2) all the safety net programs, including near cash benefits and refundable tax credits.

In Figure 5, we show the percentage of all persons removed from poverty by safety net programs according to each measure. In the left-hand bar, we show the percentage point difference in poverty between the actual OPM and what it would have been if all cash benefits had been "zeroed out;" in the right-hand bar, the analogous difference for the SPM.

In 1967, when most safety net benefits were cash transfers (e.g., social security benefits, unemployment insurance, cash welfare), moving from the OPM to the SPM made little difference, as the safety net reduced poverty by about 5 percentage points using either measure.

But during subsequent decades, noncash benefits and refundable tax credits grew more rapidly than cash ben-

efits, with the result that the OPM increasingly understates the “antipoverty impact” of safety net programs. By 2012, according to the OPM, the safety net reduced poverty by 9 percentage points; but the SPM shows that the *full* safety net reduced poverty by 14.5 percentage points. Thus, the official measure fails to account for about a third of the antipoverty impact of safety net programs.<sup>11</sup>

To be consistent with the priorities of the War on Poverty planners, Figure 6 maintains the official poverty lines but counts all resources, including noncash benefits and refundable tax credits. According to Arloc Sherman,<sup>12</sup> counting these resources reduces the official poverty rate to 10.9 percent in 2011 from 15.0 percent (the difference between the top and bottom lines). This means that the poverty rate would have fallen by 8 percentage points, not 4 points, since 1965.

### Beneath the Poverty Line: Extreme Poverty and Deep Poverty

We now consider measures of extreme and deep poverty. The OPM and SPM focus on a single point in the income distribution. For instance, if the poverty line for a given family is \$23,000, the OPM or SPM simply document whether a family falls above or below that line. Over recent decades, however, there have also been substantial income changes among those below the poverty line.

In a recent paper, H. Luke Shaefer and Kathryn Edin examine trends in “extreme poverty,” which they define as living on less than \$2 a day, the World Bank metric of global poverty.<sup>13</sup>

They find that, for households with children, extreme poverty based on money income has rapidly increased from 1.7 percent in 1996 to 4.3 percent in 2011. If non-cash benefits and refundable tax credits are counted as income, extreme poverty rises by much less, from 1.1 to 1.6 percent over these years. Thus, even though extreme poverty has increased, the situation would have been much worse without additional resources provided by safety net programs.

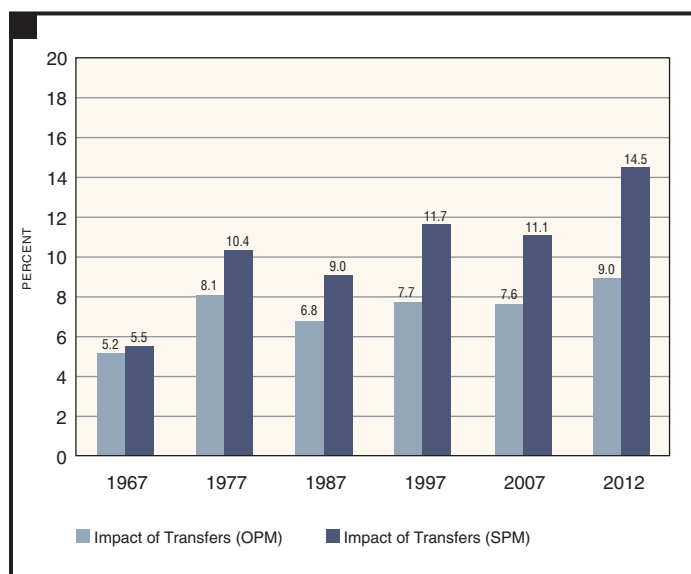
A similar result holds for “deep poverty,” defined as income less than 50 percent of the poverty line. According to the Columbia study, deep poverty for children would have risen to over 20 percent in some years without government benefits.<sup>14</sup> When all safety benefits are counted, however, deep child poverty is around 5-6 percent in almost all years since 1967.

Taken together, these studies suggest that safety net programs raise the living standards of millions of people even though they are not always large enough to raise them out of poverty.

### Where do We Go from Here?

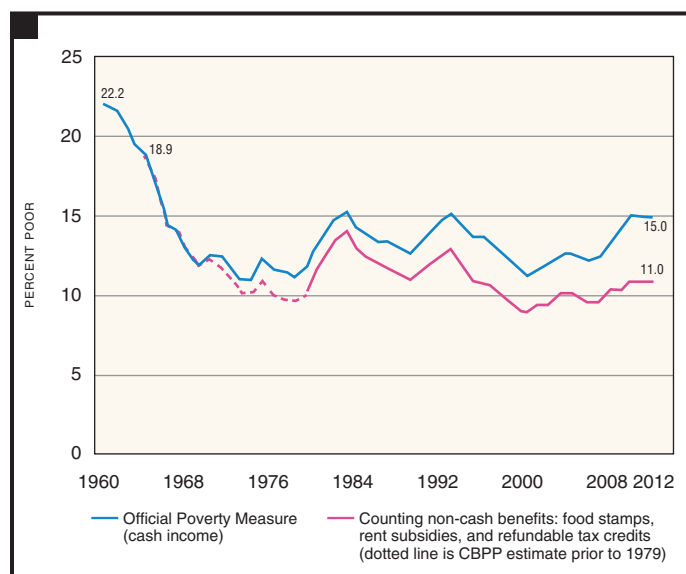
Poverty remains high because, since the early 1970s, unemployment rates have been high and economic growth has been less effective in reducing poverty than it was in the quarter century following World War II. Although the economy has largely failed the poor, safety net programs that were introduced or expanded in response to the War on Poverty take more people out of poverty today than was the case in the early 1970s. This increased antipoverty impact is obscured

FIGURE 5. Percentage Point Impact of Transfers Under OPM and SPM, 1967-2012



Source: Fox et al. (2013)

FIGURE 6. Poverty Rate Shows Greater Improvements Since 1960s When Non-Cash Benefits are Counted



Source: Arloc Sherman, Center on Budget and Policy Priorities (2013).

because the official poverty measure does not value the poverty-reducing effects of noncash benefits and refundable tax credits.

President Johnson's vision and policy priorities of 1964 remain relevant today. If poverty is to be significantly reduced, we must find ways to ensure that the benefits of economic

growth are more widely distributed than they have been in recent decades. The best way to do this is to adopt policies to increase the employment and earnings of the poor. Even with such a renewed focus on raising the market incomes of the poor, we must also continue to strengthen the safety net programs to prevent even more families from falling through the cracks. ■

## NOTES

1. Miles Corak, David Haproff, H. Luke Shaefer, and Jane Waldfogel provided thoughtful feedback on a previous draft.

2. See Danziger and Gottschalk, 1995, and Bailey and Danziger, 2013.

3. These analyses begin in 1968 given limitations in the available data for earlier years. The chart on race/ethnicity begins in 1970 as it is difficult to identify Hispanics in prior years.

4. As the population has become more educated, dropouts are an increasingly smaller group. The long-term trend for all persons without a college degree is also toward greater poverty.

5. Over time, immigrants comprise a larger share of all Hispanics, causing their poverty rate to rise because recent immigrants are more likely to be poor than the native-born.

6. See U.S. Bureau of the Census, 2013.

7. See Citro and Michael, 1995.

8. See Citro and Michael, 1995.

9. See Short, 2012.

10. See Fox, Garfinkel, Kaushal, Waldfogel, and Wimer, 2013.

11. The SPM addresses the effects of having public health insurance, such as Medicaid and Medicare, by subtracting medical out-of-pocket expenses from income. Sommers and Oellerich (2013) estimate the extent to which Medicaid reduces out-of-pocket medical expenses of the poor and conclude that, without Medicaid, an additional 2.6 million persons would have been poor in 2010 according to the SPM.

12. See Sherman, 2013.

13. See Shaefer and Edin 2013.

14. See Fox, Garfinkel, Kaushal, Waldfogel, and Wimer, 2013.

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## SAFETY NET

January 2014

The Stanford Center on Poverty and Inequality

BY KAREN JUSKO AND KATE WEISSHAAR

## KEY FINDINGS

- In 2012, U.S. safety net programs provided about one-third of the income support that low-income households needed to reach 150 percent of the official poverty line.
- The poverty relief provided by the safety net increased substantially during the Great Recession and reached its all-time high of 36 percent in 2010.
- There is considerable interstate variability in the amount of poverty relief provided by the safety net, with low-support states (e.g., Texas, Alabama) meeting only about 26 percent of the need and high-support states (e.g., Washington, Massachusetts) meeting as much as 40 percent of the need (based on pooled data from the 2008-2012 period).
- The extent to which households lose safety net benefits as their market earnings increase declined dramatically in the early 1990s and has continued to decline gradually thereafter. This change in the rate of “relief falloff” presumably works to incentivize self sufficiency.

The overall effectiveness of the social safety net is difficult to evaluate in the U.S. because our welfare institutions comprise such a complicated amalgam of social assistance and insurance programs. Due to this patchwork approach to meeting needs, low-income families are often obliged to rely on support from many sources, and the task of judging the overall effectiveness of the safety net thus requires assessing the combined effect of all programs. The task of assessing safety net performance is further complicated because the amount of support low-income families secure is often conditioned by a variety of factors in addition to earnings (e.g., household composition).

For these reasons, a focus on one program or a single source of support provides an incomplete, and potentially misleading, evaluation of the safety net. In the U.S., each safety net program has a different constellation of beneficiaries and a distinctive funding trajectory, thereby making the overall trend in safety net effectiveness a complicated function of a mixture of program effects. It is all too easy to be misled by the funding vagaries of any particular program and thereby miss the big picture of whether the safety net, as a whole, is working as we would like it to work. In this brief, therefore, we use a total-income-based measure of the effectiveness of the American safety net, a “poverty relief ratio” (R), to provide an overall assessment of the effectiveness of our social safety net.

We apply here the standard concept of a poverty threshold—an amount of income

that provides for basic needs—and assess the extent to which American safety net programs are successful in raising the incomes of the poor up to this threshold. We should be concerned if, for example, income support is so minimal, or so inefficiently targeted, that it makes up only a small part of the difference between the earnings of a poor household and its poverty threshold. This would imply that, even with safety net support, low-income households are unable to meet basic needs. Alternatively, if safety net programs typically raise the total incomes of poor families to a level at which basic needs can be met, then we might characterize them as relatively successful in providing relief.

The first and key objective of this brief is to assess, therefore, whether the safety net is efficiently delivering on the simple objective of reducing poverty. But we also care about how this objective is—or is not—being met. Historically, the safety net has been evaluated not just in terms of its effectiveness in directly eliminating poverty in the short run (via transfers), but also in terms of its success in incentivizing families to secure income in the labor market and reducing, over the long run, the very need for transfers. We of course want a safety net that provides the necessary temporary support while also encouraging families to become self sufficient.

In this brief, we therefore adopt a conventional two-pronged assessment of the safety net, with the following questions serving as the focus of our analyses:

- How has the country fared over time in its commitment to provide basic income support to those who are very poor (e.g., the "baseline relief" parameter)?
- To what extent does policy incentivize efforts to increase market income by minimizing the rate of falloff in transfers as income grows (e.g., the "relief falloff" parameter)?

We address these questions with data collected from the March Supplement of the Current Population Survey. These data can be used to track national trends as well as interstate differences in poverty relief. We will monitor changes in poverty relief for the U.S. as a whole between 1988 and 2012, and we will also compare levels of poverty relief across the U.S. states (using pooled data pertaining to the years from 2008 to 2012).

What do we find? Most importantly, the effectiveness of American safety net programs remains somewhat limited, although there have been significant improvements in the provision of income support for low-income households over the last 25 years. We find especially large increases in the overall effectiveness of American safety net programs following the passage of the American Recovery and Reinvestment Act of 2009. Nevertheless, using a standard poverty threshold (i.e., 150% of the 2010 official poverty line), in 2012 American safety net programs provide only an average of about 32 percent of the income support low-income households would need to have a total income equal to this poverty threshold.

We also find sizable cross-state variation in the effectiveness of the safety net. For the 2008-2012 period, some states provide only a quarter of the income support needed to raise the income of low-income households to the poverty threshold, while others provide 40 percent of the needed relief. The poverty relief ratio tends to be highest in the West and Northeast, middling in the Midwest, and lowest in the South and some of the interior states.

The second parameter of interest is the rate by which anti-poverty relief falls off as households secure more market income. Here again we find evidence of substantial change between 1988 and 2012. The rate of falloff was dramatically reduced in the early 1990s and then declined far more gradually thereafter. Although the "relief falloff" parameter is thus declining within the U.S. as a whole, there remains substantial cross-state variability in this parameter. For example, Arizona has a sharp falloff in relief, while Connecticut has a far flatter

rate of falloff that—presumably—better incentivizes efforts to increase self sufficiency.

The evidence behind these and other key conclusions is laid out below. The first section outlines the challenges associated with evaluating safety net programs in the U.S. and makes a case for a total-income measure. We next present estimates of the poverty relief ratio, and its component parts, for the U.S. during the 1988-2012 period. Then, we turn briefly to the states, identifying those that are more (and less) successful in poverty relief. Finally, we anticipate how recent changes in support for the long-term unemployed will affect our estimates of poverty relief in the near future.

### Measuring Poverty Relief

Figure 1 reports average levels of income support provided to low-income households using the Current Population Survey (see "Data Processing Notes" for details on data and methods). All amounts are reported in thousands of 2012 U.S. dollars for equivalent-sized households (i.e., total dollar amounts are divided by the square root of the number of people in each household). Income support is divided by type, into social insurance (unemployment, disability, and worker's compensation), social assistance (welfare, Supplemental Nutrition Assistance Program or food stamps, Supplemental Security Income, and other programs with minimum income provisions), and "Earned Income Tax Credit" (EITC), a refundable tax credit predominantly for low-income families (with eligibility determined by income, marital status, and the number of children).

Notice, first, that there are big differences in the amount of support that low-income households receive: Households with no market income receive, on average, approximately 50 percent more than is received by those in the adjacent income categories (representing very little market income). We may conclude that the safety net is oriented toward assisting zero-income households.

Second, the sources of support vary across income groups, too. Not surprisingly, social assistance programs provide support mainly to those households with very low market earnings. By contrast, EITC goes mainly to those earning slightly more, but still low incomes. Households earning between five and ten thousand dollars receive, on average, about one thousand dollars through EITC, while households earning fifteen thousand dollars receive, on average, only a few hundred dollars.

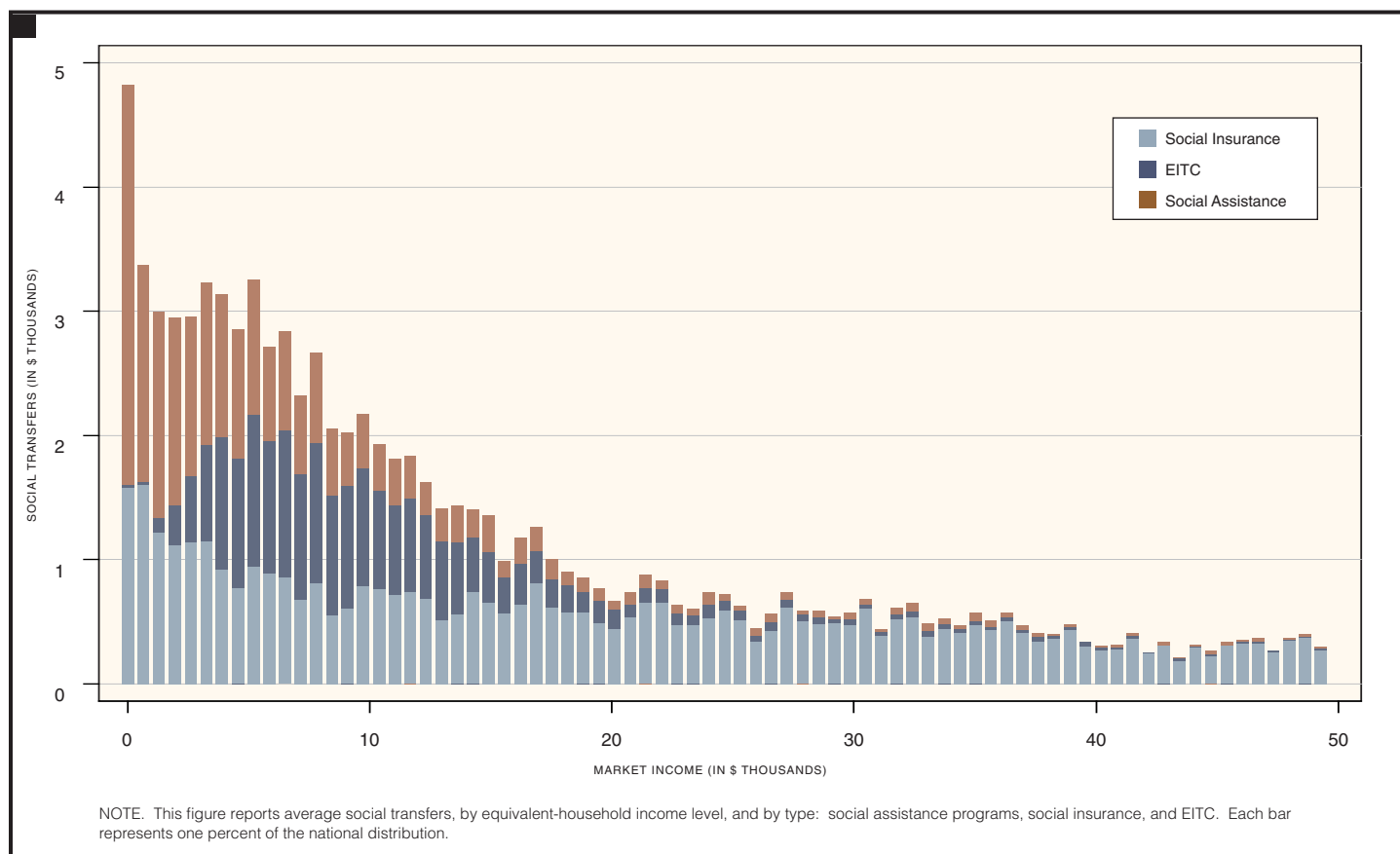
It is of course well known that low-income households benefit from a variety of safety net programs, and to varying extents. However, the measures policy analysts use to evaluate safety net programs do not adequately take these simple facts into account, as they are typically oriented to questions other than the effectiveness with which the safety net reduces poverty. There are, for example, three classes of frequently-used measures that are not adequate for our purposes:

- Fiscal measures represent the gross size of government allocations to programs, but provide little information on who receives how much support and whether it significantly changes their circumstances.
- Redistributive measures, like changes in income inequality after tax and transfers are applied, reflect the effects of redistribution on the overall income distribution rather than changes in the conditions of the poor in particular.

- Behavioral measures reflect changes among program recipients in, for example, rates of labor market participation or receipt of social assistance and thus again do not speak directly to the economic circumstances of recipients.

By contrast, poverty rate reduction measures estimate changes in the proportion of households that live in poverty, making them most similar to the measure we present here. However, conventional poverty rate reduction measures are not adequate for our purposes, as simple changes in poverty rates can conceal important changes in the distribution of support among low-income households. For example, a policy change may increase support for those with little or no market income, without changing the share of households living below some poverty threshold. More importantly, poverty reduction rate measures vary with the poverty threshold. The measure we present here, instead, maintains the relative ordering of states or annual observations across reasonable

FIGURE 1. Social Transfers, by Type and Market Income (2010).



Source: CPS 2010.

poverty thresholds, and is accordingly especially well-suited to comparative analysis.

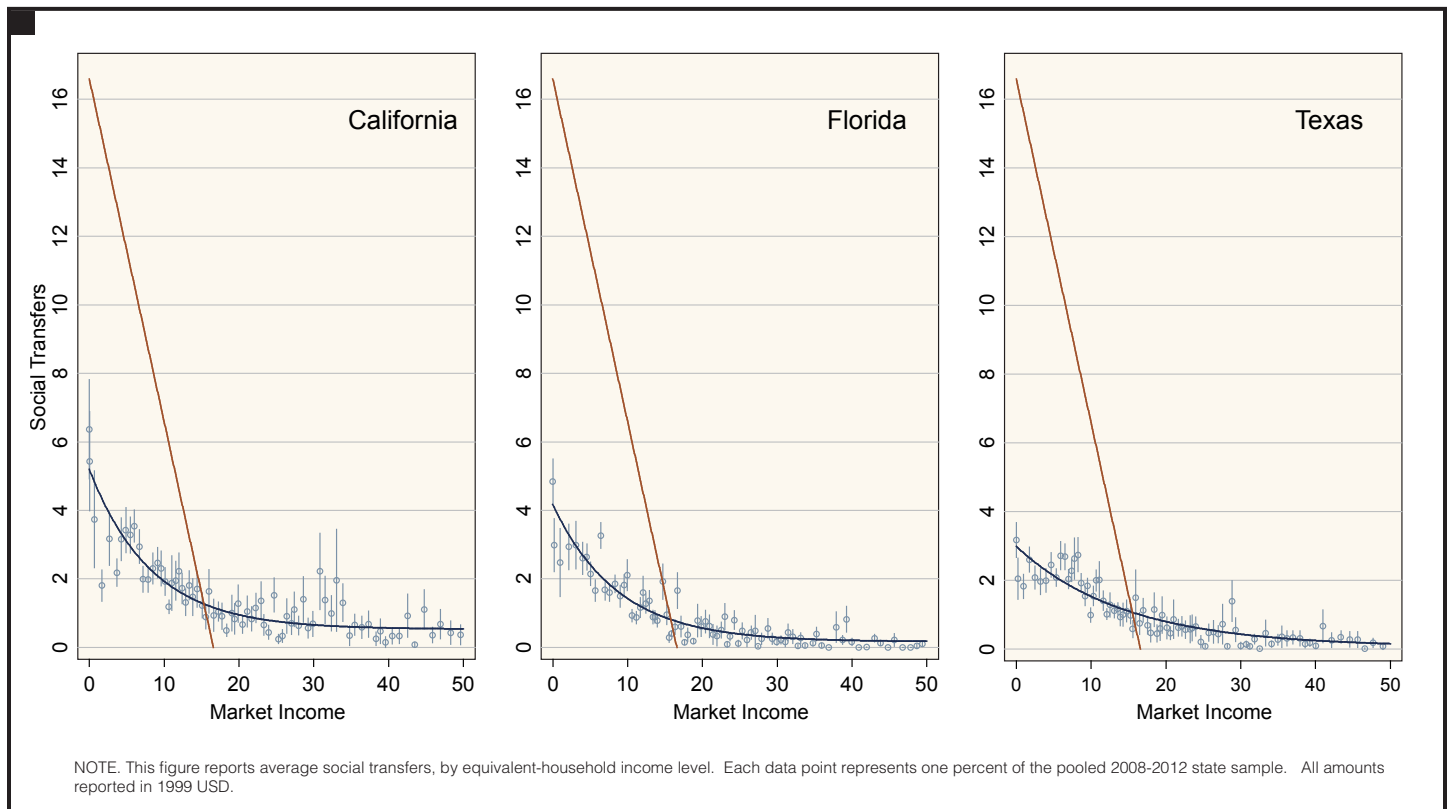
We therefore use the relationship between market income and social transfers as the basis of a poverty relief ratio. Notice in Figure 2, which plots (equivalent household) social transfer amounts against market income for three states, that this relationship varies on two important dimensions: First, California, Florida, and Texas differ in levels of income support that they provide to households with zero market income. We refer to this as “baseline relief.” Second, states also vary in the rate at which benefits decline with small increases in market earnings. Presumably, where this “relief falloff” is the greatest, incentives to increase market earnings are significantly undermined: For the very poor, small increases in earnings may result in dramatic decreases in income support, and consequently in total income. Where relief falloff is less dramatic, very low-income families continue to receive income support as they increase their market earnings, and therefore will likely have stronger incentives to enter the labor force. While states also vary in the amount of income support they provide (largely through unemployment insurance) to

those at higher levels of market income, this variation is less relevant to this discussion.

We pay particular attention to these first two differences in the relationship between market income and social transfers: differences in baseline relief, and differences in relief falloff. In fact, the parameters that describe the general relationship between social transfers and market income (the solid blue lines in Figure 2) can be used to estimate baseline relief and relief falloff directly, and can be used as the basis for a comparison of poverty relief within a state over time, or across societies more generally. (see “Deriving the Poverty Relief Ratio (R)” for more details).

While the variation in levels of baseline relief and relief falloff are interesting and informative themselves, a cross-state or time series comparison based on only one (or even two) of the parameters would be an incomplete analysis of poverty relief. Measures based on the benefits received by any particular low-income household would be similarly misleading. Instead, we use the relationship between social transfers and market income to generate an estimate of the amount of

FIGURE 2. The General Relationship between Social Transfers and Market Income (2008-2012).



Source: CPS 2008-2012.



income support provided relative to what is needed to bring all low-income households up to a poverty threshold. We use 150% of the 2010 official poverty line, for equivalent households, or \$16,584, as our benchmark. The red lines in Figure 2 represent the amount of income support that would be necessary to raise the income of each low-income household to \$16,584.

Then, we estimate the ratio of the area under the solid blue line in Figure 2 (the estimated relationship between social transfers and market income) to the area of the triangle completed by the solid brown line. An estimate of  $R=.32$  (the state mean for the 2008-2012 period), for example, implies that an average low-income household could expect to receive about 32% of the income support it would need for its total income (market income plus social transfers) to equal the poverty threshold.

### The National Estimates

We are now in a position to examine trends in poverty relief. Figure 3 reports estimates of the Poverty Relief Ratio,  $R$ , and its components, baseline relief (middle panel) and relief falloff (bottom panel), for the U.S. from 1988 to 2012. Increases in  $R$  (top panel) correspond to increases in income support, relative to the poverty threshold. Similarly, increases in baseline relief correspond to increases in support for those households with no market income. Finally, when the relief falloff parameter becomes less negative, it means that a given increase in earnings leads to a less substantial decline in benefits (with the presumption that the disincentive to pursuing market earnings is thereby reduced).

Focusing first on the top panel, we observe major shifts in overall levels of poverty relief during this period: During the late 1980s and early 1990s, average levels of income support provided slightly more than a fifth of what was needed to raise the total income of poor families to the poverty threshold. By 2012, income support had increased to 32 percent of what is needed to raise poor families' incomes up to the poverty threshold.

Major changes in  $R$  correspond to important policy shifts. We observe an increase in the effectiveness of safety net programs with the expansion of the EITC in 1990 and especially in 1993, when President Clinton made the EITC the cornerstone of his antipoverty program. Then, following the implementation of the Personal Responsibility and Work Opportunity Act in 1997, we see a significant decline in levels of income support provided to low-income households. We also observe a slight increase in benefits in the early years of the Bush

### DERIVING THE POVERTY RELIEF RATIO ( $R$ )

- › The solid blue lines in each panel of Figure 2 report the estimated relationship between social transfers and market income. This relationship is generally well-described by a negative exponential function,

$$ST_{ij} = \alpha_j + \beta_{1j} \exp(\beta_{2j} MI_{ij}) + e_{ij} \quad (1)$$

where  $ST_{ij}$  denotes social transfer amounts,  $MI_{ij}$  denotes market income for individuals  $i = 1 \dots n$  in states  $j = 1 \dots J$ , the parameters  $\alpha_j > 0$ ,  $\beta_{1j} > 0$ , and  $\beta_{2j} < 0$  describe the bivariate relationship within each state, and  $e_{ij}$  is a stochastic residual term.

- › Notice that individuals who have no market income (i.e.,  $MI_{ij}=0$ ) receive, on average, income support in the amount of  $\alpha_j + \beta_{1j}$  ("baseline relief"). Similarly, for very high levels of market income,  $ST_{ij}$  is expected to take on the value  $\alpha_j$ . Finally,  $\beta_{2j}$  reports the curvature of the line, or the rate at which benefit levels decline with increased market earnings; we refer to this as "relief falloff."

- › The solid brown line in Figure 2 reports the linear function,

$$ST_{ij} = \psi - MI_{ij}. \quad (2)$$

- › Here,  $\psi$  is a poverty threshold (e.g., a household equivalent of 150% of the official poverty line), and  $ST$  and  $MI$  are social transfers and market income, respectively. The expression in Eq. (2) reports the amount of income support that would need to be provided to raise the total amount of income, for all low-income households, to the poverty threshold,  $\psi$ .

- › In combination with Eq. (1), we can calculate the poverty relief ratio  $R$  as an estimate of the amount of income support needed, relative to the total amount implied by Eq. (2), that would bring the total income of each low-income household to the poverty threshold,  $\psi$ .

administration as part of the post-9/11 economic stimulus. Finally, following the 2008 financial crisis, we observe some success in the Obama administration's efforts to provide poverty relief, as levels of poverty relief increase to 36 percent of the poverty threshold.

The shifts in R that we observe in the top panel can be attributed to changes in baseline relief as well as changes in relief falloff. As EITC expands during the early 1990s, we see a dramatic decline in the rate at which safety net support drops off with increases in earnings. Then, we observe a steady but important decrease in the rate of relief falloff (corresponding

to an increase in values in the bottom panel) from the late 1990s through 2012. Most of the change that we observe in overall levels of poverty relief after 1997 can be attributed to changes in baseline relief.

In light of Figure 3, how then might we assess the effectiveness of our safety net? The first point that can be made is that the safety net did much work reducing the impact of the Great Recession on the amount of poverty. We see a substantial uptick in R during the recession years and, in this sense, the U.S. safety net responded just as it should have responded. At the same time, it is hardly the case that the safety net is eliminating all poverty (at least as measured here), indeed there remains much unmet need even after the safety net has acted.

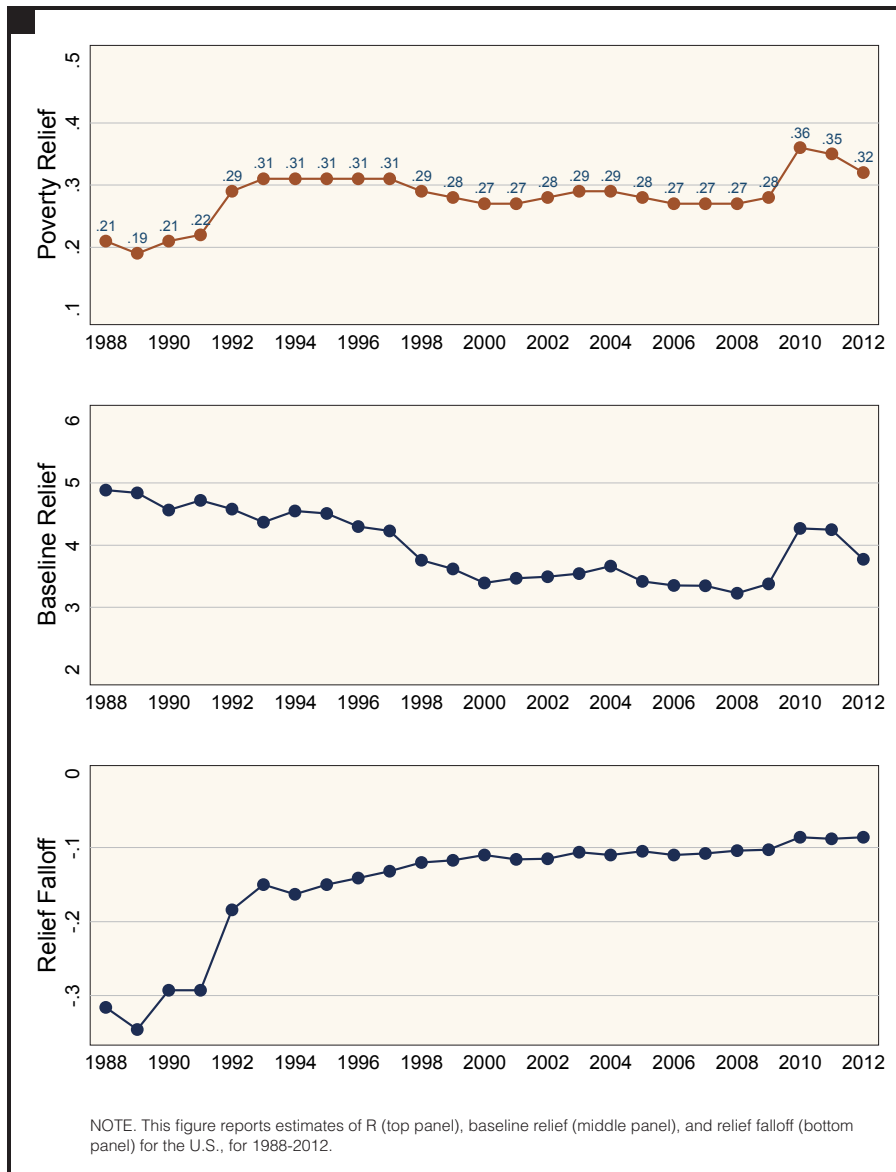
The second point is that we have fashioned a safety net in which the rate of relief falloff is gradually declining. Taken as a whole, our safety net is therefore increasingly operating to incentivize market work, which is precisely the type of safety net that most people want.

### State-Specific Estimates

The foregoing national estimates conceal much state-level variability in the amount of relief and how it is provided. To cast light on this variability, Figure 4 maps the distribution of the poverty relief ratio across the U.S. states. We observe some regional clusters, with states in the West and Northeast generally providing more effective income support, and states in the South and interior providing more limited poverty relief. We know from the analysis presented in Figure 3 that most of the variation in the effectiveness of states' poverty relief programs comes from variation in baseline support.

To cast further light on this variability, Figure 5 next plots the estimates of baseline relief against relief falloff. Higher values on the vertical axis correspond to higher levels of baseline relief. Increasing values on the horizontal axis correspond to lower rates of relief falloff. Those states, like Wyoming, Florida, and Nebraska, in the

FIGURE 3. Estimates of R, Levels of Baseline Relief, and Relief Falloff (1988-2012)



Source: CPS 1988-2012.

lower left quadrant of the graph provide low levels of support that drop off quickly with small increases in income. States in the upper right quadrant, like Massachusetts, Maine, and Rhode Island, provide relatively high levels of support to those with no market income, while benefits in these states decline comparatively slowly with small changes in market income. The third group of states, those in the upper left quadrant, like Washington and California, are those states that provide relatively high levels of support to no-market-income households, but benefits drop off fairly quickly with earnings. Finally, those states in the lower right quadrant, like Kentucky, provide relatively little income support to those with no market income, and instead provide a more uniform distribution of benefits (i.e., most income support is provided through unemployment insurance programs).

If the results of Figures 4 and 5 are combined, one finds that there are two roads to securing high poverty relief. The road typically taken in the Western states (e.g., Washington, California, Nevada, Utah) is to combine high levels of baseline relief with a relatively steep falloff, while the road typically taken in the Eastern states (e.g., Massachusetts, Maine,

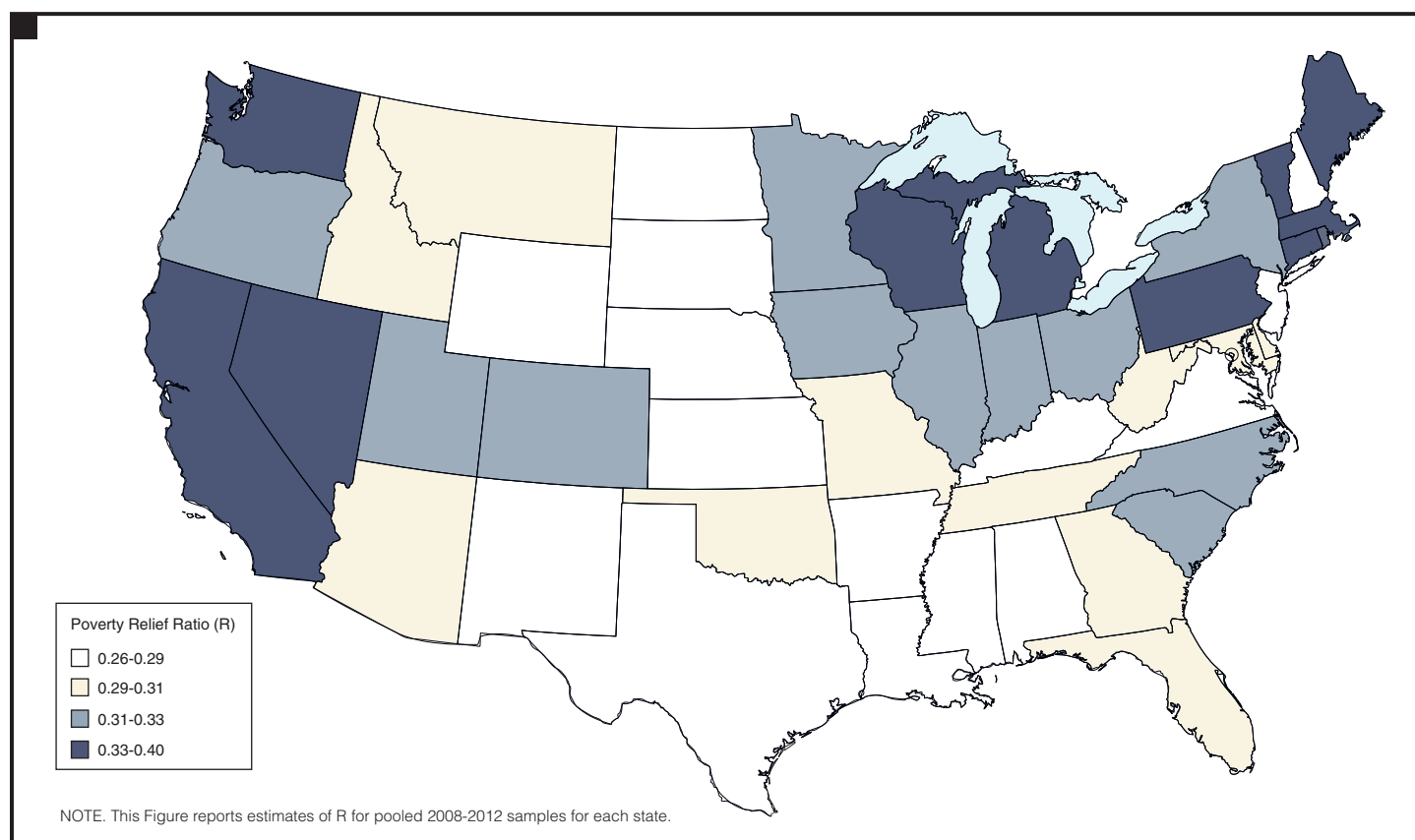
Rhode Island) is to combine high levels of baseline relief with a less pronounced falloff. Although those who prefer low-disincentive regimes would presumably opt for the Eastern road, it bears noting that, at least by the standard of overall poverty relief, each approach is doing substantial work.

### Conclusions

Building on our earlier work, we have used the poverty relief ratio to provide a direct measure of the effectiveness of American safety net programs. Implicitly, the poverty relief ratio identifies a goal for American social policy – raising all income levels to a well-specified poverty threshold – and tracks progress towards this goal. As this analysis makes clear, there is much work to be done: In 2012, only 32 percent of the total need was met (using a benchmark of 150% of the 2010 official poverty line). In some of the Southern states, the poverty relief ratio was especially low, dropping down to as little as 26 percent.

At the same time, the safety net responded rather effectively to the challenges of the Great Recession, indeed the poverty relief ratio reached an all-time high of 36 percent in 2010.

FIGURE 4. Estimates of R, by State (2008-2012)



Source: CPS 2008-2012.



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## NOTES

1. Please note that we use the term “income support” although our measure of social transfers also includes near-cash benefits (Supplemental Nutrition Assistance Program, or food stamps, and energy assistance).
2. See Jusko and Weisshaar, 2013, for a full and more technical treatment.

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## ADDITIONAL RESOURCES

Buhmann, B., Rainwater, L., Schmaus, G. and T. Smeeding. 1988. “Equivalence scales, well-being, inequality, and poverty: sensitivity estimates across ten countries using the Luxembourg Income Study (LIS) database.” *Review of Income and Wealth* 34:115-42.

Jusko, K. L.. 2008. “The Political Representation of the Poor.” A dissertation submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy (Political Science) in The University of Michigan.

Jusko, K. L. and K. Weisshaar. 2013. “Measuring Poverty Relief.” Working paper. Stanford University.

O’Hara, A.. 2006. “Tax Variable Imputation in the Current Population Survey” in the *IRS Research Bulletin* (Publication 1500), 169-82.

US Census Bureau. 2010. “Poverty Thresholds for 2010 by Size of Family and Number of Related Children Under 18 Years.” Table published on-line at <http://www.census.gov/hhes/www/poverty/data/threshld/>.

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## DATA PROCESSING NOTES

This analysis is based on the Current Population Survey March Supplement, household income data.

All dollar amounts are reported in thousands of 1999 USD. Except for EITC, which is estimated by the US Census Bureau on the basis of the information provided (see O’Hara 2006 for more detail), all income amounts are reported by CPS survey respondents. To generate equivalent household estimates of earnings and transfers, total dollar amounts were divided by the square root of the number of people in each household (see Buhmann et. al. 1988).

The analysis is restricted to working-aged households (i.e., in which the head of household is aged at least 25).

Market income includes wage and salary, self-employment, farm, interest, dividend, rent, child support, alimony, veteran’s, pension/retirement, and familial assistance income.

Social assistance support includes welfare (Temporary Assistance to Needy Families, TANF, and its predecessor Aid to Families with Dependent Children, AFDC), Supplemental Security Income, Supplemental Nutrition Assistance Program benefits (SNAP), energy assistance, and other means-tested income support programs.

Tax credits include “Earned Income Tax Credit” (EITC), a refundable tax credit predominantly for low-income families (eligibility is determined by income, marital status, and the number of children).

Social insurance benefits include unemployment insurance, as well as disability insurance and workers’ compensation.

A common poverty threshold, = \$16,584 (150% of the 2010 poverty threshold for a family of four, divided by 2; see US Census Bureau 2010) is used in calculations of R.

# INCOME INEQUALITY

January 2014

The Stanford Center on Poverty and Inequality

BY JEFFREY THOMPSON AND TIMOTHY SMEEDING

## KEY FINDINGS

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

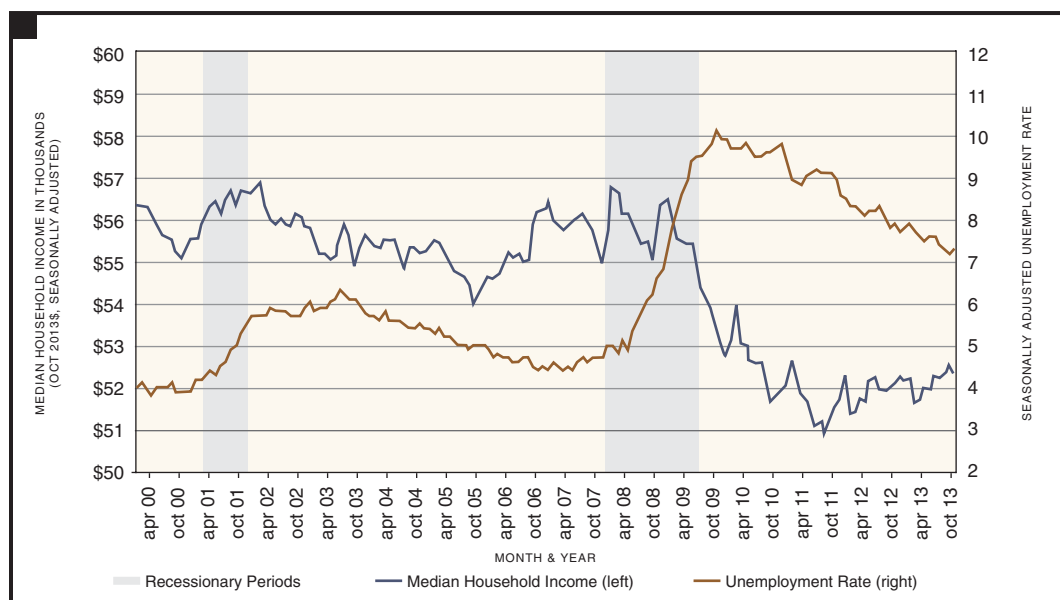
The takeoff in income inequality over the last four decades is by now well-known. By contrast, the public is perhaps less familiar with changes in the income distribution over the last decade, a period marked by a financial crisis, the Great Recession, and the tepid recovery. The main purpose of our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

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

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

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

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



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

### Median Household Income

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

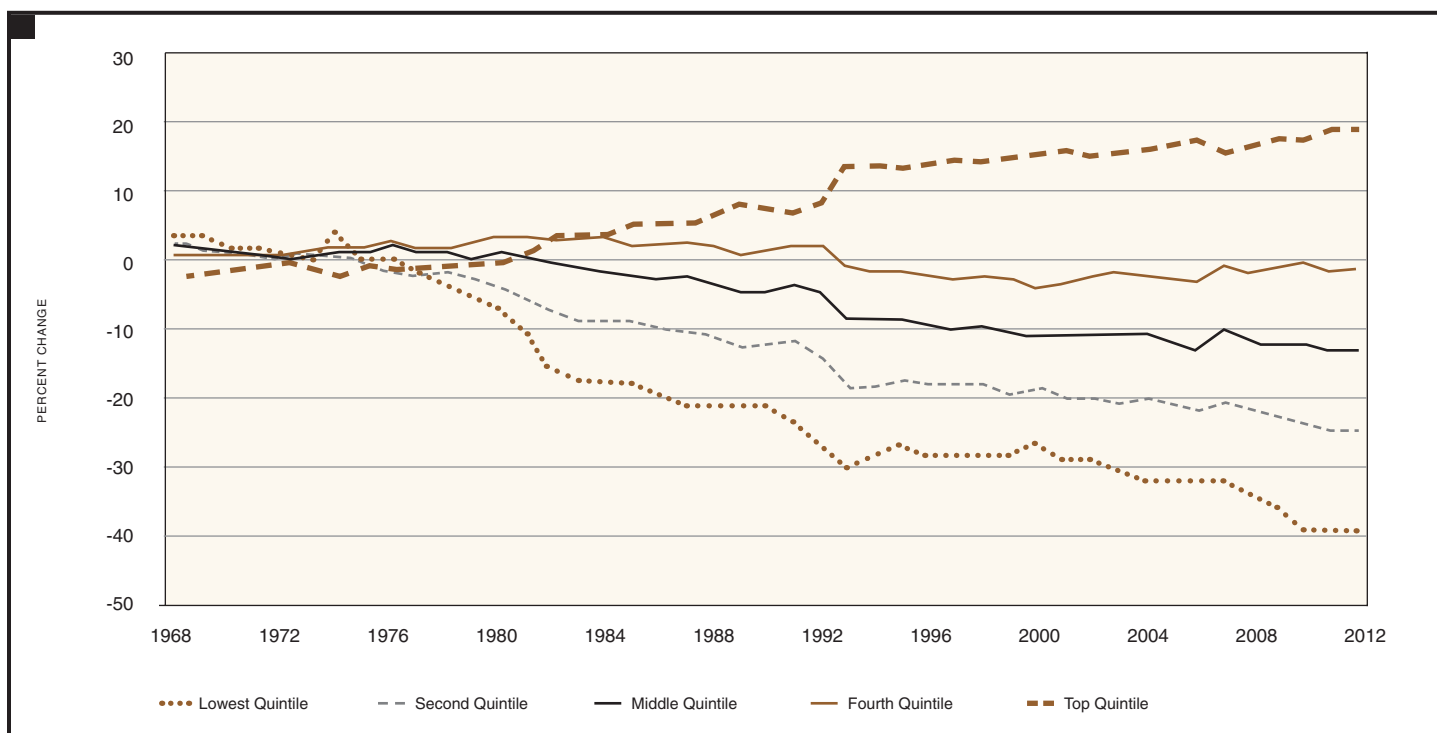
How has median income fared in the recovery period? As unemployment remained stubbornly high (above 9 percent) for most of 2010 and 2011, median household income continued to fall. It hit a low-point in mid-2011, roughly ten percent lower than pre-recession levels. After mid-2011, the unemployment rate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

### The Distribution of Income

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

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

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



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

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

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

### Gini Coefficients for Income and Consumption

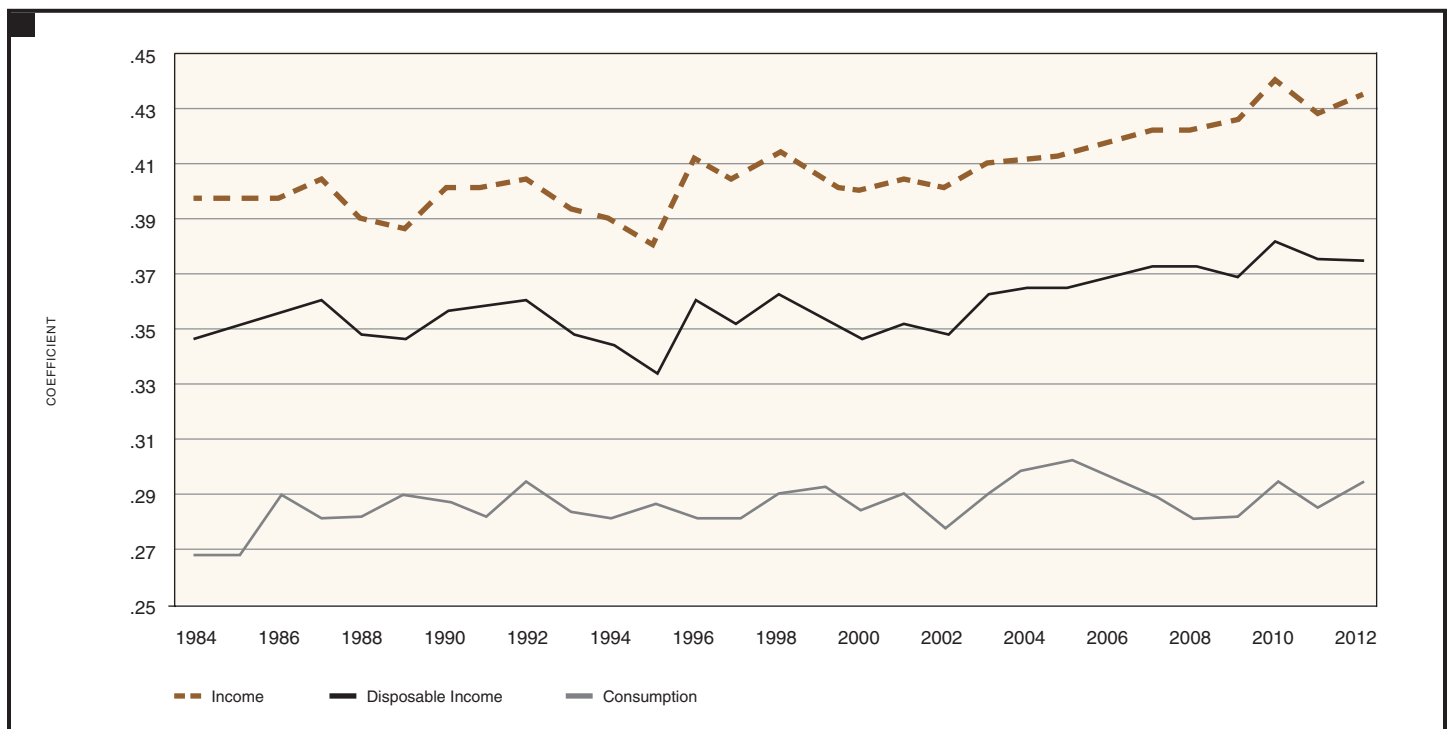
The Gini coefficient, the most commonly used income distribution statistic, is of course important to consider as well. It is reassuring that this measure also indicates that the inequality of pre-tax income rose in the Great Recession. Using CPS “Money Income,” the Gini rose from .463 to .468 between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

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

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

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

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



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



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

**Top Shares of Income**

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

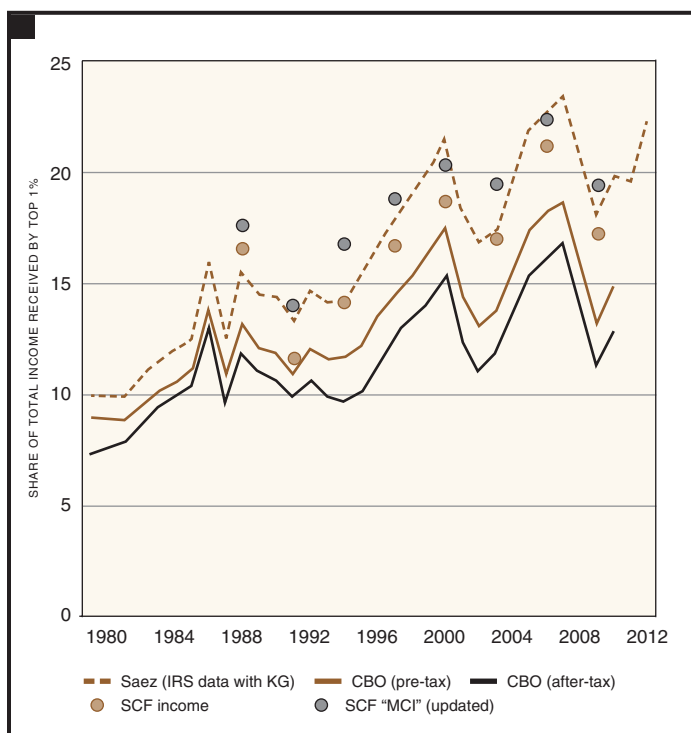
Figure 4 shows trends in the share of income received by the top one percent of income using three different data sources with different income definitions. The top line in Figure 4, drawn from the research of Emmanuel Saez,<sup>6</sup> relies on Internal Revenue Service (IRS) tax statistics. It shows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

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

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

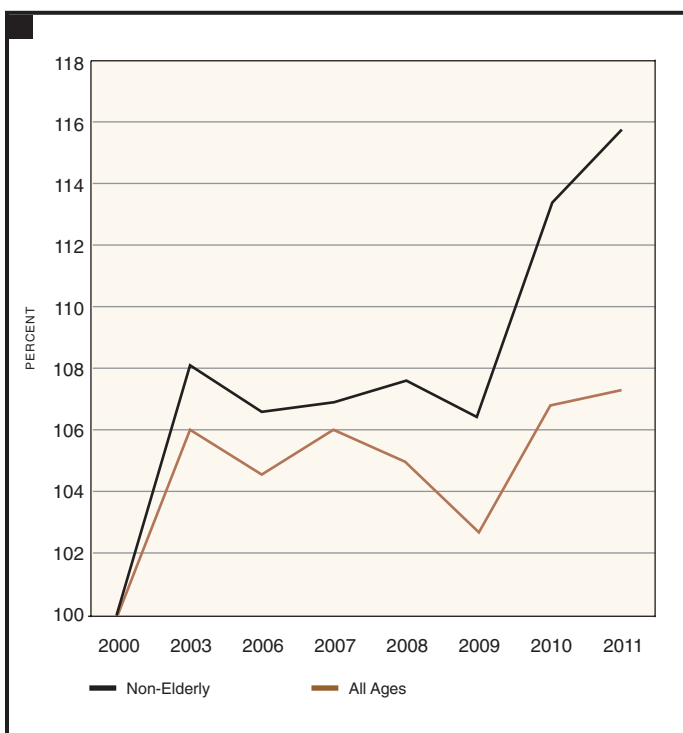
Like the tax data analyzed by Emmanuel Saez, SCF income also includes capital gains income. Neither income measure, however, includes any of the unrealized gains resulting from the ownership of assets. These gains might be relevant for the distribution of income, as most gains are not realized every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

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



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

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



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

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

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

### Impact of Policies on Inequality

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

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

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

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

### Looking Forward

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

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

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

## NOTES

1. See DeNavas-Walt, Proctor, and Smith, 2013, Table A-2.
2. See DeNavas-Walt, Proctor, and Smith, 2013, page 40.
3. This figure updates Fisher, Johnson, and Smeeding, 2013.
4. Disposable income removes federal and state income taxes and FICA taxes, and adds the value of food stamps and refundable federal tax credits in addition to the other transfer income collected in the survey. State and local sales taxes, however, are not removed. Consumption is spending on all goods and services for current consumption measured in the Consumer Expenditure Survey, excluding life insurance, pension, and cash contributions. For auto and housing purchases, the service flow or rental equivalence are used. See Fisher, Johnson, and Smeeding, 2013, for details.
5. See Fisher, Johnson, and Smeeding, 2013a; 2013b.
6. See Saez, 2013.
7. Authors' calculations based on Saez, 2013.
8. For details, see Saez, 2013, Figure 2.
9. See Thompson and Smeeding, 2013.
10. We first subtracted reported property income from the SCF, then systematically added back the returns on financial wealth, retirement assets, housing, other investments (including real estate), and business income for owners and proprietors. See Smeeding and Thompson, 2011, for more details.
11. The CBO income measure includes all types of cash and noncash income, employee benefits, realized capital gains, and the burden of all taxes, including tax rebates. See CBO, 2013, for more details.
12. The CBO removes all federal taxes, including the share of corporate taxes attributed to owners of capital, but does not remove any state or local taxes.
13. For details, see Larrimore, Burkhauser, and Armour, 2013. It should be noted that they do not include state and local sales taxes in their measures. This absence is common to all of the other after-tax measures included in this brief, but it does have implications for the after-tax distribution of income, as the effective sales tax burden is greater on lower-income households. Furthermore, in the Great Recession, state governments were most likely to turn to sales and excise tax increases to close budget shortfalls. See Johnson, Collins, and Singham, 2010.
14. See Fisher, Johnson, and Smeeding, 2013a; 2013b.
15. See Thompson and Smeeding, 2013. They also adjust for household size, dividing income by the square root of the number of household members.
16. These ratios are for the top ends of the ninth and first deciles, the ninetieth percentile (P90), and the tenth percentile (P10).
17. Fisher, Johnson, and Smeeding, 2013b.

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## WEALTH INEQUALITY

January 2014

The Stanford Center on Poverty and Inequality

BY EDWARD N. WOLFF

## KEY FINDINGS

- After two decades of robust growth in middle class wealth, median net worth plummeted by 47% from 2007 to 2010.
- As median net worth declined during the Great Recession, wealth became more unequally distributed. In fact, wealth inequality rose for the first time since the early 1980s, even as income inequality declined (under some measures).
- The recent sharp fall in median net worth as well as the rising inequality of net worth are due to the high leverage of middle class families and the high share of homes in their portfolio.
- The Great Recession hit black households much harder than white households, with the ratio of net worth between the two groups falling from 0.19 in 2007 to 0.14 in 2010. Hispanic households were hammered even more by the Great Recession: The ratio of net worth between Hispanic and white households plummeted from 0.26 to 0.15.

The last three decades have witnessed some remarkable asset price movements. While the median house price in real terms was virtually the same in 1989 and 2001, house prices suddenly took off thereafter, rising 19 percent in real terms from 2001 to 2007. Then, the Great Recession hit and home prices plummeted 24 percent. This was followed by a partial recovery. Median house prices rose 7.8 percent through September 2013, still well below their 2007 value.

The stock market has trended differently during this same period. In contrast to the housing market, the stock market boomed in the 1990s, surging 171 percent between 1989 and 2001. However, from 2001 to 2007, the Standard & Poor's 500 was up only 6 percent. During the Great Recession, it nosedived 26 percent. In this case, there was a strong recovery after 2010, with stock prices up 41 percent through September 2013.

This brief poses four simple questions in response to such shocks: How have the rapid and unprecedented movements in asset prices affected the absolute amount of middle class wealth? How have they affected wealth inequality? Which groups were most affected by these changes? And, finally, has the post-recession period brought about much of a recovery in household wealth?

It will be shown that the Great Recession abruptly reversed a trend of robust growth in middle class wealth since the early 1980s and also brought about the first growth in wealth inequality since the early 1980s. Median wealth plummeted 47 percent from

2007 to 2010, and the inequality of net worth, after almost two decades of little movement, rose sharply. Relative indebtedness of the middle class also continued to expand, even though the middle class had stopped taking on new debt.

What drove these changes? This brief will show that the recent sharp fall in median net worth and the recent rise in the inequality of net worth are traceable to the high leverage of middle class families and the high share of homes in their portfolios. Median net worth fell because middle class homeowners were not able to shed mortgage debt. At the same time, their home values declined.

Wealth inequality increased because home values composed 67 percent of middle class wealth but only 9 percent of the portfolios of the wealthiest one percent. It follows that the wealthiest were better protected against the sharp decline in housing prices during the Great Recession.

This brief will also reveal that the middle class wealth fallout was not felt equally across demographic groups. The sharp fall in the relative net worth of both minority and young households is again traceable to their high leverage and the high share of homes in their portfolio. The ratio of net worth between black and white households fell from 0.19 in 2007 to 0.14 in 2010 and that between Hispanic and white households plummeted from 0.26 to 0.15. The relative wealth of the under 35 age group (when compared to total wealth) plummeted from 0.17 in 2007 to 0.10 in 2010 and that of age group 35-44 from 0.58 to 0.41.

But has household wealth recovered since the Great Recession? The results are mixed. According to the Financial Accounts of the United States, mean household wealth fully recovered by the second quarter of 2013. Other sources, however, paint a less optimistic portrait.

In the following sections, these key results are laid out and elaborated. The concluding section will then examine the forces behind these results. For the years 1983 to 2010, the primary data source is the Survey of Consumer Finances (SCF), conducted by the Federal Reserve Board.

### The Great Reversal in Wealth

It is useful to begin by examining trends in mean and median household wealth. These trends evince what may be called the “great reversal” in which the relatively high rates of growth in recent decades come to a sudden end with the Great Recession.

Figure 1 shows the robust growth in wealth from 1983 to 2007. Median wealth grew at 1.1 percent per year from 1983 to 1989, 1.3 percent per year between 1989 and 2001, and then at 2.9 percent per year from 2001 to 2007. Between 2007 and 2010, median wealth plunged by a staggering 47 percent. The primary reasons, as we shall see below, were the collapse in the housing market and the high leverage of middle class families.

Mean net worth, which is more sensitive to the long “right

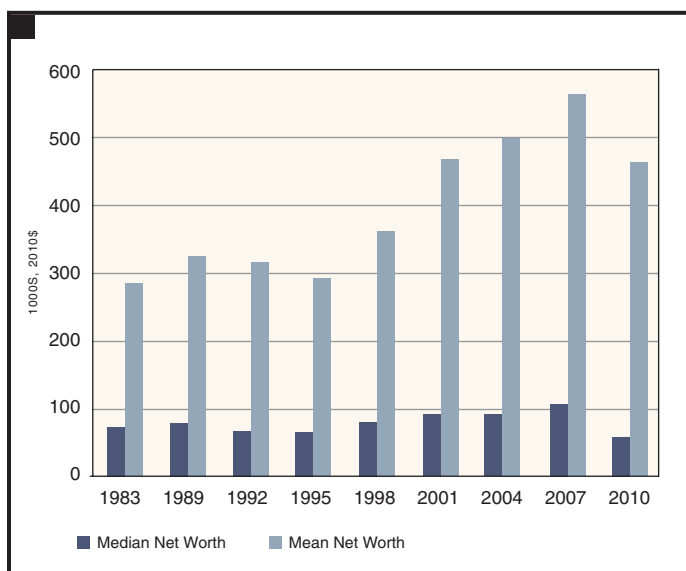
tail” of the distribution, also grew vigorously over this time period. It grew at 2.3 percent per year from 1983 to 1989, at 3.0 percent per year from 1989 to 2001, and at 3.1 percent per year from 2001 to 2007. Between 1983 and 2007, mean wealth grew more than twice as fast as the median, indicating widening inequality of wealth over these years.

The Great Recession also saw an absolute decline in mean household wealth. However, whereas median wealth plunged by 47 percent, mean wealth fell by only 18 percent. The relatively faster growth in mean wealth than median wealth from 2007 to 2010 was coincident with rising wealth inequality.

The changes in the income distribution are rather different. When the Current Population Survey (CPS) is used to track median income in real terms, we see that it gained 11 percent between 1983 and 1989, grew by only 2.3 percent from 1989 to 2001, and then grew by another 1.6 percent from 2001 to 2007 (see Figure 2). From 2007 to 2010, it fell by 6.4 percent. This reduction was not nearly as great as that in median wealth.

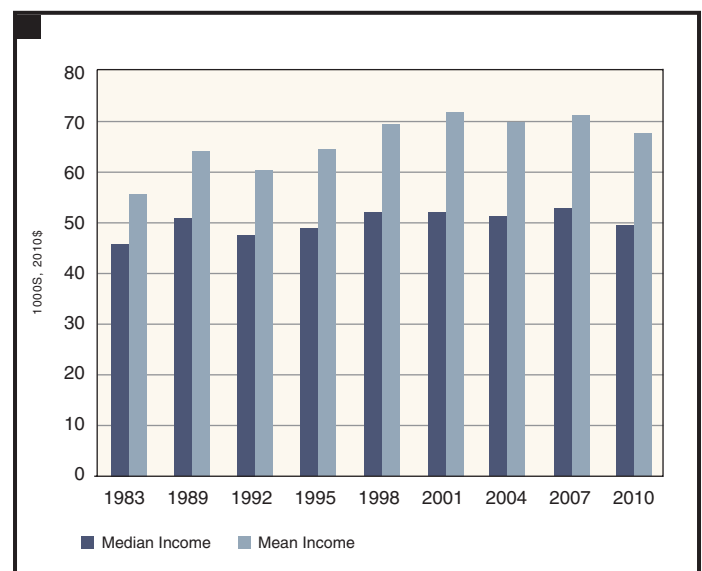
Mean income surged by 2.4 percent per year from 1983 to 1989, advanced by 0.9 percent per year from 1989 to 2001, and then dipped by 0.1 percent per year from 2001 to 2007. Mean income also dropped in real terms from 2007 to 2010, by 5.0 percent, slightly less than that of median income.

FIGURE 1. Mean and Median Net Worth, 1983-2010



Source: Survey of Consumer Finances.

FIGURE 2. Mean and Median Household Income, 1983-2010



Source: Survey of Consumer Finances.

The upshot is that the Great Recession was indeed a “great reversal” of what had been a long period of expansion in wealth. By contrast, the effects of the Great Recession on income were less profound, although here again it interrupted what had been a long period of increase (except that mean income was roughly stable from 2001 to 2007).

### Trends in Inequality

What about trends in inequality? The Gini coefficient for wealth, after rising steeply between 1983 and 1989 from 0.80 to 0.83, remained virtually unchanged from 1989 to 2007 (Figure 3). In contrast, the years of the Great Recession saw a very sharp elevation in wealth inequality, with the Gini coefficient rising to 0.87.

The time trend for income inequality contrasts with that for wealth inequality. Income inequality showed a sharp rise from 1983 to 1989, with the Gini coefficient expanding from 0.48 to 0.52, and again from 1989 to 2007, with the Gini index advancing to 0.57. Perhaps somewhat surprisingly, the Great Recession witnessed a rather sharp contraction in income inequality. The Gini coefficient fell from 0.57 in 2007 to 0.55 in 2010. One of the puzzles we have to contend with is that wealth inequality rose sharply over the Great Recession while income inequality contracted, at least according to the Survey of Consumer Finances used here. It should be noted, however, that other data sets and other measures of inequality do not suggest a sharp contraction (see, e.g., the brief on income inequality).

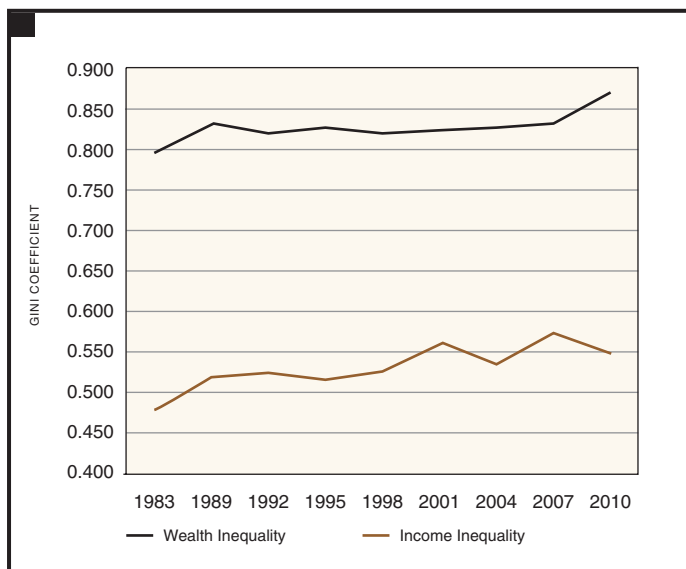
It is of course well known that wealth is more unequally distributed than income. This result is quite dramatically revealed in Figure 3. Because the Great Recession increased wealth inequality but reduced income inequality, this disparity has become even more pronounced in recent years.

### Portfolios and Debt

It is also important to monitor portfolio composition because some types of assets, particularly housing assets, were especially vulnerable during the Great Recession. In 2010, homes accounted for 31 percent of total assets among all households (first column of Figure 4). However, net home equity—home value minus mortgage debt—amounted to only 18 percent of total assets. Liquid assets made up 6 percent and pension accounts 15 percent. “Investment assets” (non-home real estate, business equity, financial securities, corporate stock, mutual funds, and trust funds) collectively amounted to 45 percent. The debt-equity ratio (the ratio of debt to net worth) was 0.21 and the debt-income ratio was 1.27.

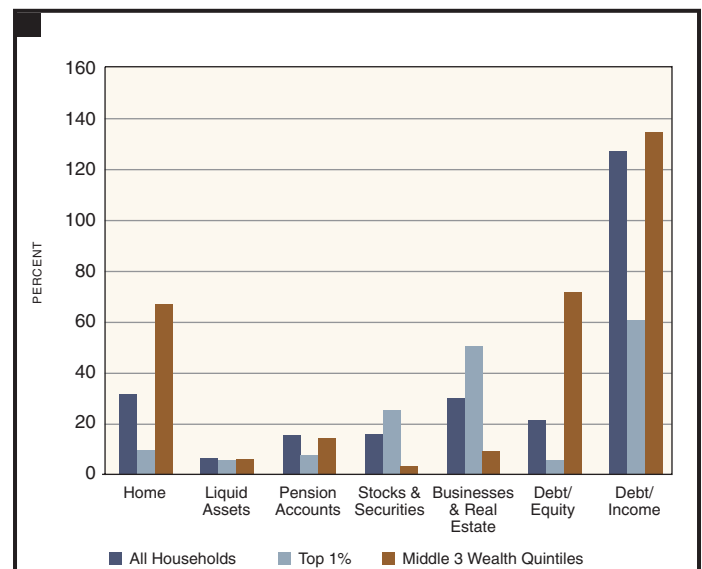
There are marked differences in portfolio composition by wealth class. As shown in the second column of Figure 4, the wealthiest one percent invested over three quarters of their savings in investment assets. Housing accounted for only 9 percent, liquid assets 5 percent, and pension 8 percent. The debt-equity ratio was only 0.03, the debt-income ratio was 0.61, and the ratio of mortgage debt to house value was 0.19. In contrast, 67 percent of the assets of the middle three wealth quintiles was invested in their home, a crucial difference relative to the portfolios of the wealthier (column 3 of

FIGURE 3. Wealth and Income Inequality, 1983-2010 (Gini Coefficients)



Source: Survey of Consumer Finances.

FIGURE 4. Composition of Household Wealth by Wealth Class, 2010



Source: Survey of Consumer Finances.

Figure 4). Home equity amounted to only 32 percent of total assets, a reflection of their large mortgage debt. Another 20 percent went into monetary savings and pension accounts. Together housing, liquid, and pension assets accounted for 87 percent, with the remainder in investment assets. Their debt-equity ratio was 0.72 and their debt-income ratio was 1.35, both much higher than that of the top quintile. Finally, their mortgage debt amounted to a little more than half the value of their home.

The rather staggering debt level of the middle class in 2010 raises the question of whether this was a recent phenomenon. It indeed was. There was a sharp rise in the debt-equity ratio of the middle class from 0.37 in 1983 to 0.61 in 2007, mainly a reflection of a steep rise in mortgage debt. The debt-income ratio more than doubled from 1983 to 2007, from 0.67 to 1.57. The rise in the debt-equity ratio and the debt to income ratio was much steeper than for all households. In 1983, the debt-income ratio was about the same for middle class as for all households, but by 2007 the ratio was much larger for the middle class.

Then, the Great Recession hit. The debt-equity ratio continued to rise, reaching 0.72 in 2010, but there was actually a retrenchment in the debt-income ratio, falling to 1.35. The reason is that, from 2007 to 2010, the mean debt of the middle class actually contracted by 25 percent in constant dollars. Mortgage debt fell by 23 percent as families paid

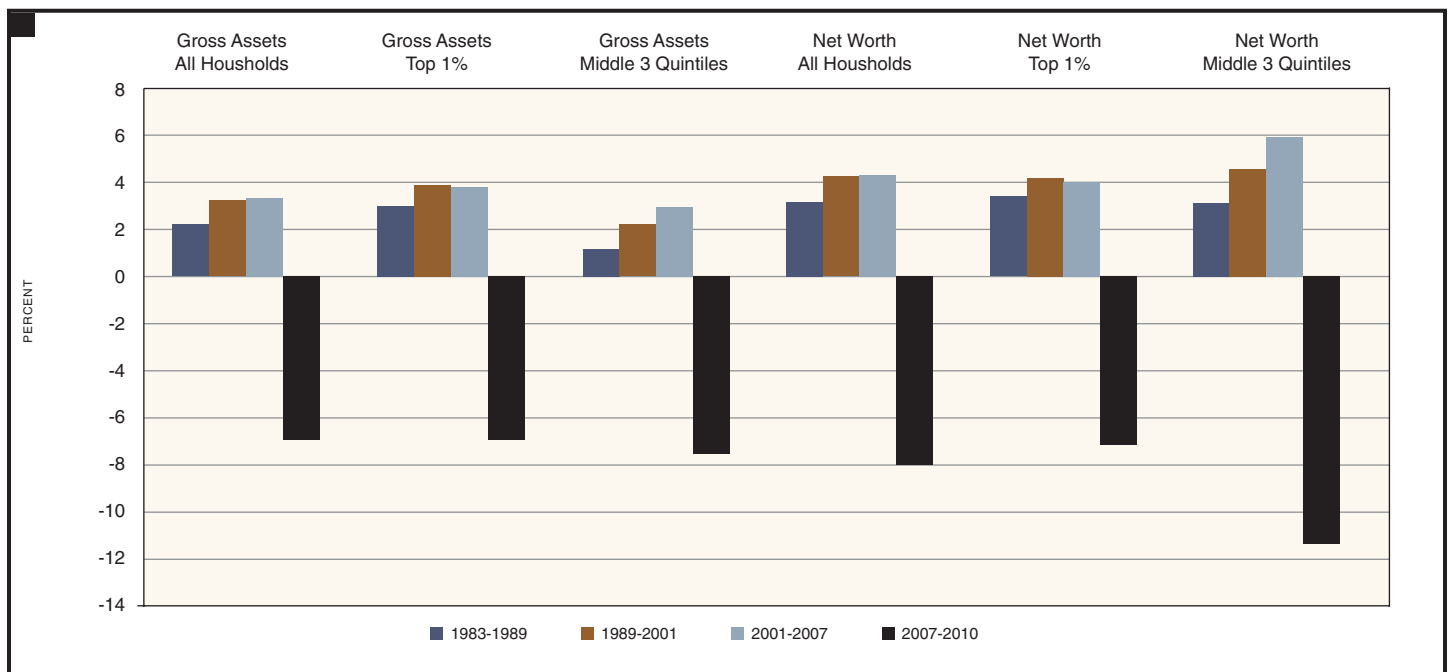
down their outstanding balances, and other debt dropped by 32 percent as families paid off credit card balances and other consumer debt. The steep rise in the debt-equity ratio was due to the sharp drop in net worth, while the decline in the debt to income ratio was almost exclusively due to the sharp contraction of overall debt.

### The Role of Leverage

Two major puzzles emerge. The first is the steep plunge in median net worth in real terms of 47 percent between 2007 and 2010 despite an only moderate drop in median income of 6.4 percent and less steep declines in housing and stock prices of 24 percent and 26 percent, respectively. The second is the steep increase of wealth inequality of 0.035 Gini points despite a decline in income inequality of 0.025 Gini points and a virtually unchanged ratio of stock to housing price. As noted above, wealth inequality is positively related to the ratio of stock to house prices, since stocks are heavily concentrated among the rich and real estate is the chief asset of the middle class.

Changes in median wealth and wealth inequality from 2007 to 2010 can be explained by leverage, the ratio of debt to net worth. The steep fall in median wealth was due in large measure to the high leverage of middle class households. The spike in wealth inequality was largely due to differential leverage between the rich and the middle class.

FIGURE 5. Average Annual Rates of Return by Period and Wealth Class



Source: Survey of Consumer Finances.

Figure 5 shows average annual real rates of return for both gross assets and net worth over the period from 1983 to 2010. Results are based on the average portfolio composition over the period. It is of interest to examine the results for all households. The overall annual return on gross assets rose from 2.20 percent in the 1983-1989 period to 3.25 percent in the 1989-2001 period and then to 3.34 percent in the 2001-2007 period before plummeting to -6.95 percent from 2007 to 2010.

The average annual rate of return on net worth among all households also increased from 3.17 percent in the first period to 4.25 percent in the second and to 4.31 percent in the third but then fell off sharply to -7.98 percent in the last period. It is notable that the returns on net worth are uniformly higher—by about one percentage point—than those on gross assets over the first three periods, when asset prices were generally rising. However, in the 2007-2010 period, the opposite was the case, with the annual return on net worth 1.03 percentage points lower than that on gross assets. These results illustrate the effect of leverage, raising the return when asset prices rise and lowering the return when asset prices fall. Over the full 1983-2010 period, the annual return on net worth was 0.87 percentage points higher than that on gross assets.

There are striking differences in returns by wealth class. The returns on gross assets were generally higher for the top one percent than the middle three quintiles. The differences are quite substantial. Over the full 1983-2010 period, the average annual rate of return on gross assets for the top one percent was 1.39 percentage points greater than that of the middle quintiles. The differences reflect the greater share of high yield investment assets like stocks in the portfolios of the rich and the greater share of housing in the portfolio of the middle class (see Figure 4).

This pattern is almost exactly reversed for returns on net worth. In this case, in the first three periods, the return was higher for the middle quintiles (except for the 1983-1989 period when its return was slightly lower than that of the top one percent), but in the 2007-2010 period the middle three quintiles registered a lower (that is, more negative) return. Differences in returns between the top one percent and the middle quintiles were quite substantial in some years. In the 2001-2007 period, the annual return was 1.92 percentage points higher for the middle quintiles, while in the 2007-2010 period, it was 4.27 percentage points higher for the top percentile. The spread in returns between the top one percent and the middle quintiles reflects the much higher leverage of the middle class (see Figure 4).

The huge negative rate of return on net worth of the middle quintiles was largely responsible for the precipitous drop in median net worth between 2007 and 2010. This factor, in turn, was attributable to the steep drop in housing prices and the very high leverage of the middle class. Likewise, the very high rate of return on net worth of the middle three quintiles over the 2001-2007 period (almost 6.0 percent per year) played a big role in explaining the robust advance of median net worth, despite the sluggish growth in median income. This, in turn, was a result of their high leverage coupled with the boom in housing prices.

The substantial differential in returns on net worth between the middle quintiles and the top percentile (over a point and a half lower) helps explain why wealth inequality rose sharply between 2007 and 2010 despite the decline in income inequality. Likewise this differential over the 2001-2007 period (a spread of about two percentage points in favor of the middle quintiles) helps account for the stasis in wealth inequality over these years despite the increase in income inequality.

### The Racial Divide Widens

Striking differences are found in the wealth holdings of specific racial and ethnic groups. In Figure 6, households are divided into three groups: (i) non-Hispanic whites (“whites” for short), (ii) non-Hispanic African-Americans (“blacks” for short), and (iii) Hispanics. In 2007, while the ratio of mean incomes between black and white households was an already low 0.48, the ratio of mean wealth holdings was even lower, at 0.19. The homeownership rate for black households was 49 percent in 2007, a little less than two thirds that among whites.

Between 1982 and 2006, while the average real income of white households increased by 42 percent, it rose by only 28 percent for black households. As a result, the ratio of mean income slipped from 0.54 to 0.48. Between 1983 and 2001, average net worth in constant dollars climbed by 73 percent for white households but rose by only 31 percent for black households, so that the net worth ratio fell from 0.19 to 0.14. However, between 2001 and 2007, mean net worth among blacks gained an astounding 58 percent while white wealth advanced by 29 percent, so that by 2007 the net worth ratio was back to 0.19, the same level as in 1983. The large gains made by black households over these six years can be traced to the much higher share of homes in their portfolio (46 percent of total assets in 2001, compared to 27 percent among whites). The homeownership rate of black households grew from 44 to 49 percent between 1983 and 2007.



The picture is rather different for Hispanics. The ratio of mean income between Hispanics and whites in 2007 was 0.50, almost the same as that between black and white households. The ratio of mean net worth was 0.26 compared to a ratio of 0.19 between blacks and whites. The Hispanic home-ownership rate was 49 percent, almost identical to that of black households.

Over the years 1983 to 2007, Hispanic mean income grew by only 18 percent, so that the ratio of Hispanic to white mean income slid from 0.60 to 0.50. On the other hand, between 1983 and 2001, mean wealth doubled for Hispanic households, at a slightly higher rate than whites, so the ratio of mean net worth increased slightly from 0.16 to 0.17. Mean net worth among Hispanics then climbed by another 82 percent between 2001 and 2007, and the corresponding ratio advanced to 0.26, quite a bit higher than that between black and white households. The surge in Hispanic wealth from 2001 to 2007 can be traced to a five percentage point jump in the Hispanic home ownership rate.

The racial picture changed radically by 2010. While the ratio of mean income between black and white households changed very little between 2007 and 2010 (income fell for both groups), the ratio of mean net worth dropped from 0.19 to 0.14. The proximate causes were the higher leverage of black households and their higher share of housing wealth in gross assets. In 2007, the debt-equity ratio among blacks was an astounding 0.55, compared to 0.15 among whites,

while housing as a share of gross assets was 0.54 for the former as against 0.31 for the latter. The sharp drop in home prices from 2007 to 2010 thus led to a relatively steeper loss in home equity for blacks (25 percent) than for whites (21 percent), and this factor, in turn, led to a much steeper fall in mean net worth for black households than white households.

The Great Recession actually hit Hispanic households much harder than blacks in terms of wealth. Mean income among Hispanic households rose a bit from 2007 to 2010, and the ratio with respect to white households increased from 0.50 to 0.57. However, the mean net worth in 2010 dollars of Hispanics fell almost in half, so that the mean wealth ratio relative to whites plummeted from 0.26 to 0.15. The same factors were responsible as in the case of black households. In 2007, the debt-equity ratio for Hispanics was 0.51, compared to 0.15 among whites, while housing as a share of gross assets was 0.53 for the former as against 0.31 for the latter. As a result, net home equity dropped by 48 percent among Hispanic home owners, compared to 21 percent among white home owners, and this factor, in turn, was largely responsible for the huge decline in Hispanic net worth both in absolute and relative terms.

#### Wealth Shifts from the Young to the Old

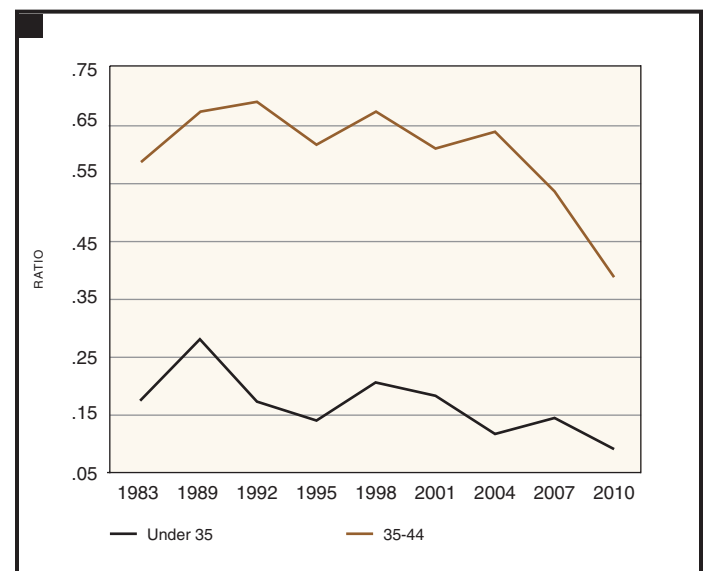
There were also notable shifts in relative wealth holdings by age group between 1983 and 2007 (see Figure 7). The relative wealth of the youngest age group, under 35 years of age, declined from 21 percent of the overall mean in 1983 to

FIGURE 6. Ratio of Mean Net Worth by Race and Ethnicity, 1983-2010



Source: Survey of Consumer Finances.

FIGURE 7. Ratio of Mean Net Worth of Young Age Groups to Overall Mean Net Worth, 1983-2010



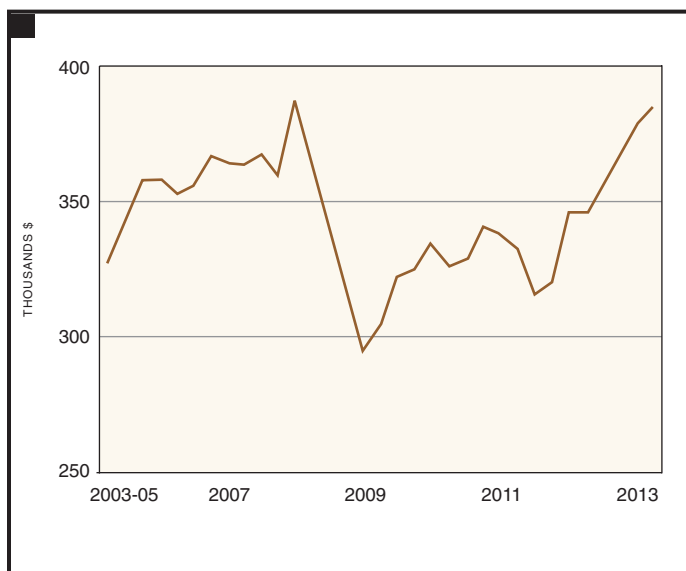
Source: Survey of Consumer Finances.

17 percent in 2007. In 2007, the mean wealth of the youngest age group was \$95,900 (in 2010 dollars), which was only slightly more than the mean wealth of this age group in 1989. The mean net worth of the 35-44 age group collapsed from 0.71 relative to the overall mean in 1983 to 0.58 in 2007.

Changes in relative wealth were even more dramatic during the period from 2007 to 2010. The relative wealth of the under 35 age group plummeted from 0.17 to 0.10 and that of age group 35-44 from 0.58 to 0.41. In 2010 dollar terms, the average wealth of the youngest age group collapsed from \$95,500 in 2007 to \$48,400 in 2010, while that of age group 35-44 shrank from \$325,000 to \$190,000.

Changes in the relative wealth position of the younger age groups over the Great Recession can be explained by their higher debt-equity ratio and the heavier concentration of homes in their portfolio. Homes comprised over half the value of total assets for the age group 35 and under in 2007, and the share tended to fall off with age. There was also a pronounced fall off of the debt-equity ratio with age, declining from 0.93 for the youngest group to 0.02 for the oldest, while the debt-income ratio for these groups declined from 1.68 to 0.30. Younger households were thus more heavily invested in homes and more heavily in debt, whereas the portfolio of older households was more heavily skewed to financial assets. As such, the wealth position of younger households was hit much harder by the Great Recession than that for older households.

FIGURE 8. Mean Household Wealth (from the Financial Accounts of the United States, 2013\$)



Source: Survey of Consumer Finances.

The steep decline in house prices from 2007 to 2010 thus led to a much more pronounced loss in home equity for the youngest age group (59 percent) than for all households (26 percent), and this factor, in turn, led to a much steeper fall in their net worth. The story is very similar for age group 35 to 44. Their debt-equity ratio was 0.41 in 2007, and their share of housing in gross assets was 0.44, both much higher than the corresponding figures for all households. As with the youngest age group, the drop in home prices from 2007 to 2010 caused a large fall in home equity of 49 percent, which in turn caused a steep collapse in their net worth.

### Recovery on the Horizon?

What, if anything, can be concluded about trends in wealth after 2010? The results presented to this point have been based on the Survey of Consumer Finance, but these data are not available after 2010. This section reports briefly on four other sources that may be used to assess post-2010 trends.

The first is the Survey of Income and Program Participation (SIPP), conducted annually by the U.S. Bureau of the Census. It shows essentially no change in median household wealth in real terms from 2010 to 2011. In contrast, wealth data from the Panel Study of Income Dynamics (PSID) show a continued plunge in median net worth. A third source, based on the Consumer Finance Monthly, shows a still different result. According to Lucia Dunn and Randall Olsen, median net worth in real terms hit its low point in 2010 but then more than doubled (a gain of 115 percent) through the first half of 2013. Real mean household wealth, in contrast, reached its nadir in 2009 and subsequently increased by 58 percent through the first half of 2013. In both cases, net worth in 2013 was still below its peak value in 2006 (with the median 30 percent below and the mean 14 percent below).

The fourth source is the Financial Accounts of the United States (which used to be called the “Flow of Funds”). This source differs from the other three in that it is based on aggregate data instead of household survey data. Results on mean household wealth in 2013 dollars based on my own calculations are shown in Figure 8. The figure indicates a peak wealth figure of \$387,000 in the first quarter of 2008. This was followed by a pronounced fall of 24 percent to its lowest value of \$294,000 reached in the first quarter of 2009. Mean household wealth then started to increase as asset markets recovered and reached a figure of \$386,000 by the second quarter of 2013, just about equal to its previous high.

The unfortunate upshot: The results are mixed. Because conclusions differ across sources, it is probably best to withhold judgment at this point. The next SCF is expected to be released in late 2014.

### Conclusions

Median wealth showed robust growth during the 1980s and 1990s and an even faster advance from 2001 to 2007. However, from 2007 to 2010, house prices fell by 24 percent in real terms, stock prices by 26 percent, and median wealth by a staggering 47 percent. Wealth inequality, after remaining relatively stable from 1989 to 2007, also showed a steep increase over the Great Recession, with the Gini coefficient climbing from 0.834 to 0.870.

The key to understanding the plight of the middle three wealth quintiles over the Great Recession was their high degree of leverage and the high concentration of assets in their home. The steep decline in median net worth between 2007 and 2010 was primarily due to their very high negative return on net worth (-8.9 percent per year). This, in turn, was attributable to their very high degree of leverage and the precipitous fall in home prices. High leverage, moreover, helps explain why median wealth fell more than house (and stock) prices over these years and declined much more than median household income.

The large spread in rates of return on net worth between the middle three wealth quintiles and the top percentile (over a point and a half lower) also largely explains why wealth inequality increased steeply from 2007 to 2010 despite the 0.025 Gini point decline in income inequality. Indeed, the middle class took a bigger relative hit on their net worth from the decline in home prices than the top 20 percent did from the stock market plunge, a result that has not been widely appreciated.

The racial disparity in wealth holdings was almost exactly the same in 2007 as in 1983. However, the Great Recession hit black households much harder than whites. Black households suffered substantial relative (and absolute) losses from 2007 to 2010 because they had a higher share of assets invested in the home than did whites and a much higher debt-equity ratio (0.55 versus 0.15).

Hispanic households made sizeable gains on whites from 1983 to 2007. However, in a reversal of fortune, Hispanic households got hammered by the Great Recession. The relative (and absolute) losses suffered by Hispanic households over these three years are likewise traceable to the much larger share of assets invested in the home and a much higher debt-equity ratio (0.51 versus 0.15).

Young households also got pummeled by the Great Recession. The same two factors explain the losses suffered by young households—the higher share of homes in their wealth portfolio and their much higher leverage ratios.

Results are mixed on whether household wealth has turned around since the Great Recession. The SIPP data show no change through 2011, and the PSID data show a continued fall, also through 2011. Data from the Consumer Finance Monthly, in contrast, shows a recovery from its bottom point, but net worth in 2013 was still below its previous high. In contrast, data from the Financial Accounts of the United States indicate a full recovery in mean household wealth by the second quarter of 2013.

We therefore have to await the release of the next SCF, slated for late 2014, to reach any definitive conclusion on recent trends in household wealth. Whatever the results may be, we are obviously in the midst of a very volatile period, one of those rare moments of rapid and momentous change. ■

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### ADDITIONAL RESOURCES

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## HEALTH INEQUALITY

January 2014

The Stanford Center on Poverty and Inequality

BY SARAH A. BURGARD AND MOLLY M. KING

## KEY FINDINGS

- Although there is improvement in some key health indicators, there is also moderate deterioration in others. For example, 9.8 percent of Americans reported that they were in poor or fair health in 2012, an increase of 0.6 percentage points since 1997.
- Economic, racial, and ethnic disparities in health outcomes are often substantial and are sometimes increasing. The proportion of Blacks and Hispanics, for example, who could not afford necessary care rose at a faster rate during the Great Recession than did the corresponding (and far lower) proportion for Whites.
- Since 2000, the proportion of Americans who have any health insurance coverage has declined (to 84.6 percent in 2012), although there has been a slight reversal in this general pattern of decline since 2010. The proportion of children who are insured has increased during this same period and is now at the very highest level since 2000.

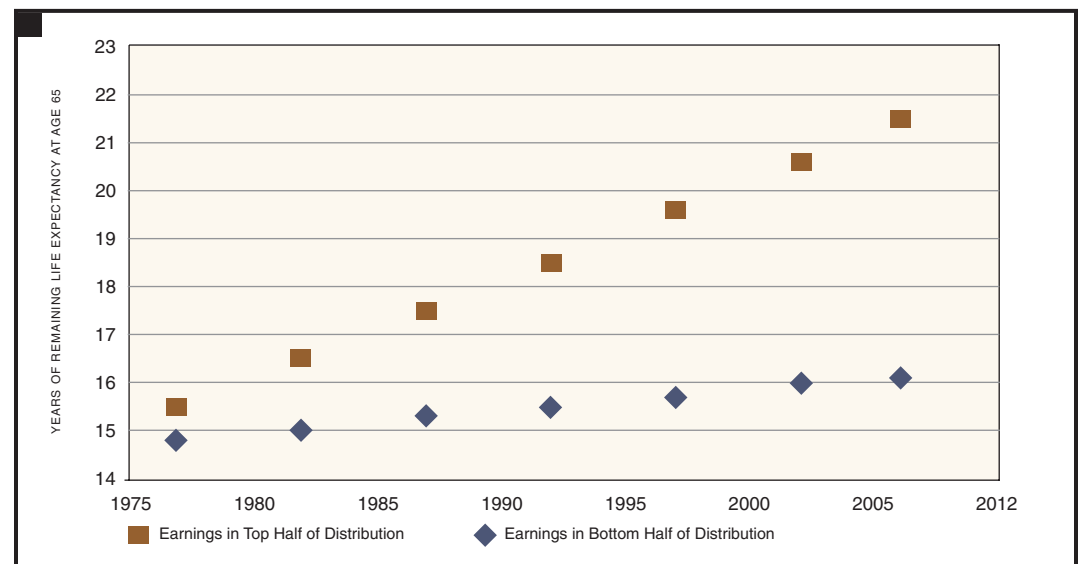
There are many reasons why poverty matters, but it is especially troubling that it affects such fundamental outcomes as health and access to health care. If poverty did not bring about all manner of health risks, we would likely be *somewhat* less troubled by it. But of course poverty and other forms of social and economic disadvantage do often translate into deficits in health and health care. The purpose of this brief is to examine long-term trends in American health and to lay out the current state of evidence on the extent to which health and health care are unequally distributed. We also note how the recent economic downturn affected these trends and disparities.

The key backdrop to this assessment is the tripling of U.S. health expenditures since the

1960s. In 2012, per capita expenditures on health were \$8,915, more than double those from 1995, though growth has slowed in the past 4 years.<sup>1</sup> Some of this rise is attributable to population aging. Costs associated with Medicare, a program established in 1965 to subsidize health care for those aged 65 and older, have grown as the elderly population constitutes an ever-larger portion of the U.S. population. Still, overall U.S. health expenditures have increased faster than the growth of the elderly population and faster than health expenditures in other OECD countries.<sup>2</sup>

It is possible that such rising costs have led to a more unequal distribution of health and health care. At the same time, health inequalities may also be affected by the

FIGURE 1. Additional Years of Life Expectancy at Age 65 for Men Covered by Social Security, by Year and Lifetime Earnings Group.



Source: SSA Working papers.<sup>4</sup>

economy (e.g., recessions), changes in how insurance is provided, and any number of other factors. In this brief, our objective is not to attempt to tease out the causes of any possible changes in health inequalities, but rather to provide a descriptive summary of the current evidence on trends in (a) health, (b) foregone health care and insurance coverage, and (c) health risk factors.

To preview our results, we find first that some health indicators, such as life expectancy, show an overall improvement. But not all indicators are improving. For example, an increasing number of Americans report delaying or foregoing health care, particularly during the recent economic recession. Second, economic and racial disparities in health indicators are often substantial, and when changes in these disparities are observed, they usually take the form of an increase in absolute size. Third, a large proportion of Americans still remain uninsured in 2012 (i.e., 15 percent), although the proportion of children who are uninsured declined by nearly 2 percentage points between the late 1990s and 2012.

### Trends in Health

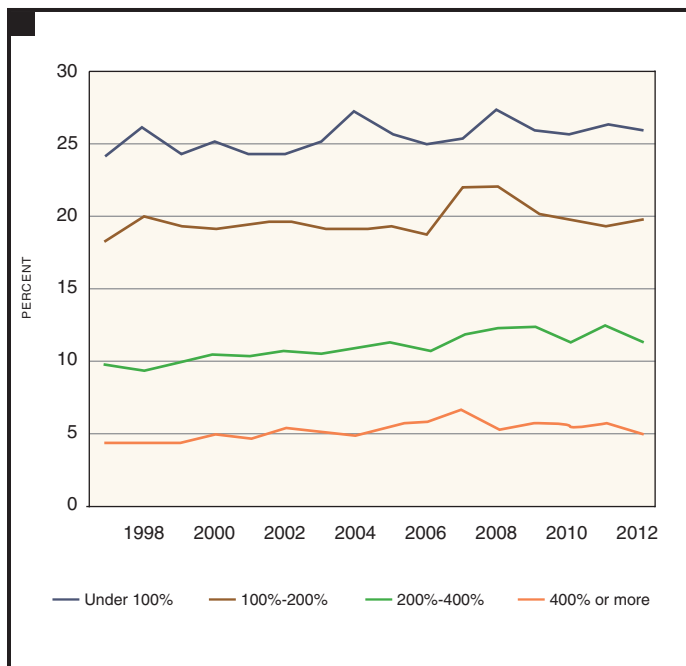
We lead off our brief by presenting trends in life expectancy, physical health status, and mental health status. To the extent

possible given available data, we focus on the degree to which such outcomes are unequally distributed.

### LIFE EXPECTANCY

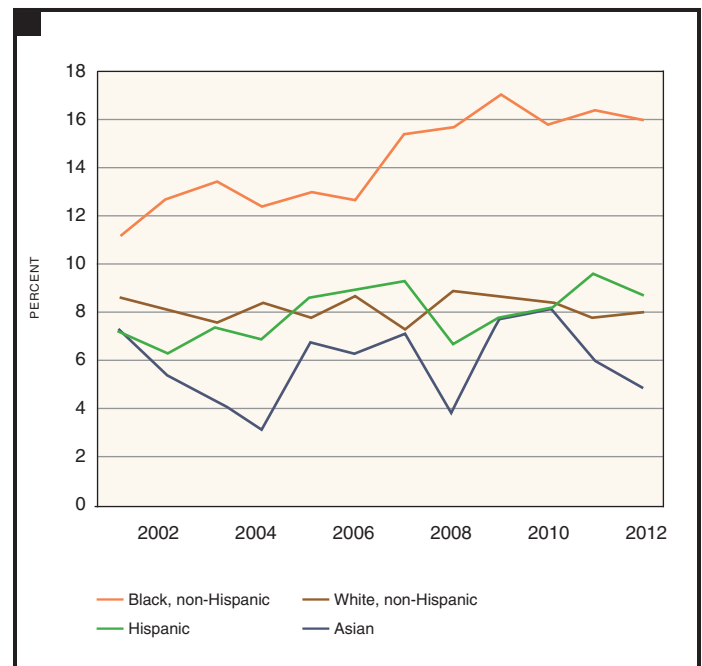
Life expectancy, one of the most basic measures of population health, has increased substantially since 1960. For U.S. males, life expectancy at birth rose by almost ten years since 1960, to 76 years as of 2011. Females started from a higher baseline, but still experienced an eight-year increase in life expectancy since 1960. Females born in 2011 could expect to live to age 81 on average.<sup>3</sup> This overall improvement in life expectancy masks a troubling trend toward growing income inequality in life expectancy. The amount of inequality was once quite limited: Among men born in 1912 (who reached age 65 in 1977), those with above-median earnings during their careers could expect to live an additional 15.5 years, whereas those with below-median earnings could expect to live an additional 15.0 years (see Figure 1). The penalty to being poorer was thus but a half-year in life expectancy. A far more substantial disparity opened over the next thirty years. By 2006, the average life expectancy of 65 year-old men was 5.5 years longer for above-median earners than below-median earners. It follows that approximately 6/7ths of the overall improvement in men's life expectancy (at age 65) dur-

FIGURE 2. Percentage of People Reporting Poor or Fair Health, by Poverty Level Status, 1997-2012.



Source: National Health Interview Study (<https://www.ihis.us/ihis/>).

FIGURE 3. Percentage of Children who Currently Have Asthma by Race and Hispanic Origin, 2001-2012.



Source: National Health Interview Study (<https://www.ihis.us/ihis/>).

ing this 30 year period accrued to those with above-median earnings.

HEALTH STATUS

Although life expectancy is a key indicator of health, other measures of health status speak more directly to the quality of life. We first present omnibus trends in self-reported health status and then shift to a measure of asthma as one of the key health indicators for children.

Using data from the National Health Interview Study, we find that 9.8 percent of Americans reported that they were in poor or fair health in 2012, an increase of 0.6 percentage points since 1997 (not shown). As shown in Figure 2, there are wide and significant income disparities in health status in 2012, with those in poverty (i.e., those whose income is less than 100% of that year’s poverty threshold) over five times more likely to report poor or fair health than those with incomes at least four times the poverty threshold (i.e.,  $26.2/4.8= 5.4$ ). Although the disparities are wide, there is no strong evidence here of growing disparities by income since 1997.

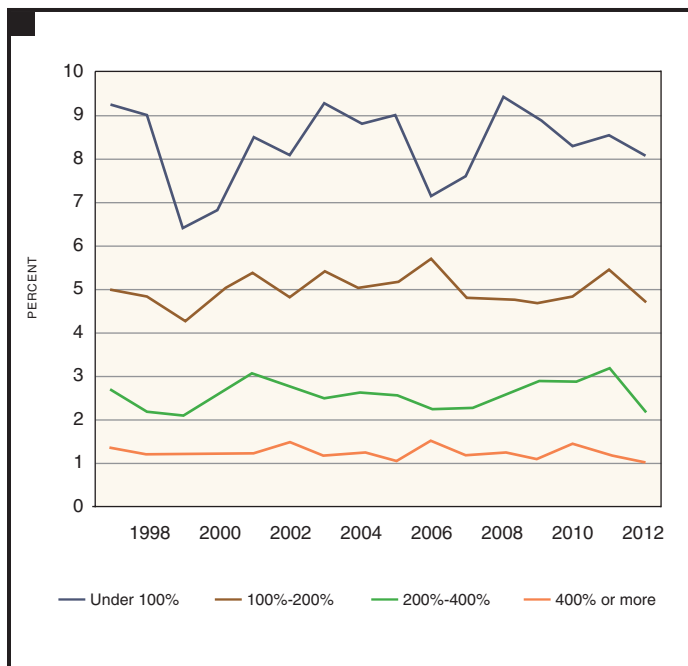
A key health indicator for children is the asthma rate. It is a dangerous condition; it is costly in terms of lost work for caregivers; and it can lead to prolonged school disruptions

for children. In this case, racial disparities in asthma are especially troubling, and we therefore present those in Figure 3 (again drawing on the National Health Interview Study). As shown here, there was a sharp uptick in 2006-2009—in the Great Recession period—in the proportion of African American children with asthma. Fortunately, that increase has now leveled out in the recovery period, albeit without fully returning to pre-recession levels. In contrast, rates among Hispanic and White non-Hispanic children have remained relatively steady. Although rates among Asian children showed large increases in 2004-2005 and 2008-2009, those high levels subsequently declined back to near the original rates. The key change over the period shown in Figure 3 is thus a substantial rise in asthma rates for African American children; indeed they are now twice as likely as White children to have asthma.

MENTAL HEALTH STATUS

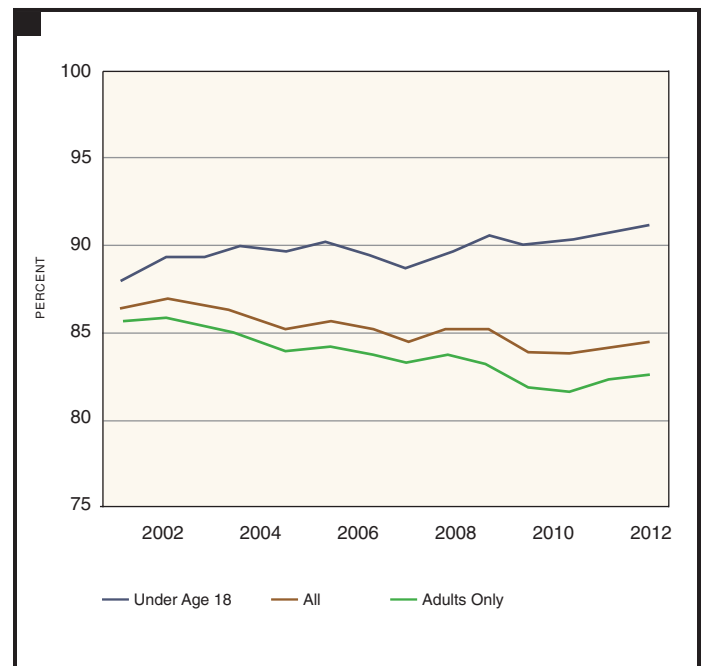
Many observers have been carefully following the mental health of Americans in the Great Recession era, as research has showed that suicide, unlike most other health indicators, was affected by earlier recessions and the Great Depression.<sup>5</sup> In the National Health Interview Study, serious psychological distress is indexed by how often in the past 30 days individuals felt hopeless, nervous, restless, sad, worthless, or that “everything was an effort.” In 2011, psychological distress

FIGURE 4. Percentage of Adults Age 18 and Over who Experienced Serious Psychological Distress During the Past 30 Days by Poverty Level, 1997-2012.



Source: National Health Interview Study (<https://www.ihis.us/ihis/>).

FIGURE 5. Percentage of Adults, Children, and all People with Health Insurance Coverage in The United States, 1999-2012.



Source: US Census Bureau (<http://www.census.gov/hhes/www/hlthins/index.html>).

reached the highest levels in over a decade, with 3.4% of adults reporting serious psychological distress in the past 30 days. This level of distress then declined significantly in 2012 and is back on par with pre-recession levels.

There are also significant income disparities in the rates of experiencing serious psychological distress (see Figure 4). During the period examined here, those living below the poverty level experienced approximately six to eight times the rate of psychological distress as those living at 400% or more of the poverty level. Adults living with incomes below the poverty line also experienced a much greater spike in psychological distress during the Great Recession, but the distress level for this income category tends to fluctuate more across time in general. Those with incomes between one and two times the poverty level experienced, on average, four times the levels of psychological distress as those in the highest income category. While the causal order between mental health and income is complex, these findings are significant and consistent with previous findings of correlations between lowered household incomes and the prevalence of mood disorders.<sup>6</sup>

### Trends in Health Care Access

Over the last two decades, both insurance premiums and out-of-pocket health costs have risen,<sup>7</sup> and it is therefore

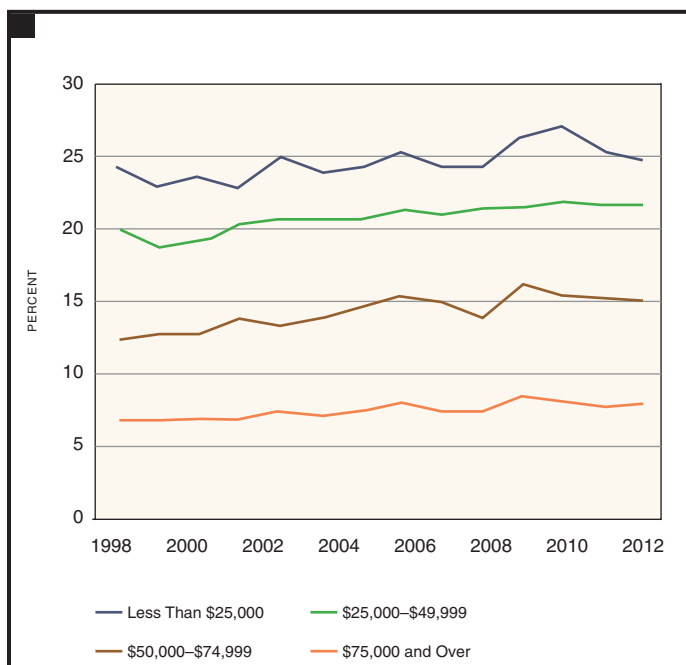
important to track trends in insurance coverage and foregone health care. We provide key indicators of both outcomes here.

### INSURANCE COVERAGE

Despite continued growth in health expenditures, the proportion of Americans who have any health insurance coverage has declined since 1999, although there have been slight countervailing increases in this proportion since 2010 (see Figure 5). The latest available data, pertaining to 2012, indicate that slightly less than 85% of all Americans are insured. However, the proportion of children who are insured has increased by over 3 percentage points between the late 1990s and 2012, in part due to increased coverage by the taxpayer-funded Children's Health Insurance Program (CHIP) established in 1997. We are likely to see a rise in coverage for all Americans with the implementation of the Affordable Care Act's (ACA) individual mandate.

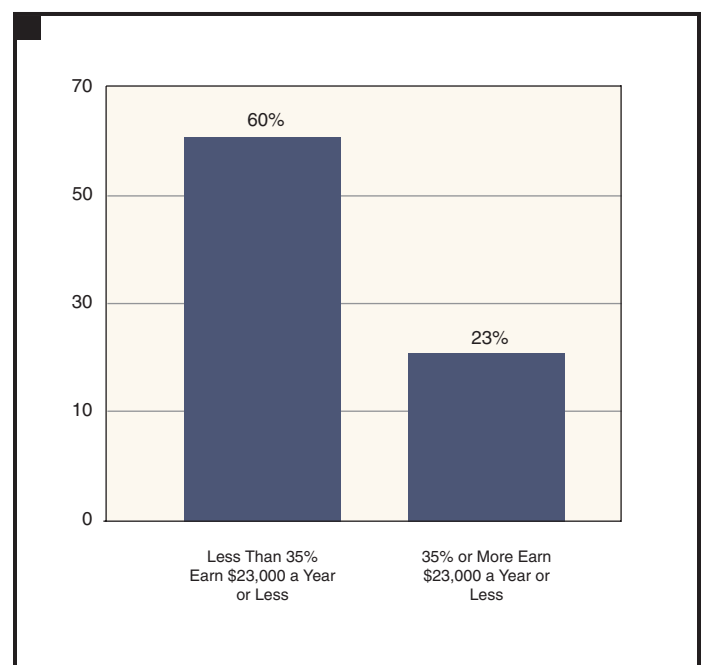
These rates of health insurance coverage differ by household income (Figure 6). In 2012, nearly one quarter of those living in households with incomes of less than \$25,000 were uninsured. The uninsured rate for those earning \$75,000 and over in 2012 was only about one-third as high (i.e., 7.9%). Among those in the second-highest income category—households earning \$50,000–\$74,999 per year—15.0% were uninsured in

FIGURE 6. Uninsured Rates by Real Household Income (in 2012 dollars), 1999-2012.



Source: US Census Bureau.<sup>8</sup>

FIGURE 7. Percentage of Firms Offering Health Benefits, by Firm Wage Characteristics, 2013.



Source: Kaiser/HRET Survey of Employer-Sponsored Health Benefits.<sup>9</sup>

2012. We may see some changes in these disparities with the implementation of the Affordable Care Act’s subsidy for health insurance beginning in 2014.

The tight coupling of health insurance coverage to employment in the United States has played a major role in exacerbating this inequality in health coverage. As shown in Figure 7, only 23 percent of firms with many low-wage workers offer health benefits, whereas 60 percent of firms with few low-wage workers offer health benefits.

**FOREGONE CARE**

Lacking health insurance coverage—or having inadequate insurance—can make needed health care unaffordable. While care may be foregone for a variety of reasons, Figure 8 illustrates the increase over the last decade and a half in the proportion of U.S. adults who reported either that they delayed medical care due to cost (upper line) or that they needed but could not afford medical care and had to forego it (lower line). The Great Recession saw a large spike in delayed care and a smaller increase in foregone needed care. Though levels of delayed or foregone care have decreased with the economic recovery, they are still higher than pre-recession levels. As the cost of health care continues to increase, these

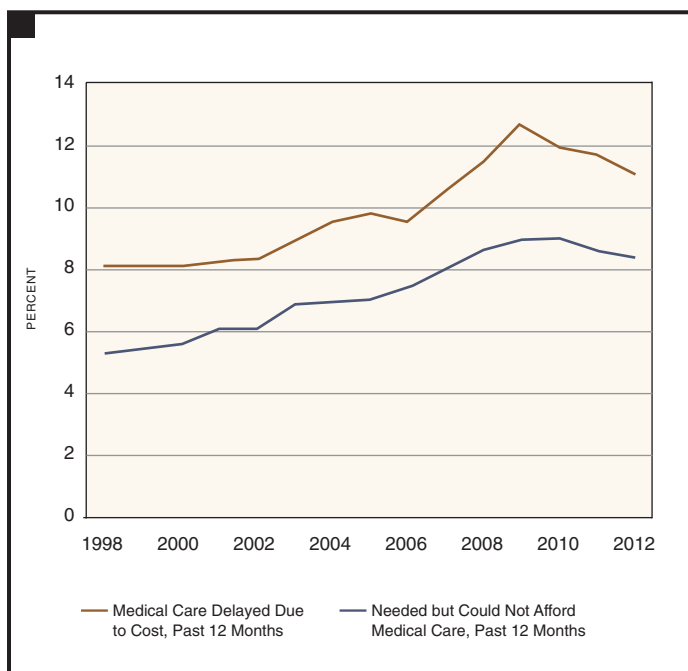
trends suggest that the secular rise in needed but unaffordable care could resume. The changes brought about by the ACA could, on the other hand, buffer against such a trend for at least some kinds of health care.

This increase in foregone care has played out differently across subpopulations. Figure 9 again shows the proportion of adults who needed but could not afford medical care, but now separately by major racial and ethnic categories. The proportion of Blacks and Hispanics who could not afford needed care rose by over one third and one quarter, respectively, during the Great Recession, while the corresponding proportion rose by less than one sixth for White Americans. The proportion of Asian adults who report foregoing care due to cost has oscillated but remained around 4% for the last decade.

These trends imply an increase in the absolute size of the racial and ethnic disparities in foregone care. As Figure 9 shows, the four groups were bunched more closely in 1999 than in 2012, with the only exception to this overall trend being a possible narrowing of the Black-Hispanic gap.

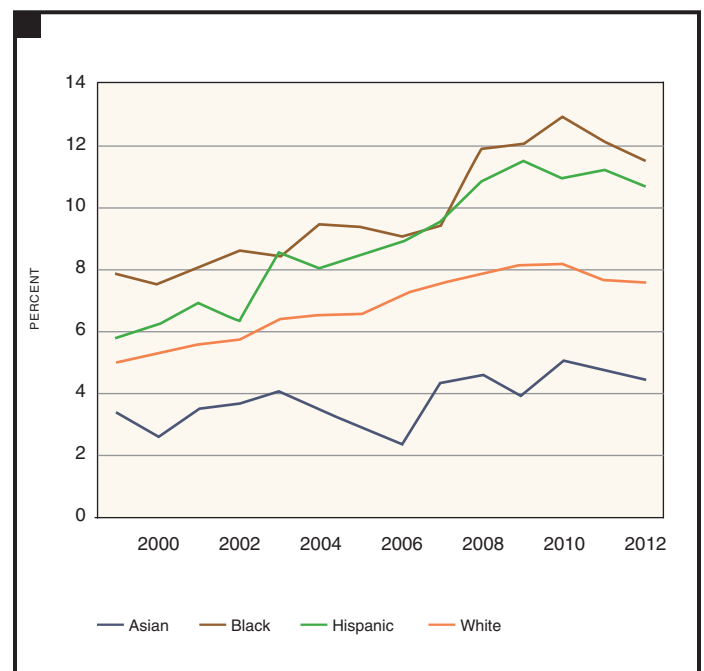
There has also been an increase in the absolute magnitude of the income gap in care foregone due to cost (Figure 10). The

FIGURE 8. Percentage of Adults in the United States who Delayed or Could not Afford Medical Care Due to Cost, 1998-2012.



Source: National Health Interview Study (<https://www.ihis.us/ihis/>).

FIGURE 9. Percentage of Adults in the United States who Could not Afford Medical Care Due to Cost by Major Racial/Ethnic Category, 1999-2012.



Source: National Health Interview Study (<https://www.ihis.us/ihis/>).



gap between the lowest and highest income groups was 12.7 percentage points in 1997, but it grew to 14.1 percentage points in 2012. Likewise, the gap between the second-poorest and the highest income groups grew from 8.9 percentage points in 1997 to 13.2 percentage points in 2012. For the time series pertaining to delayed care (Figure 11), the absolute gap between the lowest and highest income groups likewise increased, albeit again only slightly.

We next ask whether there are particular types of medical care that are increasingly likely to be foregone as medical care costs rise or economic conditions worsen. As Figure 12 shows, there was an especially dramatic increase in foregone dental care, prescription eyeglasses, and prescription medications during the Great Recession. The recovery has, however, reversed the trend lines: the proportions of adults foregoing mental health care and prescription medications have now dipped below pre-recession values, while the proportions foregoing dental care and eyeglass purchases have declined but remain nearly a percentage point higher than they were before the recession.

When income disparities in foregone care are examined, the evidence suggests in most cases a widening gap between those living below the poverty level and those with incomes

of 400% or more of the poverty line. The mental health trends shown in Figure 13 are an example of such rising income disparities in care foregone for cost.

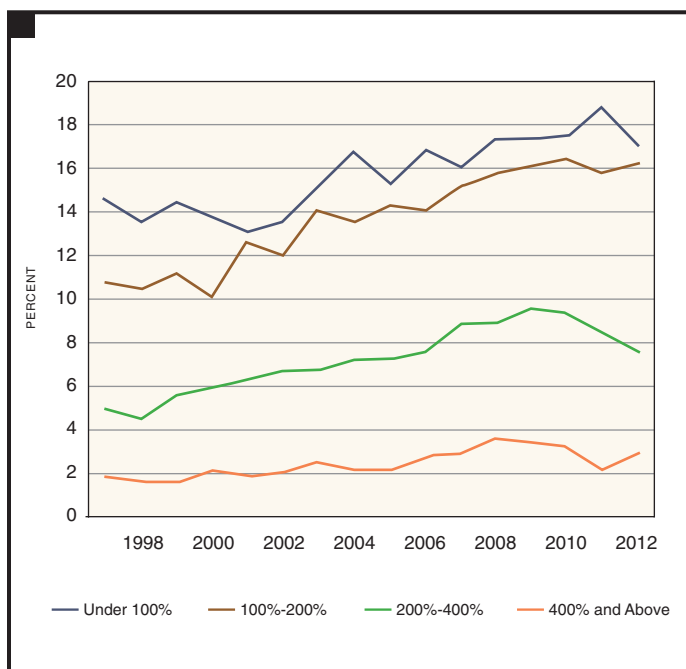
### Trends in Health Risk Factors

We conclude by considering two health risk factors, heavy alcohol use and smoking, that have long been viewed as especially important. Although the relevant time series are quite noisy, these trends are nonetheless important enough to monitor.

In Figure 14, we examine rates of heavy alcohol use, again with a breakdown by income group. The disparities assume the expected direction, with heavy drinking especially high within the poverty group. Over the last 15 years, there has been a downturn in heavy drinking among the well-off group (from 3.8 percent in 1997 to 2.9 percent in 2012), but there has not been any similar long-term trend among the poor group.

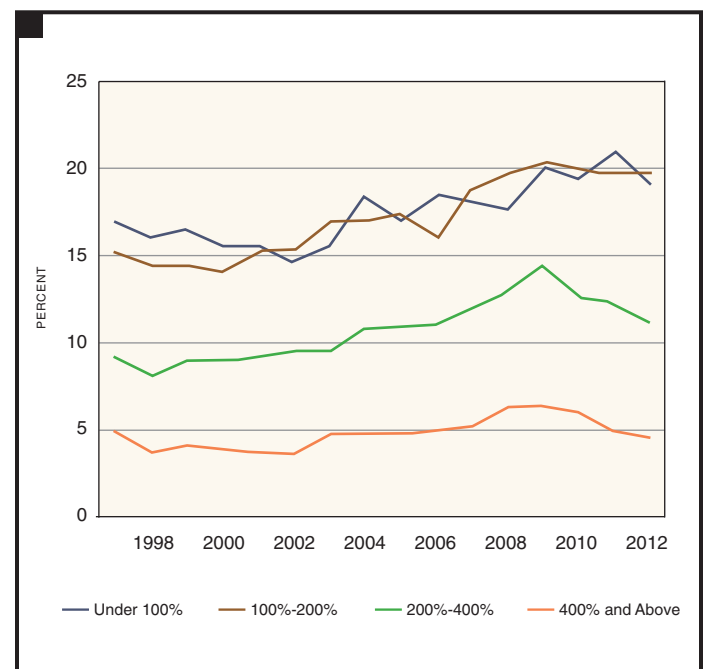
The times series for cigarette smoking is less noisy and displays a clearer decline for all groups (Figure 15). As with drinking, the income disparities are substantial, with a slightly larger decline within the well-off group than within the poor group.

FIGURE 10. Percentage of Adults in the United States who *did not Receive Medical Care* (Foregone Care) Due to Cost by Poverty Level Category, 1997-2012.



Source: National Health Interview Study (<https://www.ihs.us/this/>).

FIGURE 11. Percentage of Adults in the United States who Delayed Medical Care Due to Cost by Poverty Level Category, 1997-2012.



Source: National Health Interview Study (<https://www.ihs.us/this/>).

**The Prognosis**

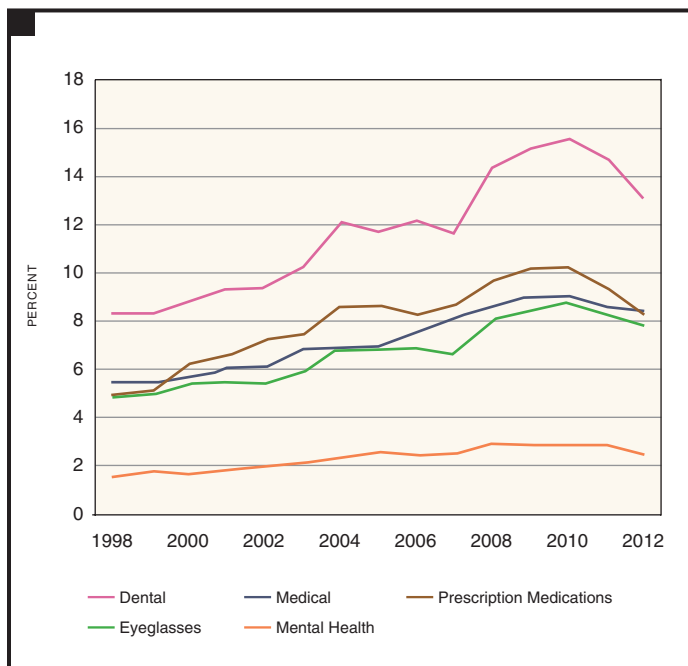
The health outlook in the United States is mixed. While some indicators of well-being are showing continued secular improvement, such as life expectancy, others are more worrisome, such as the rise in foregone and delayed medical care over the past decade and a half. Although aggregate health spending continues to increase, health insurance coverage among adults overall has slowly fallen over the past decade and a half (but coverage for children has increased). Moreover, average trends also disguise important social disparities, indeed most indicators show substantially worse standing for those in poverty, and some of these income gaps have grown in recent decades.

In the trends we explored, we found that Americans weathered the Great Recession fairly well, with no decline in life expectancy or overall self-rated health. We observed continued secular trends toward better health behaviors even over the period of the Great Recession. For the most part, U.S. adults have not turned to damaging health behaviors to cope with the stresses of the recent downturn, and levels of psychological distress have returned to prerecession levels

after a spike. The recession was, however, associated with some troubling trends, such as a growing racial gap in asthma between African American and non-Hispanic white children. Moreover, recessionary spikes have failed to entirely resolve for some types of foregone health care, and income-based disparities in foregone health care appear to have grown over the past decade and a half.

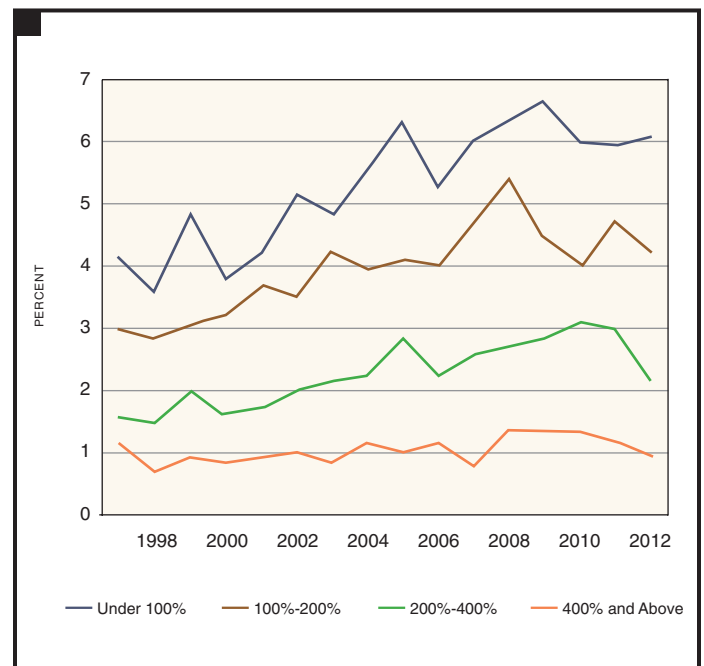
The longer-term prognosis for health and health disparities is deeply tied to policy. The implementation of the individual mandate component of the Affordable Care Act in January 2014 introduces substantial changes to the health care access landscape. This raises important questions about what will happen with respect to coverage levels for people of different age groups, racial or ethnic groups, genders, and socioeconomic positions. It is unclear whether and how this increased access to health care will be reflected in levels of population health, given the tenuous link between access to medical care and actual health outcomes.<sup>11</sup> Some health outcomes and disparities may be influenced by medical care but may also need to be addressed through public health or other initiatives.

FIGURE 12. Percentage of Adults in the United States who Needed but Could not Afford Different Types of Medical Care, 1998-2012



Source: National Health Interview Study (<https://www.ihs.us/ihis/>).

FIGURE 13. Percentage of Adults in the United States who Needed but Could not Afford Mental Health Care by Poverty Level Category, 1997-2012.

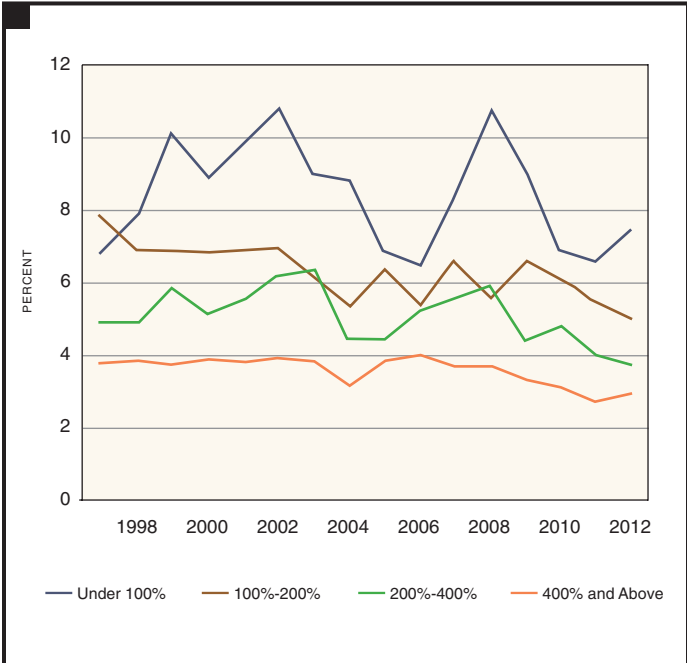


Source: National Health Interview Study (<https://www.ihs.us/ihis/>).

While it may not eliminate longstanding disparities, recent evidence does suggest that providing continuous health insurance coverage is a good place to start in supporting health care access. A gap in health insurance coverage increases the likelihood of foregoing care for individuals of all poverty levels. Among those with a gap in insurance coverage, individuals with family incomes below twice the poverty level are three times as likely to forego care, and those with

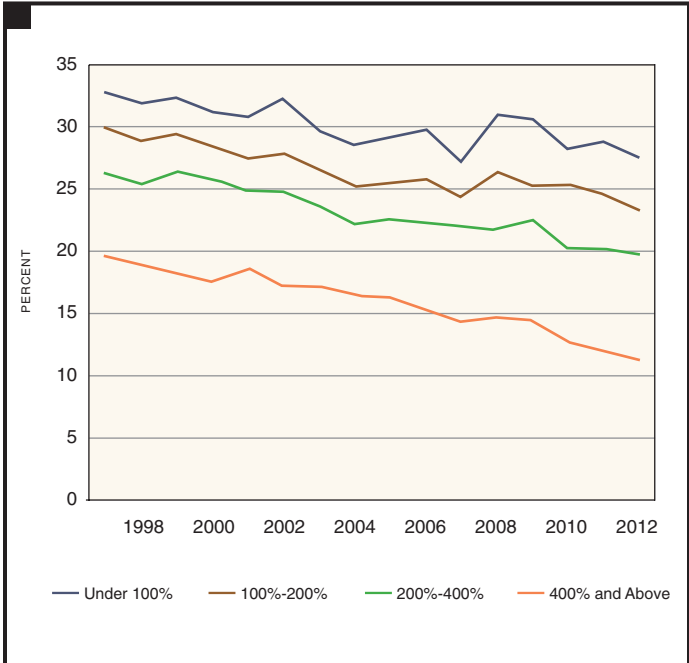
family incomes above twice the poverty level are four times as likely to forego care, compared with individuals with continuous coverage. Although these findings suggest that the Affordable Care Act may have important effects, it is important to remember that health is also responsive to a variety of social and environmental factors, including employment, income, housing security, and the quality of neighborhoods, schools, and workplaces. ■

FIGURE 14. Heavy Alcohol Use in the Past Month Among Adults by Poverty Level Category, 1997-2012. (Note: Heavy alcohol use is defined as drinking five or more drinks on the same occasion on each of more than 60 days in the past year.)



Source: National Health Interview Study (<https://www.ihs.us/ihis/>).

FIGURE 15. Cigarette Smoking in the Past Month Among Adults by Poverty Level Category, 1997-2012.<sup>10</sup>



Source: National Health Interview Study (<https://www.ihs.us/ihis/>).

## NOTES

1. See Martin et al., 2014.
2. See OECD, 2013.
3. See OECD, 2013.
4. See Waldron, 2007.
5. See Tapia Granados & Diez Roux, 2009.
6. See Sareen, Afifi, McMillan, & Asmundson, 2011.
7. See Claxton et al., 2013, and OECD, 2013.

8. Estimates of uninsured rates “reflect the results of follow-up verification questions, which were asked of people who responded “no” to all questions about specific types of health insurance coverage in order to verify whether they were actually uninsured.” See DeNavas-Walt, Proctor, & Smith, 2013: 28.
9. See Claxton et al., 2013: 40.
10. From 1997-2003, the figure represents adults age 18+ who have ever smoked 100 cigarettes and who currently smoke every day, currently smoke some days, or whose current

- smoking status is unknown but who smoked at least one day or an unknown amount of days in the past 30 days. From 2004-2012, the figure represents the same except excludes those whose smoking status is unknown. (Source: IHIS codebook for variable “CIGSDAY,” is available: [https://www.ihis.us/ihis-action/variables/CIGSDAY#universe\\_section](https://www.ihis.us/ihis-action/variables/CIGSDAY#universe_section)).
11. See Newhouse, 1993.

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## The Stanford Center on Poverty and Inequality

BY SEAN F. REARDON

## KEY FINDINGS

- White-black and white-Hispanic academic achievement gaps have narrowed by roughly 40% in the last four decades, and continue to narrow today in most states, although slowly. Nonetheless, these achievement gaps remain very large.
- The achievement gap between children from high- and low-income families has widened by roughly 40% in the last three decades. It is now considerably larger than the racial achievement gaps.
- Recent evidence suggests that racial disparities in high school graduation rates have declined sharply in the last decade; the difference in graduation rates is now half the size it was forty years ago.
- Nonetheless, black and Hispanic students are still much less likely to earn a bachelor's degree or to enroll in a highly selective college than are white students. These gaps in high levels of educational attainment have changed little in the last few decades.
- Likewise, low-income students are substantially underrepresented in selective four-year colleges. This pattern appears to be more pronounced today than it was three decades ago.

Sixty years ago, the Supreme Court declared *de jure* racial segregation of schools unconstitutional. Forty-nine years ago, Congress passed the Elementary and Secondary Education Act, which was designed in part to eliminate the achievement gap between poor and non-poor children by providing additional funding to schools enrolling large proportions of low-income students. Both of these acts, as well as many other legislative, judicial, and policy changes in the 1960s, 1970s, and later, were intended to equalize educational opportunity for students—students from low-income families and black students—who historically had little access to high quality schools. The success of these and related efforts has been mixed.

The goal in this brief is to summarize the trends in educational equity over the last several decades. I consider educational equity in relation to race and ethnicity and family income. Certainly, these are not the only relevant dimensions for a discussion of educational equity, but because they link characteristics of a child's family to his or her educational success, they are particularly relevant for a better understanding of social mobility.

In principle, it is useful to consider two types of measures of educational equity: first, measures of educational opportunity and experiences, such as school quality, access to high quality teaching, and rigorous curricula, and second, measures of educational outcomes, such as performance on standardized tests, high school graduation, college enrollment and completion. The for-

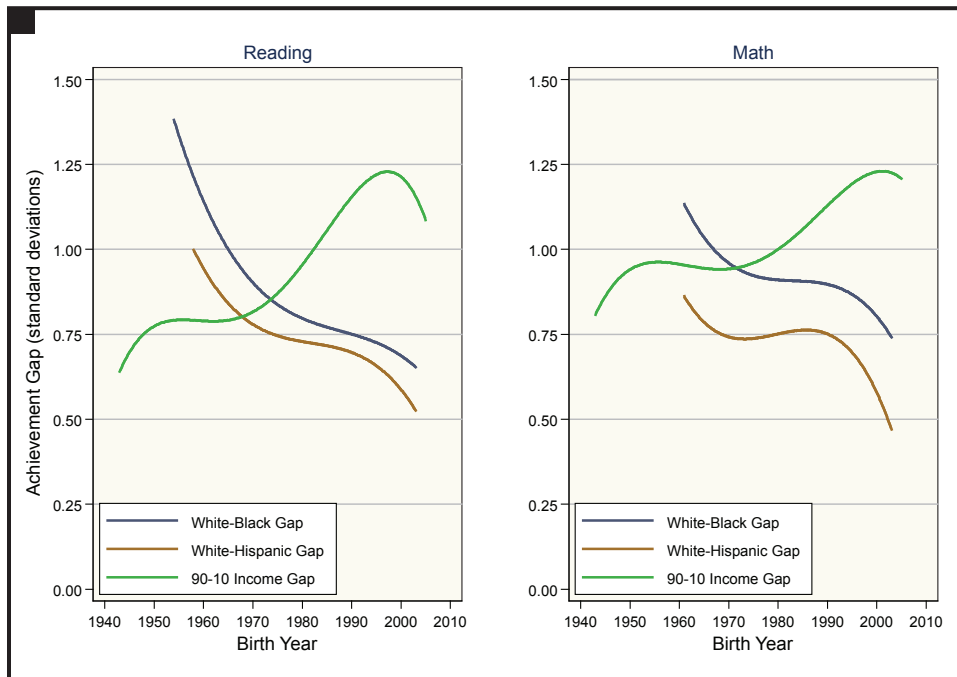
mer is more difficult to measure, because historically we haven't collected systematic data on the quality of education children receive. As rough proxies for equality of educational opportunity, researchers typically look at patterns of segregation, school funding, and pupil-teacher ratios, but these are far from ideal measures and are generally only weakly related to educational outcomes. Because a full discussion of the complexities involved in measuring equality of educational experiences is beyond the scope of this brief, I will focus my attention here on measures of equality of educational outcomes, including academic achievement, high school graduation, and college enrollment.

**Trends in Academic Achievement Gaps**

One of the success stories in U.S. education is the substantial narrowing of racial achievement gaps over the last four decades. In the early 1970s, when the first National Assessment of Educational Progress (NAEP) tests (now known as "the Nation's Report Card") were administered, the white-black achievement gap in reading was well over one and a quarter standard deviations. That same gap today is half that size (see Figure 1). The same long-term trend is evident in mathematics as well, and in the white-Hispanic gaps in both math and reading. On the whole, racial achievement gaps have narrowed by roughly 40 percent over the last four decades.

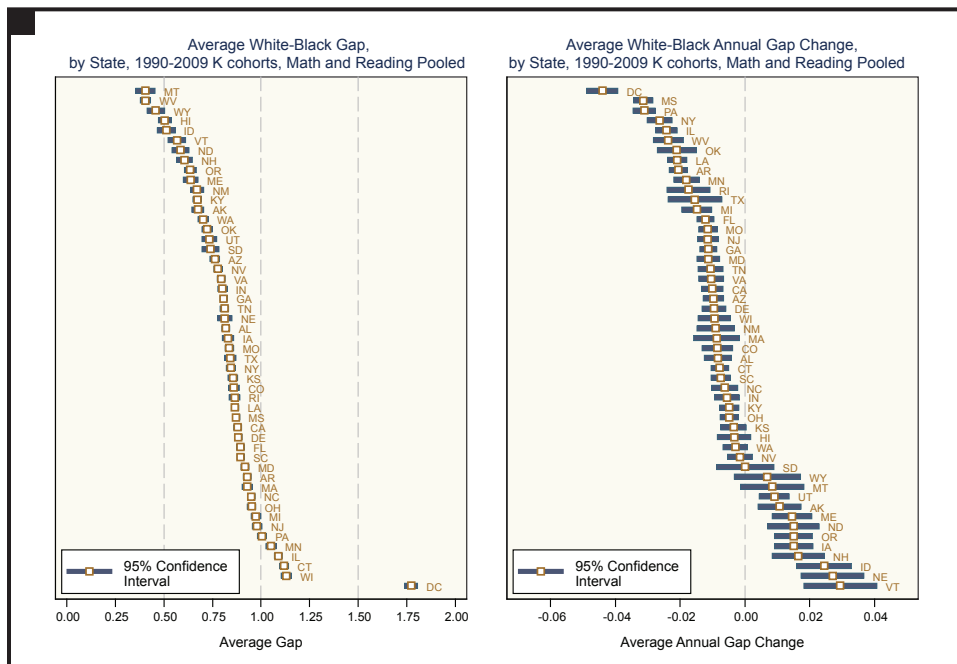
Nonetheless, our progress in narrowing racial achievement gaps has been uneven, and the gaps are still quite large, despite this progress. Most of the reduction in racial achievement gaps occurred for cohorts born between the 1950s and 1970s. Math gaps

FIGURE 1. Trends in Racial and Income Achievement Gaps, by Birth Cohort



Source: Updated versions of figures originally published in Reardon (2011). Gaps here are measured relative to the age- and cohort-specific national standard deviation of scores. This standard deviation has changed very little over time. Racial gaps are based on author's calculations from Long-Term Trend NAEP (NAEP-LTT) data. The NAEP-LTT tests have been administered to nationally-representative samples 9-, 13-, and 17-year olds roughly every four years from 1971-2012. The racial gap trend shown is the fitted curve from a precision-weighted least squares regression of gaps on a cubic function of birth cohort, controlling for age. Age is centered at 13. Each gap is weighted by the inverse of its estimated sampling variance. The income gap trend shown is based on a precision-weighted fitted quartic trend of estimated income achievement gaps from author's calculations from 13 nationally representative studies from 1960-2010.

FIGURE 2. White-Black Achievement Gaps and Trends, by State



Source: Author's calculations from Main NAEP data and state accountability test data collected from state Departments of Education and EdFacts. Estimates shown here are computed by first estimating achievement gaps in each state by year, grade, test subject, and test (NAEP or state accountability test), and then using a precision-weighted random coefficients regression model to estimate the average of these gaps, and their annual trend, in each state, adjusting for grade, subject, and test source. Gap estimates shown are empirical Bayes estimates. 95% confidence intervals are computed using the estimated posterior variance of each state's estimate.

were no smaller for children born in the early 1990s than they were for children born 20 years earlier; reading gaps narrowed only modestly over this same time period. More recently, however, the gaps have begun to narrow again. This recent trend is evident in the Long-Term Trend NAEP data shown in Figure 1 as well as in the so-called “Main NAEP” tests, a newer version of the NAEP tests that has been administered since 1990 and in state accountability tests.<sup>1</sup> Both white-black and white-Hispanic gaps have narrowed by roughly two-tenths of a standard deviation in the last two decades. While it is unclear whether this trend will continue, it is certainly good news.

Progress in narrowing achievement gaps is also uneven across the country. In some states the white-black achievement gap is more than a standard deviation. In Washington, D.C., the gap is nearly 2 standard deviations; in others it is half that large (see left panel of Figure 2). Moreover, there is considerable variation across states in the trend in achievement gaps. Although the white-black achievement gap has been narrowing on average at a rate of roughly one one-hundredth of a standard deviation per year over the last two decades, in some states it has been narrowing at two to three times that rate, notably, in Washington, D.C., Mississippi, Pennsylvania, New York, and Illinois. In other states, particularly those with small black populations, the white-black achievement gap has actually been widening (see right panel of Figure 2).

As racial achievement gaps have narrowed over the last five decades, the opposite has been true of the achievement gap between children from high- and low-income families. That gap—measured as the differ-

ence in average test scores between children whose families are at the 90<sup>th</sup> and 10<sup>th</sup> percentiles of the family income distribution—grew by 40 percent across cohorts born in the early 1970s and late 1990s (see Figure 1). The income achievement gap, which was smaller than the white-black gap for cohorts born in the 1950s and 1960s, is now considerably larger than both the white-black and white-Hispanic gaps.

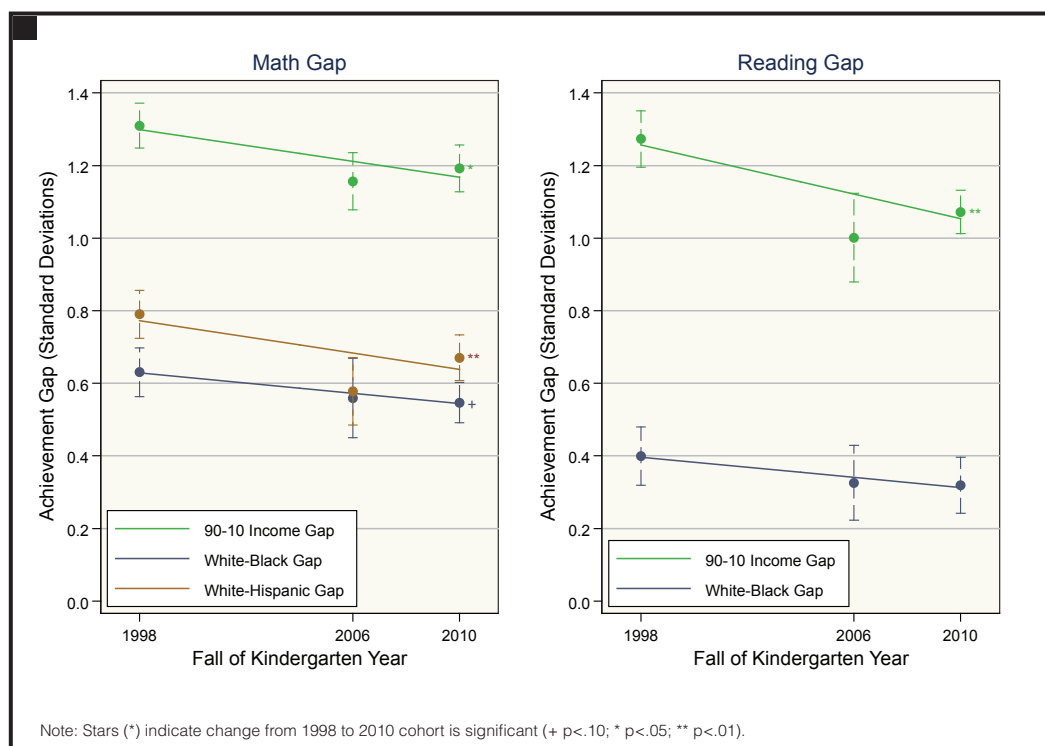
One of the key questions regarding the narrowing of the racial achievement gaps and the widening of the income achievement gap is whether these trends are due to changes in the quality of schools available to children. Likewise, are differences among states in the size and trends in their achievement gaps due to differences in states' educational systems? Or are they due to differences in the out-of-school conditions in which children grow up, such as differences in segregation patterns, income inequality, and racial socioeconomic disparities? The answers to these questions are not yet clear, but there is some research which may shed light on them.

First, the best evidence currently available, from longitudinal studies of children as they progress through school, indicates that achievement gaps change relatively little after elementary school. Income achievement gaps are very large when children enter kindergarten (roughly 1.25 standard deviations) and grow by only 10 percent through 8<sup>th</sup> grade, for example. The white-black achievement gap does grow somewhat in early elementary school, but is largely stable after that. Second, both racial and economic achievement gaps appear to narrow during the months when children are in school, and then widen again during the summer months. Third, a large proportion of the variance in racial achievement gaps among states can be explained by between-state differences in racial socioeconomic disparities. States where the white-black income and parental education gaps are larger and where segregation is higher have much larger white-black achievement gaps than states where

income disparities, educational disparities, and segregation are smaller. All of these patterns suggest that out-of-school factors play a sizeable role in shaping achievement gaps.

That said, it is not clear whether changes in out-of-school factors are the primary cause of the changes in achievement gaps. The narrowing of the racial achievement gaps coincides with the onset of the accountability movement in education, most clearly institutionalized in the No Child Left Behind (NCLB) Act of 2002, which required states and schools to explicitly attend to racial achievement gaps. Nonetheless, my research has shown that NCLB had little or no impact on racial achievement gaps. Another piece of evidence relevant here is the trend in achievement gaps when children enter kindergarten. Recent evidence comparing racial and income achievement gaps at kindergarten entry between 1998 and 2010 shows that both these gaps have narrowed over the decade (see Figure 3). The racial gaps have narrowed at a rate of about 0.07 to 0.11 standard deviations per decade over this time period, roughly the same rate as the racial gaps in elementary and middle school. This suggests that most of the narrowing of the racial gaps evident in NAEP may be due to pre-kindergarten trends, rather than improvements in educational equity during the K-12 years.

FIGURE 3. Trends in Achievement Gaps at Kindergarten Entry



Source: Reardon and Portilla (2013). Estimates are based on data from the three Early Childhood Longitudinal Studies (ECLS; www.nces.ed.gov/ecls). 90-10 income gap is the estimated difference in test scores between children from families at the 90th and 10th percentiles of the family income distribution. White-Hispanic reading gap trends are not shown because of changes in the reading test format for non-native English speakers.

The recent narrowing of the income gaps, evident in Figures 1 and 3, stands in contrast to the trend over the prior 25 years. While certainly a promising sign, the evidence for this reversal is based largely on the gap measured among kindergarteners in the Fall of 2010. It is too soon to tell whether this heralds the beginning of a sustained improvement in educational equity or simply reflects an anomaly in the data.

### Trends and Patterns of Educational Attainment

Another way to gauge our success at improving educational equity is to examine recent trends in high school graduation and college completion rates (see Figures 4 and 5). For a long time in the U.S., high school graduation rates were stagnant, or even declining. Among the cohort scheduled to graduate from high school in the mid-1960s (those born in 1946-1950), roughly 81 percent earned a high school diploma. Among those born 30 years later and scheduled to graduate in the mid-1990s, only 78 percent earned a diploma. Graduation rates have been rising rapidly, however, since the mid-1990s. Indeed, the cohort that was scheduled to graduate in the mid-2000s had an 84 percent completion rate, six percentage points higher than their peers born 10 years earlier.

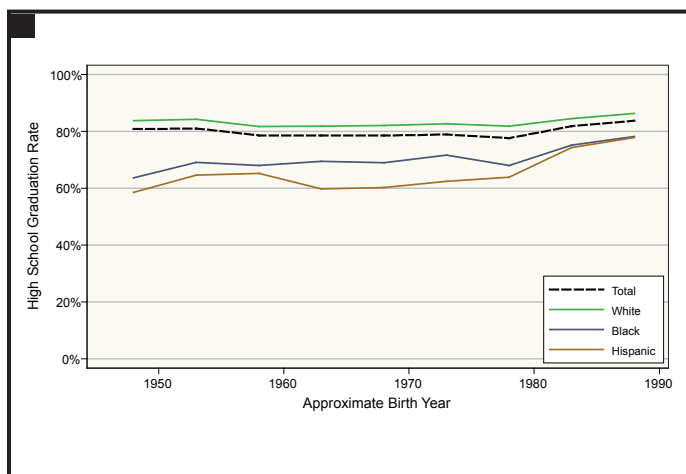
This sharp rise in graduation rates is striking, but perhaps more striking is the fact that it is disproportionately due to rising graduation rates among black and Hispanic students. In fact, the black graduation rate rose 10 percentage points in the last decade, twice as fast as the white rate; the Hispanic rate rose 14 percentage points, three times the white rate.

Despite the improvement in high school completion rates and the narrowing of racial graduation rate differences, there are still large disparities in patterns of educational attainment. Only 15 percent of Hispanic and 23 percent of black young adults (aged 25-29) in 2012 had a bachelor's degree, compared with 40 percent of white young adults (see Figure 5). Moreover, the college completion rate among whites has grown more rapidly than that among blacks and Hispanics over the last four decades. Comparable trend data are not readily available by social class background.

Although black and Hispanic students are increasingly likely to graduate from high school and to enroll in college, they are very disproportionately overrepresented in community colleges and non-selective four-year colleges. This is likely part of the reason why the racial/ethnic gaps in bachelor's degree completion have not narrowed even as high school graduation gaps have narrowed. (Another reason may be that the cohorts for whom high school graduation rates have increased are still too young to be observed in the college completion data.) Figure 6 shows that roughly 35 percent of those enrolling in community college or non-selective four-year colleges are black or Hispanic, while fewer than 5 percent of those enrolling in the most selective colleges are black or Hispanic.

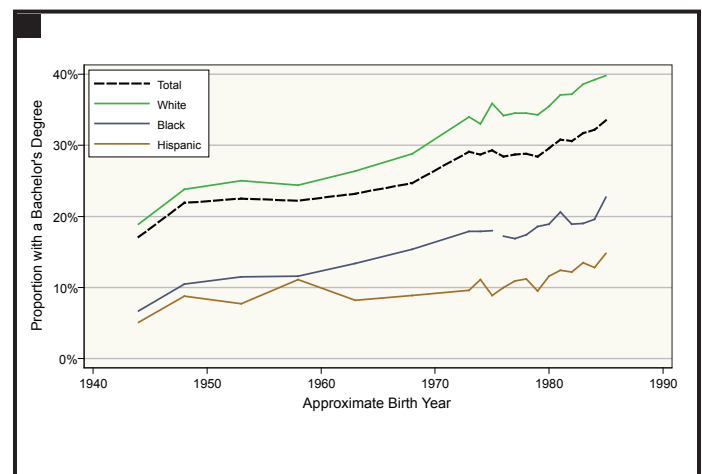
The same pattern is evident by family income as well (see Figure 7). Students from low-income families are dramatically underrepresented in selective four-year colleges. Only 6 percent of students at the most selective colleges and univer-

FIGURE 4. U.S. High School Graduation Rate for 20-24-Year-Olds, by Race/Ethnicity and Birth Cohort



Source: Murnane (2013). The high school graduation rates include only individuals who have received a conventional high school diploma (GED recipients are not counted as high school graduates here).

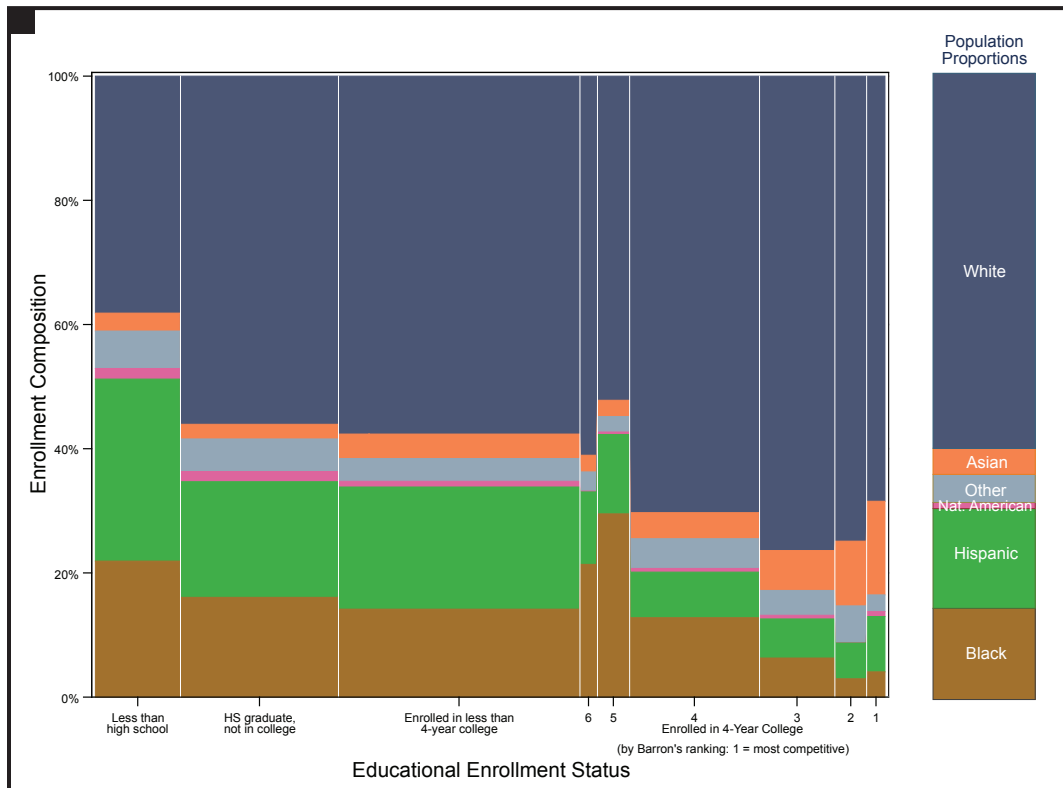
FIGURE 5. Proportion of U.S. 25-29-Year-Olds With at Least a Bachelor's Degree, by Race/Ethnicity and Birth Cohort



Source: Child Trends (2013). Note that the Office of Management and Budget race definitions were changed beginning with data collected in 2003. Estimates for 25-29-year-old black young adults prior to 2003 (those born roughly prior to 1976) are for the category "non-Hispanic Black"; estimates for later cohorts are for the category "black alone." The latter includes only individuals who identify as black and not any other race. The two category definitions are not strictly comparable.

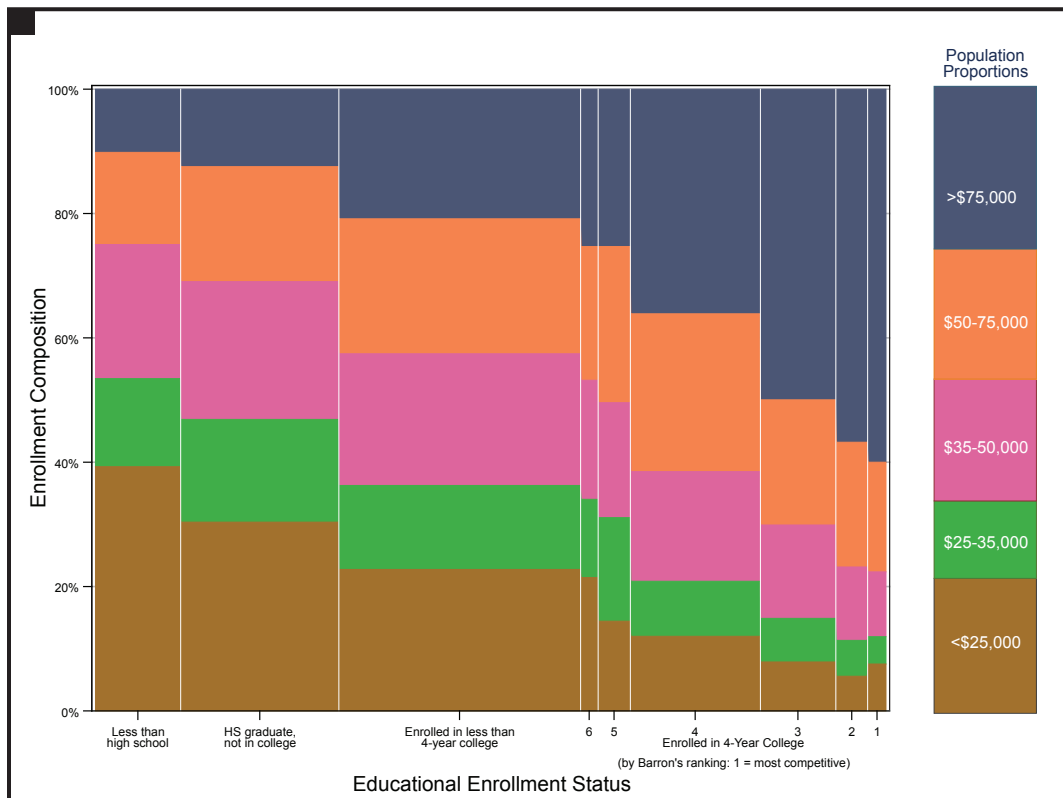


FIGURE 6. Racial Composition of Postsecondary Destinations, Class of 2004



Source: Reardon, Baker, and Klasik (2012). Data are from the Education Longitudinal Survey (ELS), a study of a nationally-representative sample of students enrolled in 10th grade in Spring 2002. The figure shows the highest postsecondary enrollment status as of Spring 2010. The width of the bars is proportional to the share of the population with each enrollment status. Four-year colleges are categorized by their Barron's selectivity ranking.

FIGURE 7. Income Comparison of Postsecondary Destinations, Class of 2004



Source: Reardon, Baker, and Klasik (2012). Data are from the Education Longitudinal Survey (ELS), a study of a nationally-representative sample of students enrolled in 10th grade in Spring 2002. The figure shows the highest postsecondary enrollment status as of Spring 2010. The width of the bars is proportional to the share of the population with each enrollment status. Family income (2001 annual income, in 2001 dollars) was reported by parents in 2002, when the students were in 10th grade. Four-year colleges are categorized by their Barron's selectivity ranking.

sities come from families in the bottom quintile of the income distribution. Almost 80 percent of students in these colleges come from families in the upper half of the income distribution. Some research indicates that low-income students are even more underrepresented in selective colleges now than they were three decades ago.

The patterns in Figures 4 through 7 are partly the result of the achievement patterns evident in Figure 1. It is likely that part of the reason for the sharp reduction in the white-black and white-Hispanic high school graduation gaps over the last decade is the decline in racial achievement gaps. Black and Hispanic students' math and reading skills at the beginning of high school are markedly higher than they were 20 years ago, which means they are entering high school much better prepared to succeed academically.

Conversely, the fact that achievement gaps remain large—despite some recent progress—is certainly part of the reason for the disparities in bachelor's degree attainment and enrollment at selective colleges evident in Figures 5 through 7. This conclusion is suggested by the importance of standardized test scores in admission to such colleges. Nonetheless, there are many other factors that shape college enrollment patterns, including affirmative action policies (or their absence) and trends in the cost and availability of financial aid. Recent research suggests that many high-achieving low-income students do not apply to highly selective colleges, despite having test scores that would make them eligible, perhaps because of perceptions of the cost of such colleges, lack of information about financial aid, or concerns that they would not fit in.

### Conclusion

The primary impression one gets from reviewing the evidence here is that inequality of educational outcomes, by race and by social class background, remains very high in the United States. That is not to say that we have not made some progress since the 1950s and 1960s. Indeed, racial disparities in academic achievement and high school graduation are smaller and, in the case of achievement gaps, substantially smaller, than they were 40 years ago. And in most states, these racial disparities continue to narrow, albeit slowly in most places. We have been less successful, however, at reducing disparities in the highest levels of academic attainment: black and Hispanic students obtain bachelor's degrees at rates far below those of whites, and are dramatically underrepresented in the most selective four-year colleges and universities.

Progress in narrowing socioeconomic disparities in educational outcomes, however, has been even more elusive than racial progress. In fact, socioeconomic gaps in academic achievement have widened substantially in the recent decades. The one bright spot of evidence here, however, is the indication in very recent data that socioeconomic gaps in kindergarten readiness have narrowed in the last decade, perhaps presaging an era of progress and reduced inequality. But such progress, and continued progress in narrowing racial disparities, will not occur without focused policy attention on improving both our schools and the wide economic disparities that inhibit the educational success of the nation's children. ■

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**NOTES**

1. See, for example, Hemphill, Vanneman, and Rahman, 2011; Vanneman, Hamilton, Baldwin Anderson, and Rahman, 2009; and Reardon, Valentino, Kalogrides, Shores, and Greenberg, 2013.

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**ADDITIONAL RESOURCES**

Child Trends. 2013. "Educational Attainment." [www.childtrends.org/?indicators=educational-attainment](http://www.childtrends.org/?indicators=educational-attainment)

Hemphill, F. Cadelle, Alan Vanneman, and Taslima Rahman. 2011. "Achievement Gaps: How Hispanic and White Students in Public Schools Perform in Mathematics and Reading on the National Assessment of Educational Progress". Washington, D.C.: National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education.

Murnane, Richard J. 2013. "U.S. High School Graduation Rates: Patterns and Explanations." *Journal of Economic Literature*, 51(2), 370-422.

Reardon, Sean. F., Rachel Baker, and Daniel Klasik. 2012. "Race, Income, and Enrollment Patterns in Highly Selective Colleges, 1982-2004." Stanford, CA: Center for Education Policy Analysis, Stanford University.

Reardon, Sean F., Rachel A. Valentino, Demetra Kalogrides, Kenneth A. Shores, and Erica H. Greenberg. 2013. "Patterns and Trends in Racial Academic Achievement Gaps Among States, 1999-2011." Working Paper. Stanford, CA: Center for Education Policy Analysis, Stanford University.

Vanneman, Alan, Linda Hamilton, Janet Baldwin Anderson, and Taslima Rahman. 2009. "Achievement Gaps: How Black and White Students in Public Schools Perform in Mathematics and Reading on the National Assessment of Educational Progress." Washington, D.C.: National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education.

## **The Stanford Center on Poverty and Inequality**

The Stanford Center on Poverty and Inequality monitors and publicizes trends in poverty and inequality, publishes the country's leading magazine on poverty and inequality, supports research on the causes of poverty and inequality, and examines the effects of public policy on poverty and inequality.

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