Pathways
a magazine on poverty, inequality, and social policy
Special Issue 2015

STATE of the STATES

The Poverty and Inequality Report

2015

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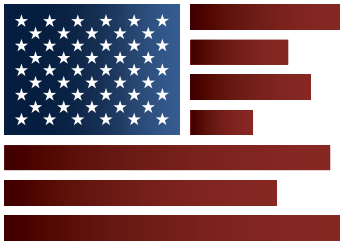

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THE POVERTY AND INEQUALITY REPORT

The Stanford Center on Poverty and Inequality

DAVID B. GRUSKY, MARYBETH J. MATTINGLY,
AND CHARLES VARNER

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 second annual report documenting trends across eight key domains and evaluating their implications for efforts to reduce poverty and inequality and equalize opportunity.

The purpose of establishing this annual series 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 poverty, employment, income inequality, health inequality, economic mobility, or educational access. This report instead provides a unified analysis that brings together evidence across eight key domains (see Table 1 for a listing), 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 the country is faring on core poverty and inequality indicators.

For our 2015 report, we are focusing on state-level variation in key poverty and inequality outcomes, a focus that is motivated by the country's long-standing commitment to a decentralized approach to school policy, safety net policy, housing policy, and even labor market policy. This decentralization has allowed states to develop their own constellation of institutions and practices that may in turn result in very different poverty and inequality profiles. But exactly how much difference is observed? Is the United States indeed running 50 very different poverty and inequality regimes? Have

any states been able to stem the poverty-increasing effects of the Great Recession? Have any states been able to reverse the country's spectacular takeoff in income inequality?

For each domain, the leading experts in the country have been asked to take on just such questions, the objective being to crisply characterize the best and most current evidence available. In Table 1, we have listed the key indicators used to describe state profiles, and we have also provided the mean, minimum, and maximum for each indicator (across the 50 states and the District of Columbia). As a further summary of our results, the bar chart in Figure 1 presents the overall poverty and inequality ranking for each state, with the rank of "1" meaning that the state has the country's best poverty and inequality score (when averaged across all eight domains), and a rank of "51" meaning it has the worst such score. We have also provided domain-specific rankings in Table 2 and the correlations between domain scores in Table 3.

What, then are the main conclusions of our report? Although we obviously cannot do justice to the wealth of results reported here, we review below five key conclusions.

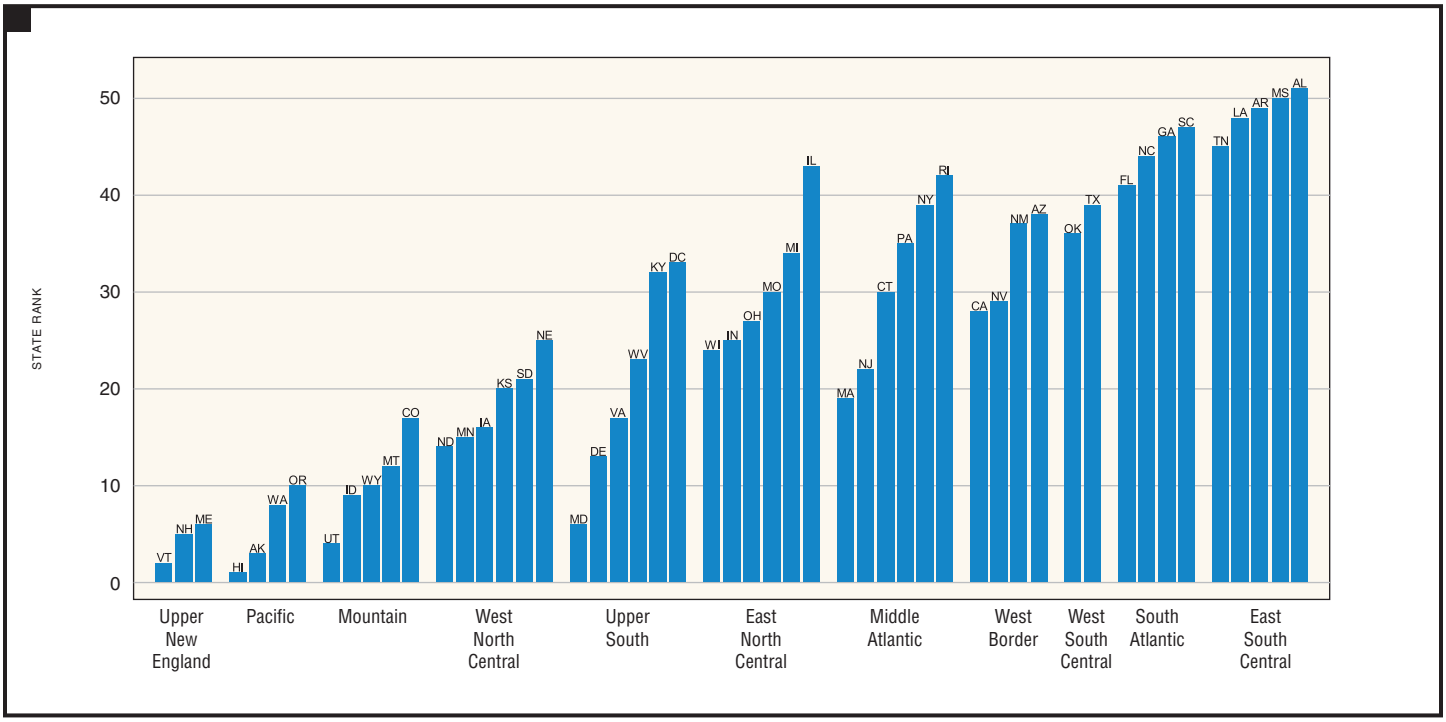
Conclusion #1: There is substantial state variation in poverty, mobility, and inequality outcomes.

It may be unsurprising that states differ dramatically in their poverty, mobility, and inequality outcomes. But the extent to which states matter and the range of domains across which they matter *is* perhaps surprising. The simple implication: When the stork drops a child into his or her new home, the location of that drop will affect fundamentally the child's risk of facing poverty or segregation or experiencing reduced opportunities for mobility.[1] In Table 1, a full reporting of such variability is provided (see far-right columns), but the following examples suffice to convey the story:

The employment rate for prime-age men (ages 25 to 54) ranges from 74.6 percent in West Virginia to 90.3 percent in Nebraska. For women, the corresponding range is yet larger, with West Virginia again anchoring the bottom of the distribution (62.2 percent) and Iowa anchoring the top (80.7 percent).

The official poverty rate likewise varies widely, with the chances of being in poverty more than twice as large in some states (e.g., Mississippi, New Mexico) as others (e.g., New Hampshire, Maryland).

FIGURE 1. State Ranking Averaged Across All Domains



NOTE: See the stub to Table 2 for a description of how these ranks were calculated.

TABLE 1. Selected List of Poverty and Inequality Measures

Domain	Measure	Mean	Minimum		Maximum	
Labor Markets	Prime-Age Employment Ratio (Men)	0.83	0.75	WV	0.90	NE
	Prime-Age Employment Ratio (Women)	0.71	0.62	WV	0.81	IA
Poverty	OPM Poverty Rate (%)	15.13	8.76	NH	24.34	MS
	Black/White Ratio	2.45	1.33	WV	4.41	CT
	Hispanic/White Ratio	2.67	0.96	HI	4.31	MN
	SPM Poverty Rate (%)	14.13	8.70	IA	23.40	CA
Income Inequality	Standard-of-Living Gini	0.42	0.34	UT	0.53	DC
	Top 10% Share	0.45	0.38	WV	0.65	WY
	Top 1% Share	0.19	0.12	WV	0.50	WY
Spatial Segregation	Black-White	72.63	55.87	NV	84.69	MT
	Hispanic-White	61.38	40.81	HI	72.00	WV
	Asian-White	66.34	34.15	DC	81.25	WV
Safety Net	Poverty Relief Ratio	0.47	0.34	WY	0.62	NJ
Education	College Completion Rate (%)	29.25	19.33	NM	63.35	DC
	Hispanic/White Ratio	0.40	0.21	DE	0.74	WV
	Black/White Ratio	0.54	0.30	DC	1.59	WY
	Hispanic-White Socioeconomic Disparity	0.72	0.23	VT	1.38	DC
	Black-White Socioeconomic Disparity	0.48	-0.04	MT	1.56	DC
	Hispanic-White Achievement Gap (Grade 8)	0.73	0.28	WV	1.63	DC
	Black-White Achievement Gap (Grade 8)	0.93	0.36	HI	1.76	DC
Health	Uninsured Rate	0.16	0.06	MA	0.28	TX
	Foregone Care Rate	0.15	0.07	ND	0.22	MS
	Poor-Fair Health Rate	0.17	0.12	VT	0.26	WV
	Smoking Rate	0.19	0.10	UT	0.27	WV
	Diabetes Rate	0.10	0.06	CO	0.14	AL
	Uninsured Rate (<$25k/>$50k Ratio)	6.68	3.09	ND	11.79	CT
	Foregone Care Rate (<$25k/>$50k Ratio)	5.13	2.59	AK	6.85	IA
	Poor-Fair Health Rate (<$25k/>$50k Ratio)	4.52	2.54	HI	6.74	DC
	Smoking Rate (<$25k/>$50k Ratio)	2.49	1.53	TX	4.28	VT
	Diabetes Rate (<$25k/>$50k Ratio)	2.07	1.51	AR	3.28	DC
Mobility	Prob. Child Born in Bottom 20% Reaches Top 20%	0.09	0.04	SC	0.19	ND

Note: See the relevant report chapters for a description of sources and operationalizations.

The range in top income shares is also extremely wide. The top one percent controls 30 percent or more of total income in some states (e.g., New York = 30.8; Wyoming = 49.7) but less than 15 percent in many others (e.g., West Virginia = 12.0; Maine = 13.3).

There are dramatic differences in the extent to which states are racially segregated. For example, 80.7 percent of blacks in Illinois would have to move to a new neighborhood to fully integrate with whites, whereas only 55.9 percent of blacks in Nevada would have to do so.

For children raised in families in the bottom quintile of the (national) income distribution, the chances of reaching the top quintile by adulthood exceed 15 percent in some states (e.g., North Dakota) but are less than 5 percent in others (e.g., South Carolina).

This variability may be understood as extreme in the sense that it often rivals the variability that obtains cross-nationally. If one compares, for example, the variability in top income shares across U.S. states with the variability across the well-off countries of North America and Continental Europe, one finds more variability *within* the U.S.[2] The same conclusion holds with respect to absolute poverty rates.[3] Similarly, while much has been made of cross-national differences in mobility, our report shows that rates of upward economic mobility within some states are "lower than in any developed country for which data have been analyzed to date" (see "Economic Mobility," p. 55). Although the American conceit is that one has to look outside the country to find extreme poverty, immobility, or inequality, in fact there's plenty to be had right here at home.

Conclusion #2: This variability is driven—in part—by state policy.

It has long been appreciated that, when it comes to poverty and inequality policy, many of the available levers are found principally at the state or local level. It is states that decide whether to raise the minimum wage or to supplement the Earned Income Tax Credit and thereby increase employment, reduce poverty, and ramp up opportunities for intergenerational mobility. It is states that decide on their commitment to compensatory preschool and their policies on primary, secondary, and tertiary education. It is states that settle on school-to-work programs in career and technical education. And, perhaps most importantly, it is states that decide how to implement temporary assistance programs for families in need.

The key question is whether this discretion is vigorously exercised. We find that, at least when it comes to safety net funding, it indeed is: *There is much variability across states in the effectiveness of their safety nets, with some states providing almost two-thirds of the support needed to bring incomes up to the poverty line (e.g., New Jersey), while others provide no more than one-third of the requisite support (e.g., Wyoming).* It follows that, when one's market income falls short, much rides on whether one lives in a state with an effective safety net. Moreover, states not only differ in the amount of support they provide, they also differ in how that support is meted out. Whereas some states provide, for example, substantial support to very poor families, others tailor packages that instead emphasize support for working-poor families with relatively high incomes (see "Safety Net," p. 37).

There are of course many poverty and inequality outcomes that are difficult to control with state policy. However, states do have considerable control over safety net policy, and the evidence is clear that states exercise this control very vigorously.

Conclusion #3: Because states that score low in one domain tend to score low in many others, there is a striking cumulation of disadvantage that creates especially wide overall disparities across states.

This report is surely not the first one to note that states vary widely in their poverty rates, mobility rates, or employment rates.[4] However, because such previous reports have typically examined variability in just one domain, the cumulation of disadvantage within a small number of heavily disadvantaged states has not been widely discussed.

This cumulation of disadvantage is clearly revealed in Table 2. As shown here, states that score low in one domain (e.g., health) tend to score low in another (e.g., labor markets), with the implication that children are multiply disadvantaged in many states. The lowest-ranked state appearing in Table 2, Alabama, scores 49th in labor markets, 44th in poverty, 39th in segregation, 49th in safety net policy, 37th in education, 49th in health, and 46th in mobility. It follows that children growing up in Alabama have poor health outcomes, face a weak labor market, have limited opportunities for education and mobility, and cannot count on much support from the safety net. Obversely, children growing up in Vermont (see row 1, Table 1) benefit from the 7th best labor market, the 3rd lowest poverty rate, and the 4th best health outcomes. The strong inter-domain correlations of Table 3 serve to quantify this tendency for advantage and disadvantage to cumulate.

TABLE 2. Overall and Domain-Specific Rankings

Region	State	Overall	Labor Markets	Poverty	Inequality	Spatial Segregation	Safety Net	Education	Health	Economic Mobility
Upper New England	VT	2	7	3	3	21	16	1	4	27
	NH	5	6	11	16	15	36	4	26	16
	ME	6	28	17	4	36	12	5	12	31
Pacific	HI	1	16	7	1	1	5	9	1	17
	AK	3	19	1	7	3	34	7	18	3
	WA	8	20	21	36	5	3	22	26	13
	OR	10	35	18	10	8	6	18	39	25
Mountain	UT	4	21	38	19	6	11	22	5	6
	ID	9	17	6	13	27	9	29	30	24
	WY	10	13	4	39	37	50	6	8	2
	MT	12	15	9	32	39	39	2	20	7
	CO	17	10	22	37	10	27	50	9	18
West North Central	ND	14	1	14	40	50	48	16	2	1
	MN	15	5	27	27	30	22	42	11	11
	IA	16	4	16	8	43	25	40	36	4
	KS	20	8	15	22	24	30	39	33	19
	SD	21	2	20	34	51	44	17	18	5
	NE	25	2	22	17	43	41	51	30	9
Upper South	MD	6	12	5	18	22	28	15	6	39
	DE	13	28	24	5	8	17	30	16	41
	VA	17	11	2	15	12	42	12	47	42
	WV	23	51	8	6	49	38	3	36	12
	KY	32	44	12	12	31	40	8	42	36
	DC	33	17	51	51	14	NA	47	9	8
East North Central	WI	24	8	41	10	46	15	45	15	26
	IN	25	32	26	2	39	20	21	38	37
	OH	27	34	19	9	31	23	24	32	45
	MO	30	22	10	31	33	35	13	40	40
	MI	34	39	28	21	34	8	28	28	44
	IL	43	26	34	41	38	14	41	23	35
Middle Atlantic	MA	19	14	35	46	25	2	34	16	15
	NJ	22	28	45	37	26	1	44	2	10
	CT	30	23	33	43	18	19	49	7	32
	PA	35	25	36	28	48	13	30	24	28
	NY	39	38	38	50	45	18	24	12	20
	RI	42	28	49	28	29	4	48	34	30
West Border	CA	28	40	37	47	11	7	43	20	14
	NV	29	41	29	49	1	10	45	22	23
	NM	37	50	30	24	6	37	26	35	29
	AZ	38	47	40	35	3	24	32	29	33
West South Central	OK	36	33	13	41	23	46	14	45	21
	TX	39	27	50	45	19	32	38	12	22
South Atlantic	FL	41	35	31	47	13	43	10	24	43
	NC	44	23	43	23	16	21	36	51	49
	GA	46	35	46	33	19	31	20	41	50
	SC	47	43	48	14	17	26	34	50	51
East North Central	TN	45	41	24	26	35	45	10	43	47
	LA	48	45	41	44	28	29	19	46	38
	AR	49	46	32	30	46	47	27	48	34
	MS	50	47	47	25	39	33	33	44	48
	AL	51	49	44	20	39	49	37	49	46

NOTE: The ranks presented here were secured by (a) converting the scores on the indicators in Table 1 to state rankings, (b) averaging across the rankings comprising each domain and converting these averages to domain-specific rankings, and (c) then averaging across these domain-specific rankings to produce an overall state ranking.

Although a few domains are quite unrelated from the others (e.g., segregation, inequality), most of them are strongly inter-correlated. The simple upshot: The tendency for "all bad things to come together" creates especially wide disparities across states in opportunities and outcomes.

Conclusion #4: The cost of residing in a high-poverty state is magnified by the regional clustering of disadvantage. The most extreme disadvantage is found in three contiguous Southern regions (East South Central, South Atlantic, West South Central), whereas the most advantaged regions are located far apart in New England and the Pacific respectively.

The high-poverty states *could* of course be scattered haphazardly across the United States. If that were the case, then children born into them would see nearby opportunities and could readily move into less disadvantaged adjacent states.

It turns out, however, that many of the high-poverty states are clustered together in larger *regions of disadvantage*. Because disadvantage is regionally concentrated in this way, residents of high-poverty states are obliged to "leapfrog" over vast swaths of equally poor states to escape disadvantage. The South forms a particularly large swath of such concentrated disadvantage: The three contiguous Southern regions—the East South Central, South Atlantic, and West South Central—are the most disadvantaged areas in the United States. The two most advantaged regions are, by contrast, relatively small "islands" located far apart from one another (i.e., Upper New England, Pacific). This regional pattern of advantage and disadvantage is represented in Figure 1.

Conclusion #5: There are clear limits to state policy. The two main economic forces of our time—the long-term rise in income inequality and the recent economic downturn—continue to exert powerful effects that overwhelm state policy.

Although states differ substantially in their baseline levels of employment, poverty, and income inequality, there is a striking cross-state consistency in how those baseline levels have responded to the main economic forces of our time.

In every state, the Great Recession reduced prime-age employment, with this reduction persisting even well after the recovery. No state had a higher percentage of prime-age adults employed in 2012 or 2013 than it had before 2008.

The post-recession recovery has not brought about a reduction in poverty (relative to the pre-recession baseline) in any state. In only six states have poverty rates returned to their pre-recession levels.

TABLE 3. Rank Correlations for Domain-Specific Rankings

	Labor Markets	Poverty	Inequality	Spatial Segregation	Safety Net	Education	Health	Economic Mobility
Labor Markets	1.000							
Poverty	0.809	1.000						
Inequality	0.096	0.300	1.000					
Spatial Segregation	-0.083	-0.183	-0.041	1.000				
Safety Net	0.028	-0.024	0.066	0.318	1.000			
Education	0.611	0.480	-0.144	-0.106	0.325	1.000		
Health	0.514	0.423	-0.167	0.122	0.338	0.456	1.000	
Economic Mobility	0.551	0.456	-0.158	-0.052	0.043	0.214	0.581	1.000

NOTE: The correlations reported here were calculated as described in the note to Table 2 (except that racial and ethnic measures were omitted before calculating the domain-specific rankings for the poverty and education domains).

The share of total income going to the top 1 percent or the top 10 percent has increased in every state since 1980. The Great Recession halted this rise, but only temporarily.

These results, which are of course described in more detail in the following chapters, reveal the limits to state policy when it is faced with overwhelming forces of the sort behind the Great Recession and the takeoff in income inequality.

A New War on Poverty and Inequality?

It is useful in closing to ask whether state—or even federal—policy is *intrinsically* limited in its capacity to take on forces of this magnitude. Although a main objective of this report is simply to document cross-state differences in poverty and inequality, a secondary one is to ask whether the pattern of results tells us anything about how a new War on Poverty, were we to choose to wage one, might bring about meaningful and permanent change.

It is sometimes argued that rising income inequality and intransigent poverty are backed by inexorable forces that are well beyond the reach of policy. This pessimism rests, however, on the assumption that anti-poverty policy must necessarily be shrunken and highly circumscribed, as of course it now is. If we continue to limit ourselves to narrow-gauge and piecemeal reform of schools, the safety net, and the economy, then of course we'll likely continue to yield equally small returns.

The alternative to such narrow-gauge efforts is major institutional reform that eliminates fundamental inequalities of access and opportunity that in turn generate illicit returns and much rent, poverty, and inequality. These reforms, especially those pertaining to inequalities of training and opportunity, are in some cases well within the purview of state policy.

To be sure, major institutional reform is more often the province of national policy, but even that ought not definitively rule it out. The great American experiment has it that institutions are perfectible and should be recast whenever they're not realizing the larger ideals at stake. The history of the United States is studded with such reform: We abolished slavery, overhauled labor and employment law, took on school segregation, and fought a first War on Poverty.

The current tendency, unfortunately, is to treat the institutional landscape as given and move quickly and immediately to piecemeal discussion of piecemeal reform. If a second war on poverty and inequality is to be a real war founded on a real commitment to win it, we might want to step back and open up to larger reform, no matter how daunting doing so may now seem. ■

NOTES

1. This metaphor of course assumes that children remain within the state into which they are dropped and are thus subjected for their lifetime to the probabilities implied by that state's scores. It also rests on the strong—and largely unsubstantiated—assumption that the state differences reported here should be taken to indicate truly causal "state effects."

2. Atkinson, Anthony B., Thomas Piketty, and Emmanuel Saez. 2011. "Top Incomes in the Long Run of History." *Journal of Economic Literature* 49:1, pp. 3-71.

3. Gornick, Janet C., and Markus Jäntti. 2012. "Child poverty in cross-national perspective: Lessons from the Luxembourg Income Study." *Children and Youth Services Review* 34, pp. 558-68.

4. See, e.g., Sommeiller, Estelle, and Mark Price. 2015. "The Increasingly Unequal States of America." *Economic Policy Institute*. http://www.epi.org/publication/income-inequality-by-state-1917-to-2012/

Labor Markets

The Stanford Center on Poverty and Inequality

BY MICHAEL HOUT AND ERIN CUMBERWORTH

KEY FINDINGS

- The ongoing increases in the total number of jobs and ongoing declines in the official unemployment rate disguise a very slow recovery in prime-age employment.
- The economy is on pace to lift men's prime-age employment to 85.1 percent by February 2017 and women's to 72.8 percent. Under this extrapolation, women's employment will return to its pre-recession level, whereas men's employment will climb only two-thirds of the way back.
- The Great Recession spread to every state, though employment fell more in some states than in others. Most state differences appear to reflect the industry composition of state economies. Prime-age employment fell most in states where new-home construction, coal mining, and financial services were important before the recession, and least in states where oil exploration or federal government employment were significant.
- A few states, notably Michigan and Nevada, increased employment by 3 or 4 percentage points relative to their low point during the recession, but the average recovery has been a meager 1 percentage point.

The Great Recession of 2007–2009 began as a financial crisis, but played out as an enduring employment crisis. 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 federal 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 began 2015 with payrolls increasing and the official unemployment rate down to 5.6 percent. But 32 percent of the unemployed have been out of work for 27 weeks or more, and the employment-to-population ratio was only 59 percent.

In this report, our aim is to assess the current standing of the U.S. labor market, focusing on the employment-to-population ratio of 25- to 54-year-old people. This age group is the core of the American labor force, old enough to have completed schooling and mostly too young to retire. Before the recession, 88 percent of prime-age men and 73 percent of prime-age women were employed. In the most recent data from October 2014, those percentages are just 84 percent for men and 70 percent for women. At the low point of the recession (earlier for men than women), they were 80 percent for men and 69 percent for women. Thus prime-age men have recovered about half of the employment lost to the recession; prime-age women have recovered one-fourth.

In keeping with the theme of this report, we also examine variation among states in labor market performance, but the differences prove to be less illuminating than the similarities. Insofar as there are state-by-state differences, they mainly reflect (a) the industry-specific effects of the recession and (b) state differences in industry composition.

A Slow Recovery in Prime-Age Employment

The single best index of employment is the prime-age employment ratio—the ratio of employed 25- to 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 again start looking for jobs, making unemployment appear to be 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 from January 2006 (almost two years before the recession began) to October 2014, with recession months shaded gray. At the employment ratio's peak in January 2007, 88 percent of American men 25–54 years old were employed; at the low point three years later, 80 percent were employed (a decline of 8 percentage points). The path upward from that low point is disappointing:

By October 2014, men's prime-age employment ratio was at 84 percent, less than half the way back to the pre-recession level.

Women's employment declined more slowly but shows practically no sign of recovery and, in this regard, is even more disappointing. In January 2007, 73 percent of prime-age women were employed. Women's employment did not bottom out until November 2011, two years after the recession officially ended. By that point women's prime-age employment had slipped to 69 percent (4 percentage points below its pre-recession level). Though a 4-percentage-point decrease in women's employment may not seem like much, it is the biggest decline on record (recordkeeping began in 1947). During twentieth-century recessions, the rate of increase in women's employment slowed, but never declined by more than 1 percentage point.[1] So from a long-term perspective, a 4-point decrease is significant.

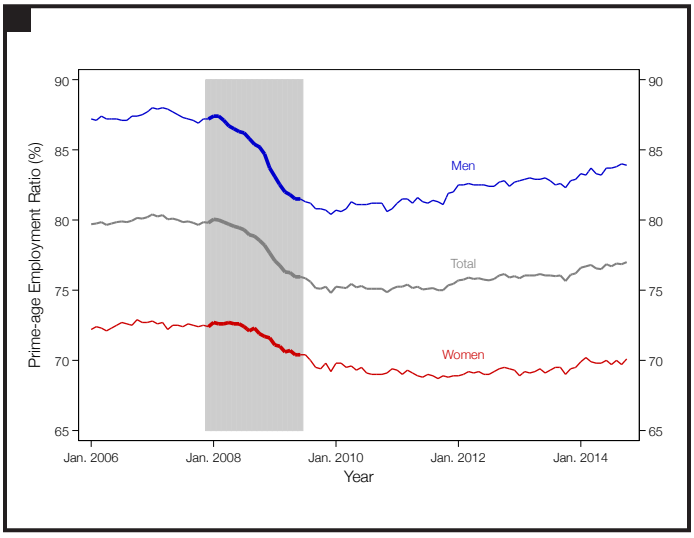
From the perspective of the first decade and a half of the twenty-first century, the past few years typify women's stalled progress in the labor market. Women's prime-age employment peaked at 75 percent in April 2000, it slipped to 74 percent by the end of 2000, and it has remained between 69 and 73 percent ever since. In the most recent data, 70 percent of prime-age women were employed.

In previous contributions to this series, we have noted that prime-age employment declined more during and after the Great Recession than during any of the recessions since the Great Depression.[2] We also noted that, for men, each postwar recession reduced prime-age employment, and since the 1970s, post-recession employment always fell short of its pre-recession high. This has brought about a historic decline in prime-age employment among men. Although 96 percent of prime-age men were employed in 1953, only 88 percent were in 2007. In the Great Recession and its aftermath, American men have recovered from a low of 80 percent to just 84 percent.

If the employment of prime-age men does not improve substantially soon, the current recovery will yield a level of employment uncommonly low. There have now been 72 consecutive months (starting in November 2008) in which men's prime-age employment has been lower than 85 percent. Prior to the Great Recession, men's employment dipped below 85 percent in exactly one month, February 1983, which was at the bottom of the 1980–1983 double-dip recession.

Women's employment increased so dramatically during the twentieth century that recessions seldom led to decreases in prime-age employment; they just slowed the rate of increase. 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 is now happening again after the Great Recession, as women's most recent prime-age employment ratio is still about where it was when the recession officially ended in the summer of 2009.

FIGURE 1. Prime-age Employment Ratio by Month and Gender, January 2006–November 2014.



Note: We used seasonally adjusted data. Prime-age refers to people who were 25 to 54 years old. Source: Bureau of Labor Statistics.

The Future of the Recovery

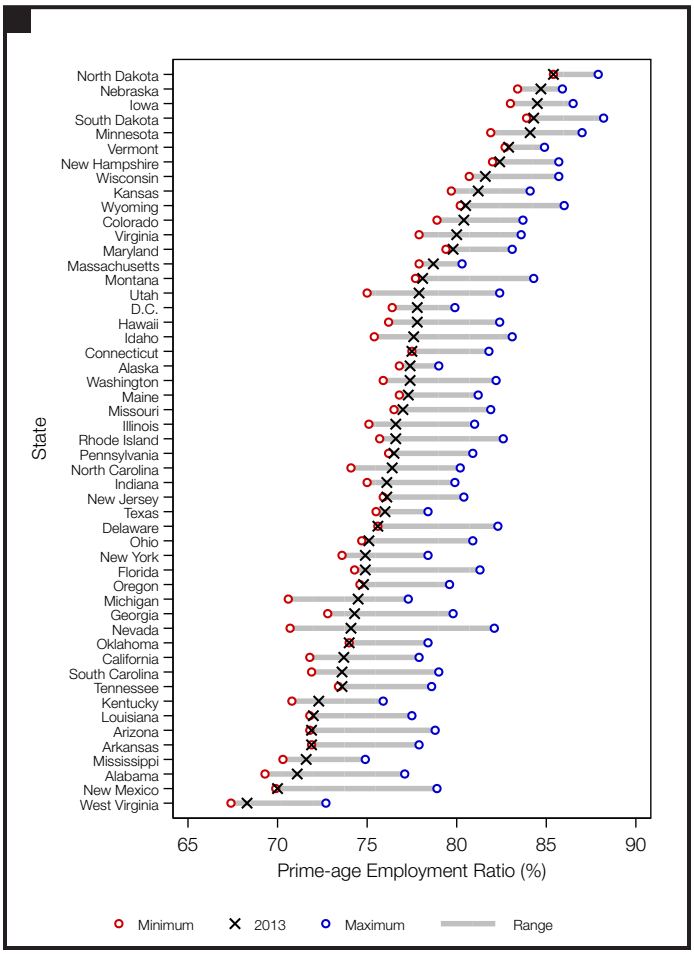
To assess the likelihood of a full employment recovery from the Great Recession, we regressed men's and women's prime-age employment ratios on the number of months from the end of the recession to the month the ratio was measured. The model has no substantive content and should not be considered a forecast or prediction about the future. But it can be used to extrapolate recent experience into the future and thus answer whether the path the economy is on right now will eventually lead to a full employment recovery.

For men, the relationship does not vary significantly from a simple straight line moving upward at the pace of 0.05 percentage point per month. At that pace, the employment-to-population ratio increases a percentage point every 20 months, implying it will take between 12.5 and 13 years for men's prime-age employment to recover the 8 percentage points lost during and after the Great Recession. Given that the U.S. economy has never gone 12.5 years without a recession, this calculation suggests that another recession is likely to reduce men's prime-age employment again before this

slow recovery restores the employment to pre-recession levels. Men's employment has failed to fully recover after the last eight recessions. The pace of men's employment improvement five years into the current recovery suggests that this will be the ninth straight recovery to fall short.

The outlook for women is slightly better, mainly because the dip in women's prime-age employment due to the Great Recession was only half of men's. Women's prime-age employment ratio continued downward slightly for about a year after the end of the recession before beginning to recover ever so slowly. If the curve is real and not just statistical noise, it implies that women's employment might be back to pre-recession levels two years from now (in February 2017). This curve-fitting exercise must be interpreted very cautiously. The data are almost as consistent with a flat line as a bowed one. On the other hand, women's employment fully recovered in seven of the last eight recoveries—a pattern that gives us just enough confidence to suggest that the probability of fully recovering from the Great Recession by February 2017 is greater than zero for women.

FIGURE 2. Prime-age Employment Ratio by State for Highest Year Before Recession, Lowest Year During or Since Recession, and 2013.



Source: Bureau of Labor Statistics

State Differences

States can be natural laboratories that allow scholars and policy makers to learn what works and what doesn't. The trick of course is to compare states that differ in their response to social problems, but that don't differ much in other important ways. This approach works better when research and evaluation are built into the policies, as when the Clinton administration exempted states from federal mandates regarding the use of federal welfare funds, provided that they conducted a rigorous evaluation of the alternative practices that they installed. Lessons learned from the states made welfare reform more successful than it would probably have been without the experimentation and evaluation.

We know of no examples of that kind of rigorous research regarding state variation in approaches to economic recovery. Nonetheless, in keeping with the theme of this report, we look to the states for clues about underemployment in the national labor market.

Prime-age employment data from each state and the District of Columbia for the years 2006–2013 show that no jurisdiction escaped the Great Recession (Figure 2). Employment fell more in some states and less in others, but no state had a higher percentage of prime-age adults employed in 2012 or 2013 than it had before 2008. The "X" in Figure 2, which pertains to employment in 2013, shows that employment four years after the end of the recession was always closer to the lowest value observed for that state than it was to the highest value for that state.

Figure 3 reveals more details, tracking each state from 2006 to 2013. It arrays all the state-by-state data, clustering states by census division and color-coding them according to net change; the states shown with thick red lines changed most, and those with thick black lines changed least. Employment declined least (by 3 percentage points or less) in Alaska, Vermont, Massachusetts, Nebraska, North Dakota, and Texas; it decreased most (by 7 percentage points or more) in Utah, Alabama, Idaho, New Mexico, and Nevada. The states that by 2013 had recovered the most—between 2.0 and 3.4 percentage points—were Mississippi, Virginia, Utah, Idaho, Nevada, and Michigan. Considering the regions instead of particular states, we note that the southern and western states fared worst; states of the upper Midwest (the Dakotas, Minnesota, Nebraska, and Iowa) were least affected.

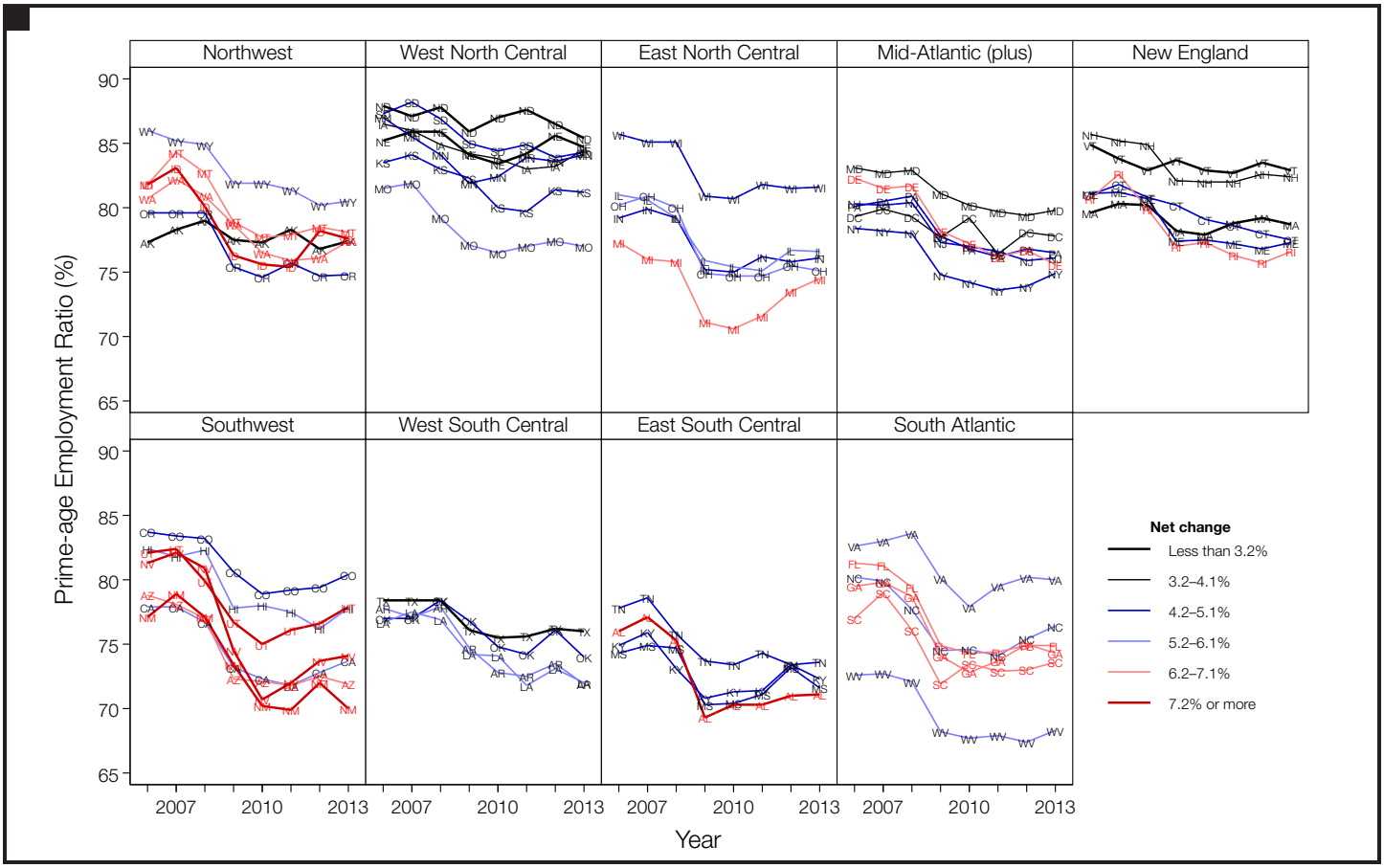
These patterns offer few clues about what might be done to hasten recovery. Michigan rose the most from its low in 2010 to 2013, aided by federal assistance to the auto industry. Nevada had the second-highest increase. Although trouble hit Nevada when the housing bubble burst and employment in construction collapsed, a relatively sharp recovery has been driven by rising employment in services (especially professional, business, education, health, leisure, and hospitality services). Oil seems to have protected Texas and the upper Midwest from the worst of the recession, but coal did not help Utah or West Virginia.

Further disaggregating the state data by gender (see the online appendix for Figures 3A and 3B) failed to yield additional insight regarding state-to-state variation.[3] The gender-specific figures echo the evidence in Figure 1, showing both that (a) the recession-related decline was worse for men and (b) what recovery there has been occurred among men. Women's employment in most states fell less and later than men's, but where we see nascent recovery, as in Michigan and Nevada, we see it mainly among men.

The simple conclusion: For the most part, the national patterns and national gender differences in employment played out much the same in state after state, with the similarities much more impressive than the differences. A simplified model that stipulates that each state has the same trend in prime-age employment fits the data amazingly well; its R^2 is 0.97.[4] If state variation in time trends amounted to just 3 percent of the variance in prime-age employment ratios, then there is not much information to be gleaned from this small variance component.

To be clear, we are not saying that states have the same or even similar labor markets. An even simpler model that takes no account of state has an R^2 of just 0.69, so there is substantial state-related variation in employment, just not much state variation in when and how hard the recession hit. As shown in Figure 2, the prime-age employment ratio ranges from a low of .68 in West Virginia to a high of .85 in North Dakota (in 2013), a

FIGURE 3. Prime-age Employment Ratio by Year, State, and Region, 2006–2013.



Note: Color-coding indicates the net change, 2006–2013. Source: Bureau of Labor Statistics

range that's far greater than the average change in prime-age employment during the Great Recession. The Great Recession, although clearly a disaster for prime-age employment, also did not come close to reducing the employment situation of the best-off states to that of the worst-off states. It's not, then, that states don't matter for rates of prime-age employment; rather, it's simply that the Great Recession did not do much to alter state rankings in prime-age employment.

Conclusions

In 2009 and 2010, the U.S. economy suffered the most job loss in the postwar era. Job seekers of all ages had trouble finding work, millions got discouraged and quit looking for work, and unemployment spells lasted longer than at any time on record. The prime-age employment ratio, the best measure of the health of the labor force, dropped to the lowest level on record among men and had the largest drop ever among women. Five years later, employment still lags far behind its pre-recession level for both men and women. At the current rate of recovery, men's employment has almost no chance of returning to pre-recession levels by February 2017; women's employment has a 50/50 chance of returning to pre-recession levels by then.

No state was exempt from the Great Recession, though employment fell more in some states than in others. Nevada, New Mexico, and Alabama endured the biggest losses of employment; Vermont, Alaska, and Massachusetts lost the least. Michigan, Nevada, and Idaho have had the biggest recoveries (defined as increase from the low point of the recession to the most recent data). Most states are still much closer to their low point than to their rate of employment at the beginning of the recession.

State differences appear to reflect industry patterns. Prime-age employment fell most in states where new-home construction, coal mining, and financial services were important before the recession and least in states where oil exploration or federal government employment were significant. A few states, notably Michigan and Nevada, increased employment by 3 or 4 percentage points after hitting a low point during the recession, but the average recovery has been a meager 1 percentage point. These differences in state experiences prove, however, to be relatively minor. Thus, unfortunately, state-to-state differences in the response to the recession are not very informative about what works (or doesn't) to stimulate employment recovery.

In previous reports we highlighted the way the weak recovery from the past two recessions differed from previous, more vigorous recoveries, especially that following the almost as deep double-dip recession of 1980–1982.[5] Those comparisons, as well as comparisons by industry, showed that the recovery depends on the two industries that suffered the worst in the Great Recession: construction and manufacturing. The housing bubbles that helped employment in the past are not to be encouraged, of course, as they only sow the seeds of the next financial crisis. Manufacturing recovery depends on innovation and demand. Innovation is hard to predict or anticipate. Fiscal policy can stimulate demand, but a bigger stimulus was politically impossible in 2009 and is even less likely now. The glum assessment here is that no state has come up with a policy that might, if widely adopted, increase the rate of recovery in employment. The prevailing optimism about the recent jobs and unemployment reports is in this sense misplaced. ■

APPENDIX: PROJECTING MEN'S AND WOMEN'S PRIME-AGE EMPLOYMENT RATIOS

In discussing Figure 1, we referred to extrapolations of recent trends in prime-age employment ratios, extrapolations that led us to conclude that it was unlikely that men's employment would fully recover to the pre-recession levels but that women's employment might return to the pre-recession level. Those conclusions are based on ordinary least squares (OLS) regressions of prime-age employment ratios on the number of months passed since the end of the Great Recession.

For men, the results favor a simple linear model. Men's predicted prime-age employment ratio equals 80.49 + 0.0508 (Months since end of recession). The standard error for the slope of that line is 0.0023; the standard error for the whole equation is 0.33; the R^2 for the model is 0.89.

For women, the linear model performs poorly (R^2 = 0.04); a quadratic equation does better. Women's predicted prime-age employment ratio equals 69.88 – 0.0609 (Months since end of recession) + 0.001022 (Months since end of recession)^2. The standard error for the linear term is 0.0059; the standard error for the quadratic term is 0.000091; the standard error for the whole equation is 0.22; the R^2 for the model is 0.69.

NOTES

1. Hout, Michael, and Erin Cumberworth. 2014. "Labor Markets." In *The Poverty and Inequality Report: A Special Issue of Pathways Magazine*. Stanford Center on Poverty and Inequality.

2. Hout and Cumberworth, 2014.

3. The online appendix is available at http:/inequality.com/sotu.

4. Under this model, the prime-age employment ratios vary according to gender-specific time trends and state-specific differences in men's and women's initial values, but the states have a common time trend. The equation for this simplified model was: $PER_{gst} = b_0 + b_1 \text{ Women} + \text{Sum}_s\, b_{2s}\, \text{State}_s + \text{Sum}_t\, b_{3t}\, \text{Year}_t + \text{Sum}_s\, b_{4s}\, \text{Woman*State}_s + \text{Sum}_t\, b_{5t}\, \text{Woman*Year}_t$.

5. Hout and Cumberworth, 2014.

Poverty

The Stanford Center on Poverty and Inequality

BY MARYBETH J. MATTINGLY AND CHARLES VARNER
WITH MAPS BY BARBARA COOK

KEY FINDINGS

- States have very different poverty rates. The highest poverty rate is found in Mississippi (24.3%), while the lowest poverty rate is found in New Hampshire (8.8%).
- The states with the highest poverty rates are in the South and West, while those with the lowest poverty rates are in New England, the Middle Atlantic, and the Upper Midwest.
- Although blacks and Hispanics face higher risks of poverty in most every state, there is also much state-level variability in the extent of this disadvantage.
- The recovery has not translated into a bona fide reduction in poverty (relative to the pre-recession baseline) in any state. In only six states have poverty rates returned to their pre-recession levels.
- Although states with rebounding economies have experienced, on average, larger declines in poverty, this economic effect accounts for only a minority of the state-level change in poverty (since the recession).

There is much that is known about poverty in the United States. It is well known that the United States has more poverty than most other equally well-off countries.[1] It is well known that poverty increased with the Great Recession and that, despite the recovery, there has not yet been any substantial reduction in poverty.[2] It is well known that, relative to whites, blacks and Hispanics continue to be especially hard hit by poverty.[3]

We know somewhat less, however, about the spatial and regional patterning of poverty and how that has changed, if at all, since the Great Recession. Have some states been able to avoid a recession-induced poverty disaster? Have poverty rates in some states recovered from the recession especially quickly? Is the racial and ethnic gap in poverty especially small in any states?

The purpose of this brief is to provide answers to questions of this sort. We might well expect substantial variability across states because poverty policy in the United States is quite decentralized, because the recession hit some regions especially hard (and the recovery has likewise been quite uneven), and because those groups that are especially at risk of poverty (e.g., blacks and Hispanics) are concentrated in some states more so than others. In this report, we examine the extent of such variability using several key state-level indicators, including (a) official poverty rates, (b) deep poverty rates, (c) racial and ethnic ratios in poverty rates, and (d) the Supplemental Poverty Measure (SPM).

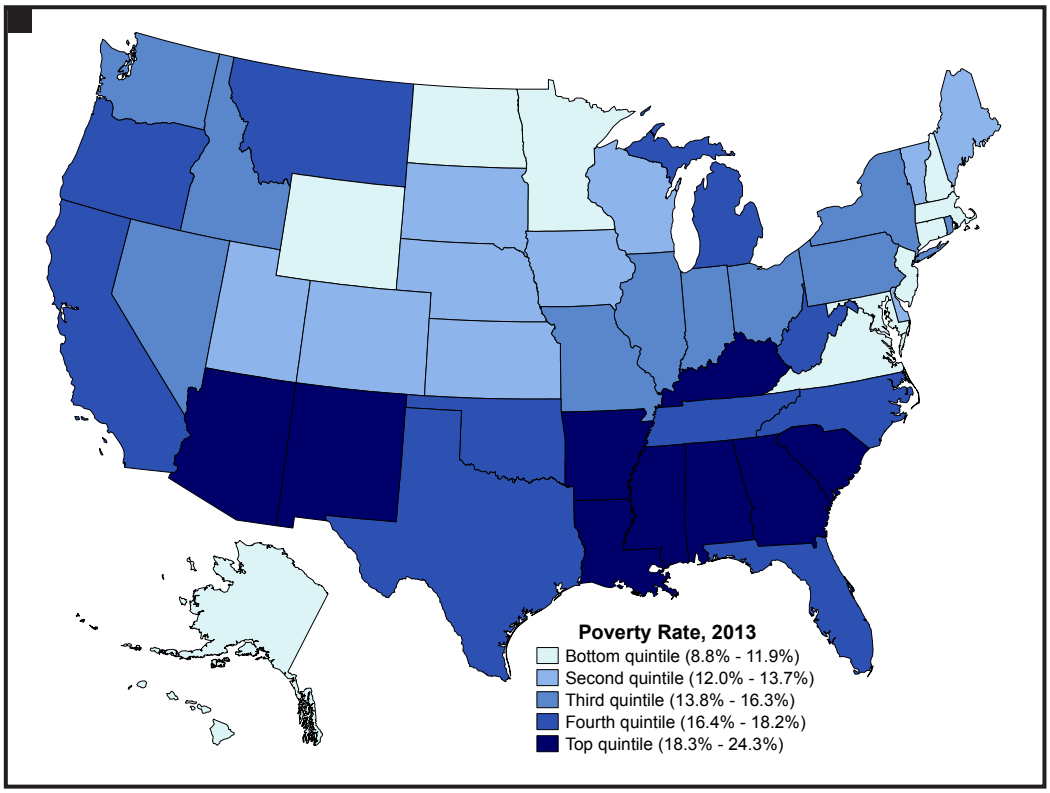
How Much Variability Is There?

The first question that we take on is a simple but important one: Is there much variability in poverty across states? In Figure 1, we report 2013 poverty rates from the American Community Survey, using the Census Bureau's official poverty measure (OPM). The map in Figure 1 divides the country into quintiles, with the lightest-blue states having the lowest poverty rates (approximately 9–12 percent), while the darkest-blue states have the highest poverty rates (i.e., exceeding 18 percent).[4] The highest poverty rate is found in Mississippi (24.3%), while the lowest poverty rate is found in New Hampshire (8.8%).

Although this result suggests a very substantial amount of variability, the skeptic might suggest that it's an artifact of our simple threshold-based measurement of poverty. It is of course possible that, within high-poverty states like Mississippi, many people happen to fall just below the threshold, thus inflating the poverty rate. There are various ways to address this concern, but we have proceeded here by calculating the deep poverty rate for each state, where families in "deep poverty" refer to those with income less than half the poverty threshold (which, for a family of four, would be less than $1,000/month).[5] Is there much variability in the amount of deep poverty too?

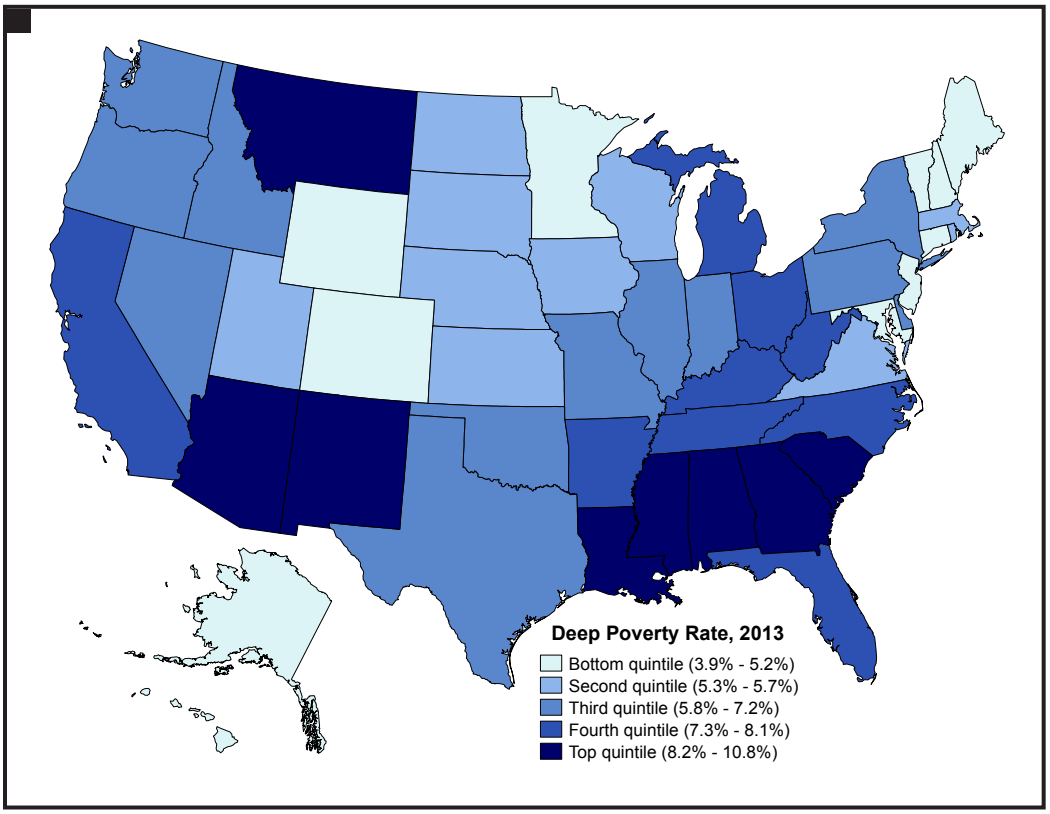
We show in Figure 2 that there is. Whereas the deep poverty rate for the country was 7.0 percent (in 2013), Figure 2 reveals that there is much variability around that average, with states such as Mississippi and New Mexico having the highest deep poverty rates

FIGURE 1. 2013 Poverty Rates (official)



Source: Ruggles et al., 2010, IPUMS 2013 ACS.

FIGURE 2. Deep Poverty Rates, 2013

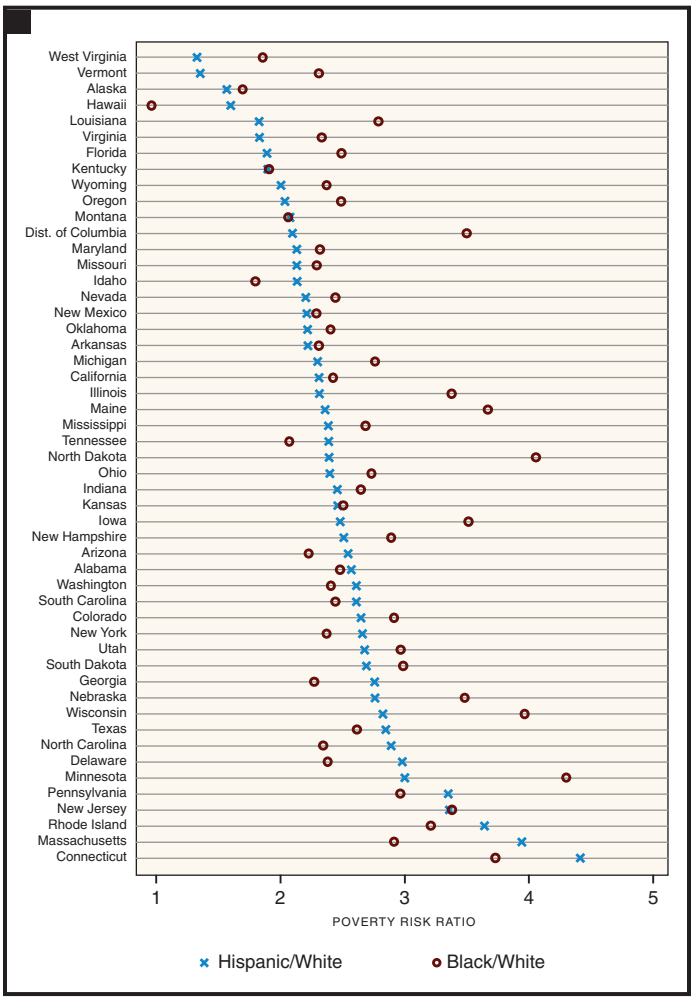


Source: Ruggles et al., 2010, IPUMS 2013 ACS.

(almost 11%), and New Hampshire having the lowest (less than 4%). There is a very strong correlation between official and deep poverty: When Figures 1 and 2 are compared, we find that states fall into the same quintile on each measure almost without exception. The highest-quintile states, where approximately 1 out of 10 individuals are in deep poverty, include Montana, Arizona, New Mexico, Louisiana, Mississippi, Alabama, Georgia, and South Carolina. The upshot is that there is substantial state-level variability in poverty for both of these two poverty measures.

The second question that we take on pertains to the patterning of this variability. Does it comport well with the stereotypical image of American poverty? It is hard to argue that it doesn't. By both measures, the states with the highest poverty rates are in the South and West, while those with the lowest poverty rates are in New England, the Middle Atlantic, and the Upper Midwest.

FIGURE 3. Poverty Relative Risk Ratios by Race-Ethnicity, 2009–2013



Source: U.S. Census Bureau, American Community Survey, 2009–2013 (5-Year Estimates)

Racial and Ethnic Variation in Poverty

We next ask about the extent to which poverty is racially and ethnically patterned. How much, in other words, do the racial and ethnic contours of poverty vary across the states? Are there any states in which blacks and Hispanics aren't especially at risk of poverty?

We address this question with 5 years of data from the American Community Survey (as doing so allows us to estimate reliable rates for small states). For each state, we calculate (a) the ratio of the black poverty rate to the white poverty rate, and (b) the ratio of the Hispanic poverty rate to the white poverty rate.

The results are shown in Figure 3. In no state do Hispanics have lower poverty rates than whites, and the black-white poverty ratio is close to 1 in just one state, Hawaii. If blacks and Hispanics are everywhere disadvantaged, there is also much variability in the extent of this disadvantage. The relative risk ratios range from 1.5 in West Virginia—with its characteristic white poverty in Appalachia—to above 4 in Connecticut (when comparing Hispanics with whites). The ratio is also very high in several states near New York City and Boston (e.g., Pennsylvania, New Jersey, Massachuestts, and Rhode Island), where prosperous white populations are mixed with poorer Hispanic and black populations living closer to the urban centers along the Northeast Corridor. This variation does not, therefore, correspond in any obvious way with the archetypal red-state/blue-state dichotomy. Indeed, with the exception of the quite uniformly high Northeastern rates, race and ethnic gaps do not appear to cluster much by region.

It is not the case, by the way, that there is equally extreme variability across *all* types of demographic groups. For example, we found that the age gradient in poverty takes much the same form in nearly all states, with poverty rates for seniors lowest, followed by rates for working-age adults, and then rates for children under 18 (see online appendix for details). Although overall poverty rates range widely across states, the age gaps in poverty are quite similar.[6]

The Recession's Continuing Toll on Poverty

The Great Recession has widely been understood to be a poverty disaster. To be sure, the safety net contained some of the harm, but nonetheless the harm was substantial and long-lasting. Where, it might be asked, do we now stand long after the recession ended?

We address this question by comparing poverty rates between 2007 and 2013 and then dividing states into four categories, ranging from no change (light blue) to an increase of 3 per-

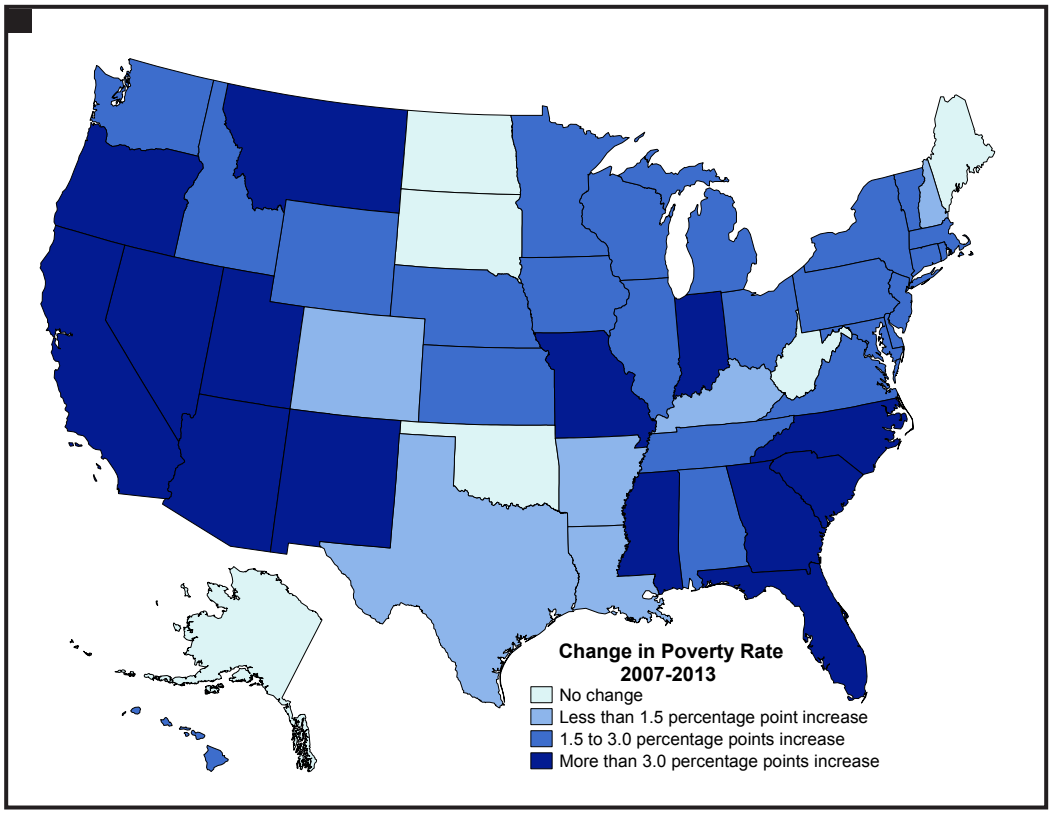
centage points or more (dark blue). Notably, only six states had fully returned to their 2007 poverty levels by 2013, and just six other states were within 1.5 percentage points of the 2007 level. These 12 states benefited in many cases from rising energy prices and increased energy production over this period (e.g., Texas).

On the other hand, California, Georgia, Arizona, Nevada, New Mexico and Florida had the largest poverty increases, with the 2013 poverty rates in these states more than 4 percentage points higher than in 2007. The poverty rise in just two of these states, California and Florida, translates into 3 million more poor people than there were in 2007. There was, worse yet, a concomitant increase in the depth of poverty: In 36 states, the gap between a poor family's total income and the poverty threshold increased between 2007 and 2013, yet another indication of a growing economic vulnerability among the poor population.[7] And, finally, the number of states with very high poverty (above 18 percent) grew from 3 to 12 between 2007 and 2013.[8]

There are two possible reasons why poverty has persisted well after the recession ended. The first possibility is that, while economic growth does tend to deliver a substantial reduction in poverty, the growth occurring during the recovery has been very uneven, with many states failing to experience much growth (and hence much of a reduction in poverty). The second possibility is that, even for states that have been experiencing growth, it is not reliably returning them to their pre-recession poverty level.

We cannot pretend to adjudicate in any decisive way between these two accounts, but Figure 5 does at least cast some light on it. This figure, which plots the 2007–2013 change in per capita Gross State Product (GSP) against the 2007–2013 change in poverty, suggests that both accounts are only partly on the mark. It is clear, first off, that the recovery has indeed been uneven, with only 29 jurisdictions experiencing a full recovery in per capita GSP by 2013, while the remaining 22 jurisdictions had not. For some states, such as Nevada, the contraction in per capita GSP over this period remains well over 10 percent. At the same time, the relationship between per capita GSP and poverty is far from determinative, with approximately two-thirds of the change in poverty left unexplained by per capita GSP.[9] In Oregon, for example, the economic recovery was second only to North Dakota's, but its poverty rate remained over 3 percentage points higher than in 2007.

FIGURE 4. Change in Poverty Rates, 2007-2013

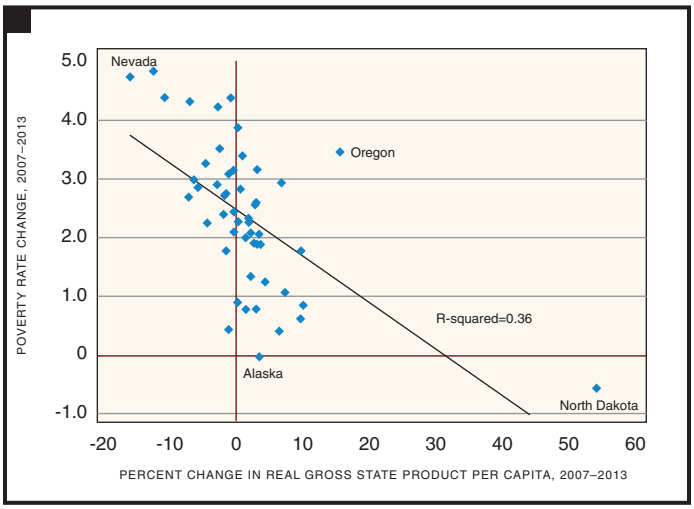


Source: Ruggles et al., 2010, IPUMS 2007 and 2013 ACS.

Supplemental Poverty Measurement

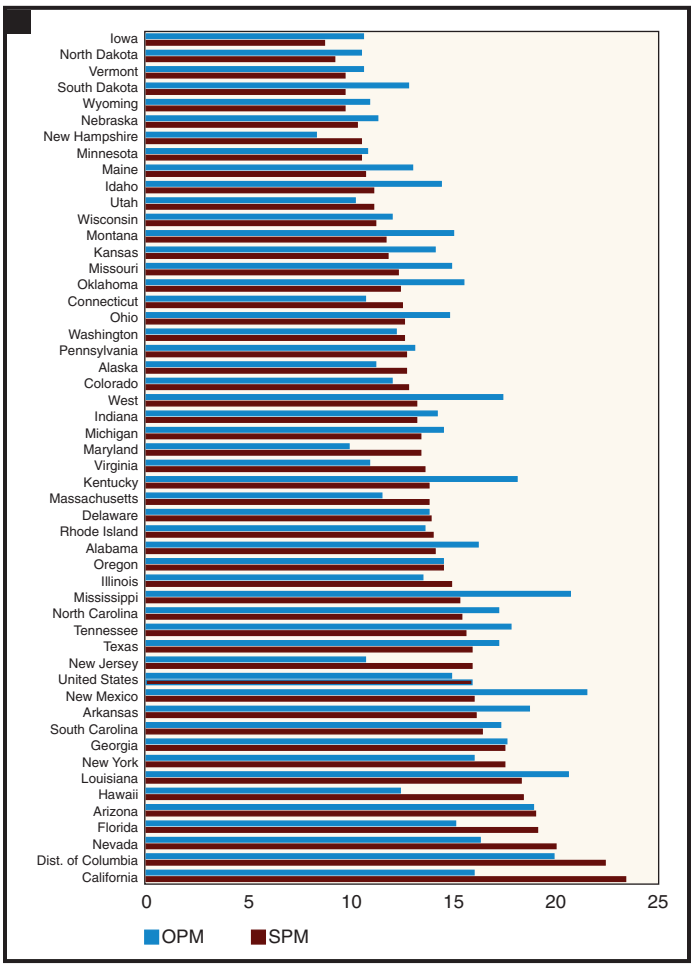
We close with a brief discussion of the poverty profile under an alternative approach to measuring poverty. Although the official poverty measure (OPM) provides a consistent historical benchmark that is useful for studying trends, it also suffers from a host of well known problems that the Supplemental Poverty Measure (SPM) addresses. The advantages of the SPM are many: It is anchored each year to actual reported consumption on food, clothing, shelter and utilities; it takes into account noncash programs (e.g., Supplemental Nutrition Assistance Program, Earned Income Tax Credit) as well as out-of-pocket expenses on medical, child care, and work

FIGURE 5. Despite economic growth, poverty has not returned to pre-recession levels.



Sources: Ruggles et al., 2010, IPUMS 2007 and 2013 ACS; Bureau of Economic Analysis.

FIGURE 6. SPM and OPM, by State



Source: CPS 2011-2013 estimates provided in Table 4 of DeNavas-Walt, Carmen and Bernadette D. Proctor, U.S. Census Bureau, Current Population Reports, P60-249, *Income and Poverty in the United States: 2013*, U.S. Government Printing Office, Washington, DC, 2014.

related needs; it recognizes that resources are sometimes shared by cohabiting partners (and with foster children); and it adjusts for geographic differences in the cost of housing. Because of these advantages, the Bureau of the Census now regularly reports the SPM.

There are nonetheless practical problems in carrying out an SPM analysis at the state level. Most importantly, an SPM analysis must be based on the Current Population Survey, which is much smaller than the American Community Survey. For reliable state-level estimates, at least 3 years of data must be combined. Additionally, because SPM measures are only available on a research basis starting in 2009, they cannot be used to establish a pre-recession baseline. In the following discussion, we therefore report state SPM estimates by pooling data from 2011-13, comparing them to an OPM measure based on the same three years of the CPS.[10]

When we consider the nation as a whole, there is a one percentage point difference between the OPM rate for 2011–2013 (14.9 percent) and the corresponding SPM rate (15.9 percent). Figure 6 shows that the two rates provide a rather different portrait of poverty. In thirty states, the SPM rate is lower than the OPM rate, with many of these states very rural (e.g., New Mexico, Mississippi, West Virginia, Idaho, Montana, South Dakota, and Oklahoma). This partly reflects the low housing costs in these states (which, unlike the OPM, the SPM takes into account). Obversely, states with relatively high housing costs, like California and New Jersey, have among the largest increases in poverty under the SPM as compared to the OPM.

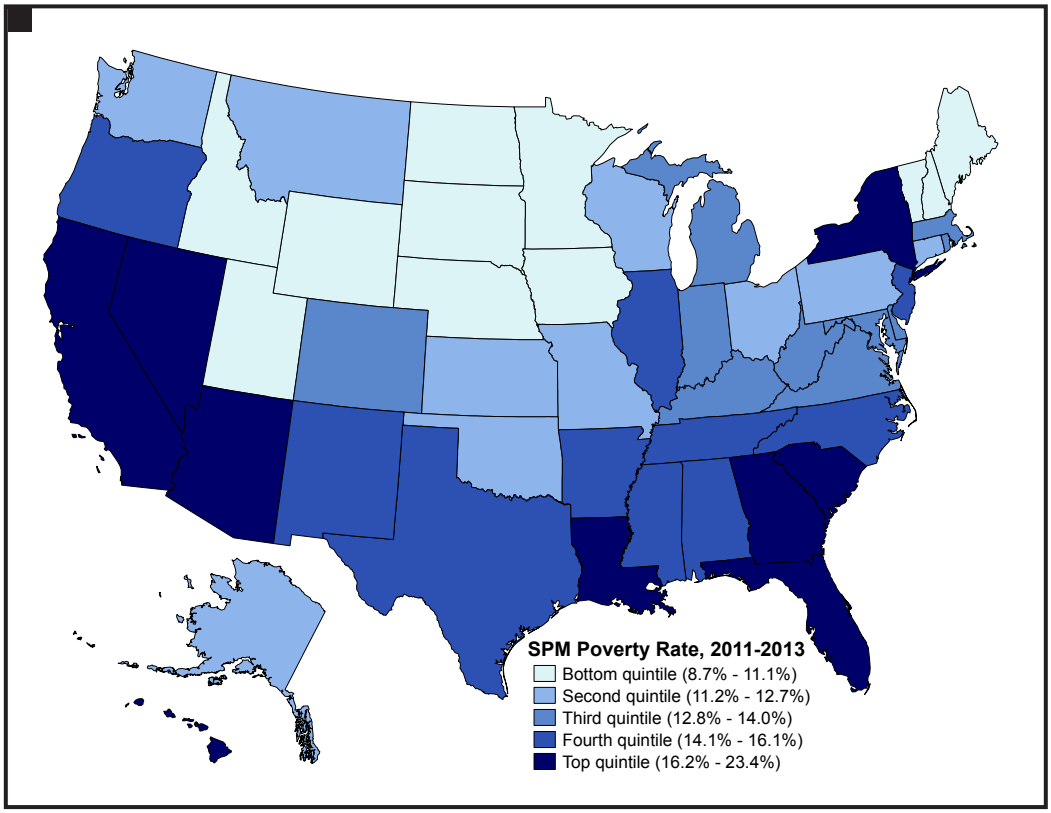
Although the SPM and OPM portraits of poverty thus differ, each type of poverty is arguably of interest, with the SPM treating housing and other costs (e.g., out-of-pocket medical costs) as given and then asking whether families, after taking those costs into account, are likely to be "strapped," while the OPM is a straightforward cash-based measure that has the virtue of simplicity. As with the OPM, there is substantial state-by-state variation in the SPM rates, as shown in Figure 7.

Discussion

We have found that the U.S. states are delivering very different amounts of poverty and are doing so according to very different rules. In states like New Hampshire, poverty is a relatively rare affair, with only one in 11 residents experiencing it. By contrast, nearly one in four residents of Mississippi are in OPM poverty, a rate nearly three times that of New Hampshire. Moreover, even though blacks and Hispanics are at a greater risk of poverty in most every state, there is much variability in the extent of this disadvantage.

We have also shown that a simple economic account of state-level trends in poverty falls short. Although states that have experienced larger economic rebounds have also experienced, on average, larger reductions in poverty, this simple economic story explains only a minority of the change in poverty rates. Given that the top of the income distribution is reaping most of the benefits of growth, it is perhaps not surprising that the contemporary growth-poverty relationship is not all that strong. ■

FIGURE 7. SPM Rates by State



Source: CPS 2011-2013 estimates provided in Table 4 of DeNavas-Walt, Carmen and Bernadette D. Proctor, U.S. Census Bureau, Current Population Reports, P60-249, *Income and Poverty in the United States: 2013*, U.S. Government Printing Office, Washington, DC, 2014.

NOTES

1. Gornick, Janet C., and Markus Jäntti. 2012. "Child poverty in cross-national perspective: Lessons from the Luxembourg Income Study." *Children and Youth Services Review* 34, pp. 558-568.

2. DeNavas-Walt, Carmen and Bernadette D. Proctor, 2014. U.S. Census Bureau, Current Population Reports, P60-249, *Income and Poverty in the United States: 2013*, U.S. Government Printing Office, Washington, D.C.

3. DeNavas-Walt, Carmen and Bernadette D. Proctor, 2014.

4. Throughout this report, we include Washington, D.C., bringing the total sample to 51. As a result, at least one of the quintiles—typically the bottom one—always includes 11 jurisdictions. Also, we do not require each quintile to have exactly 10 jurisdictions when jurisdictions near a quintile cut point have very similar (or the same) poverty rates. For example, Arkansas had the 10th-highest deep poverty rate (8.06%), but its rate is much closer to 11th-highest West Virginia (8.05%) than to 9th-highest Montana (8.41%). Thus, we group Arkansas in the fourth quintile, and as a result, the top quintile for deep poverty has only 9 jurisdictions.

5. See Shaefer, H. Luke, and Kathryn Edin, 2014. "The Rise of Extreme Poverty in the United States." *Pathways Magazine* (Summer 2014). Available at: http://web.stanford.edu/group/scspi/_media/pdf/pathways/summer_2014/Pathways_Summer_2014_ShaeferEdin.pdf

6. North Dakota is an exception. See the online appendix for details.

7. Data available from the authors upon request.

8. Alabama, Arizona, Arkansas, Georgia, Kentucky, South Carolina, Tennessee, West Virginia, and Washington, DC.

9. When the model is reestimated after eliminating North Dakota, the R^2 is 0.34.

10. We rely on state level estimates provided in Table 4 of DeNavas-Walt, Carmen and Bernadette D. Proctor, U.S. Census Bureau, Current Population Reports, P60-249, *Income and Poverty in the United States: 2013*, U.S. Government Printing Office, Washington, DC,2014.

Income Inequality

The Stanford Center on Poverty and Inequality

BY JONATHAN FISHER, JEFFREY THOMPSON, AND TIMOTHY SMEEDING

KEY FINDINGS

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

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

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

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

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

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

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

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

Measuring Inequality

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

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

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

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

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

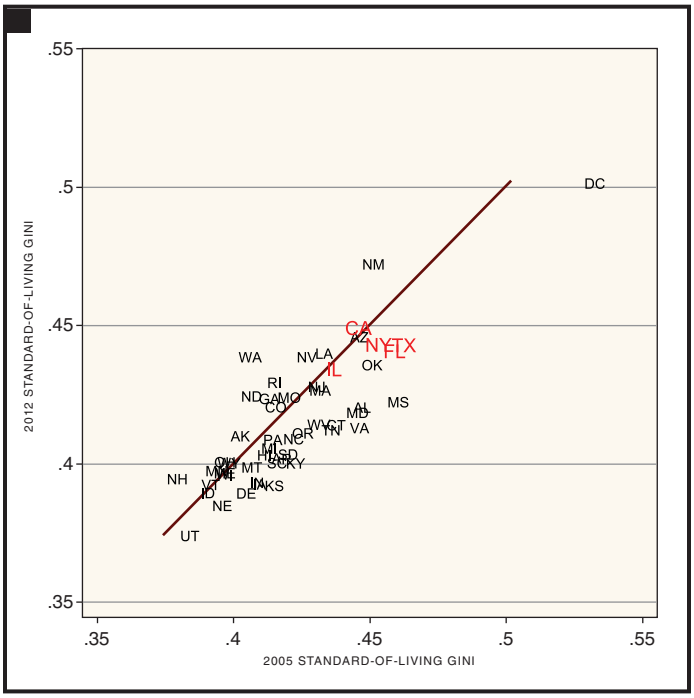
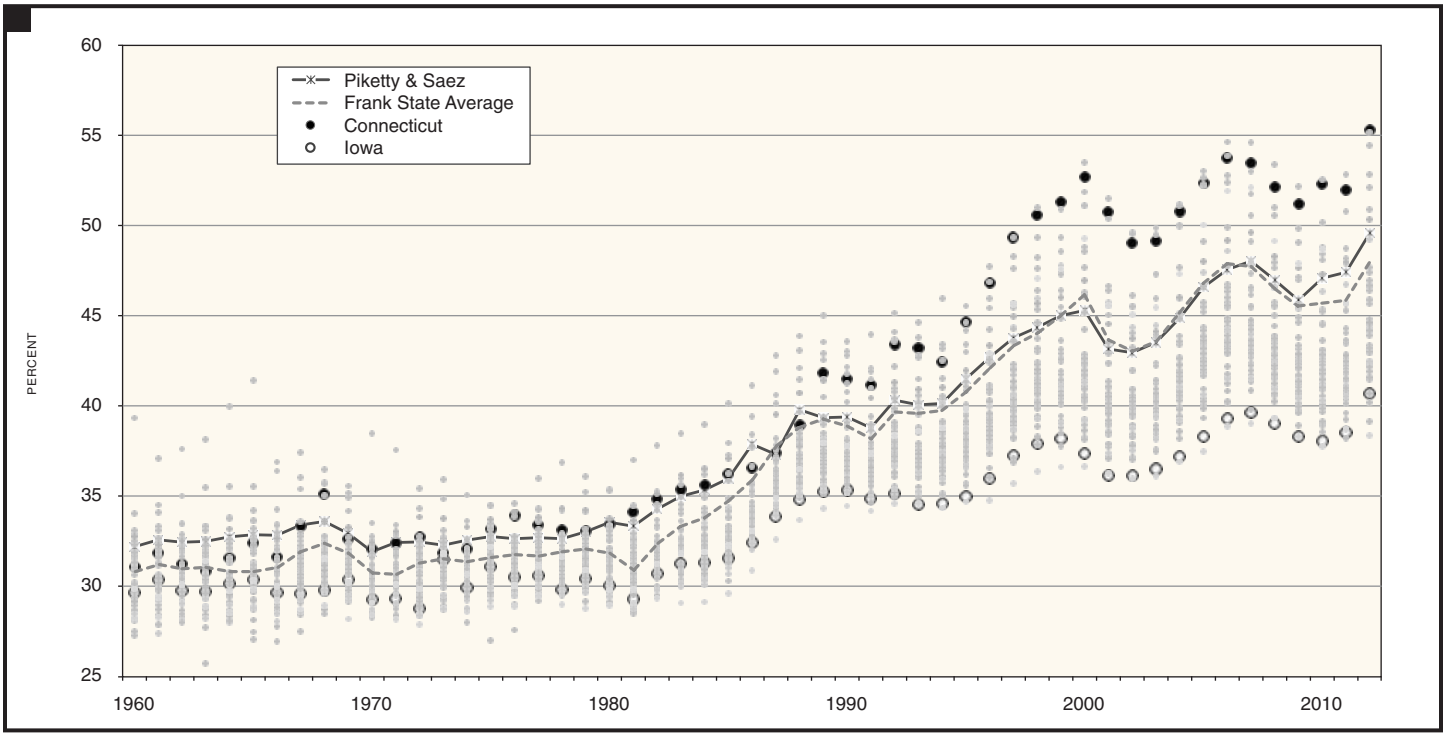
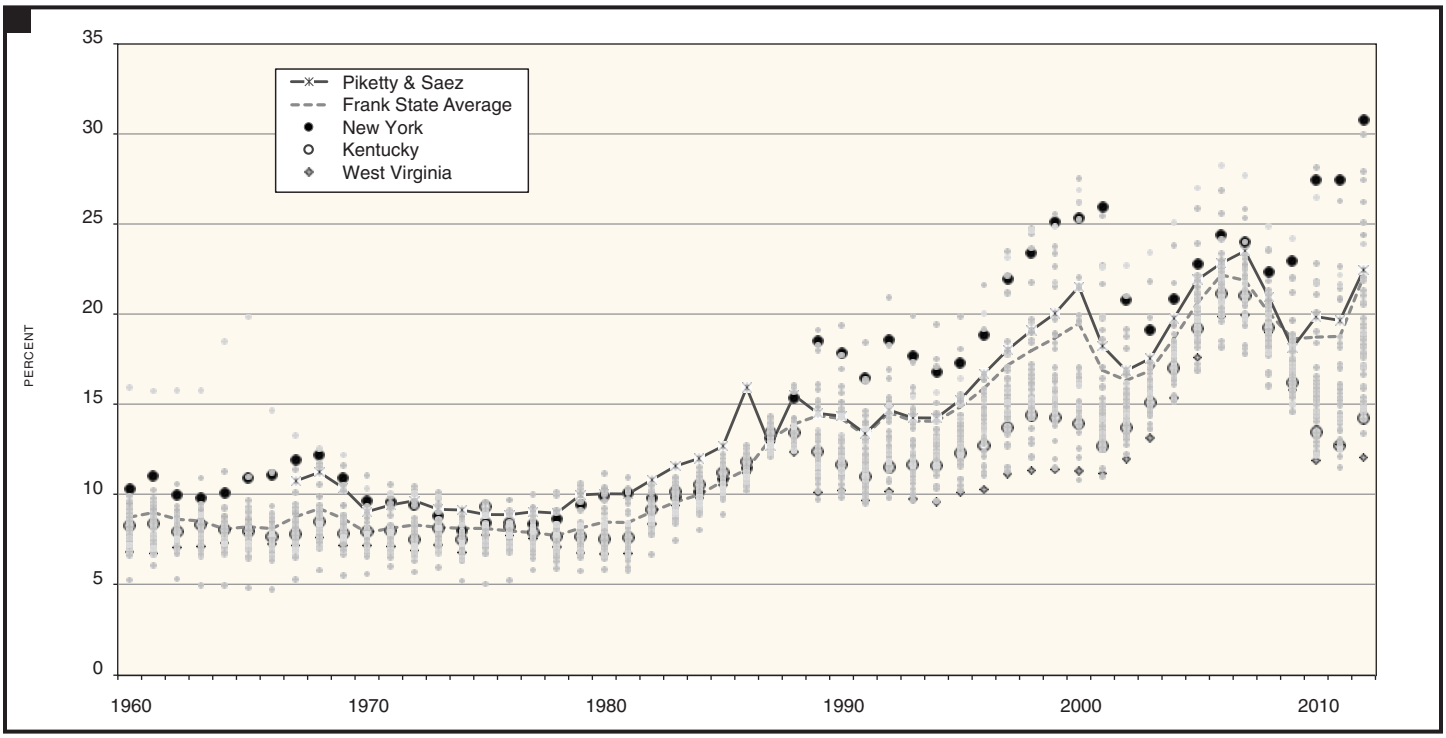


FIGURE 2. Top 10 Percent IRS Income Shares



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

FIGURE 3. Top 1 Percent IRS Income Shares



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

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

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

Basic Patterns

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

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

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

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

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

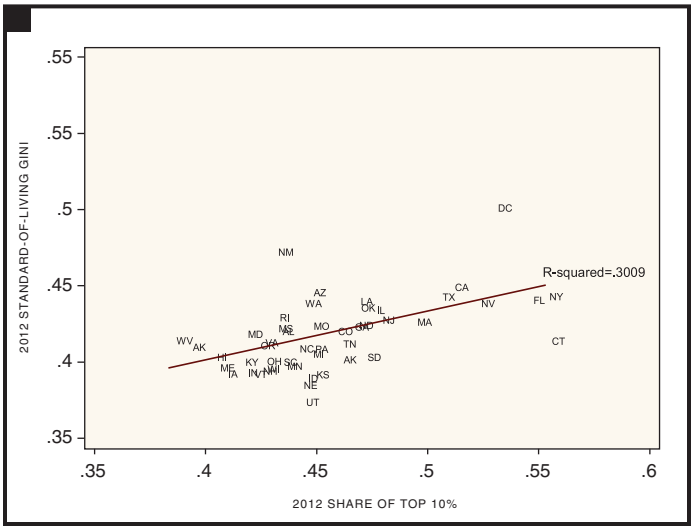
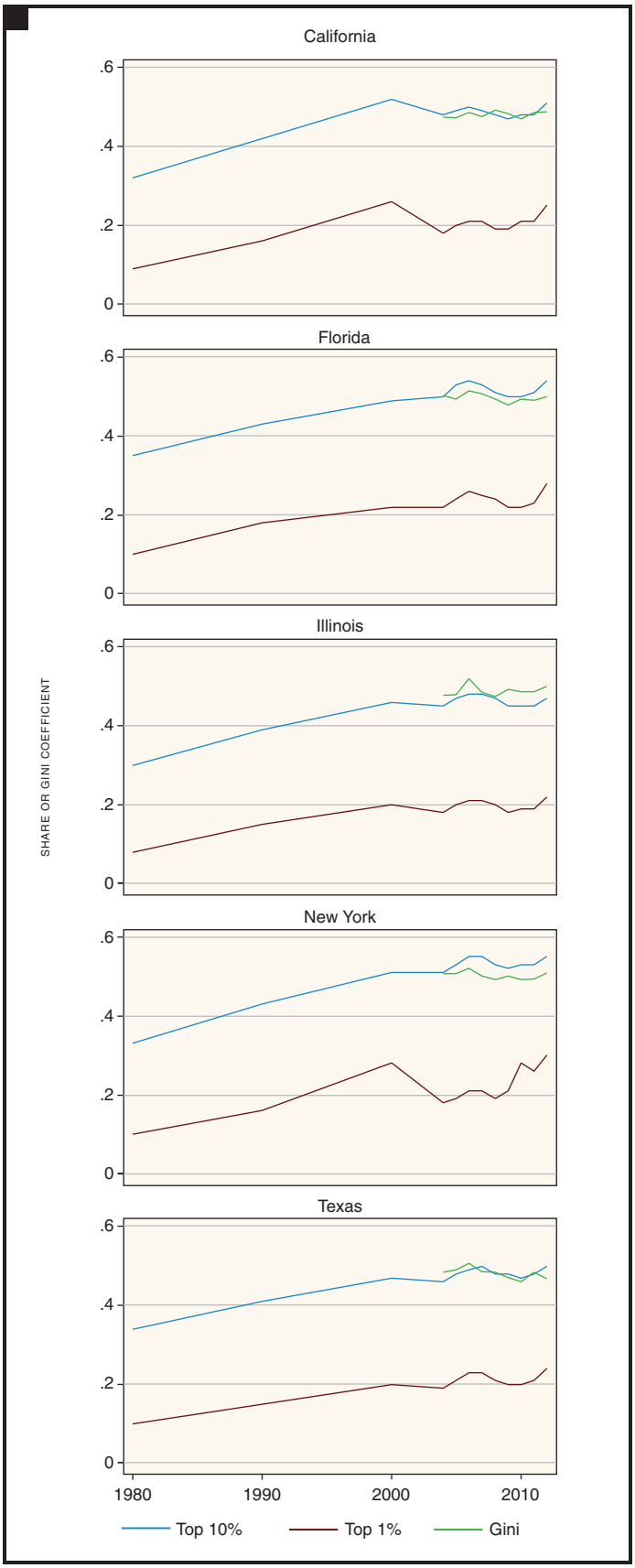


FIGURE 5. Standard-of-Living, Top 10 Percent, and Top 1 Percent Shares in the Five Largest U.S. States: 1980–2012



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

The Five Big States

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

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

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

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

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

What Can Policy Do?

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

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

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

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

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

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

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

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

NOTES

1. Baron, 2014.

2. For example, see Dougherty, 2014.

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

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

5. For example, CBO, 2014.

6. Short and Smeeding, 2012.

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

8. Piketty and Saez, 2003.

9. Morelli et al., 2015.

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

11. See Thompson and Leight, 2012.

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

13. Morelli, 2014.

14. Autor, 2014.

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

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

17. SelectUSA, 2014.

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

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

20. Baron, 2014.

21. Heinrich and Smeeding, 2014.

22. Autor, 2014.

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Spatial Segregation

The Stanford Center on Poverty and Inequality

BY DANIEL T. LICHTER, DOMENICO PARISI, AND MICHAEL C. TAQUINO

KEY FINDINGS

- There is extreme racial segregation within each of the states; in fact states are, on average, more racially segregated than are cities and metropolitan areas. In the average state, complete integration with whites could be secured by "moving" 73 percent of blacks, 61 percent of Hispanics, and 66 percent of Asians to a new neighborhood (within their state).
- States differ, often dramatically, in the extent to which they are racially or ethnically segregated. For example, 85 percent of blacks in Montana would have to move to a new neighborhood to effect complete integration, whereas only 56 percent of blacks in Nevada would have to do so.
- The states with the largest black, Hispanic, or Asian populations are often the least segregated. For example, New Mexico, which has a very high Hispanic population (46 percent), is also one of the states in which Hispanics are least segregated from whites, ranking 48th out of the 50 states and the District of Columbia.

For each of the 50 states, we ask a straightforward question: What percentage of whites, blacks, Hispanics, and Asians would have to move elsewhere in the state in order to achieve parity in the spatial distributions of racial and ethnic groups across the entire state? In other words, how spatially integrated are America's minority populations within each of the states?

Residential segregation—the geographic separation of the races—is not just a big-city phenomenon. Although residential segregation is often measured at the level of cities, in fact it occurs at many different spatial scales—states, regions, metropolitan areas, cities, suburbs, and small towns. To fully understand segregation today, a broad approach is required, one that supplements the usual city-based evaluations of residential segregation with other spatial measurements, such as state-based measurements. We provide just such state-based estimates of segregation here.

This is an important task, given concerns that the United States is very polarized by race and geography. Indeed, some whites may be "hunkering down" in mostly white exurban communities, while others are "trapped" in isolated rural areas (e.g., Appalachia) or prefer largely white areas outside metropolitan areas in the Northeast (e.g., Vermont or upstate New York) or the Midwest (e.g., the Dakotas or other parts of the agricultural heartland). At the same time, blacks and Hispanics are highly urbanized populations, and most immigrants today live in metropolitan areas, including their suburban ring, which have become new destinations for immigrant resettlement. Yet diversity is expanding beyond cities, and states have a larger role to play in ensuring equal opportunity in housing and access to good neighborhoods throughout the state. As America moves inexorably toward a new multiracial, multicultural society, the typically narrow geographic focus on big-city segregation seems increasingly anachronistic and may give misleading signals about changing race relations and spatial integration across the country.

Throughout our analyses, we use the Index of Dissimilarity, or D, to measure segregation. This index indicates the percentage of a given minority group that would have to move to other neighborhoods (within their state) in order to achieve parity between that group and whites in their percentage distributions across all neighborhoods. For more details on D and how we have calculated it, see the Appendix "Measuring Racial Segregation."

Black-White Segregation

We begin our analyses by asking whether there is much segregation at the state level. The simple answer is that there is very much indeed. In fact, when black–white segregation is measured at the state level, D typically takes on a higher value than it does when calculated at the level of cities or metropolitan areas.[1] The red bar in Figure 1, which pertains to the average level of black–white segregation across all states, indicates that nearly three-fourths of all black Americans would have to move elsewhere (to other blocks with disproportionate shares of whites) in their home states in order for the

percentages of all blacks and whites across America's cities, towns, and neighborhoods to become equal.

We next ask whether there is much variability across states in black–white segregation. Are there, in other words, some states in which segregation is especially extreme? The stereotypical view is that black–white segregation is highest in the South, where race relations have been strained by the historical past—slavery and its aftermath of Jim Crow, racial oppression, and discrimination. But previous metropolitan studies show, in fact, that neighborhood segregation is actually lowest in the American South.[2] The most highly segregated metropolitan areas, for example, are all located in the industrial North (Detroit, Milwaukee, New York, Newark, Gary, and Chicago). In each of these cities, black–white segregation in 2010 is in excess of 75 (when measured with D). In contrast, Atlanta (D = 58), Dallas (D = 55), and Memphis (D = 62) all have high, but substantially lower, segregation rates than big northern metropolitan areas.[3]

Our state-level analyses tell a similar story of regional variation. As shown in Figure 1, the ten most segregated black–white states are located outside the South. In these highly segregated states, like Montana (D = 85) and Wyoming (D = 82), blacks mostly live near other blacks. The states in which blacks are least segregated from whites are Nevada, Hawaii, Arizona, Alaska, and Delaware. These results suggest that states with very small black populations, like Montana and Wyoming, tend to be more segregated. Of the five least segregated states, only Delaware has a black percentage (21 percent) above the national average (12 percent) in 2010.

If we next restrict our analyses to states with large black populations of over 1 million in 2010, New York ranks as the nation's most segregated state, with D equaling 82. At first blush, this may seem like a surprise; after all, New York is a progressive, heavily "blue" state. But high rates of segregation in New York State are driven by large differences in black-white settlement in the New York metropolitan areas vis-à-vis the rest of the state (i.e., rural upstate New York), which is mostly white in racial composition. A narrow focus on metropolitan areas alone misses the substantial segregation of blacks at the state level (and the "blue" and "red" spatial cleavage), which takes into account patterns across and within all cities, communities, and neighborhoods.

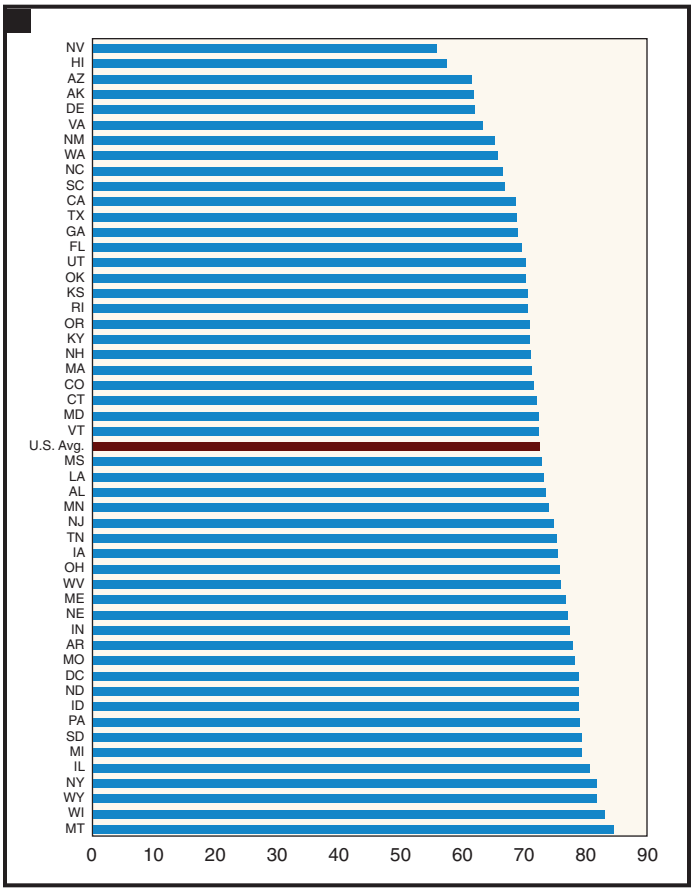
Moreover, among southern states, our results show that only Tennessee is included in the five most segregated states with black populations over 1 million. And several other states, including Alabama (D = 74), Louisiana (D = 73), and Mississippi (D = 73), exhibit segregation scores that are similar to the national average (D = 73). One clear takeaway message is that racial and ethnic diversity at the state level seems to be negatively associated with segregation. That is, diverse states are often less segregated than other states. Most Americans seemingly are not responding to growing diversity by self-segregating themselves from others.[4]

Asian-White Segregation

Figure 2 provides the state rankings of Asian–white segregation. The first conclusion coming out of Figure 2 is that, averaged across all states, Asian–white segregation (D = 66) is somewhat lower than the corresponding black–white average (D = 73).

The second conclusion is that there is nonetheless much state variability around this average. The most segregated state is West Virginia (D = 81), and the least segregated is

FIGURE 1. State Rankings of Black-White Residential Segregation (D), 2010



Source: U.S. Census Bureau, 2010 machine-readable decennial census files.

Nevada (D = 47), although the District of Columbia (D = 34) ranks lower still.

The third conclusion: Diversity and segregation are again strongly related. That is, Asians tend to be most segregated in states with smaller Asian populations, measured either in absolute numbers or as percentages of the overall state population. Joining West Virginia as most segregated states are Wyoming, North Dakota, South Dakota, and Montana, all with Asian populations of roughly 1 percent or less.

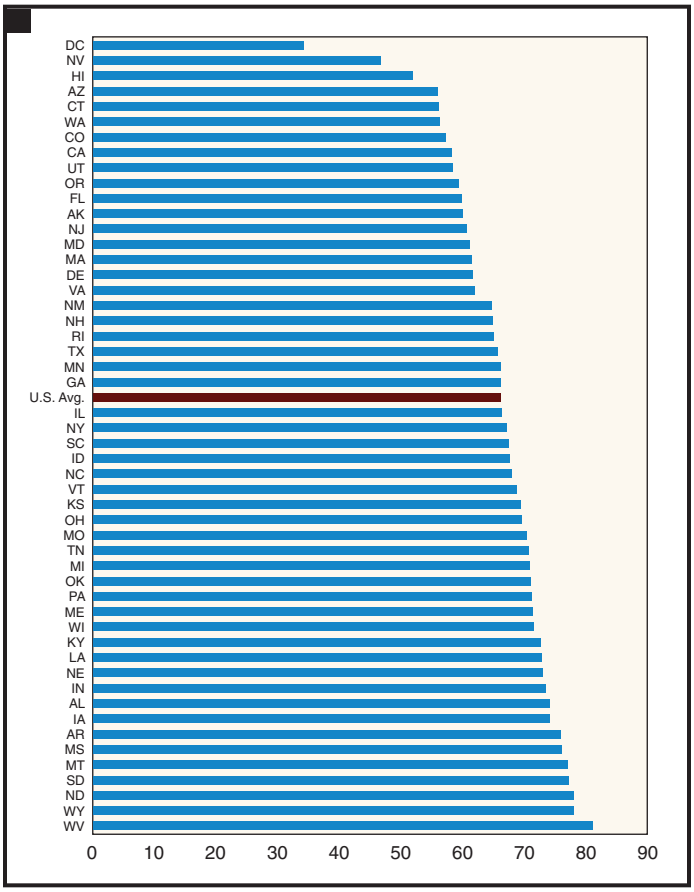
Because Asians are unevenly concentrated across the American states, only nine states had Asian populations that exceeded the national Asian percentage of 4.8. And among these, all had Asian–white segregation scores less than the national average of 66. For example, nearly one-half (47 percent) of Hawaii's population is of Asian ancestry, and Hawaii's segregation score (D = 52) is the third lowest. The key exception to this rule is New York State, which has a relatively large D score of 67, even though it has a large Asian population. As with New York State's black population, the Asian population is considerably more segregated than in other states with large Asian populations.

Hispanic-White Segregation

Hispanics are America's fastest growing population, accounting for the overwhelming share of U.S. population growth over the past decade.[5] As shown in Figure 3, the level of Hispanic–white segregation, averaged across states, comes in at 61, which is lower than the corresponding averages for either black–white (D = 73) or Asian–white (D = 66) segregation.

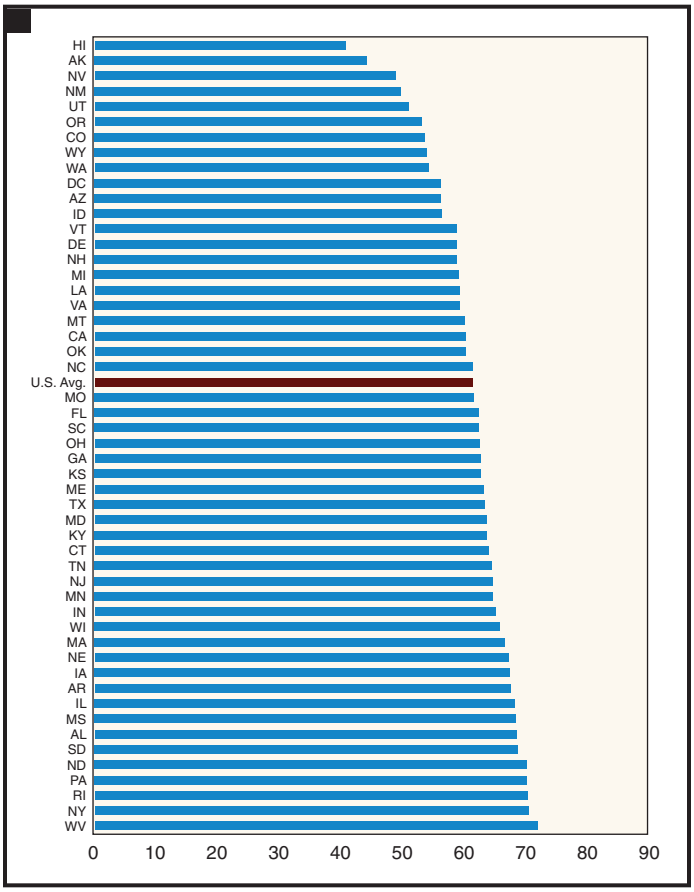
This figure also reveals that Hispanic–white segregation levels are more closely clustered around this low average than is the case for other types of segregation. There is of course some state-level variability, with Hispanic–white segregation ranging from a low of 41 (Hawaii) to a high of 72 (West Virginia). Like their Asian minority counterparts, the relatively small number of Hispanics in West Virginia are more highly segregated from whites than in any other state. Thus, this case again illustrates the familiar pattern of high segregation in those states with small minority populations. Most Hispanics

FIGURE 2. State Rankings of Asian-White Residential Segregation (D), 2010



Source: U.S. Census Bureau, 2010 machine-readable decennial census files.

FIGURE 3. State Rankings of Hispanic-White Residential Segregation (D), 2010



Source: U.S. Census Bureau, 2010 machine-readable decennial census files.

in West Virginia live together in neighborhoods in the largest West Virginia cities (Wheeling, Charlestown, or Morgantown), and relatively few live in remote or rural Appalachian counties.

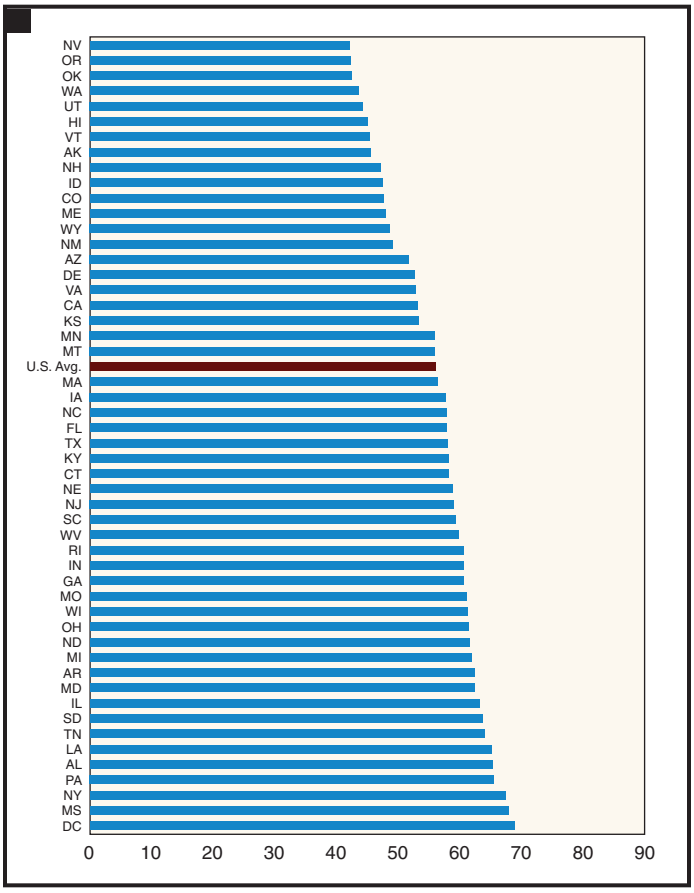
In other states—even large ones like New York—high rates of Hispanic–white state segregation seem to reflect unusually large cultural, economic, and demographic divides within the state. Nearly 18 percent of New York's population is Hispanic. But the overwhelming majority live in the New York metropolitan area. In 2010, 2.3 million Hispanics (of any race) lived in one of the five boroughs of New York City.[6] The entire state has a Hispanic population of 3.4 million. Hispanics in New York City are highly segregated from other populations in the city, but also from New York's largely white upstate population. It follows that racial and ethnic segregation occurs on many different spatial levels.

Perhaps surprisingly, states with rapidly growing Hispanic populations—gateways and new destination states—exhibited comparatively low Hispanic–white segregation levels. The two colossus states—Texas and California—with 9.5 and 14.0 million Hispanics, respectively, have Hispanic–white segregation levels that were only slightly above (Texas D = 63) and slightly below (California D = 60) the national average of 61. Among the eight states with over 1 million Hispanics each, New York again ranks as the most segregated state, while Colorado is the least segregated. New Mexico, which has the highest Hispanic percentage, at 46.3 percent, is also one of the least segregated states, ranking 48th out of the 50 states and the District of Columbia.

Segregation of Each Racial Group from All Others

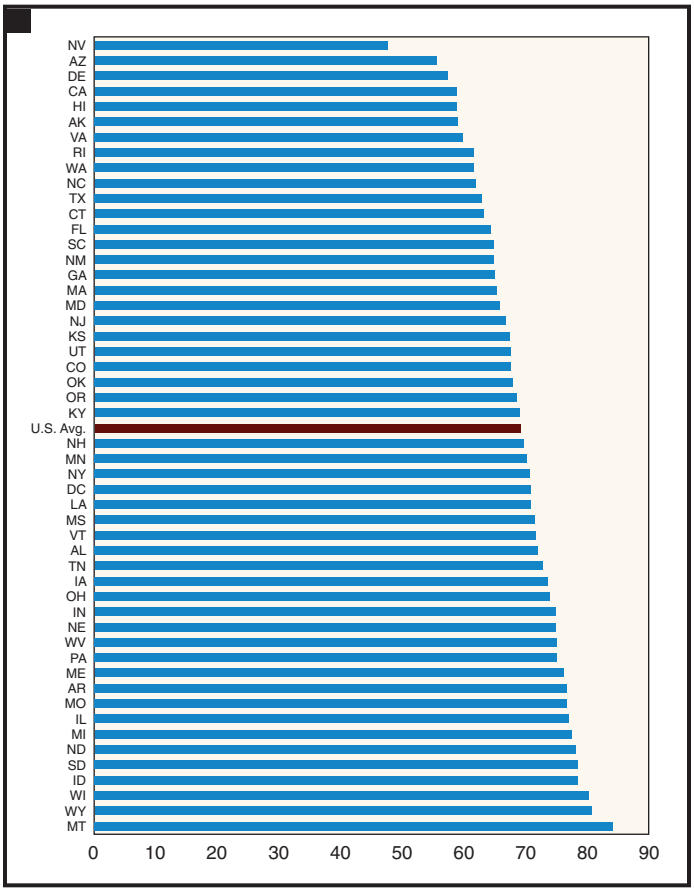
In Figures 4–7, we also provide the state rankings of each racial or ethnic group from all other groups in the population. Average state figures are represented by the red bars in each figure. These estimates can be viewed as indicators of the extent to which different racial and ethnic groups are integrated with the rest of the state population and hence the extent to which states have become racial "melting pots." The U.S. averages imply that whites (D = 56) are more integrated with all other populations than are blacks (D = 69) and Asians (D = 65). Hispanics, perhaps surprisingly, are nearly

FIGURE 4. State Rankings of White-Other Residential Segregation (D), 2010



Source: U.S. Census Bureau, 2010 machine-readable decennial census files.

FIGURE 5. State Rankings of Black-Other Residential Segregation (D), 2010



Source: U.S. Census Bureau, 2010 machine-readable decennial census files.

as integrated with non-Hispanics (D = 58) as whites are with non-whites.

Confirming the conventional wisdom, these results also show that whites in the South are nevertheless highly segregated from non-whites. For example, white–other segregation is highest in the state of Mississippi (although the District of Columbia is slightly higher), and lowest in Nevada. The paradox is that black–white comparisons (Figure 1) suggest that southern blacks are less isolated from whites in Mississippi and other states in the Deep South, but also that whites are more isolated from all other groups. This reflects, at least in part, the fact that the "other" category in the white–other category is overwhelmingly black (and whites are still more segregated from blacks than other minority groups).

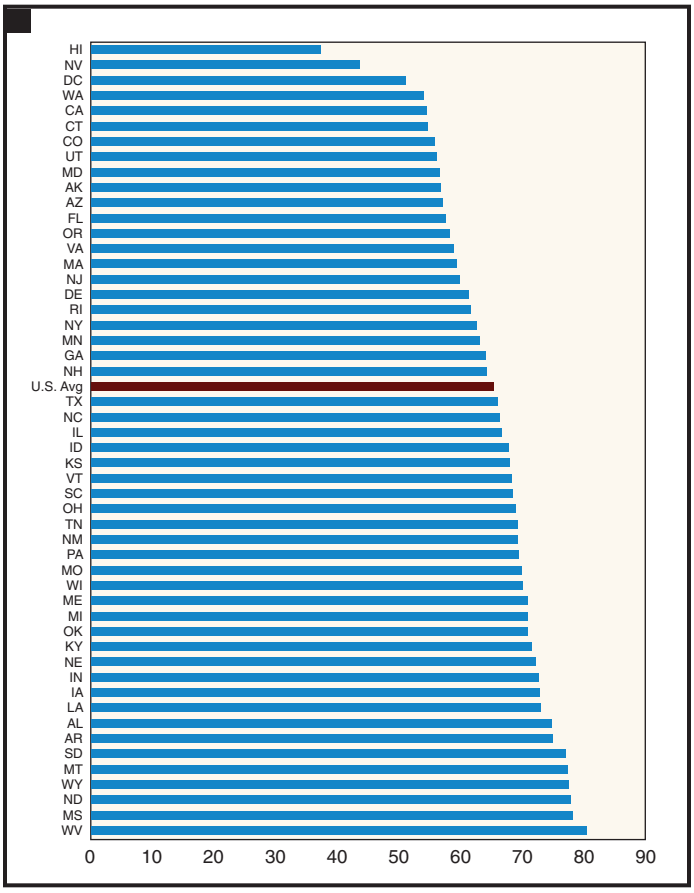
What Does It All Mean?

Most public policy analysts and social scientists view residential segregation as a decidedly metropolitan or big city phenomenon. It surely is. But the separation of America's racial and ethnic groups also extends beyond metropolitan or city boundaries. This point is clearly buttressed by the empirical evidence shown here for states. Indeed, current patterns of population dispersal—Hispanics to new rural destinations, Asians to ethnoburbs, and blacks to older suburbs—mean that a broader spatial lens is now required to fully understand the causes and consequences of racial and ethnic segregation in America.

If segregation is viewed as a proxy measure of "social distance" between racial groups, then the evidence presented here suggests a large chasm between the white majority and America's growing minority populations. The statewide estimates of segregation presented here are, on average, higher than those based on segregation within big cities or within metropolitan areas.

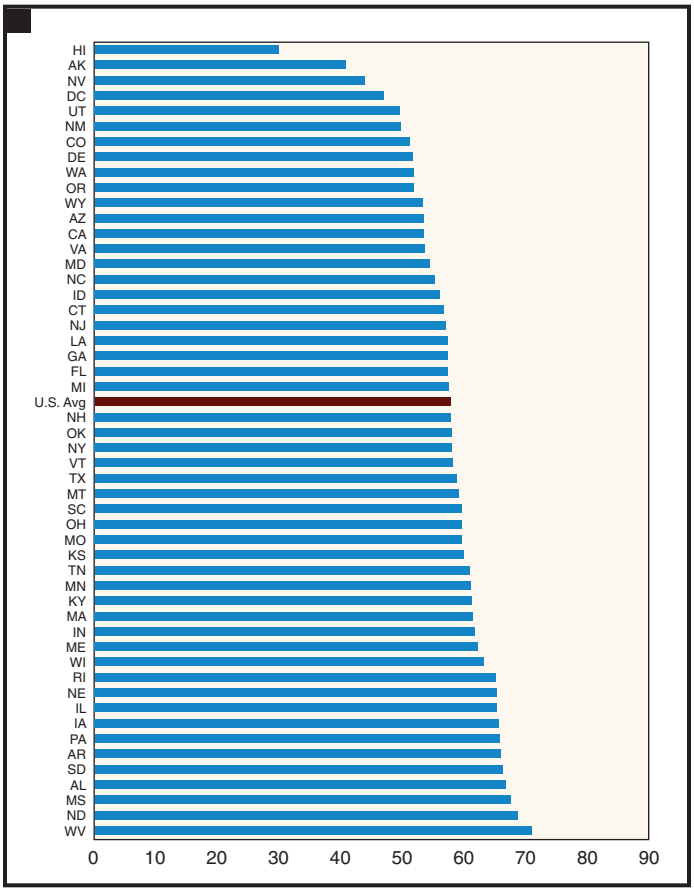
In results not presented here, we also found evidence of slight declines, on average, in state-level segregation from 2000 to 2010. This state-level pattern supports a different conclusion from metro-level segregation studies showing little decline or even increases in segregation from whites. Hispanics and

FIGURE 6. State Rankings of Asian-Other Residential Segregation (D), 2010



Source: U.S. Census Bureau, 2010 machine-readable decennial census files.

FIGURE 7. State Rankings of Hispanic-Other Residential Segregation (D), 2010



Source: U.S. Census Bureau, 2010 machine-readable decennial census files.

Asians are now "fanning out" across the nation, resettling in new Asian ethnoburbs, smaller metropolitan areas, and new immigrant destinations, including rural Hispanic boomtowns. These declines in state-level segregation are, however, quite small, and the overall picture of extreme segregation clearly holds in 2010.

There is even considerable segregation in America's most progressive and seemingly post-racial states outside the American South. In fact, southern states with the most minorities—blacks, Asians, and Hispanics—often ranked well down the list of most segregated states. This means that—at the street level—whites and minorities are more likely to interact or at least have the potential to interact on a regular basis.

Does this matter? Previous studies of metropolitan segregation indicate that segregated minority populations often lack access to good jobs, quality schooling, adequate and affordable housing, and a safe environment. Living in close proximity with whites often creates new opportunities and personal connections otherwise unavailable to many minorities. Segregation cuts off opportunities from the mainstream. Whether state segregation—segregation at a broader spatial scale—limits opportunity is perhaps much less obvious or well-documented. At a minimum, however, our results suggest that it is sometimes too easy for outsiders to denigrate the extremes of southern segregation—and the discrimination and racism it seemingly implies—when they too live in areas where they are little exposed to minorities on a daily basis.

Finally, our results also mean that states have a potentially large role to play in ensuring equal opportunity in housing and access to good neighborhoods—throughout the state. This is not just a responsibility of the federal government, or big city politicians and bureaucrats, or interested nongovernmental (e.g., real estate) organizations. How welcoming are mostly white communities to minorities living outside the metropolis? The Census Bureau forecasts that the United States will become a majority-minority society by 2043. But we do not have to wait until 2043 to see that growing racial and ethnic diversity—and segregation—are proceeding unevenly across the entire United States. For many states, the future is now. For others, changing patterns of segregation—within and between states, cities, and communities—will provide important lessons about whether we are moving to a post-racial society, one that provides opportunities for everyone, regardless of race or national origin. ■

APPENDIX: MEASURING SEGREGATION

Most previous studies of segregation use metro areas, central (principal) cities, or urbanized areas as units of analyses. They typically emphasize changing patterns of segregation across metro neighborhoods, as proxied by census tracts. The entire metro area is usually treated as a single housing or labor market that sorts different population groups into different neighborhoods. Segregation is typically measured using the Index of Dissimilarity (*D*). D_t is defined as

$$D_t = \tfrac{1}{2} \sum_{i=1}^{k} \left| m_{it} - w_{it} \right|$$

where m_{it} and w_{it} are the respective percentages of the minority and white populations residing in census tract *i* at time *t*. This index is based on pair-wise comparisons and varies from 0 (no segregation) to 100 (complete segregation). *D* indicates the percentage of minorities that would have to move to other neighborhoods in order to achieve parity between a minority population and whites in their percentage distributions across all neighborhoods.

Here we use all states rather than metropolitan areas as the unit of analysis. We also use blocks rather than census tracts (neighborhoods) as accounting units to calculate segregation. Blocks are ideal for our purposes. Blocks represent the geographic scale in which majority and minority population engage at the "street level" in formal and informal social interaction (i.e., neighboring) that potentially takes place on a regular or daily basis. This is not always true at the neighborhood level; indeed, census tracts themselves can be highly segregated by race and can misrepresent the degree to which minority and majority population actually interact socially.

NOTES

1. See, for example, Logan, John R., and Brian J. Stults. 2011. *The Persistence of Segregation in the Metropolis: New Findings from the 2010 Census*. New York: Russell Sage Foundation and Brown University. It provides the first set of estimates of segregation based on the 2010 decennial census. Segregation measures for metropolitan areas and big cities are available at http://www.s4.brown.edu/us2010/index.htm. For general discussions of alternative measures of segregation and the advantages and disadvantages of each, see Reardon, Sean F., and David O'Sullivan. 2004. "Measures of Spatial Segregation." *Sociological Methodology*, 34, 121–62; and Reardon, Sean F., Stephen A. Matthews, David O'Sullivan, Barrett A. Lee, Glenn Firebaugh, Chad R. Farrell, and Kendra Bischoff. 2008. "The Geographic Scale of Metropolitan Segregation." *Demography*, 45, 489–514.

2. See Logan and Stults, 2011.

3. Estimates downloaded from http://www.s4.brown.edu/us2010/index.htm.

4. See Lee, Barrett A., John Iceland, and Chad R. Farrell. 2014. "Is Ethnoracial Residential Integration on the Rise? Evidence from Metropolitan and Micropolitan America since 1980." In *Diversity and Disparities: America Enters a New Century*. John Logan, Ed. New York: Russell Sage Foundation, 415–456.

5. See Lichter, Daniel T. 2012. "Immigration and the New Racial Diversity in Rural America." *Rural Sociology*, 77, 3–35.

6. Downloaded from the Census Bureau's Factfinder website, at http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid = DEC_10_DP_DPDP1&prodType = table.

ADDITIONAL RESOURCES

Frey, William H. 2015. *Diversity Explosion: How New Racial Demographics Are Remaking America*. Washington, D.C.: Brookings Institution.

Lichter, Daniel T. 2013. "Integration or Fragmentation? Racial Diversity and the American Future." *Demography*, 50, 359–391.

Lichter, Daniel T., Domenico Parisi, Michael C. Taquino, and Steven Michael Grice. 2010. "Residential Segregation in New Hispanic Destinations: Cities, Suburbs, and Rural Communities Compared." *Social Science Research*, 39, 215–230.

Parisi, Domenico, Daniel T. Lichter, and Michael C. Taquino. Forthcoming. "The Buffering Hypothesis: Growing Diversity and Declining Black-White Segregation in America's Cities, Suburbs, and Small Towns? " *Sociological Science*, 2.

Safety Net

The Stanford Center on Poverty and Inequality

BY KAREN LONG JUSKO

KEY FINDINGS

- In non-recessionary periods, the safety net provides about 38 percent of the income support needed to raise incomes up to the official poverty line.The effectiveness of the American safety net increased during the Great Recession up to 53 percent.
- While baseline support (i.e., support to households with no market earnings) roughly doubled during the recession and reached as high as $7,447 per household in 2010, it fell back to $4,867 by 2013.
- Incentives to securing market income have been increasing. A household that increased its income from $0 to $1000 lost $206 in support in 1999, but only $92 in support in 2013.
- The poverty relief ratio reveals that only four states (Massachusetts, New Jersey, Rhode Island, and Washington) provide more than 60 percent of the support needed to bring incomes up to the poverty line.

This report examines whether some states have more effective safety nets than others. Although there are many reasons why states differ in their poverty rates, one possibility is that some states successfully deliver support to families that need that support ("effective" safety nets), while others provide very little support. Are there indeed big differences across states in the effectiveness of their safety nets? This report answers that simple, but important, question.

We might well expect sizable differences across states in their safety net policies and effectiveness. After all, the welfare reforms of the 1990s allowed states to experiment with different approaches to using federal welfare funds, provided that they conducted a rigorous evaluation of the alternative practices. There continue to be substantial differences across states in welfare policy and practice that might have implications for the effectiveness of their safety nets. This report provides some preliminary evidence on whether these differences might be related to state-specific ideologies about poverty.

It is of course difficult to summarize the overall effectiveness of the safety net because our welfare system is 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 the assessment of the combined effect of all programs. 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, especially because different states may rely on different programs to secure their objectives. In this report, the focus is not on state differences in the policies themselves; rather, we care only about the end result of those policies for poverty relief. We therefore consider all programs and derive a total income–based measure, dubbed the poverty relief ratio (*R*), of the effectiveness of the safety net.

The first and key objective of this report is to assess, therefore, whether each state's 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 in 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 report, a two-pronged assessment of the safety net is therefore adopted, with the following questions serving as the focus of our analyses:

- Which states provide the highest level of basic income support to

those who are very poor (e.g., the *baseline support* parameter)?

- To what extent does state policy incentivize efforts to increase market income by minimizing the rate of fall-off in transfers as income grows (e.g., the *relief falloff* parameter)?

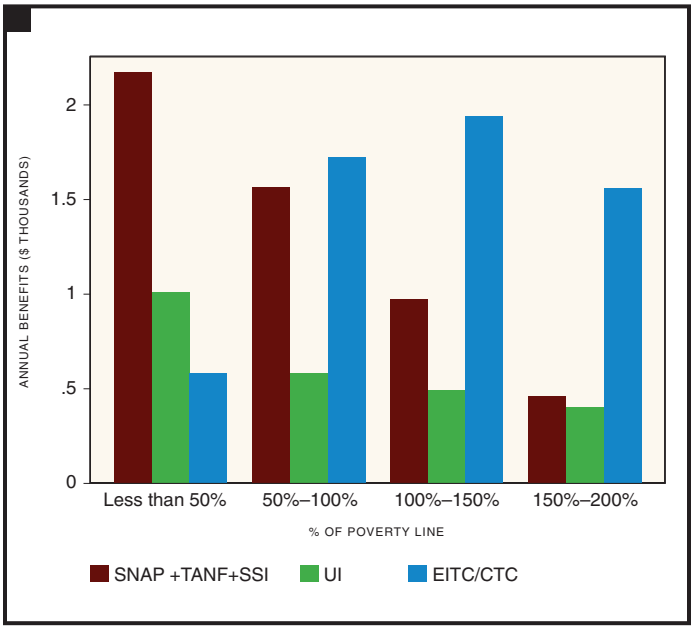
The derivation of these two measures—as well as the summary measure of total poverty relief—is presented in the Appendix.

Data and Measurement

This report is based on the Annual Social and Economic Supplement (ASEC) to the Current Population Survey (CPS). Each March, the Census Bureau supplements its monthly CPS survey with the ASEC module, which is used to assess the economic well-being of American households.

While ASEC is among the best of current household surveys for the analysis of income and poverty, two features of these data warrant close attention, given the objectives of this analysis. First, ASEC is designed to be representative of the nation as a whole, and state-level parameters are often estimated with large margins of error. To address concerns about the accurate representation of especially small states, the stability of estimates across years was carefully examined, and results in this report summarize data from the five most recent ASECs 2010–2014.[1]

FIGURE 1. Sources of Support for Low-Income Households, 2013



NOTE. This figure reports average annual amounts of cash and near-cash support for low-income households in 2013. Source: Annual Social and Economic Supplement to the Current Population Survey, 2014.

Second, the CPS relies on self-reported income and benefit amounts, and it is known to underestimate both.[2] Because this analysis uses both reported income and benefits, it is difficult to know the direction of the possible bias, let alone the size. Therefore, estimated levels of poverty relief, as reported below, should be interpreted with appropriate caution.[3]

The measures that we use here, which have been developed in earlier research,[4] are derived from the relationship between household market income and overall amounts of social transfers. Using parameters from a nonlinear analysis of the distribution of income support, the poverty relief ratio equals the ratio of income support to the amount of support needed to increase all families' incomes to the level of the official poverty line. This analysis uses the official U.S. poverty line as a common threshold for all states, in part because this threshold is used to determine eligibility for benefits. As noted above, the poverty relief ratio will be our key summary measure, but we will also report (a) levels of support provided to those with no market income (baseline support) and (b) the extent to which benefits decline with small increases in earnings (relief falloff).[5]

By using a total-income approach, the analysis takes into account that the portfolio of programs on which low-income families rely varies with their income level. As seen in Figure 1, while safety net programs—especially the Supplemental Nutrition Assistance Program (SNAP) and the Temporary Assistance for Needy Families Program (TANF)—are the main source of support for the *very* poor (those with earnings less than 50% of the poverty line), tax credit programs, such as the Earned Income Tax Credit (EITC) and the Child Tax Credit (CTC), are an important source of support for families with just slightly higher levels of income. In the analysis to follow, we take into account income support provided through all of these programs, specifically the cash benefits provided through TANF, unemployment insurance (UI), Supplemental Security Income (SSI), the "near-cash" benefits provided through SNAP and energy subsidies, and the refundable tax credit programs.

National Results

As a backdrop to the state-level results, it is useful to first report on the national results. Figure 2 reports trends from 1999 to 2013 in overall levels of poverty relief, baseline support, and relief falloff. In the left panel, the estimates of the poverty relief ratio indicate that the safety net generally pro-

vides only about 38 percent of the income support needed to raise incomes up to the official poverty line, although the effectiveness of the American safety net increased during the Great Recession, up to 53 percent.

Looking now at the right panel of Figure 2, we see that the increase in the effectiveness of the safety net coincides with an overall increase in the level of income support provided to those with no market income. Baseline support (short dashes, left axis) increased from a low of $3,671 in 2007 to $7,447 in 2010. By 2013, however, reported levels of baseline support had dropped to an average of $4,867 per household.

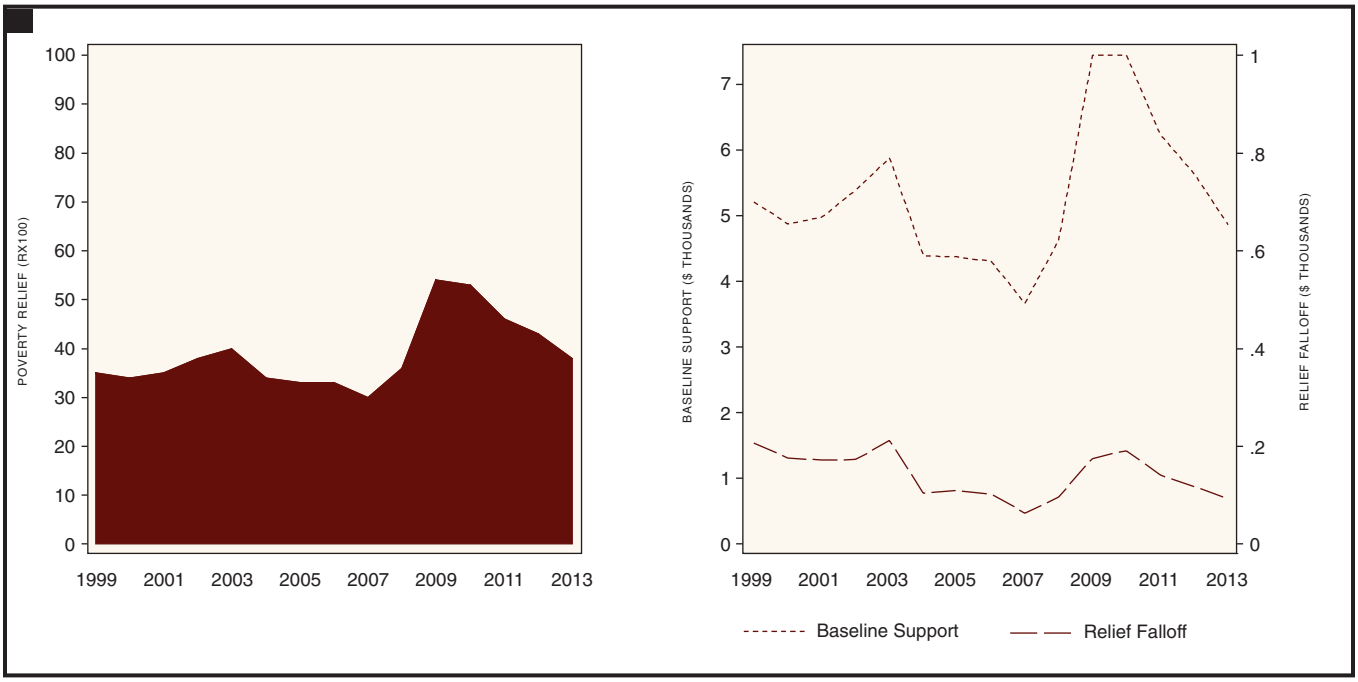
The relief falloff parameter (long dashes, right axis) pertains to the extent to which income support declines with small increases in earnings. The results presented here are the extent of falloff precipitated by an increase from $0 in earnings to $1,000 in earnings. As shown here, this increase in earnings led to a loss of $206 in support in 1999 and a loss of only $92 in support in 2013. This analysis suggests, then, that the disincentives to securing market income have on average been declining, although the Great Recession briefly disrupted this general decline.

State Results

To evaluate the effectiveness of safety net programs in the states, Figure 3 plots estimates of baseline support against estimates of relief falloff for each state, averaged over the 2009–2013 period. The solid lines in Figure 3 report median values for each dimension and allow us to characterize the distribution of support for low-income households in each state. For example, states in the upper-right quadrant (e.g., California) provide relatively high levels of baseline support for households with no market income, but they also have relatively high levels of relief falloff. These may be understood as states that are committed to relieving poverty, but that also want to quickly get out of the business of supporting families that are experiencing an increase in market income. The benefit of this approach is that state money is saved by reducing support quickly as families become more self-sufficient, whereas the cost is that it introduces sharper disincentives for securing market income. This quadrant might be understood, then, as the "progressive" quadrant, in the sense that it entails combining (a) substantial support for the very poor (a classically progressive approach), with (b) less worry about the moral hazard argument (which is a classically conservative concern). Although there are indeed many politically liberal states in this quadrant (e.g., California, Massachusetts), there are also some that are less so (e.g., Nevada).

The obvious trade-off here is that, insofar as a state provides less relief to the very poor, it can then presumably also afford

FIGURE 2. Poverty Relief in the United States, 1999–2013



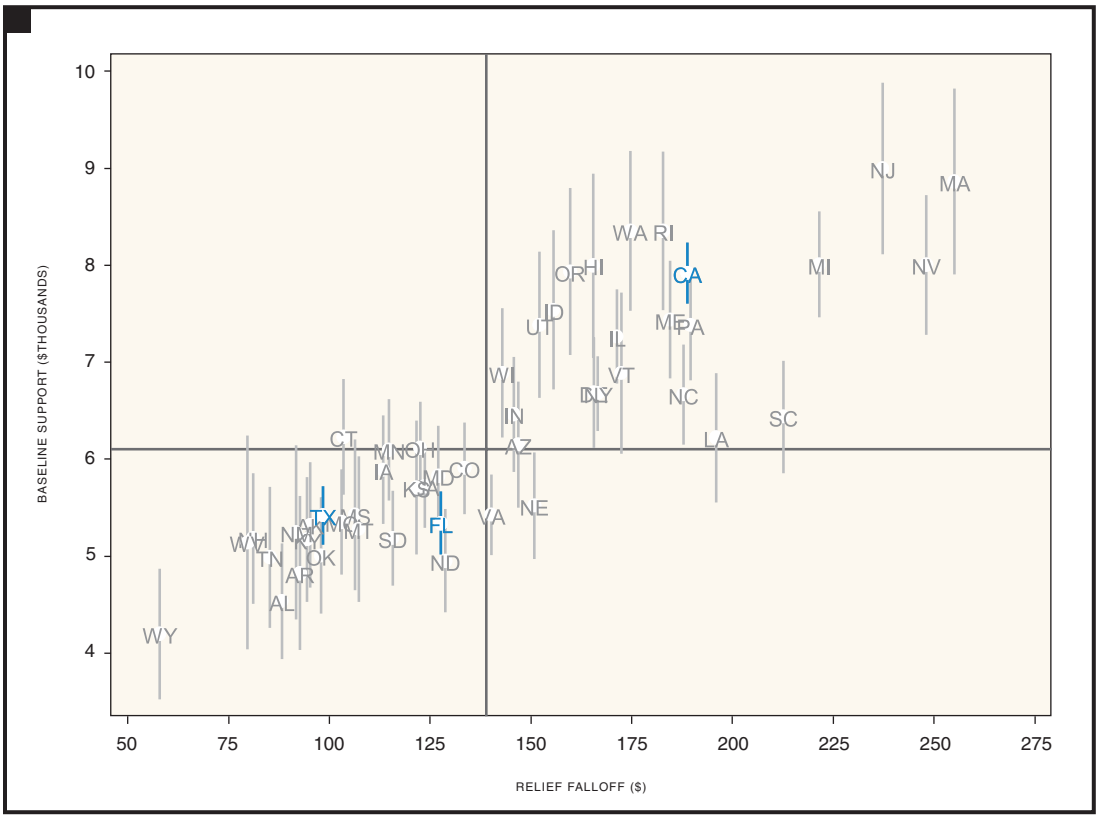
NOTE. This figure reports trends in levels of poverty relief (left panel) and baseline support and relief falloff (right panel) for the United States since 1999.
Source: Annual Social and Economic Supplement to the Current Population Survey.

a smaller relief falloff parameter. It is accordingly no surprise that the other highly populated quadrant, the bottom-left one, entails the combination of low baseline support with relatively low relief falloff. However, it is the EITC and child tax credits — federal programs — that slow the rate of benefit decline in the lower-left quadrant states. These are states that provide very little income support, even to the very poor, and instead rely on programs that favor low-income working families. If the top-right quadrant is the politically liberal one, the bottom-left quadrant is therefore a characteristically more conservative one. This political labeling of the quadrants, which is clearly very rough, is indeed partly consistent with the results of Figure 3. For example, Texas and Florida are found in this quadrant, with Wyoming assuming the most extreme position.

There are a few states that fall into the other two quadrants (albeit only barely). Connecticut, in the upper-left quadrant, provides relatively high levels of baseline support, and comparatively low rates of relief falloff. It may accordingly be understood as an across-the-board "generous" state. The case of Nebraska (lower-right quadrant), by contrast, is one in which low-income households receive comparatively low levels of baseline support and in which support also decreases rather sharply with small increases in earnings. This may be understood, then, as an overall commitment to stinginess. Although there are, then, a few cases of states falling slightly off the diagonal, it's hard not to be struck more generally by the quite linear relationship between the relief falloff and baseline support parameters.

The summary measure, provided by the poverty relief ratio, is especially helpful for distinguishing between states with similar levels of baseline support (or, alternatively, relief falloff). Florida and Texas, for example, offer about the same levels of baseline support. However, rates of relief falloff are slightly higher in Florida. Estimates of the poverty relief ratio distinguish Florida and Texas, taking values of 40 and 42, respectively. That is, about 40 percent of the income support needed to bring all households' incomes to the level of the federal poverty line is provided in Florida, whereas about 42 percent is provided in Texas.

FIGURE 3. Baseline Support and Relief Falloff in the 50 States, 2009–2013



NOTE. This figure reports estimates of levels of baseline support and relief falloff for 50 states, estimated for a pooled 2010–2014 sample. Solid lines denote median values. Error bars report 95 percent confidence intervals.
Source: Annual Social and Economic Supplement to the Current Population Survey, 2010–2014.

Figure 4 reports the distribution of the poverty relief ratio for the U.S. states, with states shaded by quartile and darker shades indicating more effective safety net programs, at least as gauged by this measure. There is some evidence of regional variation, with northwestern states typically providing more support, as a percentage of the federal poverty line, and southern states on average providing less support.[6]

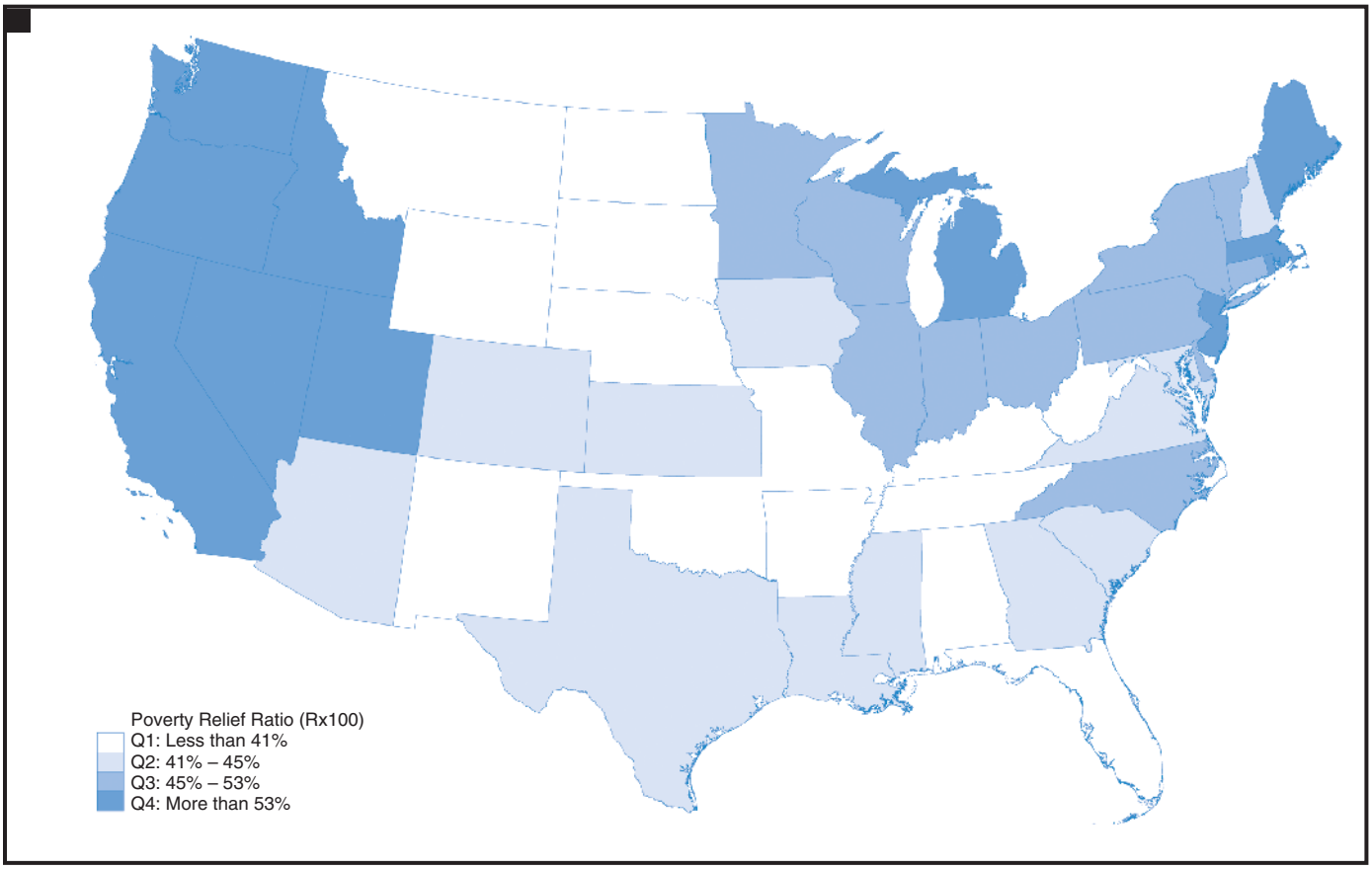
Conclusions

This report evaluates the effectiveness of the American safety net from the perspective of low-income households. Is enough income support provided to increase all incomes to the level of the official poverty line? The simple answer: No. While we observed a short-term increase in support during the Great Recession, there is currently a striking shortfall of support. Using estimates of the poverty relief ratio, averaged over the 2009–2013 period, only four states (Massachusetts, New Jersey, Rhode Island, and Washington) provide more than 60 percent of the support needed to bring incomes up to the poverty line. Further, because most of the income support received by low-income households comes in the form of near-cash benefits (SNAP) or tax credits (EITC), rather than regular cash support, the economic well-being of low-income households may be especially precarious.

The state-level results indicate that there are two types of states. One type targets their support to comparatively well-off families. The other type by contrast, provides more substantial support to poor families, but then combines that with a relatively sharp falloff in support as those families secure more market income.

There is accordingly a relatively strong relationship, at the state level, between the baseline and falloff parameters. This relationship presumably arises because the total amount of support is seen as relatively fixed and hence trade-offs must be made. The way in which this trade-off is resolved appears to arise, in part, out of ideological or "political" commitments to particular visions of how poverty is generated and should be ameliorated. ■

FIGURE 4. State Poverty Relief Ratios, 1999–2013



NOTE. This figure classifies states by estimates of their overall level of poverty relief into quartiles, with darker shades indicating higher levels of poverty relief.
SOURCE. Annual Social and Economic Supplement to the Current Population Survey, 2010–2014.

APPENDIX. DATA PROCESSING AND ESTIMATION NOTES

The analysis presented here is based on the following specification of the relationship between social transfers (T) and market income (Y):

$$T_{ij} = \alpha_j + \beta_{1j} \exp(\beta_{2j} Y_{ij}) + e_{ij} \qquad (1)$$

The index i = 1…n denotes households in states j = 1…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. This function is identified with the restriction that β_{1j} and β_{2j} do not equal zero.

The level of support needed to increase households income to the poverty threshold, ψ, is given by the equation

$$T_{ij} = \psi - Y_{ij}. \qquad (2)$$

Then, the poverty relief ratio is defined as the ratio of the area under the curve defined by Eq. (1) to the area defined by Eq. (2):

$$R = \frac{\int_0^{\tau} \alpha + \beta_1 \cdot exp(\beta_2\, MI) \partial MI + \int_{\tau}^{\Psi} \psi - MI \partial MI}{\int_0^{\Psi} \psi - MI\, \partial MI} \qquad (3)$$

(The variable τ represents the point at which these curves intersect.)

"Relief falloff" is estimated as β_{1j} (1-exp($\beta_{2j}Y_{ij}$), the expected difference in T between Y equals zero, and Y equals one thousand, or the difference in levels of support provided to no-income households, and households earning $1,000 per year.

Parameters are estimated by non-linear least squares. Estimates of τ are generated using a line-search strategy.

State-level estimates are based on pooled 2010–2014 ASEC samples.

Transfers (T) include TANF, SNAP, unemployment insurance, SSI, government-funded workers' compensation, heating subsidies, EITC, and child tax credits.

Market income (Y) includes wages and salaries, earnings from self-employment, investments, dividends, pensions, social security, alimony, child support, and veterans' payments.

All calculations are based on 2014 thousands of dollars, for households headed by working-aged (25–59) adults.

NOTES

1. Spearman rank order correlation coefficients are generally positive and substantial. For state-level estimates of the poverty relief ratio, correlations comparing 2009 with 2010, 2011, 2012, and 2013 are 0.72, 0.60, 0.49, and 0.20, respectively. For levels of baseline support, the Spearman rank order correlations comparing 2009 with 2010, 2011, 2012, and 2013 are 0.41, 0.39, 0.26, and 0.14, respectively. There is a weaker rate of consistency in levels of relief falloff, which are generally estimated with more variance. Spearman rank order coefficients range from 0.13, comparing 2009 with 2010, to –0.02, for a comparison of 2009 and 2013. The weaker relationship between observations for 2013 and earlier years is not unexpected, as some programs that provided increased support during the Great Recession have ended.

2. See Wheaton, 2007.

3. Jusko and Weisshaar, 2015, replicate some of their ASEC analysis with Survey of Income and Program Participation (SIPP) data, a household survey that more accurately captures income levels and benefits received. They find estimates of levels of poverty relief to be very similar in magnitude, and to match national trends quite closely.

4. See Jusko, 2008; Jusko and Weisshaar, 2015.

5. While this measure of "poverty relief" is similar to "poverty gap" measures, we use the poverty relief measure here because it offers two advantages: First, the summary measures of baseline support and relief falloff are especially useful for comparing safety net programs across states. Second, the poverty relief ratio maintains rank order of states, across different poverty thresholds. For more on poverty relief versus poverty gap measures, see, for example, Ziliak, 2006.

6. By using a common poverty threshold—the federal poverty line—these estimates do not reflect differences in the cost of living, which are undoubtedly lower in the southern and some midwestern states, compared with the northeastern states. However, there are some states with similar costs of living (e.g., Texas and Utah, Bureau of Economic Analysis, 2014) that nevertheless provide quite different levels of poverty relief.

ADDITIONAL RESOURCES

Bureau of Economic Analysis, 2014. "Real Personal Income for States and Metropolitan Areas, 2008–2012." BEA Report 14–16, published online: http://www.bea.gov/newsreleases/regional/rpp/2014/pdf/rpp0414.pdf.

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Education

The Stanford Center on Poverty and Inequality

BY SEAN F. REARDON

KEY FINDINGS

- White-black and white-Hispanic academic achievements gaps have narrowed by 30–40 percent in the last four decades and continue to narrow today in most states, albeit slowly. Nonetheless, these achievement gaps remain very large.
- Gaps in both achievement and educational completion vary considerably among states. For example, the Hispanic-white and black-white ratios in college completion are as low as 0.27 and 0.38, respectively, in Colorado, but as high as 0.74 and 0.76, respectively, in West Virginia.
- The size of a state's racial achievement gaps is strongly related to the extent of racial socioeconomic disparities in the state's population. States where racial differences in income, educational attainment, poverty, and unemployment are large tend to have the largest racial achievement gaps.
- Nonetheless, socioeconomic disparities do not fully account for achievement gaps. Unequal access to quality schools likely contributes to the gaps.

At the fiftieth anniversary of the Elementary and Secondary Education Act, which was intended to eliminate achievement gaps between poor and non-poor children and between black and white children, it is useful to examine the progress we have made in achieving those goals. In this report, I examine how the states have fared in eliminating racial gaps in both achievement and college completion, although obviously a full account of educational inequality would, at minimum, require an examination of socioeconomic gaps as well. Given that deep racial gaps in educational achievement figure so prominently in the American story of education, a careful examination of where we stand, some 50 years after one of the key equalizing interventions, is surely warranted.

I lead off with a brief overview of national trends in achievement gaps, in order to provide historical context for the analyses that follow. Next, I examine the current size of racial achievement and educational attainment gaps in each of the states, asking "Does the fate of a black or Hispanic child depend on the state into which she or he happens to be born?"

In the final section, I explore the causes of racial achievement gaps. Although a full assessment of their causes is beyond the scope of this report, I provide some key evidence here regarding the extent to which we should "blame" state education policy for the gaps. Specifically, I describe the associations between achievement gaps and the relative socioeconomic status of blacks, Hispanics, and whites. If achievement gaps are strongly correlated with racial socioeconomic disparities, this suggests that reducing these gaps may be best approached by addressing the labor market, neighborhood, and related institutions that generate those socioeconomic gaps in the first place. If, on the other hand, the gaps are very large even for blacks, Hispanics, and whites from families of the same socioeconomic standing, and if gaps vary substantially even among states with similar racial socioeconomic disparities, then it may be that states' educational systems and institutions are contributing to inequality.[1] To the extent that this is the case, we should take a long and hard look at how these achievement gaps are being generated, with one of the main hypotheses being that differences in school quality are to be blamed.

Trends in Racial Academic Achievement Gaps

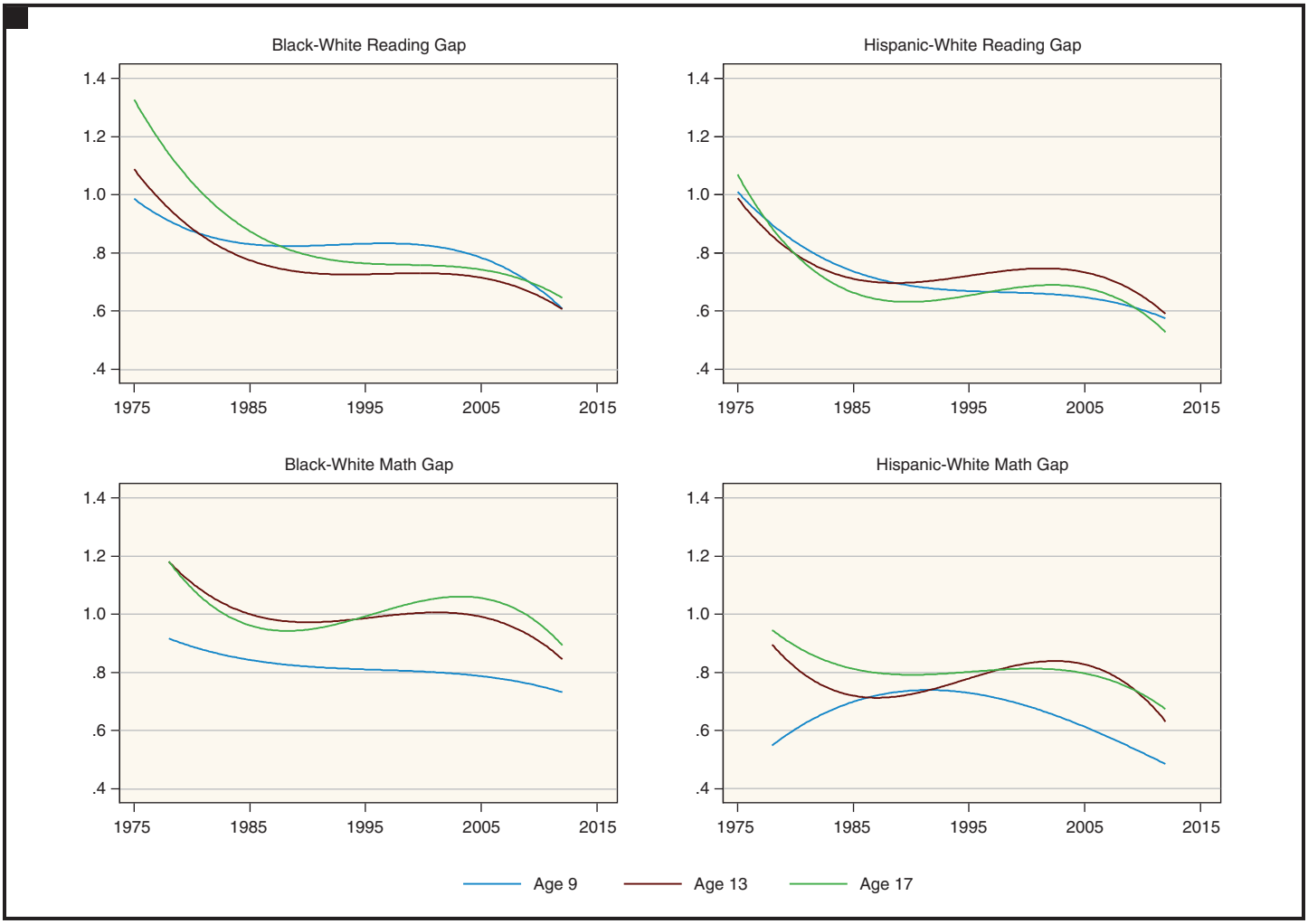
I begin, then, by examining national trends in achievement gaps. One of the success stories in U.S. education is the substantial narrowing of racial achievement gaps over the last four decades. In the 1970s, when the first National Assessment of Educational Progress (NAEP) tests (now known as "the Nation's Report Card") were administered, the white-black achievement gaps in reading and math were over a standard deviation. Today, these gaps are smaller by 25–50 percent (see Figure 1), though they are still far from eliminated. The same long-term trend is evident in white-Hispanic achievement gaps. On the whole, racial achievement gaps have narrowed significantly 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 in the 1970s and early 1980s; progress stalled or even reversed from the mid-1980s through the 1990s. 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,[2] and in state accountability tests.[3] Both white-black and white-Hispanic gaps have narrowed by roughly two-tenths of a standard deviation in the last two decades.

State Variation in Racial Gaps

I turn next to state-level variation in racial achievement gaps. Figure 2 shows average scores in 2013 on the NAEP eighth-grade math tests in each state, broken down by race. The first but very important pattern that is clear here is that there is considerable variation among states in the size of these gaps. It is further evident from Figure 2 that there is not only a great deal of variation in the size of the gaps, but there is also considerable variation across states in each group's average scores. For example, although the black-white and Hispanic-white gaps in Texas are roughly the same size as those in Florida and Oklahoma, white, black, and Hispanic students in Texas score much higher than their counterparts in Florida, who in turn score much higher than Oklahoma students of the

FIGURE 1. Trends in Racial Achievement Gaps, 1975–2013



Source: Author's calculations from Long-Term Trend NAEP (NAEP-LTT). 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. The NAEP-LTT tests have been administered to nationally representative samples of 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 test administration year. Each gap is weighted by the inverse of its estimated sampling variance.

same races. Indeed, Hispanic students in Texas score slightly higher, on average, than white students in Oklahoma.

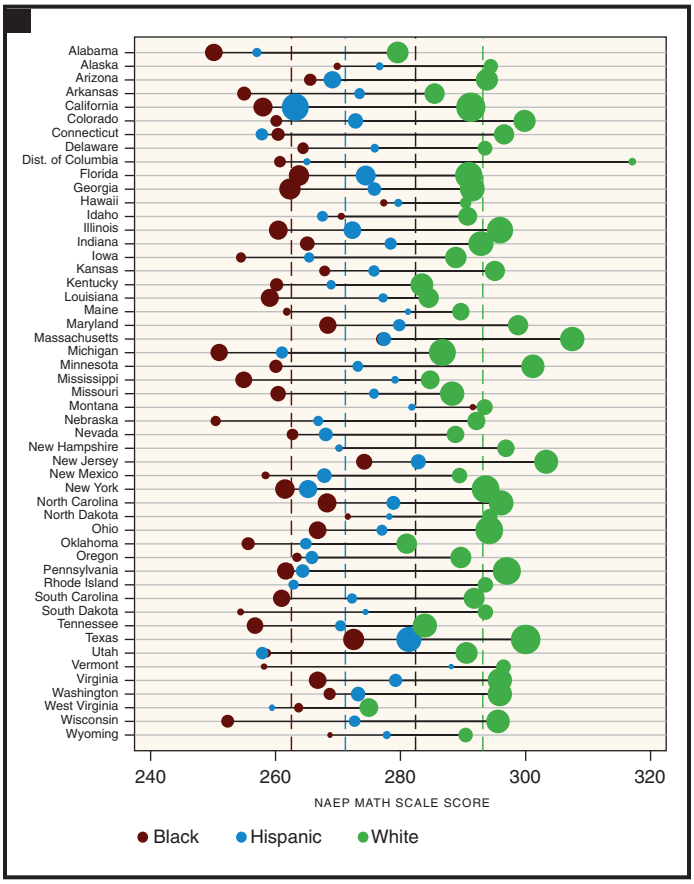
One might also ask whether educational attainment gaps, such as gaps in college completion rates, also vary among states. Figure 3 shows that indeed they do. This figure, based on data pooled from the 2003–2013 American Community Surveys, presents the proportion of 25- to 29-year-olds who have completed college in each state. We again find evidence of large racial gaps and considerable state-level variability in the size of those gaps. For example, the Hispanic-white and black-white ratios in Colorado are as low as 0.27 and 0.38, respectively, whereas the corresponding ratios in West Virginia are as high as 0.74 and 0.76, respectively.

Socioeconomic Inequality and Achievement Gaps

Are these racial gaps due to inequities in the quality of schools available to children of different racial groups? Or are they instead due to outside-of-school inequities related to family and neighborhood socioeconomic conditions and resources? I take on this question next (focusing here specifically on gaps in academic achievement).

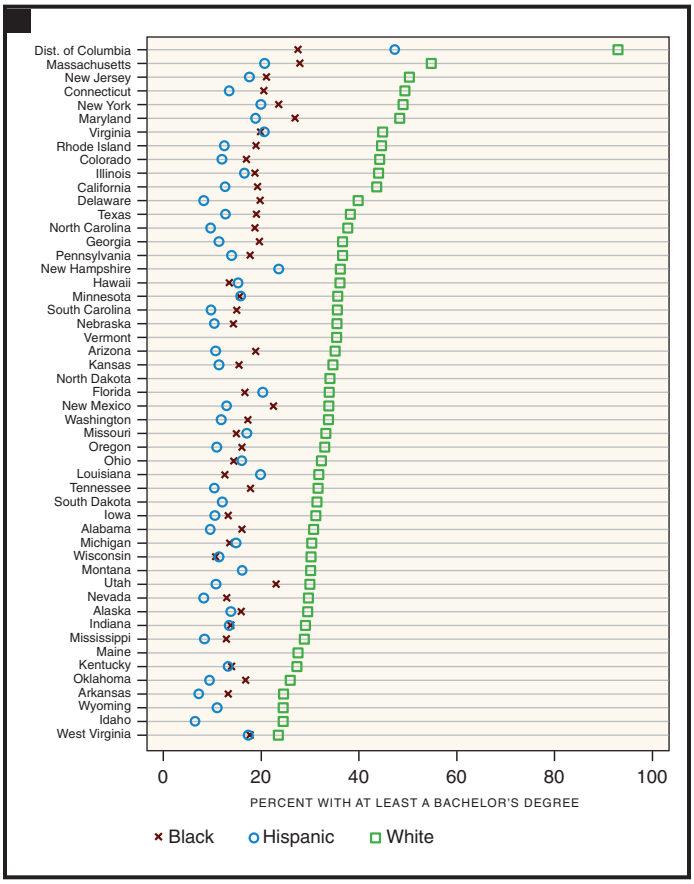
One way to answer this question is to examine the association between the size of achievement gaps within a state and the extent of racial disparities in socioeconomic status. If social inequalities in family background are the primary drivers of achievement gaps, then we would expect state racial achievement gaps to be highly correlated with the size

FIGURE 2. White, Black, and Hispanic Average NAEP Scores by State, Grade 8 Math, 2013



Source: National Assessment of Educational Progress and Common Core of Data (for enrollment counts). In a few cases where population counts are small, data were not available for 2013, so 2011 values are used instead. Dots are roughly proportional in size to the square root of the total state eighth-grade enrollment of the relevant group. Vertical dashed lines indicate national average NAEP scores of black, Hispanic, total, and white students, respectively.

FIGURE 3. College Completion Rates, by State and Race, 25- to 29-Year-Olds, 2003–2013



Source: American Community Survey 2003–2013 (Ruggles et al., 2010). "Black" is non-Hispanic black. "Hispanic" includes Hispanics of any race. White is non-Hispanic white. Proportions are estimated from unweighted sample counts; cells with less than 100 observations not shown.

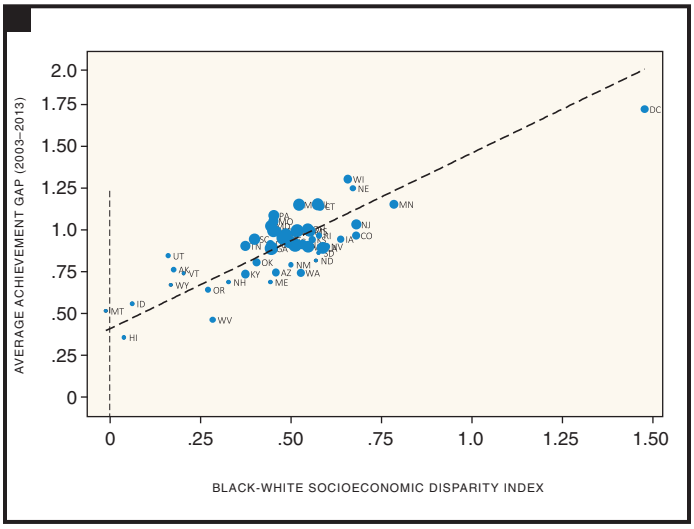
of racial differences in income, parental education, poverty rates, and the like. And if this is the case, achievement gaps may be hard to narrow without improving economic conditions for black and Hispanic families and reducing residential segregation and the concentration of poverty. On the other hand, if the association between achievement gaps and racial socioeconomic disparities is weak, there may be useful lessons to be learned from states with high levels of socioeconomic inequality between races, but with relatively low achievement gaps.

Figures 4 and 5 below present these associations. Each figure shows the white-black (Figure 4) or white-Hispanic (Figure 5) achievement gap in eighth-grade mathematics in a state, plotted against an index of racial socioeconomic disparities in the state. In the interest of saving space, I show only the eighth-grade math figures, but the patterns are very similar in fourth grade and in reading test gaps as well. All of the achievement gap patterns can be explored interactively on our achievement gaps website.[4]

The achievement gaps and racial disparities indices are computed by averaging data from 2003–2013. Achievement gaps are measured in standard deviation units. The socioeconomic disparities index is a weighted average of racial differences in income, educational attainment, poverty rates, and unemployment rates, each among parents of school-age children in the state. An index of 0 would mean that white and black parents of school-age children in the state have equal incomes, levels of educational attainment, poverty rates, and unemployment rates. Thus, if socioeconomic disparities are the main source of achievement gaps, we would expect the achievement gap to be 0 for states with no racial socioeconomic disparities and to be large for states with large disparities.

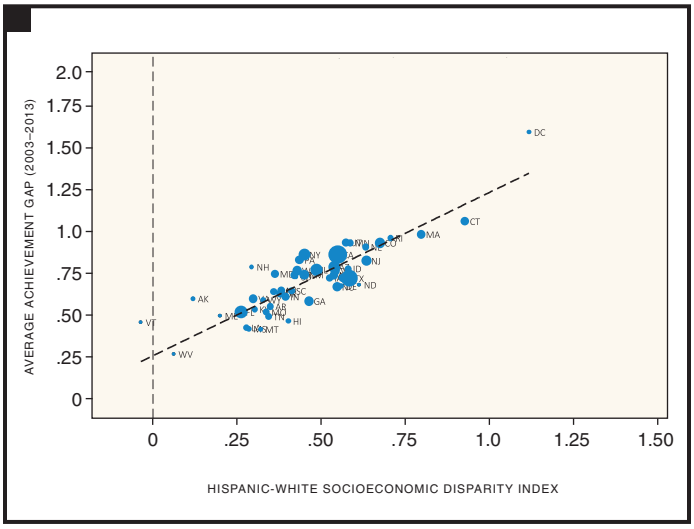
The first finding evident in Figures 4 and 5 is that white-black and white-Hispanic achievement gaps are, on average, very large. This is also apparent in Figure 2, but it comes out even more clearly here. As shown in Figures 4 and 5, there are no states where these gaps are smaller than one-quarter of a standard deviation; in most states, they are much larger. The white-black gaps average 0.93 standard deviations in math and 0.74 standard deviations in reading (not shown, though available on our achievement gaps website); the white-Hispanic gaps are smaller, but still large, averaging 0.73 standard deviations in math and 0.61 standard deviations in reading (not shown). Although the average gaps are large, they vary substantially across states, which was also evident in Figure

FIGURE 4. Association between Black-White Achievement Gaps and Socioeconomic Disparities, Grade 8 Math, 2003–2013



Source: Author's calculations from 2003–2013 Main NAEP, Current Population Survey (CPS), and the Common Core of Data. Achievement gap estimates shown here are precision-weighted averages of NAEP gaps in years 2003–2013, adjusted for the linear trend in gaps from 2003–2013. The socioeconomic disparity index is the value of $X\mathbf{B}$ from the regression model $G_s=\beta_0+X_s\,\mathbf{B}+u_s$, where G_s is the average gap in the state, and X is a vector of four variables: the white-black family income gap, the white-black disparity in parental educational attainment, the black-white poverty rate ratio, and the black-white unemployment ratio, all of which are calculated from CPS data on the parents of school-age children in each state and averaged from 2003–2013. That is, the socioeconomic disparity index is equal to the gap predicted by the regression model, minus the intercept; it has a value of 0 if white and black families have identical average incomes, educational attainment, poverty rates, and unemployment rates in a state. The size of the bubbles in the figure is proportional to the square root of the average black student K–12 enrollment in the state from 2003–2013.

FIGURE 5. Association between Hispanic-White Achievement Gaps and Socioeconomic Disparities, Grade 8 Math, 2003–2013



Source: Author's calculations from 2003–2013 Main NAEP, Current Population Survey (CPS), and the Common Core of Data. The size of the bubbles in the figure is proportional to the square root of the average black student K–12 enrollment in the state from 2003–2013. See Figure 4 for detailed information.

TABLE 1. Average Racial Socioeconomic Disparities, U.S. States, 2003–2013

	White-Black		White-Hispanic	
	Mean	(sd)	Mean	(sd)
Standardized Income Difference	0.82	(0.39)	0.77	(0.27)
Standardized Educational Attainment Difference	0.56	(0.38)	0.89	(0.36)
Poverty Rate Ratio	3.2	(1.5)	2.9	(1.0)
Unemployment Rate Ratio	2.3	(1.4)	1.8	(0.9)

Source: Author's calculations from Current Population Survey (CPS), 2003–2013. The income difference is measured using the V statistic (Ho and Reardon, 2012) to compare the white and black income distributions among families with school-age children; it can be interpreted as the difference in incomes between white and black/Hispanic families, measured in pooled income standard deviation units. The educational attainment difference is computed as the difference in years of education, measured in pooled educational attainment standard deviation units using the V statistic. The poverty and unemployment ratios are the ratios of black or Hispanic poverty or unemployment rates to the corresponding rates of whites.

2 above. Roughly 10 percent of states have white-black gaps larger than 1 standard deviation; a similar number have gaps smaller than half a standard deviation. Washington, D.C., is a significant outlier here, with white-black and white-Hispanic gaps of well over 1.5 standard deviations.

These figures also reveal that the racial socioeconomic disparities index is large on average, but varies considerably among states. To get a sense of the magnitude of this index, consider Table 1, which describes the components of the index. On average, black and Hispanic students have parents with incomes roughly 0.80 standard deviations lower than those of white students in the same state; their parents have educational attainment levels 0.56 (black students) or 0.89 (Hispanic students) standard deviations below those of whites; and their parents have poverty rates and unemployment rates two to three times higher than those of white students. There is, however, considerable variation in these differences. In Connecticut, for example, the Hispanic-white income and educational disparities are 1.2 standard deviations; the poverty ratio is 6.1. Florida, in contrast, has Hispanic-white income and educational disparities of roughly 0.50 standard deviations, and a poverty ratio of 2.2. Despite this variation, in no state are Hispanic-white socioeconomic disparities equal to 0; and black-white disparities are near zero in only three states with very few black residents: Montana, Idaho, and Hawaii.

Figures 4 and 5 clearly show that racial socioeconomic disparities are strongly related to achievement gaps. States with larger racial disparities in family socioeconomic resources have, on average, larger racial achievement gaps. The associations are somewhat stronger for the Hispanic-white gaps (correlation = 0.84) than the black-white gaps (correlation = 0.68). The very large achievement gaps in Washington, D.C., for example, are largely explained by its extraordinarily large racial disparities in income (e.g., white-black difference = 1.7 standard deviations), education (e.g., white-black difference = 2.3 standard deviations), poverty (black/white ratio = 10.7), and unemployment (black/white ratio = 9.4). The strong association between socioeconomic disparities and achievement gaps suggests that poverty and inequality are powerful factors shaping children's educational opportunities and success.

The final notable feature of Figures 4 and 5 is that, despite the strong association between socioeconomic conditions and achievement gaps, socioeconomic disparities do not fully account for all of the variation across states in the gaps. Some states with similar levels of black-white socioeconomic disadvantage, like Wisconsin and New Jersey, have significantly different black-white achievement gaps (about 0.25 standard deviations different, in this example). Hispanics in New York and in Georgia are roughly equally disadvantaged relative to white students in their states, but the Hispanic-white achievement gap is one-quarter of a standard deviation smaller in Georgia than in New York. In addition, even in states with very small or zero racial socioeconomic disparities (such as Hawaii, Montana, and Idaho), the black-white achievement gap is still quite large. These patterns suggest that there are other important factors at play in shaping educational opportunity and academic achievement gaps.

Conclusion

There is a long-running debate among educators and policymakers about whether schools can counteract social inequalities in children's families and neighborhoods. Some point to specific successful schools and school-based interventions as evidence that high-quality schooling can substantially reduce or eliminate socioeconomic or racial disparities in academic performance. Others argue that the

injuries of poverty, particularly in early childhood, cannot be fully overcome by school-based strategies, given the high levels of economic inequality in the United States. The reality is that both are true. The schooling system in the United States can—and does in some cases—reduce educational inequality. But it has not eliminated—and likely cannot eliminate—educational inequality, though it could certainly be more effective at doing so than it has been. The fact that a large part of states' achievement gaps can be accounted for by their racial socioeconomic disparities suggest that out-of-school factors play a sizable role in shaping achievement gaps. Without more directly reducing these socioeconomic disparities, we are unlikely to be able to fully eliminate inequality in educational outcomes. ■

NOTES

1. Of course, some of the socioeconomic differences among parents are likely themselves due to educational policies that were in place when they were growing up, so this analysis is far from definitive regarding the extent to which educational systems contribute to achievement gaps.

2. See, for example, Hemphill et al., 2011; Reardon et al., forthcoming; Vanneman et al., 2009.

3. Reardon et al., 2013.

4. The achievement gaps website is available at http://inequality.com/sotu.

ADDITIONAL RESOURCES

Hemphill, F. Cadelle, Alan Vanneman, and Taslima Rahman, T. 2011. *Achievement Gaps: How Hispanic and White Students in Public Schools Perform in Mathematics and Reading on the National Assessment of Educational Progress.* NCES 2011-459. Washington, D.C.: National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education.

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Health

The Stanford Center on Poverty and Inequality

BY SARAH A. BURGARD AND MOLLY M. KING

KEY FINDINGS

- There is substantial variation across the states in health care access, health behaviors, and self-rated health status. In some southern states, as many as one in five adults report foregoing care even when they need it, a rate twice as high as prevails in many other states.
- The states also differ widely in the extent to which health access and outcomes are unequally distributed. Although the poor register very low health results in some states, there is a more equal distribution of health and health access in other states.

Inequalities in access to health and health care are especially important forms of inequality because they speak to who lives long and who lives well.

It is well known that, even though the United States spends more on health care per capita than any other country, it has some of the worst access and outcome results among wealthy nations.[1] While important, such cross-country comparisons hide substantial health inequality *within* the United States. Even a cursory inspection of the data suggests that some states are indeed better performers on key health measures. For example, only one in ten adults in Utah smoke, whereas more than one in four do so in West Virginia. The purpose of this brief is to examine whether state differences of this magnitude are commonly found across various other health measures.

We focus not just on average levels of health access, behaviors, and outcomes, but also on how unequally they are distributed. Although everyone would presumably prefer a state with high average health scores, it also matters whether the health disparities between the poor and relatively well-off are very large. If a state has a high mean level of health but also subjects its poor residents to a large "health penalty," then anyone who is at risk of being poor would presumably want to avoid that state (at least insofar as the penalty is large enough to render them worse off than their counterparts in other states).

Therefore, we examine two important features of a state's health profile: the average level of health, behavioral, or access problems in the state; and the variation in the distribution of these outcomes by income.

Measuring health and health access

We measure access to care using two key indicators: (a) the proportion of a state's residents who lack health insurance and (b) the proportion who had to forego medical care for cost reasons. We measure health outcomes and behaviors using three indicators: (a) the proportion of a state's residents who reported poor or fair self-rated health, (b) the proportion who were smokers, and (c) the proportion who currently have diabetes or ever had been told they had diabetes. An online appendix provides analyses of additional health measures and breakdowns by additional demographic characteristics.[2]

We measure the average health level of a state with simple proportions (e.g., the proportion of a state's population that smokes), and we measure income disparities with relative risk ratios (e.g., [the proportion of low-income people who smoke]/[the proportion of higher-income people who smoke]).[3] The latter tell us the extent to which adults living in relatively well-off households have better health (or health access) than those living in poor households. We define low-income households as those with less than $25,000 in income and higher-income households as those with more than $50,000 in income.[4]

The data for this report come from the Center for Disease Control's Behavioral Risk Factor Surveillance System (BRFSS) for 2013.[5] The BRFSS includes interviews of non-institutionalized adults ages 18–64 in all 50 states conducted via both landline and cellular telephones.[6]

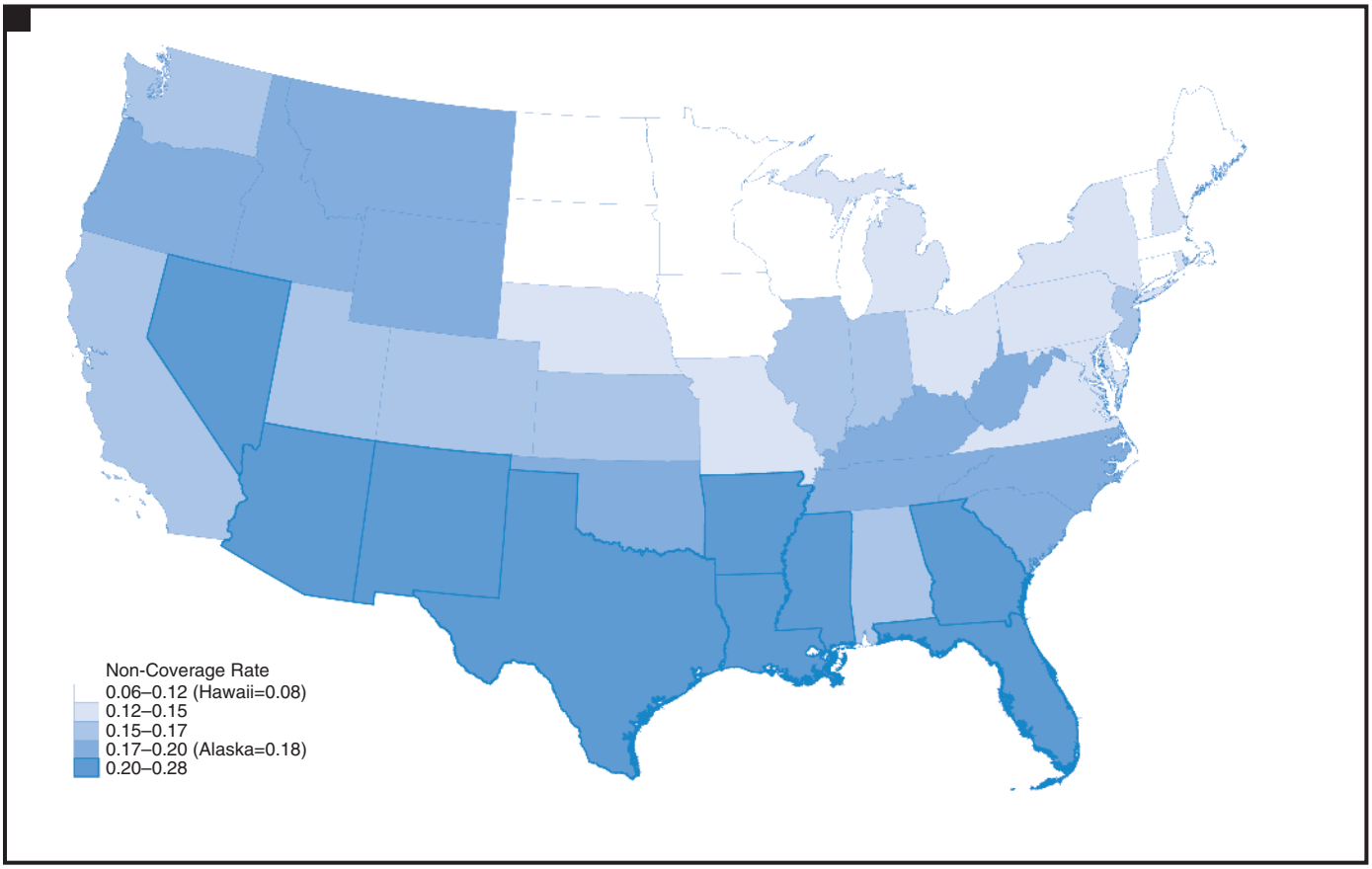
Insurance

We begin by examining the proportion of adults in each state who said they were uninsured in 2013 (the year before the Affordable Care Act's individual mandate took effect). Nationwide, 17.2 percent of American adults reported not having insurance coverage at the time they were interviewed in 2013. But there is much variability around this national average, with state non-coverage rates ranging from a low of 6.1 percent (Massachusetts) to a high of 27.7 percent (Texas). As shown in Figure 1, residents of the South and West were more likely to lack coverage than residents of the Midwest and Northeast, although there is also some variation within regions. For example, Alabama, Tennessee, and Virginia have more coverage than other southern states.

Coverage also varies substantially by household income. For low-income Americans, the risk of being uninsured in 2013 (32.8%) was more than six times higher than it was for higher-income Americans (5.0%).[7] But this overall income disparity in coverage disguises much variability across states. As shown in Figure 2, low-income individuals in the most equal states were three times more likely than higher-income individuals to be uninsured, whereas low-income individuals in the most unequal states were nearly twelve times more likely than higher income individuals to be uninsured. Notably, some of the smallest income disparities are found in the South and West, where overall non-coverage rates are the highest (cf. Figure 1). As we shall see, this somewhat counterintuitive pattern occurs for several of our indicators, a result suggesting that higher-income individuals in low-access states cannot exploit the advantage that money tends to provide in other states. The barriers are too large, in other words, for even the relatively well-off to overcome them.

The data from Figures 1 and 2 are combined in Figure 3. Here,

FIGURE 1. Proportion of Adults Lacking Health Insurance, 2013



Source: 2013 data from Center for Disease Control's Behavioral Risk Factor Surveillance System.

the vertical axis displays state non-coverage rates, while the horizontal axis displays state risk ratios by income (also for non-coverage). This generates four quadrants:

The equal-healthy (EH) quadrant in the bottom left of Figure 3 comprises states that have high coverage rates and relatively small income-based disparities in coverage rates. These are states in which all residents, even the poor, are doing relatively well. For example, Hawaii has the second lowest non-coverage rate overall (8.2%), and higher-income Hawaiians have very little advantage in coverage relative to the poor. If you are poor and sick, a state like Hawaii is a very good place to be.

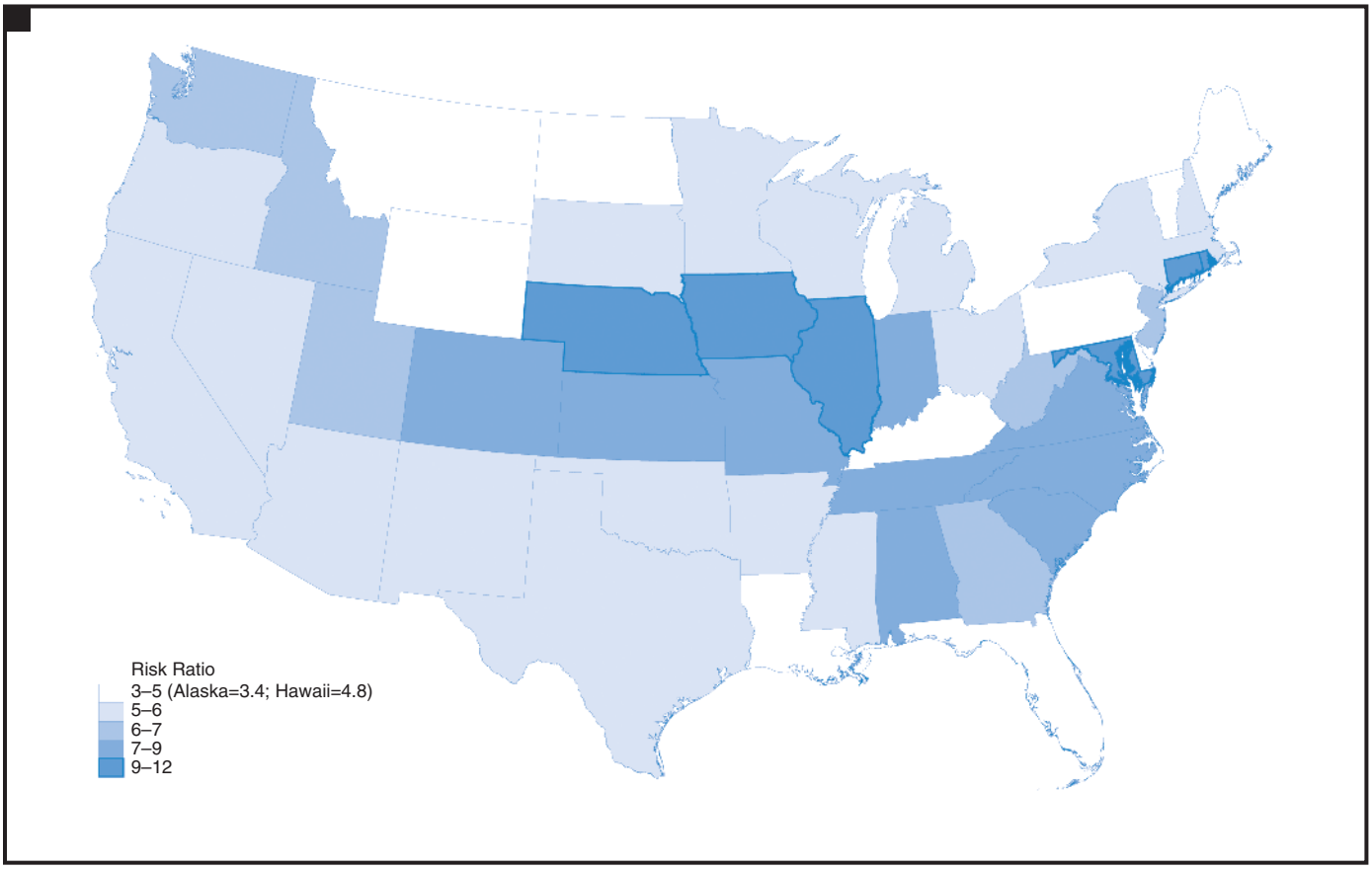
The unequal-healthy (UH) quadrant in the bottom right of Figure 3 includes states that again have relatively high overall coverage rates, but in this case the relatively well-off are more deeply advantaged. For example, Maryland has the fifteenth lowest level of non-coverage overall (12.8%), but it is among the worst in the nation on inequality, with the poor over nine times more likely to be uninsured than the relatively well-off.

The equal-unhealthy (EU) quadrant, shown here in the top left of Figure 3, is a comparatively bad place for everyone, the low-income and higher-income alike. This quadrant includes, for example, Mississippi, which has a high overall non-coverage rate (23.0%), a high low-income non-coverage rate (36.2%), and a relatively high non-coverage rate for higher-income individuals as well (6.3%).

The unequal-unhealthy (UU) quadrant, shown in the top right of Figure 3, likewise represents states with relatively poor coverage, but here the relatively well-off have much better chances than the poor to beat the odds and secure coverage. An exemplar state here is North Carolina.

To conserve space, the analyses for the remaining indicators will be carried out more economically, with the maps available in our online supplement. In all cases, the logic of our analyses will be much the same, with a special focus on how states fall into each of these four quadrants.

FIGURE 2. Relative Risk Ratio of Non-Coverage for Low-Income Adults Compared to Higher-Income Adults, 2013



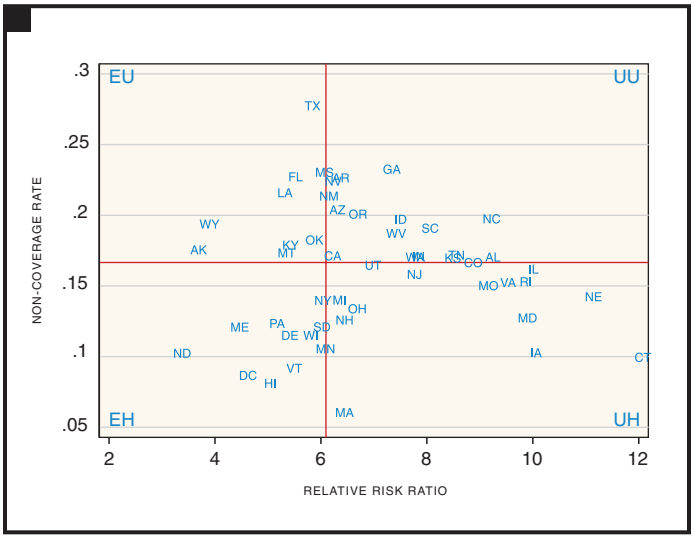
Source: 2013 data from Center for Disease Control's Behavioral Risk Factor Surveillance System.

Foregone Care

In 2013, more than one in seven Americans reported that, because of concerns about costs, they did not see a doctor when they needed to see one. There were substantial state differences in the propensity to forego care: for example, one in five adults reported foregoing care in Mississippi, Arkansas, Florida, and Louisiana, while fewer than one in ten reported foregoing care in North Dakota, Massachusetts, Hawaii, Vermont, or South Dakota. The overall likelihood of foregone care is regionally concentrated, with a pattern of higher risk in the South and some western states.

There are also state differences in the inequality of foregone care, but they are not as large as those in insurance coverage. Low-income individuals are anywhere from 2.6 to 6.9 times as likely to report foregoing care as higher-income individuals (see Figure 4). However, unlike the regional clustering of risk ratios for insurance coverage, there is less evidence of clustering in this case.

FIGURE 3. Relative Risk Ratio by Prevalence for Non-Coverage, 2013



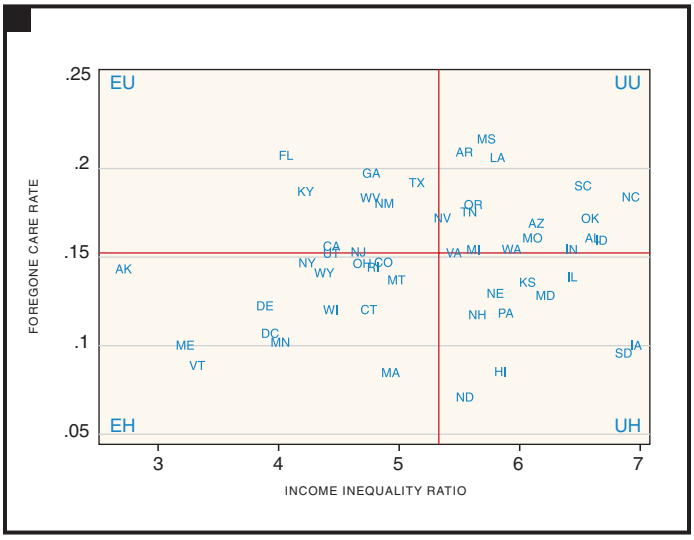
Note: Lines represent median national values. Relative Risk Ratio represents risk of being uninsured for low-income relative to higher-income residents
Source: 2013 data from Center for Disease Control's Behavioral Risk Factor Surveillance System.

Self-Rated Health

Nationwide, nearly one in five people rated themselves as having only fair or poor overall health (rather than good, very good, or excellent health). Reports of fair or poor health are concentrated in the South and Southwest (with West Virginia holding the lowest ranking).

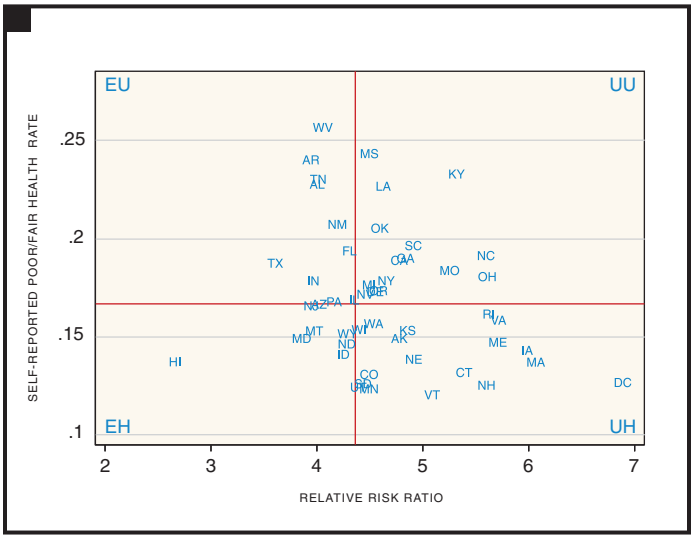
The poor are from 2.5 to 6.7 times as likely as their better-off neighbors to be in fair or poor health. This disparity is greatest in the Northeast and Midwest, where rates of fair and poor health are relatively low. The distinctive feature of Figure 5 is that the equal-healthy (EH) quadrant is very sparsely populated. It is almost as if the only path to a healthy state is via a high level of inequality (in which higher-income individuals have a much better chance of being healthy).[8]

FIGURE 4. Relative Risk Ratio by Prevalence for Foregone Care, 2013



Note: Lines represent median national values. Relative Risk Ratio represents risk of foregoing care for low-income relative to higher-income residents.
Source: 2013 data from Center for Disease Control's Behavioral Risk Factor Surveillance System.

FIGURE 5. Relative Risk Ratio by Prevalence for Self-Reported Health Status, 2013



Note: Lines represent median national values. Relative Risk Ratio represents risk of reporting poor or fair health for low-income relative to higher-income residents
Source: 2013 data from Center for Disease Control's Behavioral Risk Factor Surveillance System.

Smoking

In 2013, 17.4 percent of American adults were smokers. There is substantial state-level variation in smoking rates, with some concentration in the Northwest and Appalachia. More than 25 percent of adults in West Virginia, Kentucky, and Arkansas are smokers, while fewer than 15 percent are in Utah, California, Hawaii, and New Jersey.

Smoking was much more common among poor adults, but income disparities followed no clear geographic pattern. As with self-rated health, the equal-healthy (EH) quadrant is sparsely filled. The states with the fewest smokers (e.g., Vermont) tend, in other words, to be very unequal ones (Figure 6).

Diabetes

Across the nation, about one in ten adults had or had ever been told they have diabetes (in our 2013 data). Diabetes is more common in the South and Rust Belt and less common in the Northeast and West. There is less within-region variation than in other outcomes, with the notable exceptions of Arizona and New Mexico, which have higher rates than other states in the West.

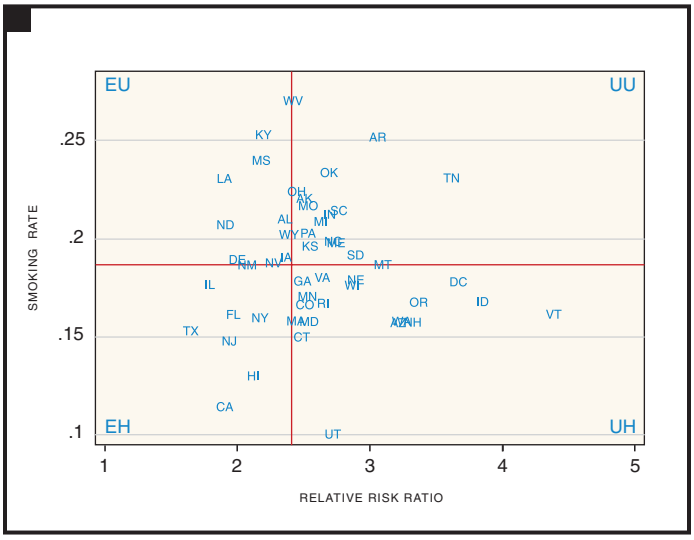
Those living in poor households were anywhere from 1.5 to three times as likely as higher-income individuals to have or have had diabetes. The Great Lakes states and the Northeast had the greatest income disparities in diabetes levels, even though overall levels are low in those regions. We again find that, among the healthy states, a low-inequality outcome (the EH quadrant) is relatively rare, with Utah and Hawaii standing out as exemplars of this profile (Figure 7).

Conclusions

Whereas most published reports on state differences in health focus on average well-being, we have combined that usual focus with an additional consideration of how unequally health outcomes, behaviors, and access are distributed.[9] Under most normative standards, one would prefer a state to be both healthy and equal, meaning that the lower-left (EH) quadrant is the conventional policy goal. It is good for everyone, even the poor, to live in an EH state, as overall health is good and income disparities in health are small.[10] Are there many such states? The answer to that question depends on the type of outcome considered. We have found that it appears somewhat easier to realize the equal-healthy goal with the foregone care and diabetes measures.

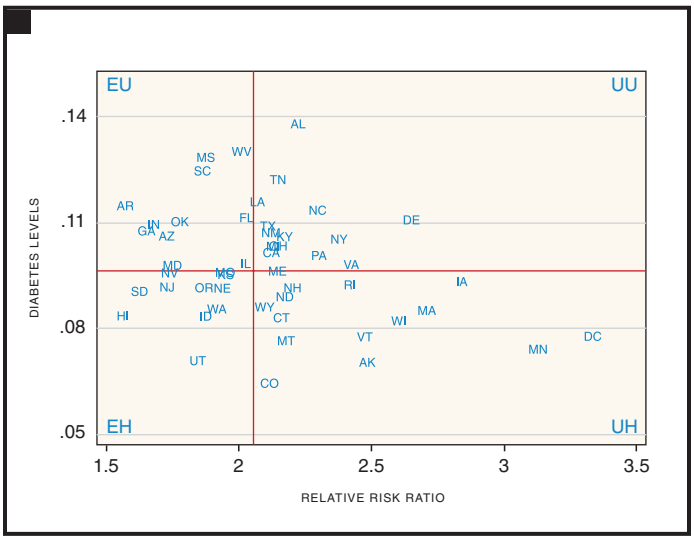
The key question of course is whether there will ultimately be a wider diffusion of better health in now-unequal states. It is important to recognize that policy levers designed to improve overall levels of well-being may, at least initially, reinforce income inequality in the distribution of health.[11] After all, reforms meant to help all residents of a state will likely be taken up most easily by the wealthiest residents; and efforts to improve population health may therefore first result in an increase in inequality. By this logic, there is reason to believe

FIGURE 6. Relative Risk Ratio by Prevalence for Smoking, 2013



Note: Lines represent median national values. Relative Risk Ratio represents risk of smoking for low-income compared to higher-income residents.
Source: 2013 data from Center for Disease Control's Behavioral Risk Factor Surveillance System.

FIGURE 7. Relative Risk Ratio by Prevalence for Diabetes, 2013



Note: Lines represent median national values. Relative risk ratio represents risk of having or ever having had diabetes for low-income relative to higher-income residents.
Source: 2013 data from Center for Disease Control's Behavioral Risk Factor Surveillance System.

that states in the unequal-healthy (UH) quadrant may, over time, move into the less well-populated equal-healthy (EH) quadrant. This state "mobility" may of course be sped up with targeted efforts to diffuse behaviors and interventions to poor populations.[12] ■

NOTES

1. Crimmins, Eileen M., Samuel H. Preston, and Barney Cohen. (Eds.). 2011. *Explaining Divergent Levels of Longevity in High-Income Countries.* Washington, D.C.: National Academies Press. Available at http://www.nap.edu/openbook.php?record_id=13089.

2. Available at http://inequality.com/sotu.

3. It should be noted that these prevalence and relative risk measures are not independent of one another. If the relative risk changes (while all else stays the same), the overall prevalence will also change. We can define independent prevalence and income group odds ratio parameters by fitting a set of state-specific logistic models in which the health outcome is a function of income dummies for low-income and middle-income individuals (with the high-income case the omitted category). When this model is estimated, the vast majority of states remain in the quadrant they appear in this report, so we decided to present the simpler formulation.

4. The Official Poverty Measure cutoff line in 2013 was $19,530 for a three-person household and $23,624 for a two-adult, two-child household. The Supplemental Poverty Measure placed the poverty level for the same family size of renters or house owners with a mortgage at just over $25,000. See http://www.census.gov/content/dam/Census/library/publications/2014/demo/p60-251.pdf.

5. Available at http://www.cdc.gov/brfss/annual_data/annual_2013.html.

6. Andie Grossman assisted us in selecting our data set. For more details about the data set, see the BRFSS 2013 Codebook, available at http://www.cdc.gov/brfss/annual_data/2013/pdf/CODEBOOK13_LLCP.pdf.

7. The U.S Census Bureau estimates that 13.4 percent of people were without health insurance coverage for the entirety of 2013 (see http://www.census.gov/newsroom/press-releases/2014/cb14-169.html). The overall population estimate from the BRFSS dataset comes out a bit higher, at 17.2 percent, since it only asks about status at the time of the survey, not about coverage for the entire year.

8. It is of course very difficult to have a healthy state when (a) the poor population is large, and (b) there is a large health disparity between poor and well-off households (see endnote 3).

9. See, for example, the United Health Foundation's America's Health Rankings (http://cdnfiles.americashealthrankings.org/SiteFiles/Reports/Americas%20Health%20Rankings%202014%20Edition.pdf), Kaiser Family Foundation's State Health Facts (http://kff.org/statedata/), and the Gallup Healthways State of American Wellbeing (http://info.healthways.com/wellbeingindex).

10. There are many differences among states that might explain the differences in these outcomes and the states' rankings on equality and health measures. Though we do not have the space to explore those here, tracking how states fare on levels of and inequality in the distribution of well-being has value for long-term policy evaluation, particularly in the wake of the Affordable Care Act.

11. See Phelan, Jo C., Bruce G. Link, and Parisa Tehranifar. 2010. "Social Conditions as Fundamental Causes of Health Inequalities: Theory, Evidence, and Policy Implications." *Journal of Health and Social Behavior*, 51(Suppl), S28–S40.

12. See Keppel, Kenneth, Linda Bilheimer, and Leda Gurley. 2007. "Improving Population Health and Reducing Health Care Disparities." *Health Affairs*, 26(5), 1281–1292.

Economic Mobility

The Stanford Center on Poverty and Inequality

BY RAJ CHETTY, NATHANIEL HENDREN, PATRICK KLINE, AND EMMANUEL SAEZ

KEY FINDINGS

- There is less intergenerational mobility in the United States than is sometimes appreciated by the public, but intergenerational mobility is not declining. When poor children born in 1971 and 1986 are compared, one finds a slight increase (from 8.4 to 9.0 percent) in the chances of reaching the top fifth of the income distribution by age 28.
- There is substantial variation within the United States in the prospects for escaping poverty. In the highest-mobility areas of the United States, mobility rates are higher than rates in most other developed countries, and more than 1 in 10 children with parents in the bottom quintile of the income distribution reach the top quintile by adulthood. Poor children in western states have the best chances of making it to the top.
- In the lowest-mobility areas of the United States, which tend to be in the South, fewer than 1 in 20 poor children reach the top quintile, a rate that is lower than in any developed country for which data have been analyzed to date.
- Mobility rates are relatively low in areas with high income and racial segregation. Mobility rates are relatively high in areas with high school quality, local tax rates, social capital, and marriage rates.

The United States is often hailed as the "land of opportunity," a society in which a child's chances of success depend little on her family background. Is this reputation warranted? And is it especially warranted in some states, regions, or areas of the United States?

There is a growing public perception that intergenerational income mobility—a child's chance of moving up in the income distribution relative to her parents—is declining in the United States. Is it really true that opportunity has declined?

In two recent papers, we address these questions by compiling statistics from millions of anonymous income records.[1] These data have less measurement error and much larger sample sizes than previous survey-based studies and thus yield more precise estimates of intergenerational mobility across cities and states over time. Our core sample consists of all children in the United States born between 1980–1982, whose income we measure in 2011–2012, when they are approximately 30 years old. We divide our analysis into two parts: an analysis of time trends and an analysis of geographical variation in mobility across areas of the United States.

Time Trends

We find that the most robust way to measure intergenerational mobility is by ranking parents by parental income (at the time the child was growing up in the family) and by ranking children by their income when they are adults. For each percentile of parent's income, we compute the average rank of the income of the children when adults. As shown in Figure 1, we find that this rank-rank relationship is almost perfectly linear, with a slope of 0.34. This implies that children growing up in the highest-income families rank, on average, 34 percentiles higher than children growing up in the poorest families.

Contrary to popular perception, we find that such percentile rank–based measures of intergenerational mobility have remained extremely stable for the 1971–1993 birth cohorts. For example, the probability that a child reaches the top fifth of the income distribution given parents in the bottom fifth is 8.4 percent for children born in 1971, compared with 9.0 percent for those born in 1986. Children born to the highest-income families in 1984 were 74.5 percentage points more likely to attend college than those from the lowest-income families. The corresponding gap for children born in 1993 is 69.2 percentage points, suggesting that, if anything, mobility may have increased slightly in recent cohorts.

Figure 2 illustrates the stability of intergenerational mobility for children born between 1971 and 1993 (where, for children born after 1986, estimates are predictions based on college attendance rates). The y-axis, "intergenerational persistence," is a measure of the gap in average income percentiles for children born in the poorest versus richest families. On average, children with parents in the bottom 1 percent of the income distribution grow up to earn an income approximately 30 percentiles lower than their peers with parents in the top 1 percent of the income distribution. This difference has remained relatively steady across the birth cohorts we studied.

Although rank-based measures of mobility remained stable, income inequality increased substantially over the period we study. Hence, the consequences of the "birth lottery"—the parents to whom a child is born—are larger today than in the past. A useful visual analogy (depicted in Figure 3) is to envision the income distribution as a ladder, with each percentile representing a different rung. The rungs of the ladder have grown farther apart (inequality has increased), but children's chances of climbing from lower to higher rungs have not changed (rank-based mobility has remained stable).

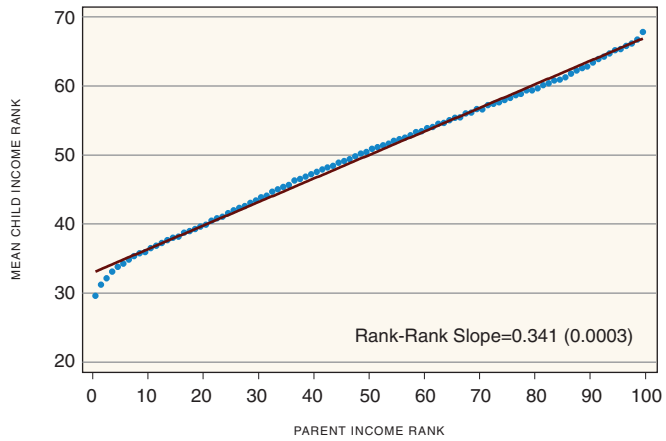
This result may be surprising in light of the well-known cross-country relationship between inequality and mobility, termed the "Great Gatsby Curve" by Alan Krueger.[2] However, much of the increase in inequality has come from the extreme upper tail (e.g., the top 1 percent) in recent decades, and top 1 percent income shares are not strongly associated with mobility across countries or across metro areas within the United States.[3]

Putting together our results with other recent evidence that intergenerational mobility did not change significantly between the 1950 and 1970 birth cohorts, we conclude that rank-based measures of social mobility have remained stable over the second half of the 20th century in the United States.[4]

Variation within the United States

Intergenerational mobility, on average, is significantly lower in the United States than in most other developed countries.[5] However, mobility varies widely within the United States, and we now turn to examine this regional and state variability. We begin by constructing measures of relative and absolute mobility for 741 "commuting zones" (CZs) in the United States. Commuting zones are geographical aggregations of counties that are similar to metro areas but also cover rural areas. Children are assigned to a CZ based on their location at age 16 (no matter where they live as adults), so that their location represents where they grew up. When analyzing local area variation, we rank both children and parents based on their positions in the national income distribution. Hence, our statistics measure how well children fare relative to those in the nation as a whole rather than to those in their own particular community.

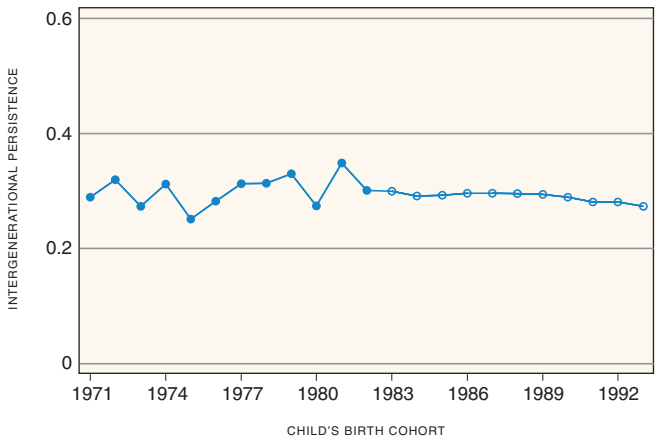
FIGURE 1. Intergenerational Mobility in the United States



Note: The figure presents a non-parametric binned scatter plot of the relationship between child and parent income ranks. Both figures are based on a population sample of the 1980–1982 birth cohorts and baseline family income definitions for parents and children. Child income is the mean of 2011–2012 family income (when the child was around 30), while parent income is mean family income from 1996–2000. We define a child's rank as her family income percentile rank relative to other children in her birth cohort and his parents' rank as their family income percentile rank relative to other parents of children in the core sample. The slopes and best-fit lines are estimated using an OLS regression on the micro data. Standard errors are reported in parentheses.

Source: Chetty et al., 2014a.

FIGURE 2. Trends in Intergenerational Mobility in the United States



Note: The series in solid circles (through cohort 1982) plots estimates from OLS regressions of child income rank at age 29–30 on parent income rank, estimated separately for each birth cohort from 1971–1982. The series in open circles represents a forecast of intergenerational mobility based on income at age 26 for the 1983–1986 cohorts and college attendance for the 1987–1993 cohorts; for details, see Chetty et al., 2014b.

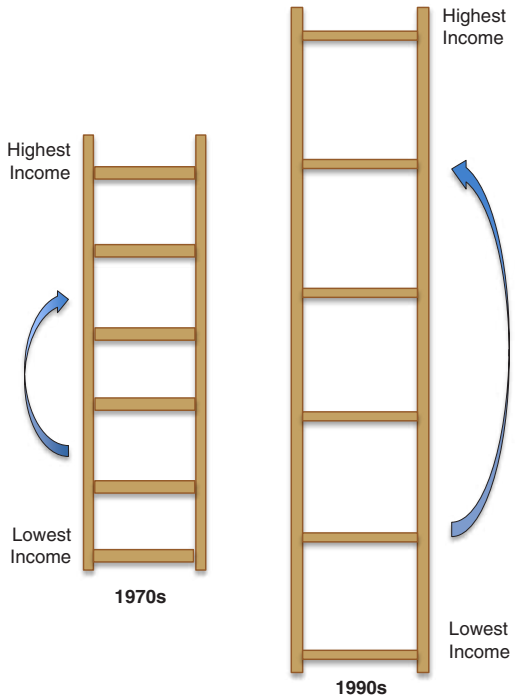
Source: Chetty et al., 2014b.

We begin this spatial analysis by aggregating CZs up to the level of states and then grouping states according to their Census region. In Figure 4, the bar for each state pertains to the probability that a child with parents in the bottom fifth of the income distribution reaches the top fifth of the income distribution (in adulthood).

The variation between regions is notable. Poor children in western states have the best chances of making it to the top quintile, while their counterparts in the South have the bleakest odds.

There is also evidence of variation within regions. Rust Belt and southeastern states have markedly lower mobility than other midwestern and southern states. There is, by contrast, no sharp subregional variability in the Northeast, while the West is notable for its two outlier states: Arizona (very low mobility) and Wyoming (very high mobility).

FIGURE 3. Changes in the Income Ladder in the United States



The rungs of the income ladder have grown farther apart (income inequality has increased)

...but children's chances of climbing from lower to higher rungs have not changed.

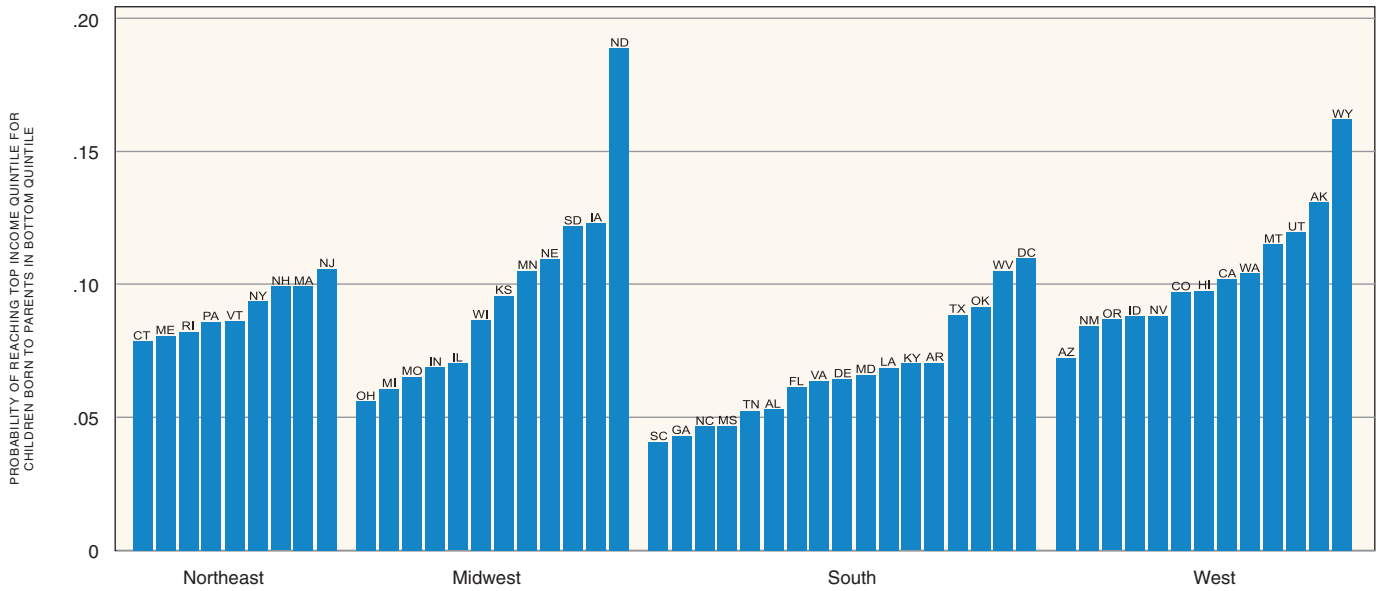
But mobility is not strictly a regional and subregional affair. There is also much variation across states that are in close geographic proximity and have similar socio-demographic characteristics. For example, North Dakota has the highest mobility in the country (children in the bottom fifth have an 18.9% chance of reaching the top fifth), whereas South Dakota has much less mobility (a corresponding statistic of 12.2%). Likewise, neighboring states like Texas and Arkansas or New Mexico and Arizona also offer very different opportunities for children born into them.

If we next drop down to the level of CZs themselves (see Figure 5), we again find that rates of mobility vary by where one grows up. In areas with the highest rates of mobility (denoted by the lightest color on the map), children growing up in the bottom fifth have more than a 16.8 percent chance of reaching the top fifth. That number is higher than in most other countries with the highest rates of mobility. At the other end of the spectrum, that is, the darkest-colored areas, children have less than a 4.8 percent chance of moving from the bottom fifth to the top fifth of the income distribution. The rates of upward mobility in these areas are lower than in any developed country for which data have been analyzed to date. These differences in the chance of reaching the top quintile illustrate that children born into disadvantaged families have very different life chances depending on where their parents live.

This map also reveals that urban areas tend to have lower rates of social mobility than rural areas. The successful children growing up in rural areas do not just "move up" but also generally "move out." That is, they typically move to large metropolitan areas, often out of their state of birth. There is also substantial variation in upward mobility across cities, even among large cities that have comparable economies and demographics. Table 1 lists upward mobility statistics for the 50 largest metro areas, focusing on the 10 cities with the highest and lowest levels of upward mobility. Salt Lake City, Boston, and San Jose have rates of mobility similar to the most upwardly mobile countries in the world, while other cities—such as Charlotte, Atlanta, and Milwaukee—offer children very limited prospects of escaping poverty. The odds of moving from the bottom to the top are two to three times larger for those growing up in Salt Lake City or San Jose as compared with those growing up in Milwaukee or Atlanta.

In ongoing work, Chetty and Hendren find that if a child moves from a city with low upward mobility (such as Milwaukee) to a city with high upward mobility (such as Salt Lake City), her own income in adulthood rises in proportion to the time she is exposed to the better environment.[6] This finding suggests

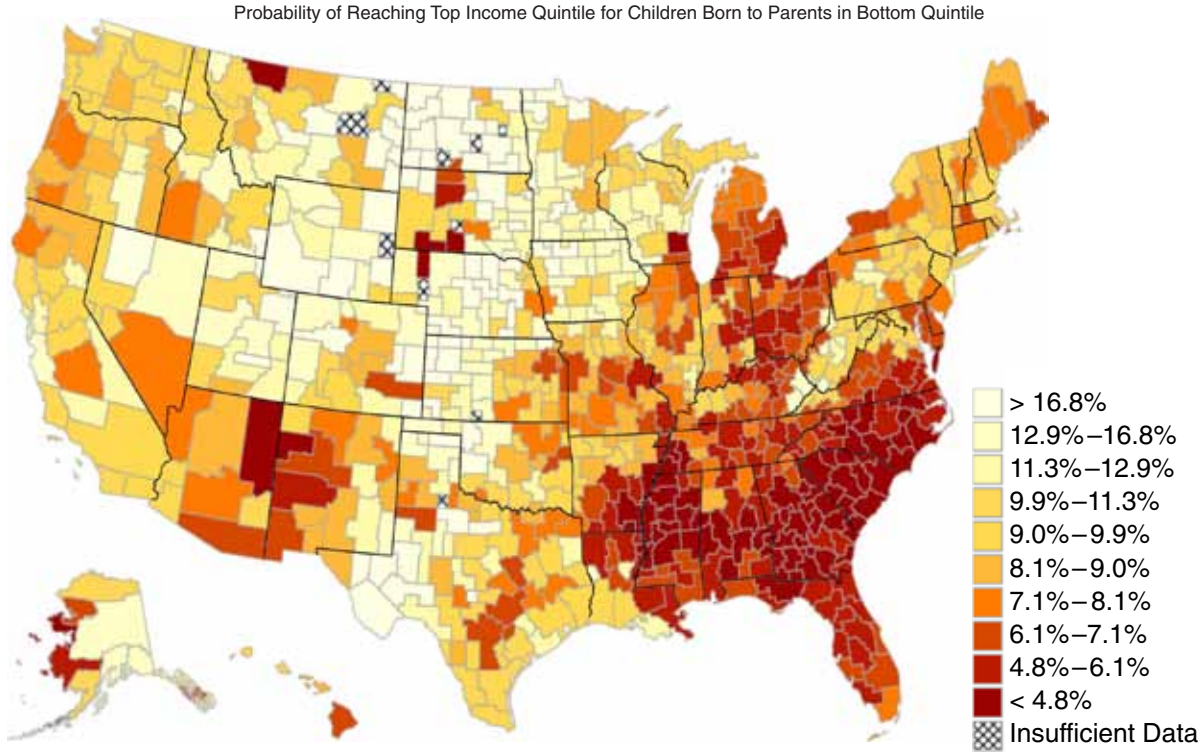
FIGURE 4. Intergenerational Mobility by State



Note: This figure plots the state average (weighted by children in 1980–1982 cohorts) of the commuting zone mobility measure presented in Figure 5. Multistate commuting zones are assigned to the state with the largest city in the CZ. This figure is constructed using data from Online Data Table V of Chetty et al., 2014a.

Source: Chetty et al., 2014a.

FIGURE 5. The Geography of Intergenerational Mobility



Note: This figure presents a heat map of the probability that a child reaches the top quintile of the national family income distribution for children conditional on having parents in the bottom quintile of the family income distribution for parents. Children are assigned to commuting zones based on the location of their parents (when the child was claimed a dependent), irrespective of where they live as adults. This figure is constructed using data from Online Data Table V of Chetty et al., 2014a.

Source: Chetty et al., 2014a.

TABLE 1. Upward Mobility in the 50 Largest Metro Areas: The Top 10 and Bottom 10

Rank	Commuting Zone	Odds of Reaching Top Fifth from Bottom Fifth	Rank	Commuting Zone	Odds of Reaching Top Fifth from Bottom Fifth
1	San Jose, CA	12.9%	41	Cleveland, OH	5.1%
2	San Francisco, CA	12.2%	42	St. Louis, MO	5.1%
3	Washington, D.C.	11.0%	43	Raleigh, NC	5.0%
4	Seattle, WA	10.9%	44	Jacksonville, FL	4.9%
5	Salt Lake City, UT	10.8%	45	Columbus, OH	4.9%
6	New York, NY	10.5%	46	Indianapolis, IN	4.9%
7	Boston, MA	10.5%	47	Dayton, OH	4.9%
8	San Diego, CA	10.4%	48	Atlanta, GA	4.5%
9	Newark, NJ	10.2%	49	Milwaukee, WI	4.5%
10	Manchester, NH	10.0%	50	Charlotte, NC	4.4%

Note: This table reports selected statistics from a sample of the 50 largest commuting zones (CZs) according to their populations in the 2000 Census. The columns report the percentage of children whose family income is in the top quintile of the national distribution of child family income conditional on having parent family income in the bottom quintile of the parental national income distribution—these probabilities are taken from Online Data Table VI of Chetty et al., 2014a.

Source: Chetty et al., 2014a.

that much of the variation in upward mobility across areas may be driven by a causal effect of the local environment rather than differences in the characteristics of the people who live in different cities. Place matters in enabling intergenerational mobility. Hence it may be effective to tackle social mobility at the community level. If we can make every city in America have mobility rates like San Jose or Salt Lake City, the United States would become one of the most upwardly mobile countries in the world.

Correlates of Spatial Variation

What drives the variation in social mobility across areas? To answer this question, we begin by noting that the spatial pattern in gradients of college attendance and teenage birth rates with respect to parent income is very similar to the spatial pattern in intergenerational income mobility. The fact that much of the spatial variation in children's outcomes emerges before they enter the labor market suggests that the differences in mobility are driven by factors that affect children while they are growing up.

We explore such factors by correlating the spatial variation in mobility with observable characteristics. We begin by showing that upward income mobility is significantly lower in areas with larger African-American populations. However, white individuals in areas with large African-American populations also have lower rates of upward mobility, implying that racial shares matter at the community (rather than individual) level. One mechanism for such a community-level effect of race is segregation. Areas with larger black populations tend to be more segregated by income and race, which could affect both white and black low-income individuals adversely. Indeed, we find a strong negative correlation between standard measures of racial and income segregation and upward mobility. Moreover, we also find that upward mobility is higher in cities with less sprawl, as measured by commute times to work. These findings lead us to identify segregation as the first of five major factors that are strongly correlated with mobility.

The second factor we explore is income inequality. CZs with larger Gini coefficients have less upward mobility, consistent with the "Great Gatsby curve" documented across countries.[7] In contrast, top 1 percent income shares are not highly correlated with intergenerational mobility both across CZs within the United States and across countries. Although one cannot draw definitive conclusions from such correlations, they suggest that the factors that erode the middle class hamper intergenerational mobility more than the factors that lead to income growth in the upper tail.

Third, proxies for the quality of the K–12 school system are also correlated with mobility. Areas with higher test scores (controlling for income levels), lower dropout rates, and smaller class sizes have higher rates of upward mobility. In addition, areas with higher local tax rates, which are predominantly used to finance public schools, have higher rates of mobility.

Fourth, social capital indices[8]—which are proxies for the strength of social networks and community involvement in an area—are very strongly correlated with mobility. For instance, areas of high upward mobility tend to have higher fractions

of religious individuals and greater participation in local civic organizations.

Finally, the strongest predictors of upward mobility are measures of family structure, such as the fraction of single parents in the area. As with race, parents' marital status does not matter purely through its effects at the individual level. Children of married parents also have higher rates of upward mobility if they live in communities with fewer single parents.

We find modest correlations between upward mobility and local tax and government expenditure policies, and no systematic correlation between mobility and local labor market conditions, rates of migration, or access to higher education.

We caution that all of the findings in this study are correlational and cannot be interpreted as causal effects. For instance, areas with high rates of segregation may also have other characteristics that could be the root cause driving the differences in children's outcomes. What is clear from this research is that there is substantial variation in the United States in the prospects for escaping poverty. Understanding the properties of the highest-mobility areas—and how we can improve mobility in areas that currently have lower rates of mobility—is an important question for future research that we and other social scientists are exploring. To facilitate this ongoing work, we have posted the mobility statistics and other correlates used in the study on the project website. ■

NOTES

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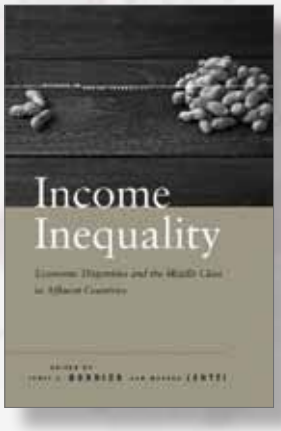

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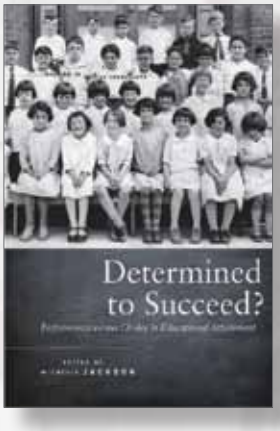

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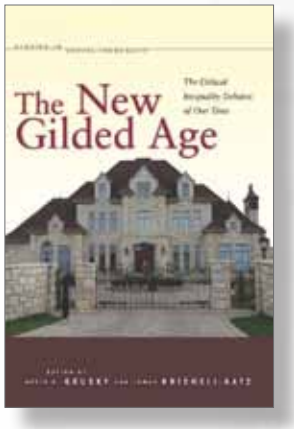

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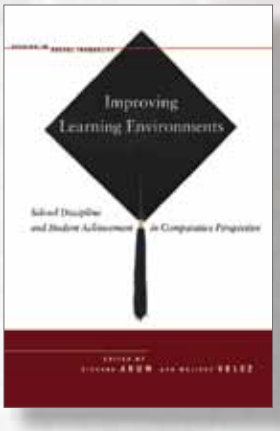

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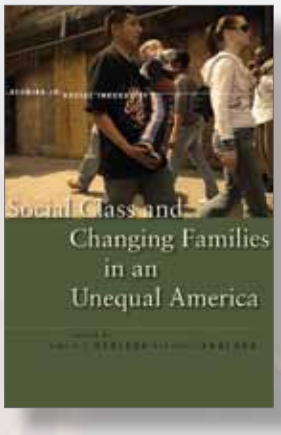

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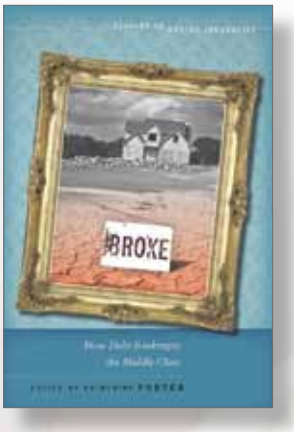

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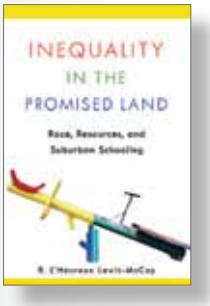

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