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STATE *of the* UNION

The Poverty and Inequality Report

2016

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THE POVERTY AND INEQUALITY REPORT

The Stanford Center on Poverty and Inequality

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AND CHARLES E. 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 third annual report examining the "state of the union" on poverty, inequality, and labor market outcomes.

The purpose of establishing this annual series of reports is to ensure that critical facts on poverty and inequality enjoy the same visibility as other indicators of the country's health. There are of course all manner of analyses 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 these and other domains and thus allows for a comprehensive assessment of where the country stands.

In prior reports, we have provided this comprehensive assessment by (a) examining the takeoff in U.S. income inequality and other long-term trends in U.S. poverty, inequality, and labor market outcomes (2014 State of the Union), and (b) examining the redistribution, labor market, and economic mobility profiles of the 50 U.S. states (2015 State of the Union). For our 2016 report, we are presenting a cross-national analysis, as doing so allows us to revisit often-parochial debates about U.S. poverty and inequality from an especially revealing comparative standpoint. The key questions in play are accordingly straightforward: Is the U.S. truly an outlier when it comes to poverty and inequality outcomes? Is it instead a standard-issue "liberal regime" with outcomes that are roughly similar to those of other liberal welfare regimes? Are there particular domains in which the U.S. stands out as especially equal or unequal?

For each of the nine domains examined here, some of the world's leading experts 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 indicators used to characterize each country's poverty and inequality profile, and we have also provided the mean, minimum, and maximum for each indicator. This table neither includes all the indicators or all the countries examined in the chapters themselves. In each of the domains, the authors

were asked to exploit the best available data, and there is accordingly some variability across chapters in the countries covered. For the purposes of this summary, we have selected a core set of countries for which a relatively wide range of indicators are available, thus allowing us to effect a broad summary comparison.

As a further summary of our results, Table 2 ranks each country within each of the six domains in Table 1, with this domain-specific ranking computed by averaging a country's ranking across the indicators comprising a domain. We have also provided the overall ranking of each country by averaging across the domain-specific rankings. In Tables 3 and 4, an analogous set of results is presented for a wider set of countries, results that are based on the restricted subset of indicators that is available when cross-national coverage is broadened. It bears noting that some of the countries represented in Tables 3 and 4 are substantially less well-off than is the U.S. (e.g., Czech Republic, Estonia, Greece, Italy, Poland, Slovak Republic, Slovenia, Spain).

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 some of the most important ones.

TABLE 1. Poverty and Inequality in 10 Well-Off Countries, 2010

Domain	Measure	Mean	Lowest		Highest		U.S. (rank)	
Labor Markets	Prime-Age Employment (percent employed)	78.1	68.9	(ES)	84.8	(DE)	74.6	(8)
	Men	84.2	75.7	(ES)	90.6	(DE)	80.1	(9)
	Women	72.2	60.6	(IT)	80.0	(DE)	69.2	(8)
Poverty	Market Income Poverty w/ Relative Threshold (percent < threshold)	34.9	29.1	(AU)	41.2	(FR)	31.2	(2)
	Disposable Income Poverty w/ Relative Threshold (percent < threshold)	11.4	7.0	(NO)	16.2	(US)	16.2	(10)
	Market Income Poverty w/ Absolute Threshold (percent < threshold)	33.5	25.8	(AU)	42.2	(ES)	26.1	(2)
	Disposable Income Poverty w/ Absolute Threshold (percent < threshold)	9.2	3.4	(NO)	20.3	(ES)	9.2	(8)
Safety Net	Relative Poverty Reduction (percentage points)	23.5	15.1	(US)	32.5	(FR)	15.1	(10)
	Absolute Poverty Reduction (percentage points)	24.4	16.9	(US)	32.6	(FR)	16.9	(10)
Income Inequality	Market Income Inequality (Gini)	0.49	0.41	(NO)	0.52	(FR)	0.51	(9)
	Disposable Income Inequality (Gini)	0.32	0.25	(NO)	0.39	(US)	0.39	(10)
Wealth Inequality	Top Decile's Share of National Wealth (percent)	51.2	43.5	(ES)	77.2	(US)	77.2	(10)
	Top Percentile's Share of National Wealth (percent)	19.0	12.4	(FI)	41.8	(US)	41.8	(10)
Economic Mobility	Intergenerational Earnings Elasticity	0.35	0.17	(NO)	0.50	(IT, UK)	0.47	(8)

Note: See the relevant report chapters for a description of sources and operationalizations. The 10 countries are: AU (Australia), CA (Canada), DE (Germany), ES (Spain), FI (Finland), FR (France), IT (Italy), NO (Norway), UK (United Kingdom), and US (United States). In this and all subsequent tables, the labor market and safety net indicators are ranked from high (1) to low (10), while all other indicators are ranked from low (1) to high (10).

Conclusion #1: There is substantial cross-national variation in poverty and inequality.

It may be unsurprising that countries differ substantially in their poverty, inequality, and labor market outcomes. But the extent of this variability *is* perhaps surprising. The simple conclusion: When the stork drops a newborn child into his or her new home, the location of that drop has profound implications for the amount of inequality the child will see and experience. The top percentile's share of national wealth ranges, for example, from a low of 12.4 percent in Finland to a high of 41.8 percent in the U.S. (see Table 1). The rate of disposable income poverty, when measured in relative terms, ranges from a low of 7.0 percent in Norway to a high of 16.2 percent in the U.S. The prime-age employment rate ranges from a low of 68.9 percent in Spain to a high of 84.8 percent in Germany. These results make it clear that, even among the relatively rich countries of Table 1, there are fundamental differences in the type of poverty and inequality regimes that have been established.

This is not to gainsay the equally important point, as stressed in last year's State of the Union report, that there is also much variability in poverty and inequality regimes *within* the U.S. 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 rather more variability within the U.S.[1]

Conclusion #2: The U.S. is an outlier.

The first conclusion coming out of Table 1, then, is that one finds vastly different poverty and inequality profiles even among the well-off countries. We are of course especially interested in the position of the U.S. within this wide distribution of profiles. Is the U.S., as many have surmised, indeed an outlier among the well-off countries? Is it even an outlier when one considers countries that are less well-off?

The answers to these questions are likely disappointing for U.S. partisans. As shown in Table 2, the U.S. has the lowest overall ranking among our 10 well-off countries, a result that arises in part because it brings up the rear of the pack in three of the six domains covered here (safety net, income inequality, wealth inequality). Even when the comparison set is expanded to include the less well-off countries, the U.S. still ranks a dismal 18th (out of 21 countries), with only Spain, Estonia, and Greece scoring worse (see Table 4).

It is of course well-known that the liberal welfare regimes found in Anglophone countries (i.e., Australia, Canada, United Kingdom, U.S.) are inequality-producing machines. Can we

TABLE 2. Rankings for 10 Well-Off Countries

Country	Labor Markets	Poverty	Safety Net	Income Inequality	Wealth Inequality	Economic Mobility	Overall
Australia (AU)	5	2	9	4	2	4	3
Canada (CA)	3	4	8	3	6	3	4
Finland (FI)	7	3	3	2	1	2	1
France (FR)	2	7	1	6	7 (tie)	7	6
Germany (DE)	1	8	2	5	9	5	5
Italy (IT)	9	9	5	7	4	9 (tie)	8
Norway (NO)	4	1	4	1	7 (tie)	1	2
Spain (ES)	10	10	7	8	3	6	9
United Kingdom (UK)	6	6	6	9	5	9 (tie)	7
United States (US)	8	5	10	10	10	8	10

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

understand the U.S. profile as simply the expected pro-file of an Anglophone liberal welfare economy? The simple answer: No. As Tables 1 and 2 make clear, the U.S. occu-pies an extreme position even relative to the four Anglophone countries, with the implication that the U.S. is a liberal regime "on steroids." Although the United Kingdom has a poverty and inequality profile that, among the Anglophone countries, comes closest to that of the U.S., even relative to this bench-mark the U.S. has a distinctively anemic safety net and a distinctively unequal distribution of wealth (see Table 2).

It is noteworthy that the U.S. performs poorly in domains that have historically been regarded as its strengths. Within the labor market domain, it has long been argued that the U.S. is a great "jobs machine," indeed the distinctive benefit of its flexible and "unregulated" labor market was supposed to be the jobs that such deregulation delivered. Where, then, are all the jobs? As shown in Table 1, the U.S. ranks eighth in prime-age employment among women (with only Italy and Spain faring worse) and ninth in prime-age employment among men

(with only Spain faring worse). The "highly regulated" labor markets of Germany, Denmark, or Norway would appear, by contrast, to be the real job-delivering machines.

The U.S. likewise fails to deliver on its long-standing com-mitment to running a high-mobility regime. The stylized story here has long been that, however unequal its income distribu-tion may be, the U.S. at least runs a fair and open competition in which everyone has a legitimate shot at getting ahead. The data presented in Ch. 7 indicate that in fact the birth lottery matters *more* in the U.S. than in most well-off countries. The intergenerational earnings elasticity, which speaks to the pay-off that accrues to being born into higher-earning families, is substantially larger in the U.S. than in many countries that are not routinely featured as the "land of opportunity."

Conclusion #3: There is nonetheless some good news.
This is not to suggest that the U.S. performs equally poorly in all domains. Although there is clearly much that is disap-pointing in this report, the poverty data also point to a real

TABLE 3. Selected Poverty and Inequality Measures for 21 Countries, 2010

Domain	Measure	Mean	Lowest		Highest		U.S. (rank)	
Labor Markets	Prime-Age Employment (percent employed)	77.8	63.6	(IE)	84.8	(DE)	74.6	(17)
	Men	83.3	67.9	(IE)	90.6	(DE)	80.1	(17)
	Women	72.4	56.1	(GR)	80.0	(DE)	69.2	(17)
Poverty	Market Income Poverty w/ Relative Threshold (percent < threshold)	33.9	22.9	(IS)	43.6	(IE)	31.2	(5)
	Disposable Income Poverty w/ Relative Threshold (percent < threshold)	9.7	4.8	(NL)	16.2	(US)	16.2	(21)
	Market Income Poverty w/ Absolute Threshold (percent < threshold)	35.8	19.9	(IS)	59.0	(PL)	26.1	(4)
	Disposable Income Poverty w/ Absolute Threshold (percent < threshold)	12.9	1.5	(LU)	44.1	(EE)	9.2	(13)
Safety Net	Relative Poverty Reduction (percentage points)	24.3	15.1	(US)	34.3	(IE)	15.1	(21)
	Absolute Poverty Reduction (percentage points)	22.9	7.0	(EE)	34.7	(IE)	16.9	(19)
Income Inequality	Market Income Inequality (Gini)	0.48	0.40	(IS)	0.58	(IE)	0.51	(18)
	Disposable Income Inequality (Gini)	0.30	0.25	(DK)	0.39	(US)	0.39	(21)

Note: See the relevant report chapters for a description of sources and operationalizations. The countries appearing in this table are: AU (Australia), CA (Canada), CZ (Czech Republic), DK (Denmark), EE (Estonia), FI (Finland), FR (France), DE (Germany), GR (Greece), IS (Iceland), IE (Ireland), IT (Italy), LU (Luxembourg), NL (Netherlands), NO (Norway), PL (Poland), SK (Slovak Republic), SI (Slovenia), ES (Spain), UK (United Kingdom), and US (United States).

opportunity that could be exploited. In understanding the U.S. poverty data, the usual starting point is of course that the rate of disposable-income poverty, which is the rate that people actually experience after taxes and transfers play out, does *not* cast the U.S. in a very favorable light. The absolute poverty rate for disposable income is higher in the U.S. than in all but two well-off countries (i.e., Spain, Italy). This result, which is discussed at length in Chapter 2, typically provokes much hand-wringing among scholars of U.S. poverty. The good news, however, is that the high U.S. rate is attributable to a very anemic safety net rather than to problems with the market itself. When market income is instead used to calculate the absolute poverty rate, the U.S. in fact has the second *lowest* rate (among the 10 well-off countries in Table 1), with only Australia having a yet lower rate. Because the weak U.S. safety net fails to reduce the market rate by all that much, the U.S. ends up with a disposable-income rate that is very high.

This is a silver-lining result. It means that, at least when it comes to poverty, market performance is arguably not the most important U.S. problem. The market is in fact delivering adequately (at least by international standards), and the distinctively U.S. problem is an underperforming safety net. Why is this good news? It is good news because in principle it is much easier to ramp up the safety net than to revamp the economy and labor market in ways that deliver higher market incomes. If you have to choose your problem, it is far better in this sense to have a political problem (i.e., an underperforming safety net) than an economic one (i.e., an underperforming labor market). Although no one should underestimate the magnitude of the U.S. political problem, it is encouraging that the requisite reforms are tractable and incremental and hence conceivably ones that many Americans would find attractive. We need not, for example, install a safety net of social democratic proportions. Even if the U.S. safety net were only ramped up to the standard of other liberal economies (especially the United Kingdom), much headway would be made in reducing poverty.

TABLE 4. Rankings for 21 Countries

Country	Labor Markets	Poverty	Safety Net	Income Inequality	Overall
Australia (AU)	10	6	18	11	13
Canada (CA)	6	8	15	9	9 (tie)
Czech Republic (CZ)	7	11	16	6	11
Denmark (DK)	13	5	4	5	4
Estonia (EE)	16	20	21	15	20
Finland (FI)	15	7	6	8	8
France (FR)	5	12	2	14	7
Germany (DE)	1	15	3	12	6
Greece (GR)	20	18	14	21	21
Iceland (IS)	3	1	19	1	2 (tie)
Ireland (IE)	21	16	1	19	15 (tie)
Italy (IT)	18	17	9	16	17
Luxembourg (LU)	4	2	11	13	5
Netherlands (NL)	2	3	5	4	1
Norway (NO)	9	4	8	3	2 (tie)
Poland (PL)	14	21	12	10	15 (tie)
Slovak Republic (SK)	8	14	17	2	12
Slovenia (SI)	11	13	7	7	9 (tie)
Spain (ES)	19	19	13	17	19
United Kingdom (UK)	12	10	10	18	14
United States (US)	17	9	20	20	18

Note: The ranks presented here were secured by (a) converting the scores on the indicators in Table 3 to country rankings, (b) averaging across the rankings comprising each domain and converting these averages to domain-specific rankings, and (c) averaging across these domain-specific rankings to produce an overall country ranking.

Why do all bad things come together?

Despite the foregoing silver lining, one has to be immensely worried that the U.S. has assembled a largely negative bundle of outcomes, indeed the results of Tables 2 and 4 suggest that "all bad things" come together in the U.S. The U.S. ranks dead last in income and wealth inequality (among the 10 relatively rich countries of Table 2); its safety net is likewise dead last when it comes to the core task of poverty relief; the prime-age employment rate for U.S. men, 80.1 percent, is only barely higher than Spain's dead-last rate of 75.7 percent; and our intergenerational elasticity is the eighth largest (among the 10 relatively rich countries of Table 2) and thus starkly at variance with our reputation as the land of opportunity. Why, it might be asked, do "all bad things" come together in this way?

There are two complementary answers to this question. The first is that, by virtue of running the consummate liberal welfare regime, the U.S. has chosen a set of institutions and commitments that are tailor-made for producing just this constellation of outcomes (see Figure 1). The U.S. tends to default, for example, to the presumption that grossly unequal market outcomes are the result of competitive processes, thus allowing rent-based outcomes at the top (e.g., excessive CEO pay) to flourish unchallenged.[2] Likewise, because market outcomes are viewed as the legitimate outcome of competitive processes, the U.S. is loath to engage in too much "market-distorting" and incentive-

destroying redistribution. This commitment accounts, for example, for our famously anemic safety net and ongoing political efforts to render it yet more anemic. Finally, because liberalism supports the relentless commodification of everything (e.g., health care, schooling, neighborhood amenities), the poor are not only disadvantaged because they have less money but also because money is increasingly needed to buy goods, services, and even opportunities for their children. In a deeply commodified regime, parents are left to *purchase* high-quality childcare, high-quality primary and secondary schooling (if only by moving into expensive neighborhoods), and high-quality college training, all of which means that opportunity itself has been commodified. But it is not just opportunity that has been commodified. This commitment to commodification also leads to unusually large health disparities (via, for example, the "sale" of health), unusually large income-based disparities in test scores, and many of the other results featured in this report.

The U.S. has, then, a long list of "bad" outcomes because it has wholeheartedly embraced neoliberal institutions that are tailor-made for producing such outcomes and then legitimating them as the invisible hand at work. This institutionalist account, as convincing as it may be, is nonetheless not a full explanation of our poverty and inequality profile. It is very likely that quite powerful feedback loops are also in play (see Figure 2). The following is a simple example of how inequality

FIGURE 1. Stylized Representation of Institutional Account

Liberal Welfare Regime
Regulation and Institutional Reform Delegitimated
Redistribution Delegitimated
Commodification Supported

Extreme Residential Segregation

Large Barriers to Economic Inclusion

Extreme Health Disparities

Low Prime-Age Employment
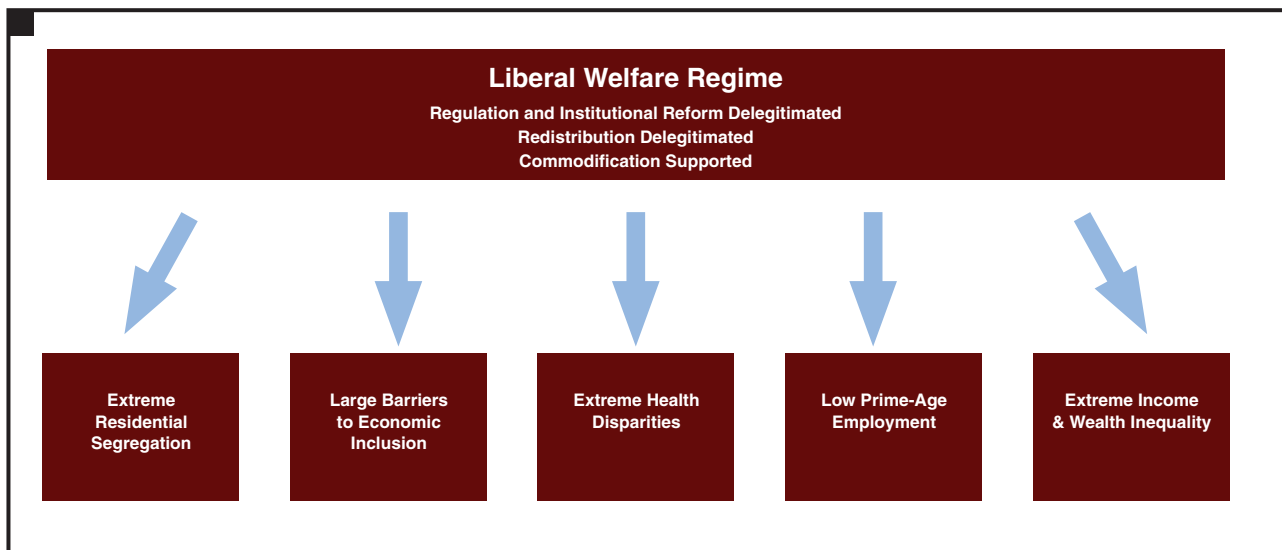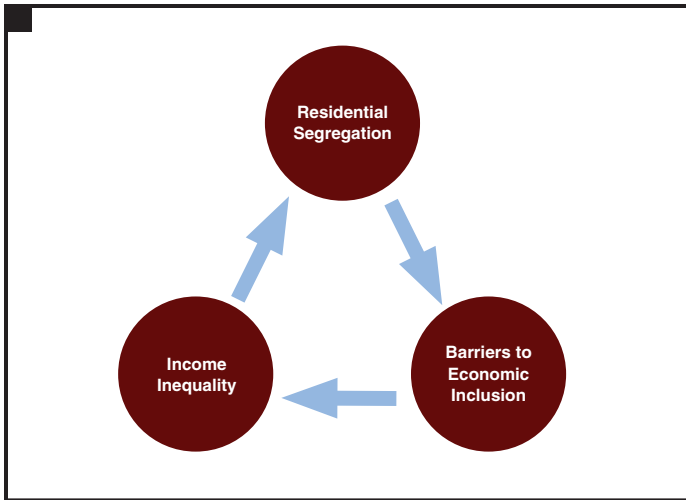
Extreme Income & Wealth Inequality

FIGURE 2. Illustrative Feedback Loop

may be self-reproducing: The extreme economic segregation of the U.S. implies that (a) poor children are likely to grow up in poor neighborhoods with relatively poor public schooling, (b) the resulting reduction in demand for college schooling protects well-off children from competition "from below" and accordingly raises the return to schooling, and (c) the associated increase in income inequality then allows for a further ramp-up in economic segregation. This stylized example of a

feedback loop, which of course rests on a host of strong (and unsubstantiated) assumptions, is but one of many possible interactions between different types of inequality. If at least *some* of these feedback loops are in operation, we would expect the many different types of inequality to come into alignment at high levels and to continue to increase.

This account, if on the mark, is worrying because it suggests a dynamic system that is partly beyond our control. In the illustrative feedback loop presented above, it is not as if ever-increasing economic segregation proceeds from some popular commitment to the virtues of running a high-segregation society. It is instead simply the unintended result of forces that, once set in motion, take on a life of their own. The purpose of this report may be understood in this sense as an attempt to wrest back some amount of control over our poverty and inequality profile. If there is indeed popular support for the U.S. profile revealed in this report, then of course the case for intervening is weak. If, however, there is real and abiding public sentiment for change, then it becomes a matter of interceding at some key juncture in the feedback loop and hence turning it against itself. The unappreciated virtue of feedback loops is that, although they typically take us in unintended directions, they also contain within them the engine for converting a destructive loop into a benign one and thus reversing course. ∎

NOTES

1. 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.

2. There is of course much debate about whether CEO pay in the U.S. is indeed a case of rent extraction (see, e.g., Saez, Emmanuel. 2013. "The Case for Taxing Away Illicit Inequality." *Pathways Magazine*. https://web.stanford.edu/group/scspi/_media/pdf/pathways/spring_2013/Pathways_Spring_2013_Grusky_Saez.pdf).

LABOR MARKETS

The Stanford Center on Poverty and Inequality

BY MICHAEL HOUT

KEY FINDINGS

• The current prime-age employment rate in the United States, 84 percent for men and 70 percent for women (in November 2015), is lower than that of peer countries in Europe (i.e., France, the United Kingdom, and Germany). Relative to the full set of 22 well-off countries in the LIS, the U.S. ranks 16th in men's prime-age employment and 18th in women's.

• The prime-age employment rate in the U.S. was hit especially hard by the Great Recession. The U.S. had the sixth largest decline in prime-age employment between 2004 and 2010 among the 22 countries, with only Ireland, Hungary, Greece, Spain, and Iceland experiencing bigger declines.

• The prime-age employment rate in the U.S. still languishes well below pre-recession levels. If the current (slow) rate of improvement continues, the U.S. will likely fall into another recession before the male rate returns to its pre-recession level.

The Great Recession of 2007 to 2009 began as a financial crisis, but played out as an enduring employment crisis for American workers. 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 enters 2016 with payrolls increasing and the official unemployment rate down to 5.0 percent. But 31 percent of the unemployed have been out of work for 27 weeks or more, and the employment to population ratio is only 59 percent.

These are big problems, but they might nonetheless be understood as the generic employment problems of all well-off mature economies. The simple question that we accordingly take on here: Is the U.S. facing *special* employment problems? Is there, in other words, "employment exceptionalism" in the U.S.? Or are pretty much all well-off economies facing employment problems of this magnitude?

We address this question by focusing exclusively on the employment to population ratio of 25-to-54-year-old people. This is the prime age range for labor force participation: Those within it are old enough to have completed schooling but are mostly too young to retire. 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 become discouraged and stop looking for a job. The unemployment rate includes only people who were looking for work in the month of the employment survey; excluding people who have stopped looking makes the economy look better than it is. As a recovery starts, those people start looking for work again, distorting the unemployment rate in the opposite way—the economy looks worse until the labor market stabilizes again. The prime-age employment ratio overcomes this "discouraged worker" problem by keeping tabs on everyone whether they are looking for work or not.

Although we are mainly interested in how the U.S. fares comparatively, we will start off with a brief review of the U.S. case alone, focusing on recent trends in prime-age employment in the U.S. We then use the LIS data set (formerly the Luxembourg Income Study)[1] to carry out harmonized cross-national comparisons of prime-age employment.

Historic Collapse, Very Slow Recovery

Figure 1 takes the long view of prime-age employment in the U.S. It plots the prime-age employment ratio for men and women (separately) from January 1985 to November 2015 (the most recent data), with recession months shaded gray. In January 2007, before the Great Recession, 88 percent of American men 25–54 years old were employed; at the low point three years later, 80 percent were (a decline of 8 percentage points). The

path upward from that low point has been very unsteady; by November 2015, men's prime-age employment ratio was at 84 percent, roughly halfway back to the pre-recession level.

Women's employment declined less (and more slowly), but recovered less (and more slowly too). 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 per- cent; by November 2015, it was less than halfway back. A 4 percentage-point decrease in women's employment may not seem like much, but it is the biggest decline in wom- en's employment on record (record-keeping began in 1947). Some 20th-century recessions slowed the rate of increase in women's employment, but none reduced it by more than 1 percentage point.[2] The market for women's labor in the 21st century has been very different, in good times and bad, from the corresponding market in the 20th century. The highest prime-age employment ratio for women ever recorded was 75 percent in April 2000; it slipped to 74 percent by the end of 2000 and has been between 69 and 73 percent ever since.

In an earlier report with Erin Cumberworth,[3] 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 regression has no substantive content and should not be considered a forecast or predic- tion about the future. But it assists in gauging whether the

economy is on a path that might eventually lead back to pre- recession employment levels. For men, a simple straight line moving upward from the end of the recession through the end of 2014 describes the trend well. The slope of the trend line is 0.05 percentage points per month. At that pace, the employ- ment to population ratio increased 1 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- point loss during and after the Great Recession. Because the U.S. economy has never gone 12.5 years without a recession, we concluded that another recession was likely to reduce men's prime-age employment again before this slow recov- ery restored the employment to pre-recession levels. Another year's employment data do not suggest that our projections were off; men's prime-age employment ratio increased only 0.32 in 12 months, a slower pace than in the five years before.

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 that of men. Women's prime-age employment ratio continued downward slightly for about a year after the end of the recession before beginning to ever- so-slowly recover. If the curve is real and not just statistical noise, the shape of the curve implies that women's employ- ment might be back to pre-recession levels one year from now, in February 2017.

Differences among Countries

In the U.S., employment trends during and after the Great Recession reflected, in part, economic policies formulated to offset the financial crisis and its effects. The 2009 stimulus package—officially, the American Recovery and Reinvest- ment Act—appropriated roughly $800 billion for federal programs designed to offset decreased private spending due to the crisis. The Federal Reserve Bank used "quantitative easing" to stimulate borrowing. Other countries had different responses, depending on the threat or reality of bank fail- ures, the banking laws in their country, labor laws, and how much public services depended on money borrowed abroad. These differences in the policy response interacted with (1) the potentially idiosyncratic economic conditions facing each country, and (2) the labor market and safety net institutions at play in each country.

Figure 2 compares the prime-age employment ratios (PERs) of men and women in 22 European or English-speaking coun- tries before and during the Great Recession. As noted above, the data come from the LIS, which provides harmonized versions of nationally representative data sets with income, wealth, employment, and demographic data. The figure

FIGURE 1. Prime-age Employment Ratio by Month and Gender, January 1985–November 2015
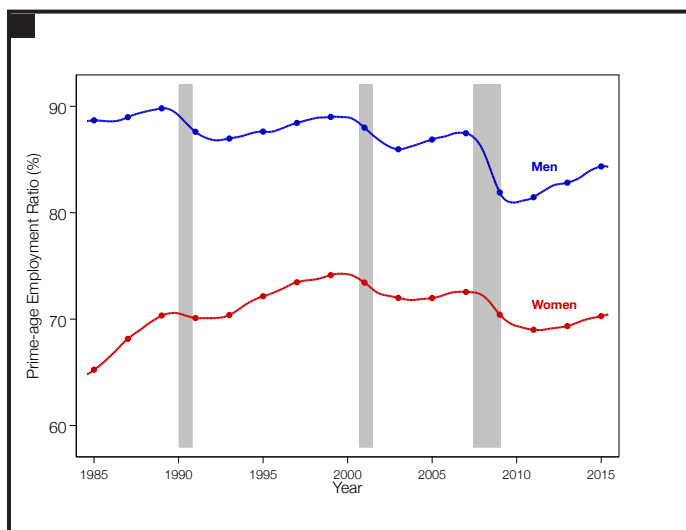
Note: The prime-age employment ratio is the number of employed persons to the total population, restricted to persons 25 to 54 years old. Source data were seasonally adjusted by the Bureau of Labor Statistics (BLS); the author then used locally estimated regression (lowess) to smooth the BLS series (bandwith = 0.075).

shows four PERs for each country: women's PER circa 2004 (red circle with a white center), women's PER in 2010 (solid red circle), men's PER circa 2004 (blue circle with a white center), and men's PER in 2010 (solid blue circle). Countries are ranked from highest (Germany) to lowest (Ireland) on men's PER in 2010.

The first result of interest is that the U.S. ranked 14th in women's PER and 15th in men's PER even before the recession (out of 22 countries). It follows that the U.S. had substantial employment problems, at least relative to the standard for well-off countries, well before the recession hit. Moreover, when compared to its true "peer countries" (i.e., the United Kingdom, Germany, France), the U.S. ranks dead last for men's and women's PER alike.

If the U.S. started off with already-low PERs, might it perhaps have experienced a less-substantial recession-induced drop

in PERs? It might be hypothesized, for example, that U.S. firms were already running "lean and mean," meaning that there was less room for further cutting with the recession's onset. This was, however, clearly not the case. As Figure 2 shows, men's employment fell between 2004 and 2010 in 18 of the 22 countries, but the fall in the U.S.—9 percentage points for men's PER and 4 for women's PER—was much larger than the average.

Some nations fared much worse: The Euro-crisis countries of Ireland, Hungary, Greece, and Spain saw the biggest declines in this key indicator. These declines reflect, to some extent, the particular vulnerabilities of these economies to the targeted effects of the recession. Ireland, for example, had one of Europe's biggest housing bubbles. After Allied Irish Bank failed and others retrenched, many families owed more than their house was worth. Private spending plummeted, and the government could not borrow to keep up demand because it took on the failed banks' debts. As a consequence, the job market collapsed. Men's PER fell 15 percentage points; women's PER fell 5 percentage points.

Although Hungary, by contrast, had neither a housing bubble nor a bank failure, it depended on exports and loans from Germany. When both declined, men's PER dropped 13 percentage points and women's PER dropped 5 percentage points. Greece had a high percentage in public employment and a low rate of tax collection. When foreign creditors insisted on austerity, the government nearly defaulted on its loans. Men's PER fell 15 percentage points, and women's PER fell 4 percentage points. Finally, Spain was fiscally balanced before the crisis, but its labor market was weak. As domestic spending and exports fell, men's PER fell by 13 percentage points. Women's PER was virtually unchanged at one of Europe's lowest rates, effectively halting Spain's process of catching up with the rest of Europe in women's labor force participation.

The more telling contrasts are arguably with the "peer economies" of the United Kingdom, France, and Germany. Relative to this standard, U.S. employment fared the worst. In the United Kingdom and France, the men's PER fell only 3 percentage points, whereas it fell 9 percentage points in the U.S. At the same time, women's PER was unchanged in the United Kingdom and actually rose 2 points in France, whereas it fell 4 percentage points in the U.S. Germany fared best: Men's PER rose 3 points; women's PER rose 5 points. Finally, employment dropped very little in the Scandinavian countries, and it increased slightly in the Netherlands, Australia, and Italy.

FIGURE 2. Prime-age Employment Ratio by Country, Circa 2004 and in 2010
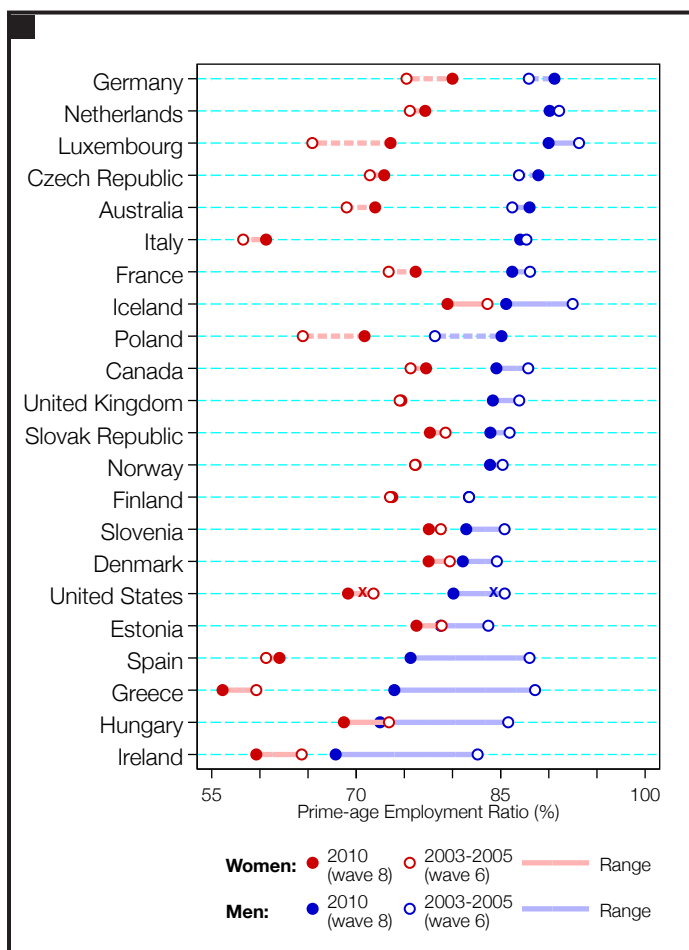
Note: X's show most recent data for the U.S. Hungary's wave 8 data were collected in 2009. Dashed lines indicate increases over time.

The upshot of the data in Figure 2 is that the U.S. labor market fell more than labor markets in other mature economies. To be sure, employment in the U.S. did not collapse as it did in the special cases of Ireland, Hungary, Greece, and Spain, but it certainly performed worse than its peer countries (the United Kingdom, France, Germany).

Why was the U.S. so hard hit? There are two reasons: First, because the Great Recession was driven by a financial crisis and a housing bubble, it was bound to hit the U.S. harder than countries that relied less on these two sectors. Second, the U.S. protects workers against income loss through unemployment insurance, but it has permissive laws on layoffs. Employers are freer to lay off workers than they are elsewhere. As Figures 1 and 2 show, the U.S. not only took a bigger employment hit than other nations, it has not fully recovered by the end of 2015 (the X's in Figure 2 mark the 2015 PER for the U.S.).

The LIS cannot yet be used to carry out a full comparison of contemporary PERs. Only a handful of "wave 9" data sets, which are needed to bring the time series up to the present day, are available in the LIS. To fill in the recent experiences, I have supplemented the LIS data with official reports countries make to the Organization for Economic Cooperation and Development (OECD).[4] The LIS and OECD define PERs the same way, but the results do not align perfectly in all countries, so I report some of each in Figure 3. It shows the PERs by gender based on LIS data up until 2005 and based on OECD data from 2000 to 2014.

The news from the OECD data is not good. These data make even clearer how the U.S. stands out among other mature economies. Here again, we see that job loss was worse in the U.S. than in the United Kingdom, France, and Germany, as noted above. The U.S. ranked 14th in women's PER and 15th in men's PER before the recession (out of 22 countries), but after the dust settled and the recovery occurred, the U.S.

FIGURE 3. Prime-Age Employment Ratio by Year, Gender, and Country, 1990–2014
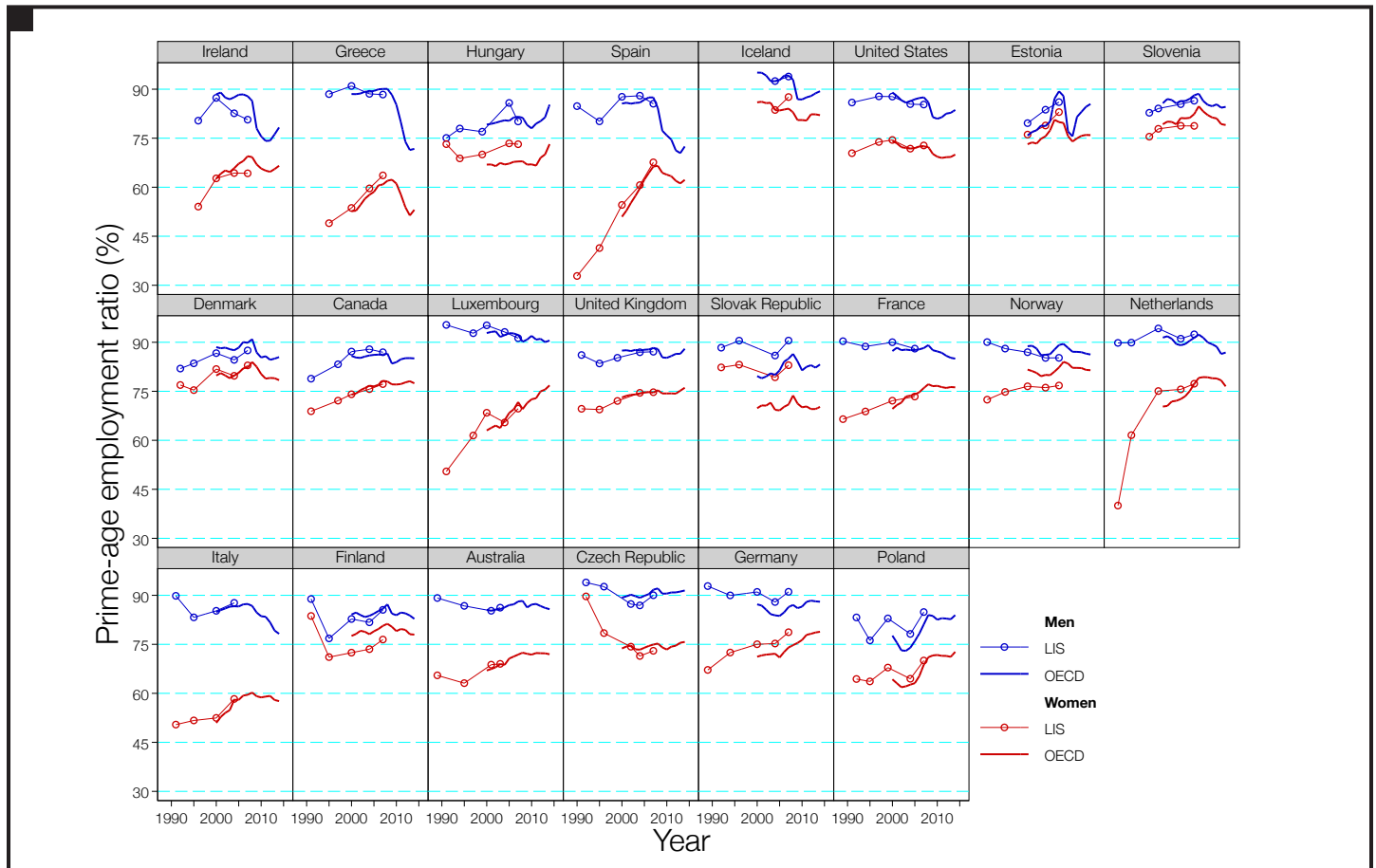
Note: Circles show LIS data; series that are just lines are annual OECD data.

ranked 18th in women's PER and 16th in men's PER. The only countries with a lower PER are Greece, Italy, Spain, and Ireland (for both women's and men's PER), plus Finland and the Slovak Republic (for men's PER).

We led off by asking whether the U.S. is facing special employment problems or just the standard-issue employment problems of mature economies. The answer to this question is, unfortunately, resoundingly clear: There is indeed "employment exceptionalism" in the U.S.

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. Six years later, employment has improved, but neither men nor women have regained their pre-recession employment levels.

This dismal jobs picture is not entirely unique. Vulnerable countries like Greece, Ireland, Hungary, and Spain also experienced huge job losses in the recession. But no other large economy suffered the same level of employment drop-off. The United Kingdom, France, and Canada saw much less change in employment, and Germany actually experienced an increase in employment.

Will there be a reversal in the employment fortunes of the U.S.? The key—and open—questions in this regard are whether a new job-creating invention in the U.S. will reverse recent trends, whether automation will have the job-reducing effects that even some mainstream economists now openly discuss, and whether the growing interest in public-sector jobs of "last resort" proves to have any long-run traction. ∎

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NOTES

1. Luxembourg Income Study (LIS) Database, http://www.lisdatacenter.org (multiple countries; 1990-2010). Luxembourg: LIS.

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

3. Hout, Michael, and Erin Cumberworth. 2015. "Labor Markets." *The Poverty and Inequality Report: A Special Issue of Pathways Magazine*. Stanford Center on Poverty and Inequality.

4. Organization for Economic Cooperation and Development (OECD) Database, https://data.oecd.org/emp/employment-rate-by-age-group.htm (multiple countries; 2000-2014). Employment rate by age group (indicator). doi: 10.1787/084f32c7-en.

POVERTY

The Stanford Center on Poverty and Inequality

BY JANET C. GORNICK AND MARKUS JÄNTTI

KEY FINDINGS

- Using a relative poverty standard for disposable household income, the U.S. poverty rate exceeds that reported in all of the other high-income countries in this study, with the sole exception of Israel.

- The well-known exceptionalism of American relative poverty extends only to rich countries. Most of the middle-income countries in this study report higher relative poverty rates than are seen in the United States.

- U.S. children are 30 percent more likely to live in relative poverty than is the U.S. population overall. This general pattern is not unusual. In about three-quarters of the rich countries included in this study, children's poverty risk (vis-à-vis disposable income) is higher than that of all persons.

- When we consider absolute poverty (using a poverty line based on the official U.S. threshold), American children are more likely to be poor than children in 11 of the 20 study countries. And nine of these 11 countries—all but Luxembourg and Norway—are less affluent than the U.S.

It is well-known, at least among scholars of poverty, that the U.S. has more poverty than most other high-income countries. That result has now been established in a substantial research literature based on data from LIS (formerly known as the Luxembourg Income Study), from the Organization for Economic Cooperation and Development (OECD), and from Eurostat (the statistical office of the European Union).[1] In this report, we take a closer look at that claim, drilling down and extending it in several ways. We first examine just how robust the claim is. We explore whether the U.S. still stands out as a high-poverty country (a) when a broader range of countries, even middle-income ones, are considered; (b) when poverty is defined in terms of both market income and disposable income;[2] and (c) when poverty is defined in both relative and absolute terms.

Second, we examine whether the U.S. has a distinctive system when it comes to poverty among children, a subgroup that draws our attention due to the worrisome consequences, both short- and long-term, associated with child poverty. We know that U.S. children are 30 percent more likely to live in poverty than is the U.S. population overall. Here, we ask: Is that a widespread pattern? In other words, is poverty among children disproportionately high within other countries too?

We next assess the association between poverty risk and household structure. The key question here is whether single mothers in all countries, not just the U.S., are exposed to a disproportionate risk of poverty. We thus start with the finding that, in the U.S., households headed by single mothers are nearly four times as likely to be poor as are those headed by two parents. We again ask: Is that a widespread pattern?

The risk of poverty in the U.S. is also strongly affected by educational attainment[3] and attachment to the labor market.[4] In the U.S., persons without high-school degrees are more than six times as likely to be poor as those who have completed post-secondary school, and persons with no earnings are 80 times as likely to live in poor households as are those whose earnings place them in the top two-thirds of their earnings distribution.[5] Again, we ask: Are these disparities—including the steepness of the gradients—widespread?

## Brief Remarks about Our Empirical Work

All of our results are based on microdata contained in the LIS database.[6] The first table, which includes 34 countries, pertains to households with heads of all ages. In subsequent tables (Tables 2–5), we restrict our analyses to younger households and persons. Tables 2 and 3 include households with heads below age 60, and Tables 4 and 5 include persons aged 25–59.

TABLE 1. Overall Poverty Rates in High- and Middle-Income Countries, 2010

		A	B	C	D	E	F
		50% DHI			U.S. Line		
	Income Level, 2010	Market Income (MI)	Disposable Household Income (DHI)	Poverty Reduction (MI Less DHI)	Market Income (MI)	Disposable Household Income (DHI)	Poverty Reduction (MI Less DHI)
ANGLOPHONE							
Australia	H	29.1	13.8	15.3	25.8	5.7	20.1
Canada	H	33.0	12.0	21.1	28.2	6.4	21.8
Ireland	H	43.6	9.3	34.3	43.1	8.4	34.7
United Kingdom	H	33.6	10.1	23.5	33.0	9.2	23.8
United States	H	31.2	16.2	15.1	26.1	9.2	16.9
Group average		34.1	12.3	21.8	31.2	7.8	23.5
CONTINENTAL EUROPE							
France	H	41.2	8.6	32.5	39.6	7.0	32.6
Germany	H	40.9	11.3	29.6	39.5	8.2	31.3
Luxembourg	H	31.4	5.7	25.7	22.7	1.5	21.2
Netherlands	H	31.3	4.8	26.6	30.0	3.1	26.9
Group average		36.2	7.6	28.6	32.9	5.0	28.0
EASTERN EUROPE							
Czech Republic	H	28.6	6.3	22.2	37.4	17.2	20.3
Estonia	H	34.5	11.7	22.9	51.2	44.1	7.0
Georgia	M	38.2	18.6	19.6	96.4	95.6	0.8
Hungary	H	69.9	7.0	62.9	85.6	44.8	40.8
Poland	H	36.9	9.2	27.7	59.0	40.0	19.0
Russia	M	32.0	13.1	18.9	49.6	33.1	16.5
Serbia	M	44.8	14.1	30.7	81.7	66.5	15.1
Slovak Republic	H	29.2	7.3	21.8	40.7	22.0	18.7
Slovenia	H	35.5	10.2	25.2	39.2	14.0	25.1
Group average		38.8	10.8	28.0	60.1	41.9	18.1
NORDIC EUROPE							
Denmark	H	32.3	6.1	26.2	30.7	3.2	27.5
Finland	H	32.4	7.2	25.2	30.7	4.0	26.7
Iceland	H	22.9	5.7	17.2	19.9	3.3	16.6
Norway	H	31.4	7.0	24.4	27.8	3.4	24.4
Group average		29.8	6.5	23.3	27.3	3.5	23.8
SOUTHERN EUROPE							
Greece	H	37.5	13.0	24.4	43.1	22.2	20.9
Italy	H	37.4	12.7	24.7	42.1	18.1	24.0
Spain	H	38.7	14.7	24.0	42.2	20.3	22.0
Group average		37.9	13.5	24.4	42.5	20.2	22.3
LATIN AMERICA							
Brazil	M	33.9	17.2	16.7	80.0	75.2	4.8
Colombia	M	21.5	19.7	1.8	87.4	87.5	-0.1
Mexico	M	27.1	19.8	7.3	82.2	79.0	3.2
Panama	M	28.6	22.1	6.5	73.1	70.6	2.5
Peru	M	29.4	25.2	4.2	82.2	81.4	0.8
Uruguay	M	33.5	15.2	18.3	74.3	65.9	8.4
Group average		29.0	19.9	9.1	79.9	76.6	3.3
OTHER							
Israel	H	32.7	20.2	12.5	39.9	30.5	9.4
South Africa	M	47.1	25.8	21.3	82.9	83.9	-1.0
Taiwan	H	12.3	11.7	0.6	11.7	10.9	0.8

Source: Luxembourg Income Study (LIS) Database, authors' calculations. A table of poverty rates for all countries and years in the full LIS Database is available in an online appendix to this report.

FIGURE 1. Overall Poverty Rates in High- and Middle-Income Countries, 2010
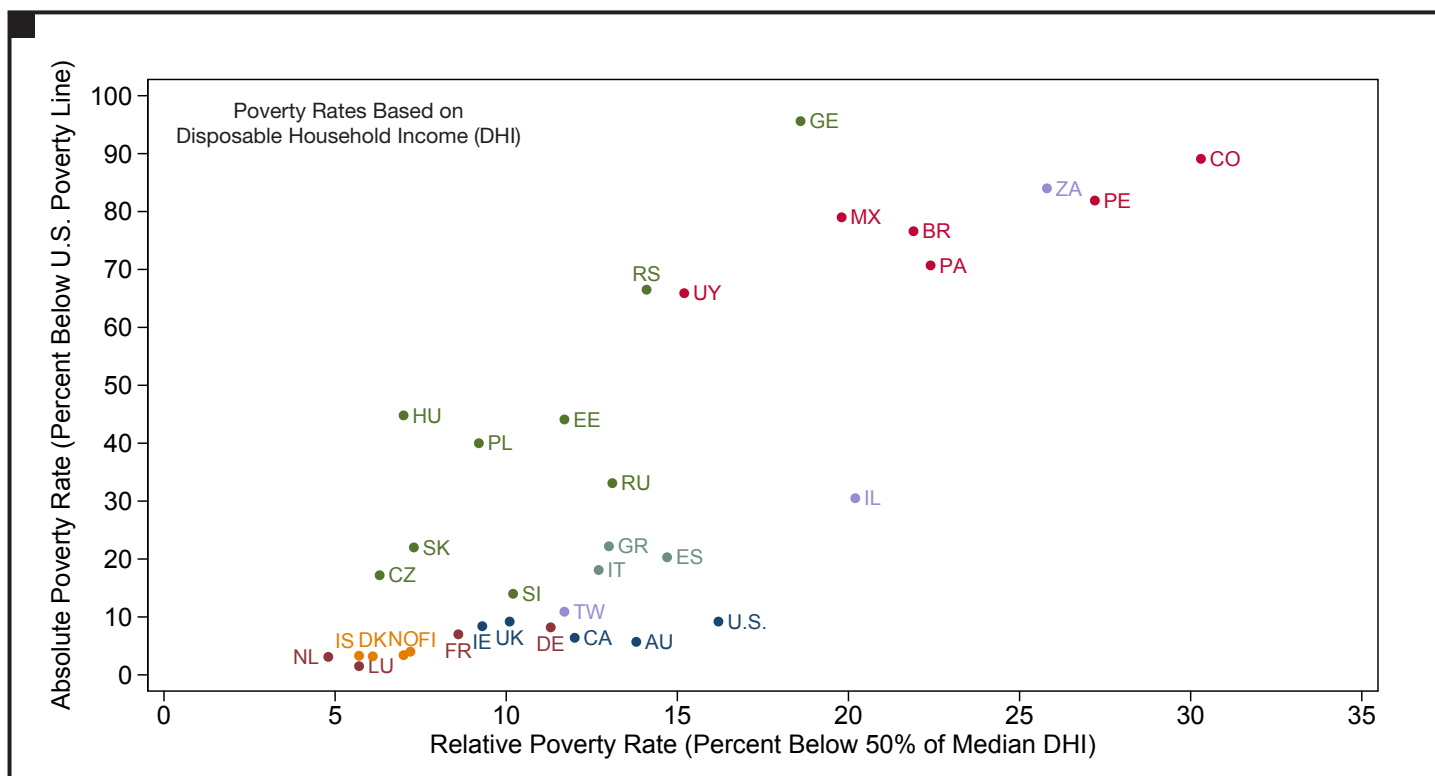
Source: Luxembourg Income Study (LIS) Database, authors' calculations.

One of our core interests is the poverty-reducing effects of taxes and transfers. We omit older households (i.e., with heads aged 60+) and persons (i.e., age 60+) in order to lay aside income support programs that primarily serve retirees; those programs have distinct logics, and a full assessment of them is outside the scope of this report.

Furthermore, in Tables 2–5, we examine a subset of the countries covered in Table 1. In these latter tables, we focus on 20 countries, selected because they are all high-income countries (and thus the most straightforward comparators for the U.S.) and because they all contain data on pre-tax market income. Having pre-tax data allows us to calculate comparable estimates of poverty reduction, capturing both taxes and transfers, across all 20 of these countries.

Throughout this report, we group countries by "regime type," drawing on a widely used social science framework that classifies countries according to social policy designs; these regimes, of course, overlap standard geographic groupings as well. We make use of these clusters—however imperfect they are—because they provide an organizing framework for assessing cross-national variation. They help us to identify empirical patterns across countries, and they bring into relief

the importance of policy configurations for poverty reduction.

The U.S. in Comparative Perspective

We begin with an overview of poverty across nearly three dozen countries, deploying standard definitions of the poverty line[7] and of country income levels (see Table 1).[8] The core question here, it may be recalled, is whether the conventional view—that the U.S. system produces high poverty rates—is robust across a more expansive range of countries and with regard to multiple poverty definitions.

Table 1 shows that, among high-income countries (marked H), U.S. poverty rates are indeed exceptionally high. When we consider disposable-income poverty in relative terms (see column B), which is the most common approach in comparative poverty studies, the U.S. poverty rate (16.2%) exceeds that reported in every other high-income country included here, with the sole exception of Israel (20.2%). The cross-national variation is substantial. In 12 of these high-income countries, poverty rates based on this measure are below 10 percent; in the Netherlands, the rate is below 5 percent.

Is the U.S. just as exceptional among a broader range of countries? The simple answer: No. Among middle-income

countries (marked M), the result is, in fact, quite different. Nearly all of the middle-income countries in this study report higher relative poverty rates than are seen in the U.S. Countries with greater relative poverty include five Latin American countries (Brazil, Colombia, Mexico, Panama, Peru), as well as Georgia and South Africa. Thus, the well-known exceptionalism of American[9] poverty pertains to rich countries; it is not a universal result. Again, the variation is not insubstantial; relative poverty in South Africa exceeds 25 percent.

When we consider columns A, B, and C together, we understand more fully what drives the high rate of U.S. poverty vis-à-vis disposable income. First, U.S. disposable income poverty (16.2%) is the ninth highest among these 34 countries. Second, in contrast, U.S. market income poverty (31.2%) is 25th highest. Third, the level of poverty reduction (15.1 percentage points) is the seventh lowest. We can thus conclude: The high disposable income poverty rate in the U.S. is driven more by meager poverty reduction than by high market poverty rates. The only countries that reduce poverty, via taxes and transfers, less than the U.S. does are four Latin American countries, Israel, and Taiwan (and, in Taiwan, little poverty reduction is needed).

What about poverty with respect to a fixed real income poverty line, often called absolute poverty? When we switch our framework to use the official U.S. poverty line as our anchor, our results shift again—and markedly. Using that U.S. line, disposable income poverty in the U.S. is 9.2 percent (see column E). The absolute poverty rate is higher in all 10 middle-income countries (not surprisingly). It is also higher in 11 other high-income countries—including all of the Eastern and Southern European countries in our analysis. At the same time, U.S. absolute poverty remains high among a core group of rich comparator countries (see Figure 1).[10] American poverty, using the U.S. line, exceeds that reported in all of the other Anglophone countries (except the UK), as well as in all of the Continental and Nordic cases. In cross-national terms, American poverty stands out—and that is true for both relative poverty and absolute poverty.

Children as a Special Case
It is well known that the rate of poverty among children is high in the U.S. We replicate this well-known result here: Among the 20 rich countries included in Table 2, the U.S. reports the highest rate of disposable income poverty among children: 21.1 percent (see column B). In general, (relative) child poverty is most prevalent in the U.S. and in the Southern European countries; it is least prevalent in the Nordic countries.

As was found in Table 1, when we shift to absolute poverty,

the U.S. falls to a middling position. In absolute terms, children are more likely to be poor in the Eastern and Southern European countries, but they are also *less* likely to be poor, compared to American children, in 11 of these 20 study countries. Nine of those 11 countries—all but Luxembourg and Norway—are less affluent than the U.S.

It is also often noted that U.S. children are at greater risk of poverty than is the American population as a whole. Indeed, vis-à-vis relative poverty, our results indicate that American children are, remarkably, 30 percent more likely to live in poverty than is the U.S. population overall (see Table 2, column H). Is this a widespread pattern? In fact, it is. In about three-quarters of the 20 rich countries included here, children's poverty risk (vis-à-vis disposable income) is higher than that of all persons.

This same result does not, however, hold for market income. In all five country groups, children's risk of living in poverty—when we consider market income (see column G)—is *less* than the risk reported in their countries more generally. Relative to overall poverty in their own countries, children are 93 percent as likely to be market-income poor (on average) in the Anglophone group, 65–68 percent in the Continental and Eastern European countries, and 56 percent in both the Nordic and Southern European clusters. That general pattern is not surprising; children live in households with adults whose main income source is the labor market (see Table 2), whereas country populations as a whole (see Table 1) include households with elderly adults who have left paid work for partial or full retirement (and who thus have little or no market income).

When we shift to disposable income poverty (see column H), the story changes dramatically. As noted, in most of these study countries, children's poverty risk is *higher* than in their countries overall. It is lower in only four countries: three Nordic countries (Denmark, Finland, and Norway) and (by a smaller margin) in the UK.

The final point to be made, as shown in column I, is that poverty reduction is much more limited for children than for persons overall (with the UK as an exception). While children are not expected to be as dependent on income augmentation by the state as are other demographic groups (such as older persons), state interventions still matter. Consider a comparison of the U.S. and the UK. The two have similar rates of market income poverty: 30.3 percent in the U.S. and 33.8 percent in the UK (see column A). But they are extremely different with respect to disposable income poverty: 21.1 percent in the U.S. compared to 9.4 percent in the UK (see column B). This country pairing tells us that, regarding child

TABLE 2. Child Poverty Rates in High-Income Countries, 2010

	A	B	C	D	E	F	G	H	I
	50% DHI			U.S. Line			Ratio of all children to all persons (Table 2 compared to Table 1)		
							50% DHI		
	Market Income (MI)	Disposable Household Income (DHI)	Poverty Reduction (MI Less DHI)	Market Income (MI)	Disposable Household Income (DHI)	Poverty Reduction (MI Less DHI)	Market Income (MI)	Disposable Household Income (DHI)	Poverty Reduction (MI Less DHI)
ANGLOPHONE									
Australia	27.8	14.4	13.4	22.8	7.0	15.8	0.96	1.04	0.88
Canada	25.6	14.3	11.2	19.1	6.9	12.2	0.77	1.20	0.53
Ireland	42.1	10.1	32.0	41.6	9.2	32.4	0.97	1.09	0.93
United Kingdom	33.8	9.4	24.4	32.8	8.1	24.8	1.01	0.93	1.04
United States	30.3	21.1	9.2	23.2	12.1	11.1	0.97	1.30	0.61
Group average	31.9	13.9	18.1	27.9	8.7	19.3	0.93	1.11	0.80
CONTINENTAL EUROPE									
France	29.1	11.5	17.7	26.8	8.8	18.0	0.71	1.33	0.54
Germany	29.2	19.1	10.1	27.2	16.4	10.8	0.71	1.69	0.34
Luxembourg	25.3	9.4	15.9	12.1	1.7	10.4	0.80	1.65	0.62
Netherlands	11.4	6.3	5.1	9.7	3.2	6.5	0.36	1.33	0.19
Group average	23.8	11.6	12.2	19.0	7.5	11.4	0.65	1.50	0.42
EASTERN EUROPE									
Czech Republic	18.3	10.6	7.7	31.5	22.9	8.6	0.64	1.67	0.35
Estonia	22.4	12.7	9.7	43.3	36.9	6.4	0.65	1.09	0.42
Poland	25.4	12.0	13.4	54.3	46.8	7.5	0.69	1.30	0.48
Slovak Republic	21.2	13.2	8.0	38.9	31.1	7.7	0.73	1.81	0.37
Group average	21.8	12.1	9.7	42.0	34.4	7.6	0.68	1.47	0.41
NORDIC EUROPE									
Denmark	14.6	4.5	10.1	12.9	2.3	10.6	0.45	0.74	0.39
Finland	16.0	3.7	12.3	14.0	1.9	12.0	0.49	0.51	0.49
Iceland	17.2	7.4	9.8	13.3	3.5	9.8	0.75	1.30	0.57
Norway	16.5	5.2	11.3	12.1	1.8	10.4	0.53	0.74	0.46
Group average	16.1	5.2	10.9	13.1	2.4	10.7	0.56	0.82	0.48
SOUTHERN EUROPE									
Greece	17.9	17.3	0.6	25.6	27.4	-1.8	0.48	1.33	0.02
Italy	21.2	19.1	2.1	27.5	25.2	2.3	0.57	1.50	0.08
Spain	24.9	20.6	4.3	30.0	27.0	3.0	0.64	1.40	0.18
Group average	21.3	19.0	2.3	27.7	26.5	1.1	0.56	1.41	0.10

Source: Luxembourg Income Study (LIS) Database, authors' calculations. Child = under age 18 living with household head under age 60.

poverty, policy matters, and it matters a lot.

Household Type Matters
Another stylized fact, widely reported in the U.S., is that persons in households headed by single mothers are especially likely to be poor. In Table 3, we see that Americans living in single mother–headed households are indeed at high risk of (disposable income) poverty—fully 36.5 percent are poor (see column B). That is the highest rate among these 20 countries.

What is driving this high poverty rate in the U.S.? Consider the market-income poverty results (see column A). Note that

there are three countries, among these 20, where market-income poverty among single mother–headed households is similar or higher than it is in the U.S. (where it is 50.1%): Ireland (70.9%), the UK (56.0%), and Luxembourg (50.6%). Yet in these three comparison cases, disposable-income poverty is substantially lower than it is in the U.S. (where it is 36.5%): Ireland (22.7%), the UK (12.3%), and Luxembourg (25.9%). These results indicate that that the impact of tax-and-transfer policy varies across national contexts, and it varies extensively.

Our results reveal that Americans in two-parent households

TABLE 3. Poverty Rates by Household Structure, 2010

	A	B	C	D	E	F	G	H	I
	Single-Mother Households			Two-Parent Households			Single-Mother Households / Two-Parent Households		
	Market Income (MI)	Disposable Household Income (DHI)	Poverty Reduction (MI Less DHI)	Market Income (MI)	Disposable Household Income (DHI)	Poverty Reduction (MI Less DHI)	Market Income (MI)	Disposable Household Income (DHI)	Poverty Reduction (MI Less DHI)
ANGLOPHONE									
Australia	46.5	22.5	24.0	13.1	6.9	6.2	3.5	3.3	3.9
Canada	40.8	26.0	14.8	14.9	7.6	7.3	2.7	3.4	2.0
Ireland	70.9	22.7	48.2	27.3	5.5	21.8	2.6	4.1	2.2
United Kingdom	56.0	12.3	43.7	17.0	6.7	10.2	3.3	1.8	4.3
United States	50.1	36.5	13.7	15.5	9.7	5.8	3.2	3.8	2.4
Group average	52.9	24.0	28.9	17.5	7.3	10.3	3.1	3.3	2.9
CONTINENTAL EUROPE									
France	45.4	20.9	24.5	18.2	7.0	11.2	2.5	3.0	2.2
Germany	47.8	28.0	19.8	10.9	5.3	5.6	4.4	5.3	3.5
Luxembourg	50.6	25.9	24.8	16.0	5.2	10.8	3.2	5.0	2.3
Netherlands	38.2	14.5	23.8	4.9	2.2	2.7	7.8	6.6	8.8
Group average	45.5	22.3	23.2	12.5	4.9	7.6	4.5	5.0	4.2
EASTERN EUROPE									
Czech Republic	33.5	22.1	11.4	9.7	5.3	4.4	3.4	4.1	2.6
Estonia	28.7	23.6	5.1	13.9	8.6	5.3	2.1	2.8	1.0
Poland	36.9	15.6	21.3	18.7	9.6	9.1	2.0	1.6	2.3
Slovak Republic	22.0	13.5	8.5	10.5	7.3	3.2	2.1	1.8	2.7
Group average	30.3	18.7	11.6	13.2	7.7	5.5	2.4	2.6	2.1
NORDIC EUROPE									
Denmark	31.7	6.8	24.9	6.7	2.1	4.5	4.8	3.2	5.5
Finland	35.3	10.3	25.0	11.4	2.5	8.9	3.1	4.2	2.8
Iceland	37.5	16.0	21.5	6.8	2.8	4.1	5.5	5.8	5.3
Norway	37.5	9.4	28.1	7.0	1.5	5.4	5.4	6.2	5.2
Group average	35.5	10.6	24.9	8.0	2.2	5.7	4.7	4.8	4.7
SOUTHERN EUROPE									
Greece	32.2	22.6	9.6	16.0	14.1	1.9	2.0	1.6	5.1
Italy	36.1	25.1	11.0	18.0	15.3	2.7	2.0	1.6	4.1
Spain	38.0	28.4	9.6	20.4	15.5	5.0	1.9	1.8	1.9
Group average	35.4	25.3	10.1	18.1	15.0	3.2	2.0	1.7	3.7

Source: Luxembourg Income Study (LIS) Database, authors' calculations. Universe restricted to households with heads below age 60.

are also at comparatively high risk of poverty (see column E)—although the U.S. outcome (9.7%) is not as exceptional as it is for single mother–headed households. Persons in two-parent households in all three Southern European countries are more likely to be poor than are their U.S. counterparts.

Overall, while the magnitudes vary across countries, we do see a somewhat universal pattern. In all 20 countries, persons in households headed by a single mother are more likely to be poor—both before and after taxes and transfers—than are persons in households headed by two parents. It is also the case that poverty reduction is always greater in single-parent households—but not extensive enough to equalize poverty rates "at the end of the day" (that is, disposable income poverty) between the two household types.

Education Matters

One's economic prospects, including the risk of being poor, are, of course, shaped by another crucial demographic factor: one's own educational attainment. In Table 4, we report poverty rates for persons (aged 25–59) with low, medium, and high levels of educational attainment.

Education systems are complex, so measuring educational attainment with perfect institutional comparability across countries is not possible. Nevertheless, nearly everywhere,

TABLE 4. Poverty Rates by Educational Attainment among Persons Aged 25–59, 2010

	A	B	C	D	E	F	G	H	I
	Low Education			Medium Education			High Education		
	Market Income (MI)	Disposable Household Income (DHI)	Poverty Reduction (MI Less DHI)	Market Income (MI)	Disposable Household Income (DHI)	Poverty Reduction (MI Less DHI)	Market Income (MI)	Disposable Household Income (DHI)	Poverty Reduction (MI Less DHI)
ANGLOPHONE									
Australia	30.1	15.0	15.1	17.3	9.4	7.9	10.0	5.9	4.1
Canada	38.2	20.6	17.6	25.1	13.8	11.3	16.1	9.3	6.8
Ireland	55.5	13.1	42.4	35.1	7.7	27.4	16.3	5.1	11.2
United Kingdom	49.2	15.5	33.7	20.9	7.6	13.3	9.5	5.8	3.7
United States	51.3	37.8	13.5	25.4	15.9	9.5	9.7	5.9	3.8
Group average	44.9	20.4	24.5	24.8	10.9	13.9	12.3	6.4	5.9
CONTINENTAL EUROPE									
France	40.9	13.6	27.2	21.5	7.5	14.1	10.3	4.6	5.8
Germany	35.8	19.7	16.2	19.0	11.5	7.5	10.6	6.7	3.9
Luxembourg	31.6	11.2	20.4	15.8	4.7	11.1	6.2	2.8	3.4
Netherlands	22.0	5.2	16.8	11.9	4.2	7.7	7.7	3.6	4.1
Group average	32.6	12.4	20.1	17.1	7.0	10.1	8.7	4.4	4.3
EASTERN EUROPE									
Czech Republic	44.5	19.1	25.4	14.0	5.8	8.2	4.7	1.8	2.9
Estonia	40.7	24.9	15.8	23.9	15.0	8.9	7.0	4.3	2.8
Poland	54.5	24.3	30.1	26.9	9.5	17.5	7.7	2.0	5.8
Slovak Republic	52.2	26.7	25.5	16.7	7.9	8.8	6.0	3.3	2.7
Group average	48.0	23.7	24.2	20.4	9.5	10.8	6.3	2.8	3.5
NORDIC EUROPE									
Denmark	32.0	6.2	25.8	12.3	3.9	8.4	8.1	3.6	4.6
Finland	33.5	11.1	22.4	20.8	7.7	13.1	7.1	2.8	4.3
Iceland	21.0	5.3	15.7	14.8	7.6	7.2	7.4	4.4	3.0
Norway	31.7	6.7	25.0	13.4	3.3	10.1	8.4	4.2	4.2
Group average	29.6	7.3	22.2	15.3	5.6	9.7	7.8	3.8	4.0
SOUTHERN EUROPE									
Greece	33.7	21.8	11.9	21.3	13.3	8.0	12.3	4.8	7.5
Italy	33.8	20.9	12.9	15.3	7.9	7.4	7.9	3.5	4.4
Spain	36.6	21.0	15.6	19.7	11.7	8.0	10.8	6.3	4.6
Group average	34.7	21.2	13.5	18.8	10.9	7.8	10.4	4.9	5.5

Source: Luxembourg Income Study (LIS) Database, authors' calculations.

poverty rates—based on both market and disposable income—are highest in the least educated group, lower in the medium-educated group, and lower yet in the most highly educated group.[11] Not surprisingly, then, the reverse holds for poverty reduction; in all 20 study countries, it falls as educational attainment rises.

The U.S. result, while not entirely exceptional, is notable. Among those with the lowest attainment (see column B), Americans are the most likely to be poor (37.8%); this reflects the general pattern of high poverty in the U.S., as shown throughout this report. Among those with the highest attainment (see column H), Americans are the fourth most likely to be poor (5.9%; tied with Australia); highly educated persons

are more likely to be poor in Spain (6.3%), Germany (6.7%), and Canada (9.3%).

In the U.S., those with the least education (as a group) are more than six times as likely to be poor as those with the most education (results not shown). That ratio—6.4—is exceeded in only three countries (all in Eastern Europe). In the U.S., as everywhere, education matters, and again, it matters a lot.

Paid Work Matters
In the U.S., we take it for granted that working for pay—and especially commanding high earnings—is a poverty prevention tool. Is that reliably the case in the U.S.? And elsewhere? And for whom? In Table 5, we report disposable income pov-

TABLE 5. Poverty Rates by Gender and Level of Earnings among Persons Aged 25–59, 2010

	A	B	C	D	E	F	G	H	I	J	K	L
	All persons 25–59			Men 25–59			Women 25–59			Gender Gap (Women minus Men)		
	No Earnings	Low Earnings	Medium-High Earnings	No Earnings	Low Earnings	Medium-High Earnings	No Earnings	Low Earnings	Medium-High Earnings	No Earnings	Low Earnings	Medium-High Earnings
ANGLOPHONE												
Australia	31.0	8.6	0.3	40.0	8.5	0.1	26.4	8.6	0.5	-13.6	0.0	0.4
Canada	37.2	20.6	0.3	42.0	20.6	0.2	34.1	20.6	0.5	-7.9	0.0	0.3
Ireland	18.6	7.7	0.0	20.9	9.1	0.0	17.0	6.1	0.1	-3.9	-3.0	0.1
United Kingdom	24.1	9.1	0.5	32.2	9.5	0.3	19.0	8.7	0.7	-13.2	-0.8	0.4
United States	37.9	21.3	0.5	42.0	20.6	0.2	35.6	22.1	0.8	-6.5	1.5	0.6
Group average	29.7	13.4	0.3	35.4	13.7	0.2	26.4	13.2	0.5	-9.0	-0.4	0.3
CONTINENTAL EUROPE												
France	28.4	12.0	0.4	32.6	12.4	0.2	26.0	11.6	0.5	-6.6	-0.8	0.3
Germany	33.0	15.4	3.7	50.6	12.7	2.4	25.7	17.8	4.9	-24.9	5.1	2.6
Luxembourg	13.1	13.1	0.7	14.9	12.6	0.2	12.3	13.8	1.3	-2.6	1.2	1.0
Netherlands	12.4	7.7	0.5	20.1	8.0	0.0	9.0	7.3	0.9	-11.1	-0.7	0.9
Group average	21.7	12.1	1.3	29.6	11.4	0.7	18.3	12.6	1.9	-11.3	1.2	1.2
EASTERN EUROPE												
Czech Republic	18.4	9.3	0.2	23.3	8.9	0.1	16.7	9.7	0.2	-6.6	0.8	0.0
Estonia	36.0	22.2	0.5	45.4	22.9	0.0	28.7	21.5	1.1	-16.7	-1.4	1.1
Poland	19.6	9.6	0.7	24.3	11.2	0.6	16.9	7.7	0.7	-7.4	-3.6	0.1
Slovak Republic	24.6	11.1	0.8	27.8	11.0	0.8	22.4	11.1	0.8	-5.4	0.1	0.0
Group average	24.6	13.0	0.5	30.2	13.5	0.4	21.2	12.5	0.7	-9.0	-1.0	0.3
NORDIC EUROPE												
Denmark	16.2	7.1	0.2	21.2	7.1	0.0	11.9	7.1	0.3	-9.2	0.0	0.2
Finland	27.4	9.1	0.0	33.6	10.3	0.0	21.8	7.9	0.0	-11.8	-2.4	0.0
Iceland	17.0	15.0	0.1	22.9	13.6	0.0	13.5	16.5	0.3	-9.4	2.9	0.3
Norway	16.2	8.9	0.2	20.2	9.5	0.1	13.1	8.2	0.3	-7.2	-1.3	0.2
Group average	19.2	10.0	0.1	24.5	10.1	0.0	15.1	9.9	0.2	-9.4	-0.2	0.2
SOUTHERN EUROPE												
Greece	25.0	19.9	1.4	29.6	23.5	1.1	22.6	15.0	1.7	-7.0	-8.5	0.7
Italy	26.5	19.4	0.5	34.8	24.2	0.7	23.7	13.6	0.2	-11.1	-10.5	-0.5
Spain	32.6	18.4	1.3	37.9	19.5	1.1	29.2	17.1	1.5	-8.7	-2.4	0.4
Group average	28.0	19.3	1.0	34.1	22.4	1.0	25.2	15.3	1.2	-8.9	-7.1	0.2

Source: Luxembourg Income Study (LIS) Database, authors' calculations.

erty rates for those with zero earnings, low earnings, and medium-high earnings. We do so for all persons aged 25-59 and for men and women separately.

As with educational attainment, we find some universal patterns: everywhere, for men and women alike, the risk of poverty falls as one's own attachment to the labor market increases (from none, to low, to medium-high)—and the gradient is steep across all country clusters. Those with no earnings experience high rates of living in disposable income poverty—on average, 29.7 percent in the Anglophone countries, 21.7 percent in the Continental European countries, 24.6 percent in the Eastern European countries, 19.2 percent

in the Nordic countries, and 28.0 percent in the Southern European countries (see column A). In contrast, medium-high earners face much lower risks of poverty everywhere, typically poverty rates of 1 percent or less (see column C).

The final panel reveals that gender matters—especially among those who are potentially more vulnerable to poverty. Note that, in all 20 countries, among persons with no earnings, men are substantially *more* likely to be poor than are their female counterparts (see column J). That finding reflects persistent gendered divisions in paid work; women with no earnings are more likely to be partnered with (and sharing household income with) earners than are men. Women with

no earnings are also more likely to have co-resident children, so they are eligible for more income transfers conditioned on the presence of children.

In the U.S., those with no earnings (as a group) are substantially more likely to be poor (37.9%) than are those with earnings in the bottom third of the distribution (21.3%). Non-earners are vastly more likely to live in poverty than are high earners (0.5%). That is a general pattern across this group of rich countries.

Conclusion

In this report, we find that, using a relative poverty standard and considering disposable household income, the U.S. poverty rate exceeds that reported in all of the other high-income countries in our study, with the sole exception of Israel. At the same time, the well-known exceptionalism of American relative poverty is not a universal result; most of the middle-income countries in this study report higher relative poverty rates than are seen in the U.S.

Our results help us to understand more fully what drives the comparatively high rate of U.S. relative (disposable income) poverty. The high rate in the U.S. is driven more by meager poverty reduction than by high market poverty rates. The only countries that reduce poverty, via taxes and transfers, less than the U.S. does are four Latin American countries, Israel, and Taiwan.

When we use the official U.S. poverty line—the "absolute" line—as our anchor, our results shift. The absolute poverty rate (vis-à-vis disposable income) is, not surprisingly, higher than it is in the U.S. in all 10 middle-income countries included here. Absolute poverty is also higher in 11 other high-income countries in our study—including all of the Eastern and Southern European countries. What is more surprising is that absolute poverty in the U.S. is *higher* than in a core group of rich comparator countries. American poverty, using the U.S. line, exceeds that reported in nearly all of the other Anglophone countries, as well as in all of the Continental and Nordic cases. All told, in cross-national terms, especially compared to other rich countries, American poverty stands out—and that is true for both relative poverty and absolute poverty.

We also find that child poverty is especially high in the U.S. Using the most common indicator, relative disposable income poverty, among the 20 rich countries included here, the U.S. reports the highest percentage of children living in poverty. One key finding is that U.S. tax-and-transfer policies reduce child poverty less than do policies in many other countries.

Likewise, we find that Americans living in single mother–headed households face the highest poverty rate among our 20 study countries. Americans in two-parent households also face a comparatively high risk of poverty—although the U.S. outcome is not as exceptional as it is for single mother–headed households.

In addition, we find two general patterns across these study countries: the risk of poverty falls as educational attainment rises and as labor market attachment increases. In the case of education, the gradient in the U.S. is comparatively steep (i.e., education is an especially important poverty prevention tool); with respect to labor market attachment, the U.S. gradient is not unusual.

Finally, our results indicate that national-level policies and institutions play a major role in shaping poverty outcomes. Returning to our first table, and considering relative (disposable income) poverty, we see that, on average, the Anglophone countries "produce" more poverty (12.3%), than do the Eastern European (10.8%), Continental (7.6%), and Nordic countries (6.5%); they produce less relative poverty than reported in the Southern European (13.5%) and Latin American (19.9%) countries studied here. To close, we conclude that American policy makers should look abroad for lessons about poverty and poverty reduction—lessons that are both inspirational and cautionary. ∎

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NOTES

1. For results based on the LIS data, see, e.g., Brady, 2009; Gornick and Jäntti, 2012, 2010, 2009; Rainwater and Smeeding, 2003; also see the LIS Inequality and Poverty Key Figures: http://www.lisdatacenter.org/data-access/key-figures/inequality-and-poverty/. See also OECD, 2015, 2011, 2008, and Eurostat, 2015.

2. We define *market income* (MI) as pre-tax-pre-transfer income, and *disposable household income* (DHI) as post-tax-post-transfer income. For convenience, we shorthand DHI as "disposable income." MI includes income from labor, from selected sources of capital, and from private transfers. DHI adjusts market income by subtracting direct taxes paid out (i.e., income taxes and social contributions) and by adding the value of public transfers received. (Counted income is not reduced to account for non-discretionary expenditures other than direct taxes.) Income in all households is adjusted for family size, using the widely-used "square root" equivalence scale.

3. We use a tripartite education classification in our analyses. *Low* educational attainment includes those who have not completed upper secondary education; *medium* refers to those who have completed upper secondary education or non-specialized vocational education; and *high* includes those who have completed post-secondary education, specialized vocational education, and beyond. LIS provides standard recodes for most countries, based on an international classification system. Where

LIS did not provide recodes, we constructed them, adhering to these educational cutoffs as closely as possible.

4. We define *low* earners as those whose annual earnings fall in the bottom third of the earnings distribution (among those with positive earnings) and *medium-high earners* as those in the top two-thirds. These distributions are country-specific and gender-specific.

5. U.S. results cited in this introduction are reported in Tables 2–5 in this report.

6. See www.lisdatacenter.org for a detailed description of the Luxembourg Income Study (LIS) Database. The LIS Database contains approximately 300 datasets from nearly 50 countries. The data are available in repeated cross sections (1980, 1985, 1990, 1995, 2000, 2004, 2007, 2010); as of this writing, LIS is nearing completion of the 2010 wave and has started making available datasets from 2013.

7. In Tables 1 and 2, we use two different poverty lines. The first one, the "relative" line, is drawn at 50 percent of median DHI (where the DHI-based line is used to calculate both market income poverty and disposable income poverty). The 50%-of-median line is country-specific, meaning that "relative" poverty refers to income relative to others in the same country. The second one, the "absolute" line, is set at the level of the U.S. poverty line, which is converted to international dollars, adjusted for purchasing power parities (PPPs). All results in

the rest of the tables pertain to relative poverty. We define *poverty reduction* using a simple accounting framework: it is the MI-based poverty rate minus the DHI-based poverty rate.

8. The World Bank classifies all the world's countries as "high income," "upper-middle income," "lower-middle income," and "low income." We use the terms "high-income countries" and "rich countries" interchangeably. We use the term "middle-income" to refer to upper- and lower-middle income countries.

9. For convenience, we use the term "American" as an adjective referring to U.S. residents or conditions in the U.S. We understand that not all U.S. residents are American by nationality, and that the U.S. is not alone in the Americas.

10. In Figure 1, the abbreviations are as follows: Australia (AU), Brazil (BR), Canada (CA), Colombia (CO), Czech Republic (CZ), Denmark (DK), Estonia (EE), Finland (FI), France (FR), Georgia (GE), Germany (DE), Greece (GR), Hungary (HU), Iceland (IS), India (IN), Ireland (IE), Israel (IL), Italy (IT), Luxembourg (LU), Mexico (MX), Netherlands (NL), Norway (NO), Panama (PA), Peru (PE), Poland (PL), Russia (RU), Serbia (RS), Slovak Republic (SK), Slovenia (SI), South Africa (ZA), Spain (ES), Taiwan (TW), United Kingdom (UK), United States (U.S.).

11. Iceland and Norway are minor exceptions to the pattern (with respect to disposable income poverty).

ADDITIONAL RESOURCES

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SAFETY NET

The Stanford Center on Poverty and Inequality

BY KAREN JUSKO

KEY FINDINGS

• The U.S. safety net provides about half of the income support needed to increase all incomes to the level needed to meet basic needs (measured here as 150% of the official U.S. poverty line).

• Levels of poverty relief are typically higher—and sometimes *much* higher— in other post-industrial countries.

It is one of the truisms of comparative poverty scholarship that the United States (U.S.) is quite ungenerous in its poverty policy. As is frequently argued, a main reason why there is so much poverty in the U.S. is not that the market itself generates an unusual amount of poverty, but rather that relatively little in the way of post-market assistance is provided to those in need. The evidence on behalf of this claim is well-established; indeed, the chapter by Janet Gornick and Markus Jäntti, as published in this report, provides clear and compelling evidence that social programs in the U.S. do not reduce "market poverty" to the extent that such programs in other well-off countries do.

We will build on this result by providing (1) a precise quantitative measure of just how much the U.S. safety net falls short of meeting needs, and (2) a precise assessment of how the U.S. compares to its peers on this quantitative measure. The simple question here: To what extent does the U.S. safety net meet the standard set by other well-off countries?

Although we will provide new evidence, then, on the overall performance of the U.S. safety net, even more importantly we will also provide new evidence on the *type* of safety net that the U.S. has built. In particular, there are two dimensions that may be distinguished in characterizing a country's safety net:

Baseline relief: How much basic income support is provided to those who are very poor (e.g., the "baseline relief" parameter)?

Relief falloff: To what extent does a country's safety net incentivize efforts to increase market income by minimizing the falloff in transfers as income grows (e.g., the "relief falloff" parameter)?

There are of course strong stereotypes about where the U.S. falls on each of these two dimensions. That is, the conventional wisdom is not just that the U.S. has a limited safety net, but also that it's limited in a quite distinctive way. The standard view in this regard is that the U.S. provides little in the way of baseline relief, a policy decision that rests on the view that, when such relief is set at too high a level, it reduces the incentive to enter the labor market. The U.S. safety net is also presumed to be based on a distinctively low falloff parameter. We're said to like a slow falloff because we want families to ramp up their market earnings without facing the disincentive of a large consequent loss in their program support.

The upshot is that, just as there's a conventional wisdom about the (relatively small) size of the U.S. safety net, so too there's a conventional wisdom about the particular form our safety net takes. The latter conventional wisdom has not,

however, been subjected to much in the way of empirical test. This article provides that test by examining how a classic set of relatively well-off countries compare on each of these two key safety net parameters.

This report thus addresses three questions for each of 13 well-off countries:

1. Are the overall benefits provided to low-income households substantial enough to meet basic needs?

2. How much support is provided to those households with no market income ("baseline support")?

3. How quickly do benefits decline as income increases ("relief falloff")?

To address these questions, the LIS data set (formerly the Luxembourg Income Study), a state-of-the-art resource for the analysis of income and wealth, is used.[1] The LIS comprises nationally representative data sets that have been revised and standardized to allow for reliable comparisons. Given the objective of this report, it's especially relevant that each country-level data set has been supplemented with extensive documentation of the various social programs, including eligibility criteria and typical benefit amounts.

The next section develops an approach to estimating the parameters indexing each of the two safety net dimensions, as well as the overall measure of safety net performance. In the section that follows, a comparative analysis is then carried out with this approach, an analysis in which features of the U.S. safety net are compared to 12 other well-off countries. The results will show that the U.S., when compared to other countries at similar levels of development, leaves significant needs unmet. The U.S. safety net provides the lowest level of poverty relief among the 13 countries in our analysis, a relatively low level of baseline support, and a moderate rate of relief falloff. As will be shown, the conventional wisdom about the U.S. safety net is roughly on the mark, not just with respect to the overall amount of relief, but also with respect to the way in which that small amount of relief is delivered.

Measuring Safety Net Effectiveness

The measures of safety net effectiveness that are used in this report are derived from characteristics of the relationship between household market income and overall amounts of social transfers. As described in earlier research,[2] we estimate parameters from a nonlinear analysis of the distribution of income support, as a function of market income. This analysis allows us to estimate a "poverty relief ratio," designated R, for each country. The value of R is the ratio of income support to the amount of support needed to increase all families' incomes to a given poverty threshold. Higher values on R indicate more generous social support (see Appendix for more details).

The intuition behind this measure of "poverty relief" is similar to that behind "poverty gap" measures. Both measures allow analysts to examine the extent to which social programs fulfill unmet needs. Here, I use the poverty relief ratio because it offers important analytic advantages over the poverty gap measure, three of which I'll mention here.

First, by using a total-income approach, R recognizes the

FIGURE 1. Sources of Support for Low-Income Households
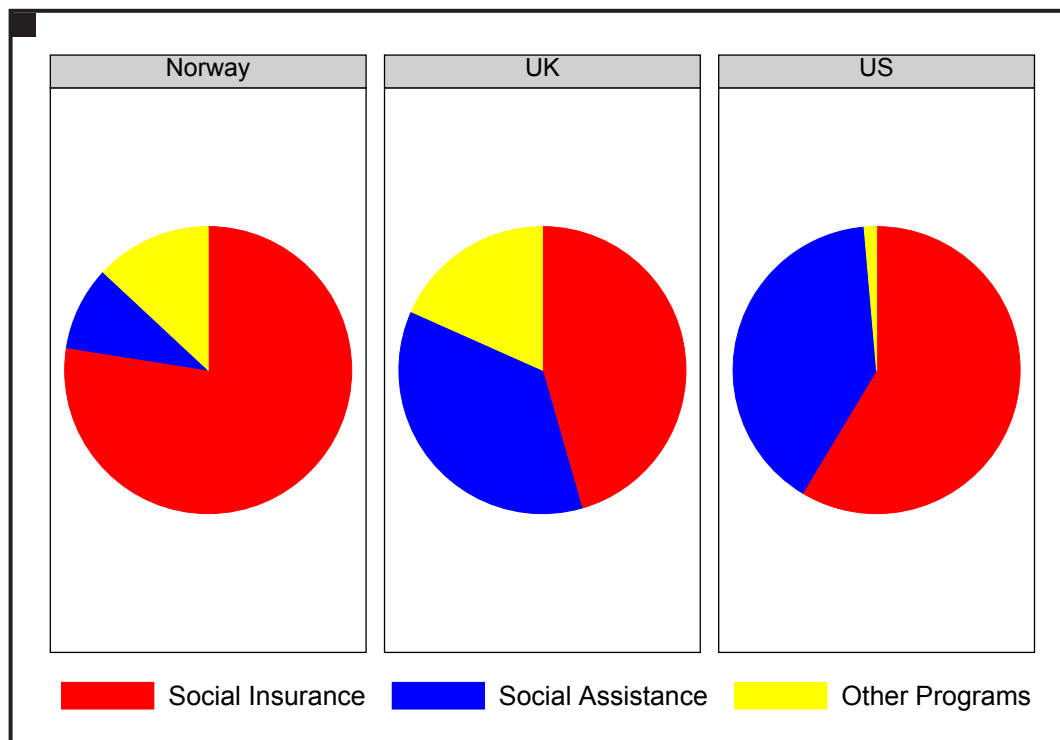
Source: LIS. This figure reports average annual amounts of monetary support, by program type, for households with no market income.

full portfolio of programs on which low-income families often rely. The key feature of *R* is that it refers to the *amount* of support received and not the *way* in which that support is delivered. There are wide cross-national variations in the types of programs on offer. For example, if social programs are classified according to their eligibility criteria, three main types of programs may be distinguished, with countries differing substantially in their mix of types.

This point is demonstrated in Figure 1, where we report the share of total monetary support that low-income households in the U.S., the United Kingdom, and Norway receive from social insurance programs, social assistance programs, and other universal benefit programs. We see here that social insurance programs, which generally require a history of contributions and provide support during labor market interruptions, provide support to varying degrees across the U.S., the United Kingdom, and Norway. Although all countries rely heavily on social insurance programs for low-income households, we see that low-income households in the U.S. and the United Kingdom also typically receive a substantial proportion of their income from means-tested social assistance programs. The U.S. and United Kingdom safety nets also differ in that the United Kingdom relies more on benefits provided through programs that are not means-tested and are

non-contributory (e.g., children's benefits, universal pension systems, or veterans' benefits).[3]

What Figure 1 suggests is that, although social assistance programs are often most closely identified with the "safety net" in public discussions, low-income households everywhere rely on a portfolio of programs for support. In some countries, low-income households may rely just as much, and sometimes more, on social insurance programs and universal benefits. As a consequence, any analysis that focuses on one type of program (e.g., social assistance programs) would provide a misleading assessment of the effectiveness of the social safety net in each country, and cross-national comparisons would be similarly undermined. For this reason, this analysis evaluates the effectiveness of the safety net in each country by estimating the *total* amount of support provided to low-income households, relative to *total* need.

The second advantage of the poverty relief ratio is that, by using a parametric framework (as described in the Appendix), it is possible to distinguish between (1) levels of support provided to those with no market income (baseline support) and (2) the extent to which benefits decline with small increases in earnings (relief falloff). When these two dimensions are distinguished, safety net programs can be classified into general types, as will be done below.

The third advantage of the poverty relief ratio is that it maintains the rank order of country cases regardless of the poverty threshold used. This property sets *R* apart from other measures of the effectiveness of the safety net (e.g., reduction in poverty rates). For the analyses reported below, the threshold is set at 150 percent of the official U.S. poverty line (150PL) in 2011, for a family of four ($33,525).

As seen in Table 1, when income is measured in a consistent currency (2011 USD), similar proportions of each national population are identified as low-income. Low-income households comprise at least 39 percent of the population in more than half of the countries included in this analysis; in Greece and Spain, this proportion is substantially larger. Levels of support are only weakly related to the size of the low-income population.[4] For each country, this threshold also exceeds the standard "at-risk of monetary poverty" threshold, which is often used in the analysis of European social policy. As a consequence, it can be interpreted as a fully inclusive measure, capturing all of a country's antipoverty efforts.

TABLE 1. Assessing the Poverty Threshold

|	Percent Low-Income	At-Risk-of-Poverty Threshold
Australia	43	$28,086
Canada	39	$23,581
Germany	36	$24,329
Denmark	38	$24,656
Spain	61	$15,895
Finland	41	$20,940
Greece	70	$14,028
Ireland	53	$19,614
Iceland	37	$21,173
Netherlands	24	$25,940
Norway	38	$24,845
United Kingdom	48	$21,998
U.S.	37	$29,114

Note: This table reports the percent of households with total incomes less than the 150PL threshold and an estimate of the "at-risk-of-poverty" threshold, or 60 percent of the reported median income in each country.

The Results

As a starting point, Figure 2 reports the overall relationship between social transfers (all social insurance, social assistance, and other monetary benefits) and market income for each country included in this analysis. It is immediately apparent from Figure 2 that overall levels of support vary across countries. Compare, for example, the amounts of "baseline" support provided to households earning no market income (at the left side of each graph). In the U.S., these very poor households receive an average of $18,595, while in Australia, for example, a much higher level of baseline relief, $23,331, is provided. Countries also vary in the amount of support provided to the relatively well-off. Households at the $50,000 level in Norway receive an average of $6,746 in

FIGURE 2. Social Transfers and Market Income, by Country
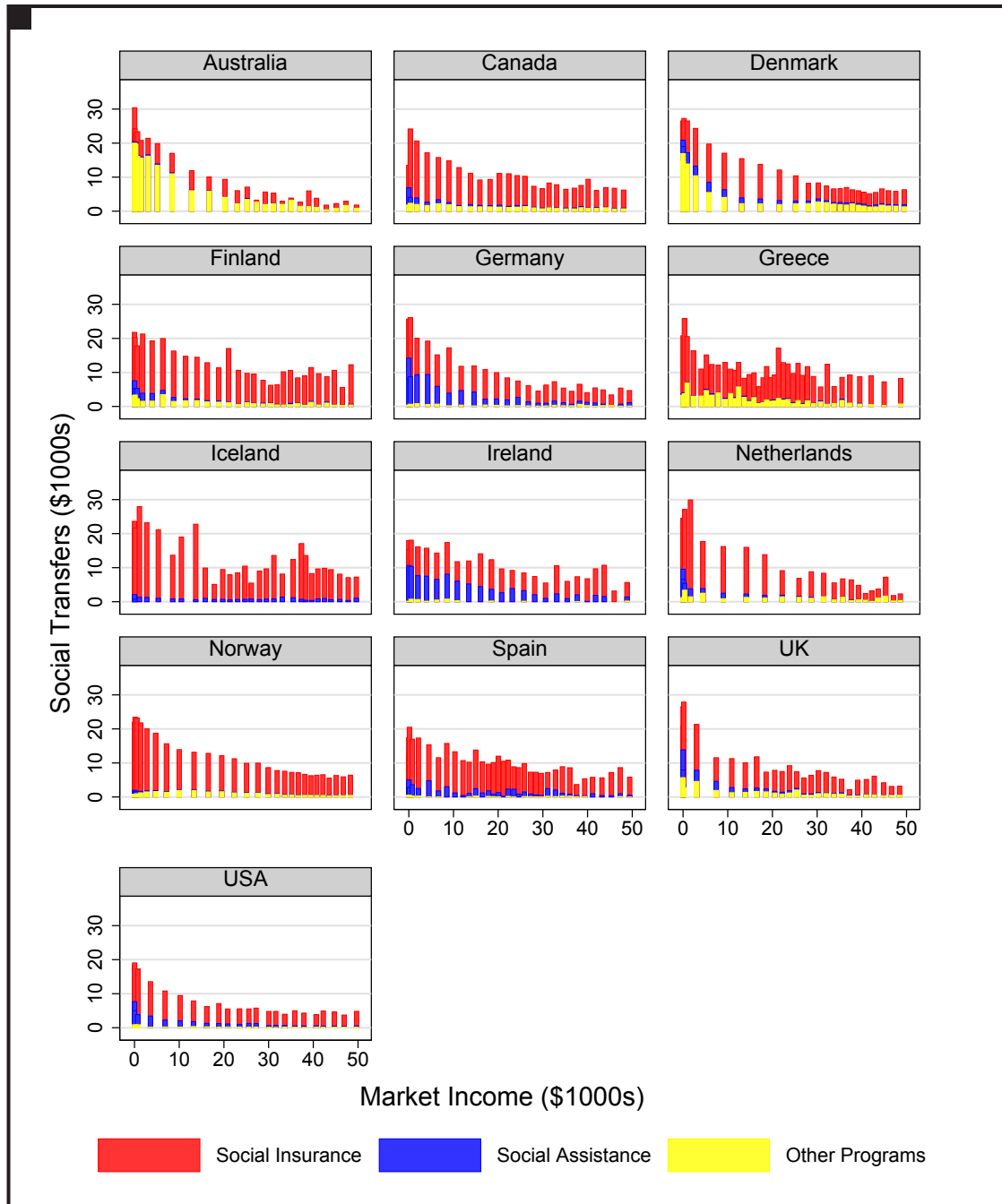
Source: LIS. This figure reports average annual amounts of monetary support, by program type, for households at each market income level. Each bar represents 1 percent of the national working-aged sample.

transfers, whereas households at the same level in the U.S. receive an average of only $3,368 in transfers. The U.S. bars are of course distinctively low not just at the two extremes but also throughout the interior of the curve.

As seen in Figure 2, countries also vary in the rate at which benefits decrease as the household's earnings increase, indeed the difference in "relief falloff" is especially apparent in comparing Spain and the United Kingdom. The overall relationship between social transfers and market income follows the same general (negative binomial) pattern in each country included in this analysis, with the largest amounts of support provided to those with little or no market income, and amounts of support declining nonlinearly as income increases. Because of this general pattern, important aspects of the safety net can be characterized and reliably compared with the parameters that describe this relationship (see the Appendix for details).

Figure 3 uses estimates of the parameters that describe the relationship between market income and social transfers to assess baseline support (vertical axis) and relief falloff (horizontal axis). Countries that take higher values in baseline support (e.g., Denmark) provide more generous transfers to those households with no market income. In countries with higher rates of relief falloff (e.g., Greece), however, benefits decrease more quickly with small increases in earnings.

When these dimensions of social policy are plotted against each other, the safety nets of the countries included in this study can be classified in a straightforward way. First, the top left quadrant pertains to a safety net that provides relatively high levels of baseline support, combined with comparatively low rates of relief falloff. This quadrant represents, then, an especially generous and uniform social safety net, with Denmark providing the exemplar here.

Second, the countries in the lower left quadrant provide less generous levels of baseline

relief, but benefit amounts decrease only slowly with small increases in earnings. This type of safety net, represented most closely by the case of Canada, doesn't single out the extreme poor for special treatment. The contrast between these first two types, represented by the difference between Canada and Denmark, thus hinges mainly on the amount of aid delivered to the extreme poor. In liberal regimes, like Canada, levels of baseline support are generally lower.

Third, countries in the top right quadrant provide quite generous levels of support for those with no market income, but the rate of relief falloff in these countries is relatively high. This high falloff is typically presumed to reduce incentives to increase market income. It is of course unsurprising that Greece, which has long been criticized for such disincentives, provides the best example of this type.

The lower right quadrant pertains to safety nets with low baseline support, but with steep falloff. It is perhaps surprising that the U.S. falls—albeit only barely—within this quadrant. To be sure, the low level of baseline support in the

FIGURE 3. Levels of Baseline Support and Relief Falloff
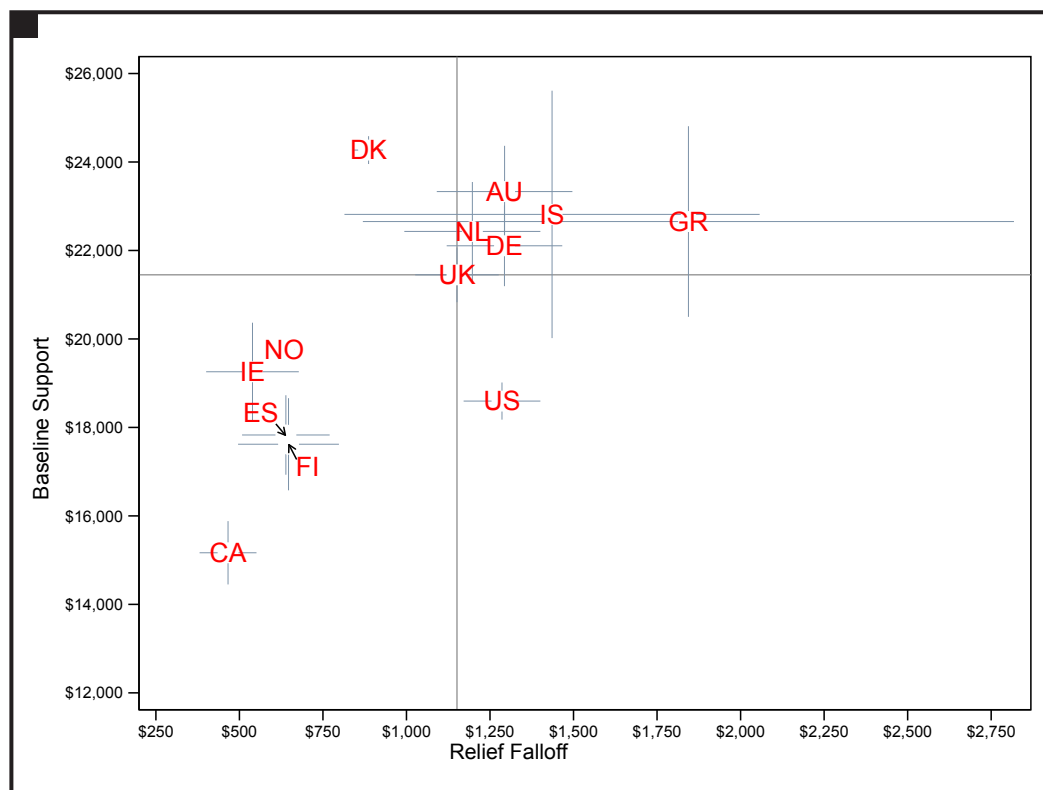
Source: LIS. This figure reports estimated parameters that pertain to levels of baseline support (i.e., average levels of support for those reporting no income), and rates of relief falloff (i.e., the decrease in benefits with a $1,000 increase in earnings). Error bars report 95 percent confidence intervals, estimated using the delta method. Solid lines report median values on each dimension. All amounts are reported in 2011 USD. The countries included in this analysis are Australia (AU), Canada (CA), Denmark (DK), Finland (FI), Germany (DE), Greece (GR), Iceland (IS), Ireland (IE), Netherlands (NL), Norway (NO), Spain (ES), the United Kingdom (UK), and the U.S.

FIGURE 4. Country Poverty Relief Ratios
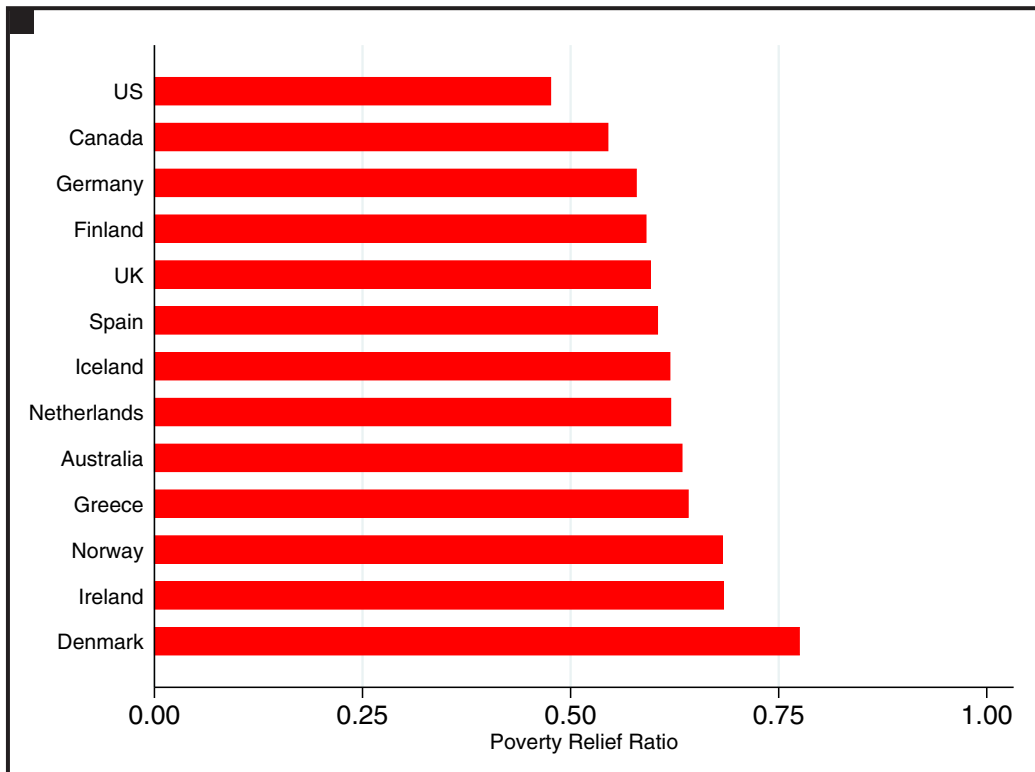
Source: LIS. This figure reports estimates of overall poverty relief provided in each country as a proportion of total support needed to raise all incomes to 150 percent of the U.S. poverty line.

U.S. is expected, but one would not have hypothesized that the U.S. would fall above the median on relief falloff. In interpreting this result, we should bear in mind that many other countries (Australia, Germany, Iceland, Greece) fall yet further to the right and thus have even steeper rates of relief falloff.

The relationship between social transfers and market income can also be used to provide overall estimates of poverty relief. Figure 4 reports the poverty relief ratio, using the 150PL poverty threshold. In the U.S. case, for example, this analysis suggests that the safety net provides about 47 percent of the support needed to provide for all basic needs. That is, the total amount of monetary support provided to low-income Americans meets less than half of their economic needs, as defined by the 150PL. For all other countries, levels of poverty relief are higher, in some cases just slightly higher (e.g., 54% in Canada) and in other cases substantially higher (e.g., 77% in Denmark).

Implications

This report suggests that the U.S. safety net is, for the most part, delivering in a way consistent with its reputation. The overall amount of poverty relief is the lowest among the 13 countries in our analysis; the baseline level of support is the fourth lowest among our countries; and the rate of relief falloff is just slightly above the median level.

How might one evaluate such results? If one likes the type of safety net that the U.S. is purported to have, then one might be pleased with these results. If, on the other hand, one prefers a safety net that provides more relief, then of course these results would be judged as distressing. ■

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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*):

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

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:

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

Next, the poverty relief ratio is defined as the ratio of the area under the curve defined by Equation 1 to the area defined by Equation 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.)

"Baseline support" is estimated with the expression $\alpha_j + \beta_{1j}$, or the expected value of *T* when *Y* equals zero.

"Relief falloff" is estimated as $\beta_{1j}(1 - \exp(\beta_{2j}))$, or the expected difference in levels of support provided to no-income households, and households earning \$1,000 per year.

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

Social transfers (*T*) include all monetary benefits provided through social insurance, social assistance, and other benefit programs that are reported in LIS data. (Support for post-secondary education and the costs of medical care are excluded.)

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

All calculations are based on 2011 thousands of U.S. dollars, for non-standard households, headed by working-aged (25–59) adults.

NOTES

1. Luxembourg Income Study (LIS) Database, http://www.lisdatacenter.org (multiple countries; 2010). Luxembourg: LIS.

2. Jusko, Karen Long. 2008. "The Political Representation of the Poor." Ph.D. dissertation, Department of Political Science, University of Michigan. Jusko, Karen Long and Katherine Weisshaar. 2015. "Measuring Poverty Relief." Working Paper.

3. Note that while these measures of poverty relief, baseline support, and relief falloff provide a comprehensive assessment of monetary transfers provided through public programs and reported in LIS data, these measures also omit important aspects of support that take the form of non-monetary support or that are provided through private organizations.

4. The correlation between overall levels of poverty relief and the proportion of working-aged "low-income" households with earnings less than \$33,525 is 0.12.

INCOME INEQUALITY

The Stanford Center on Poverty and Inequality

BY JONATHAN FISHER AND TIMOTHY M. SMEEDING

KEY FINDINGS

- When disposable-income inequality is measured across 20–35 years of survey data, the consistent result is that the U.S. has the highest level of disposable-income inequality among rich countries.

- The U.S. has the largest "social distance" gap between households at the 90th percentile and households at the 10th percentile in the income distribution. The U.S. has the highest 90th percentile point, meaning our rich are indeed better off than those in other countries, as almost everyone expects. But our poorest, at the 10th percentile, are also lower in real terms than are the poor in all other comparison countries save Italy.

- Some countries have experienced periods of falling, as well as rising, inequality over the last three decades. The simple, but important, conclusion to draw is that rising income inequality is not inevitable. Policy and markets can both make a difference.

The explosion of research on income inequality in the United States has uncovered key facts about the sources and patterns behind the takeoff. We know, for example, that the long-term trend in income inequality has been driven by two main factors: a surge at the top end in income and wealth; and, at the bottom end, a combination of reduced wealth and slower income growth during good times and a fall in income during bad times. We likewise know a lot about the role of education, technology, deunionization, and globalization in bringing about the takeoff in income inequality in the U.S.

Although there has also been much cross-national comparative research on income inequality, this line of research is somewhat less well-known and will therefore be the focus of our article. The comparative approach works well to expose the distinctiveness of the U.S. We live, of course, in a famously exceptional country, but nowhere is the U.S. more exceptional than in its level of economic inequality.[1]

By examining cross-nationally comparable measures of income inequality, we can move beyond the often parochial debates about U.S. inequality and come to appreciate how our distinctive institutions create distinctive outcomes. Also, by comparing recent trends in inequality across several nations, we can better understand what U.S. policy has and has not achieved and, more importantly, how it might be made more effective. We can also better understand the effects of extreme inequality on mobility, economic growth, and other outcomes we value.

Measurement

We measure income inequality in terms of disposable cash income (DPI), which is adjusted for household size and (a) includes all types of money income, (b) subtracts out direct income and payroll taxes, and (c) reflects all cash and near cash transfers, such as food stamps, cash housing allowances, and refundable tax credits (e.g., the Earned Income Tax Credit [EITC]).[2] We measure inequality in DPI with the Gini coefficient and the ratio of the 90th to the 10th percentiles in the distribution. The Gini coefficient measures inequality on a scale from 0 to 1, with higher numbers representing greater inequality. We also measure redistribution by comparing the Gini for pre-tax and transfer "market income" (MI) to that of DPI. By calculating the Gini for market income, we are able to "take out" the direct role of the government, via taxes and transfers, in influencing inequality.

Our analyses are based on 10 rich nations with well-established welfare states: the U.S.; the Anglo-Saxon nations of Australia, Canada, the United Kingdom, and Ireland; France, Italy, and Germany; and two Scandinavian countries, Norway and Sweden. We employ data from the LIS data set (formerly the Luxembourg Income Study) and the OECD Income Distribution Database (IDD).[3] In an online appendix table, we expand the analyses of MI and DPI inequality to 33 nations, including several middle-income countries (Online Appendix Figure A1).

Cross-National Differences in Absolute and Relative Inequality

We begin by comparing the level of inequality across our 10 countries for the latest year that is available in the LIS. We do so for both market income and disposable personal income.

The countries in Figure 1 are ranked from low to high by the Gini coefficient for disposable income. In all countries, the Gini coefficient for disposable income exhibits less inequality than the Gini coefficient for market income, as taxes and transfers redistribute income to lower-income households. The difference between the Gini coefficients for market income and disposable income, is in this sense, a measure of the level of redistribution in each country. We find that the U.S. and Canada have the least redistribution, but the disposable-income Gini for Canada is substantially below that for the U.S. because Canadian market-income inequality is much lower. As compared to other countries in Figure 1, we see that the U.S. has very high market-income inequality, although Ireland has yet higher market-income inequality and Italy, the United Kingdom, France, and Germany have roughly the same level of market-income inequality as the U.S. The U.S. nonetheless ends up with the highest disposable-income inequality because it engages in relatively little redistribution. Although

Ireland has considerably more market-income inequality than the U.S., it engages in substantially more redistribution and thus ends up with substantially less disposable-income inequality.

The U.S. has had the highest level of disposable-income inequality among rich countries for some time. When disposable-income inequality is measured across 35 years of LIS data or 20 years of IDD data, the consistent result is that the U.S. has the highest level of disposable-income inequality among rich countries, even when the comparison is extended to include a more expansive set of countries than those in Figure 1 (see Online Appendix Figure A1 for the expanded comparison). As shown in Figure A1, only the middle-income countries of Russia, Turkey, Mexico, and Chile have higher disposable-income inequality than the U.S. The simple conclusion: The U.S. is the world champion of disposable-income inequality among rich nations.

The foregoing measures of income inequality are not, of course, affected by cross-national differences in mean income. Critics of this relative approach to inequality often argue that absolute living standards should also be taken into account. Because the U.S. is richer than almost all other OECD countries, those at a given percentile in the income distribution—say, the 10th percentile—may well be better off in absolute terms than those at the same percentile in other rich countries.[4]

This proposition can be assessed with LIS data by using purchasing power parities to convert all country incomes into equivalent U.S. dollars.[5] Using purchasing power parities allows us to compare real levels of well-being at various points in the income distribution across nations. For this purpose, perhaps the most basic measure of real levels of inequality is the decile ratio, which shows the "social distance" gap between the household at the 90th percentile and the household at the 10th percentile in the income distribution.

FIGURE 1. Market and Disposable Income Inequality by Country Using the Gini Coefficient
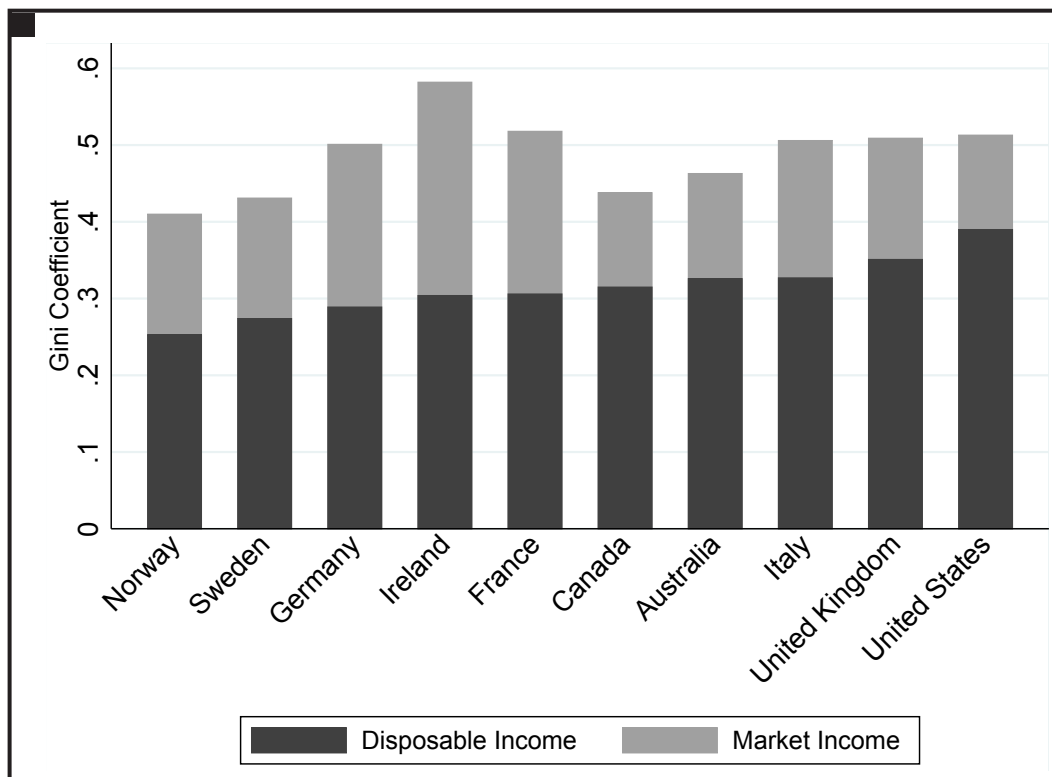
Note: 2012 or latest year available. Disposable income is market income plus transfers and minus taxes.
Source: LIS (formerly the Luxembourg Income Study) (LIS; www.lisdatacenter.org) and The Organisation for Economic Co-operation and Development's (OECD) Income Distribution Database (http://www.oecd.org/social/income-distribution-database.htm).

When this approach is taken, we find that the U.S. has the highest decile ratio (see Figure 2). It also has the highest 90th percentile point, meaning our rich are indeed better off than those in other countries, as almost everyone expects. But our poorest, at the 10th percentile, are also lower in real terms than are the poor in all other countries save Italy.[6] The high decile ratio in the U.S. is generated, then, not just because the rich are especially well off, but also because the poor are especially poor. The combined effect is to generate a U.S. decile ratio of more than 6, meaning the incomes of those at the 90th percentile are, on average, six times higher than are those at the 10th percentile.[7] The next highest ratios are below 5 in Australia and Canada, while the French, Swedes, and Norwegians have decile ratios below 4. Indeed, our decile ratio is roughly twice that of Norway, whose level of GDP per person is just about the same as ours. The poor in Norway (i.e., 10th percentile) enjoy more than twice the real incomes of the poor at our 10th decile.

The U.S. is, therefore, the most unequal rich country on earth, a conclusion that holds equally for absolute or relative measurement. Were we always the most unequal? The next section addresses this question.

Trends in Income Inequality

Table 1 and Figure 3 present changes in disposable income inequality from the 1980s through 2010, the earliest and latest comparable information we have on these countries. We find that the U.S., while starting from a very high level of inequality, has also experienced one of the largest increases in inequality since 1979 (18%). The United Kingdom has seen a similar rise (21%), and Australia (17%) and Germany (17%) are close behind the U.S. (Table 1). But Sweden, for which data are first available in 1981, has had the fastest increase in both absolute and relative inequality, though from a very low base. We also see that France, Germany, and Sweden ended up with roughly the same level of inequality in 2010, despite their very different pathways since 1980 in achieving that level (Figure 3). Indeed, France has experienced an 11 percent *decrease* in inequality (since 1978), while Germany and Sweden have experienced an increase during that period. The U.S. data suggest a return to rising income inequality after a recession-induced pause, whereas post-2010 data for other nations are not yet available for comparison.[8]

One lesson from Figure 3, also shown in Table 1, is that some countries—in particular, Sweden, the United Kingdom, Ire-

FIGURE 2. Income Inequality by Country Using the 90th and 10th Percentiles in U.S. Dollars
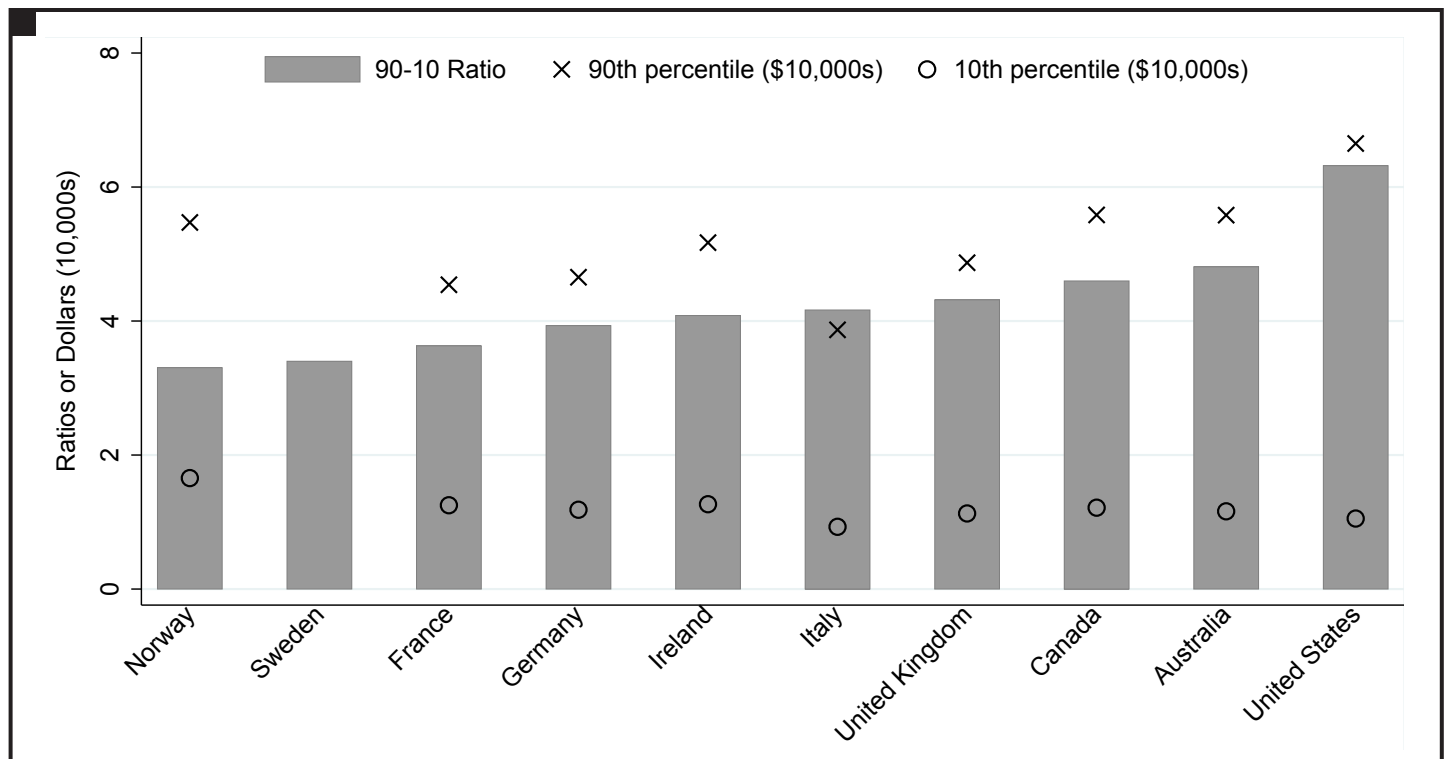
Note: Data are from 2010 or latest year available. Income definition is disposable household income from LIS. Income is in equivalent dollars using the square root of family size as the equivalence scale. Data for all countries except Sweden come from LIS. The data for Sweden come from OECD, but the OECD does not report the levels for the 90th and 10th percentiles, just the ratio. Figures are adjusted for purchasing power parity (PPP) differences using OECD PPP numbers.
Source: LIS; OECD.

land, and France—have experienced periods of falling, as well as rising, inequality over the last three decades. The simple, but important, conclusion to draw is that rising income inequality is not inevitable. Policy and markets can both make a difference.

But the dominant result is, of course, one of rising inequality. The descriptive source of this trend is twofold: at the top end, there has been a surge in high incomes; and at the bottom end, there has been much slower income growth during good times and, in some cases, a fall in income in bad times. Further, changes in labor and capital markets since 2000 have combined to narrow and shrink the middle class in the U.S. and in other nations.[9] In OECD countries, taxes and benefits have historically been effective in reducing inequality, especially in the decade prior to the Great Recession. In the midst of the Great Recession, benefits for the unemployed and other redistribution measures managed to at least partially stem the rise in inequality generated by the market. But now, as we finally emerge from the Great Recession, the fear is that the effect of taxes and benefits has become weaker, accelerating the overall upward trend in disposable-income inequality. This pattern is visible in some, but not all, rich countries.[10]

TABLE 1. Trends in Gini Inequality Since 1978

	First Year	Last Year	Absolute Change	Percent Change
United States	1979	2010	0.058	18.0%
Australia	1981	2010	0.050	16.7%
Canada	1981	2010	0.031	10.3%
France	1978	2010	-0.038	-11.4%
Germany	1981	2010	0.044	16.9%
Ireland	1987	2010	-0.026	-7.8%
Italy	1989	2010	0.007	2.3%
Norway	1979	2010	0.022	8.7%
Sweden	1981	2005	0.089	43.4%
United Kingdom	1979	2010	0.059	20.8%

Note: Income definition is disposable household income. Income is in equivalent dollars using the square root of family size as the equivalence scale.
Source: LIS; OECD.

FIGURE 3. Trends in the Gini Coefficient Using Disposable Income
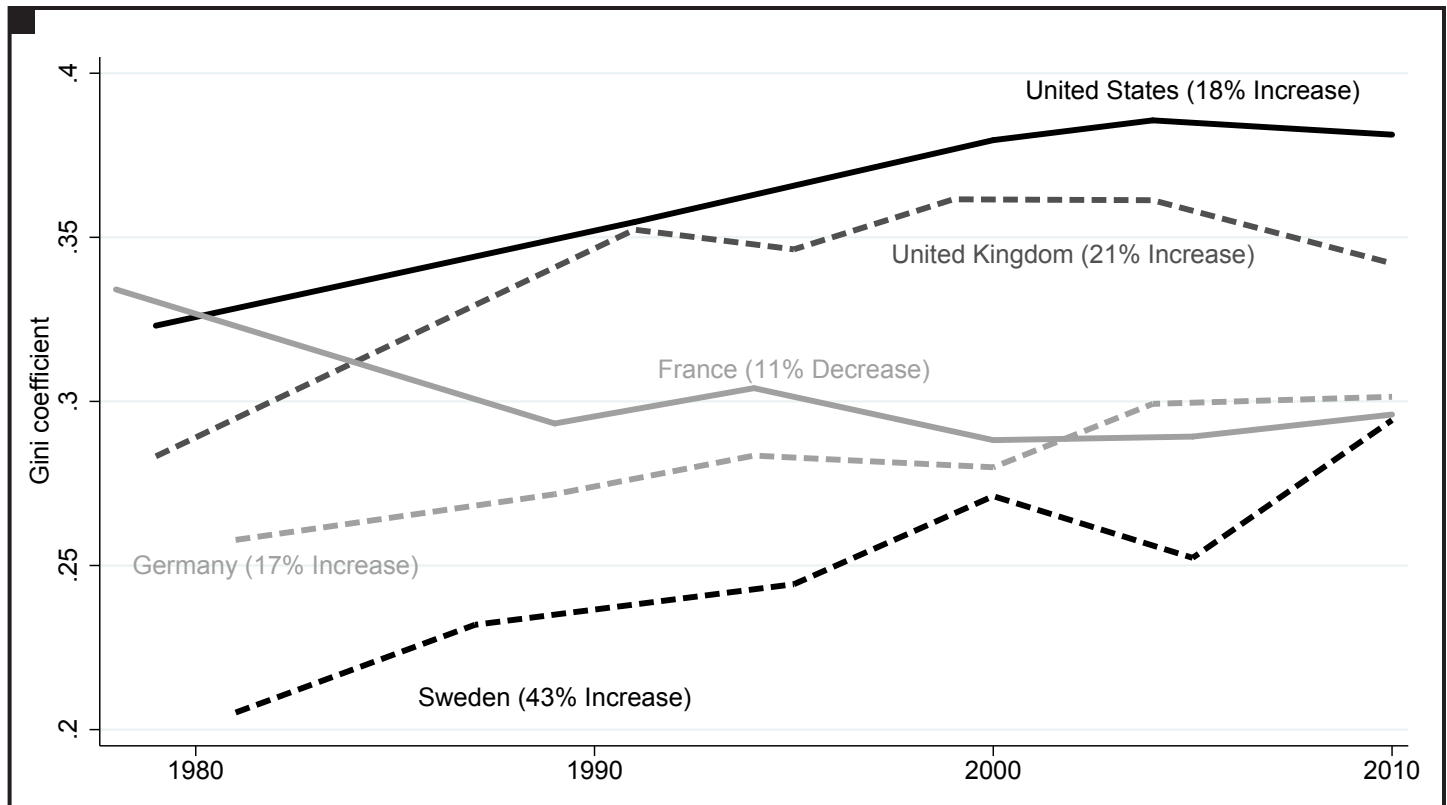
Note: Income definition is disposable household income. Income is in equivalent dollars using the square root of family size as the equivalence scale.
Source: LIS; OECD.

Income and Wealth

We have concluded to this point that the U.S. is the "most unequal rich country on earth." Does this conclusion hold when the focus shifts to wealth inequality? Although Gabriel Zucman covers wealth inequality in detail in the next chapter of this report, a brief head-to-head comparison of the wealth and income results will be revealing here.[11] The OECD has garnered comparable wealth inequality data that allow us to examine the income and wealth shares of the top 10 percent in each of our major nations except Ireland (see Figure 4).[12]

We clearly see that the U.S. is far and away the country with the most unequal wealth distribution. The top 10 percent in the U.S. have about 80 percent of all net worth, compared to 60 percent in Germany and Sweden, and 50 percent or less in each of the other nations. It follows that the U.S. not only has the weakest safety net but that the poor also have little in the way of personal savings to cushion drops in income or to meet unexpected expenses. The top decile, by contrast, can easily self-insure against economic risks, afford its own health care and education, and opt out of public sector provision of social goods.[13] This amassing of wealth, which has grown more unequal in recent years in the U.S., also allows for large intergenerational transfers of wealth to assure the social position and status of one's children.[14]

Why Do We See These Patterns?

The data observed here suggest that inequality is high and rising in most rich nations—especially, but not only, in the U.S. The drivers of these changes are rooted in several decades of globalization of trade, technological change, and the growth of both high- and low-end service jobs. Because labor markets have always been the heart of market income for middle class households, the foregoing changes—all of which have profound implications for the labor market—have had a major impact on earnings and incomes in the U.S. and elsewhere.[15]

These changes have implications for those at both the top and bottom of the labor market. At the top, the rise of high-demand business services and of winner-take-all markets dominated by the well-educated have led to substantial increases in earnings for the "winners," thus leading to a pulling-away at the top. Meanwhile, at the other end of the labor market, wages of workers with low skills have not kept up, and manual jobs in goods production and distribution (manufacturing, assembly, and shipping) constitute a fall-

FIGURE 4. Income and Wealth Shares
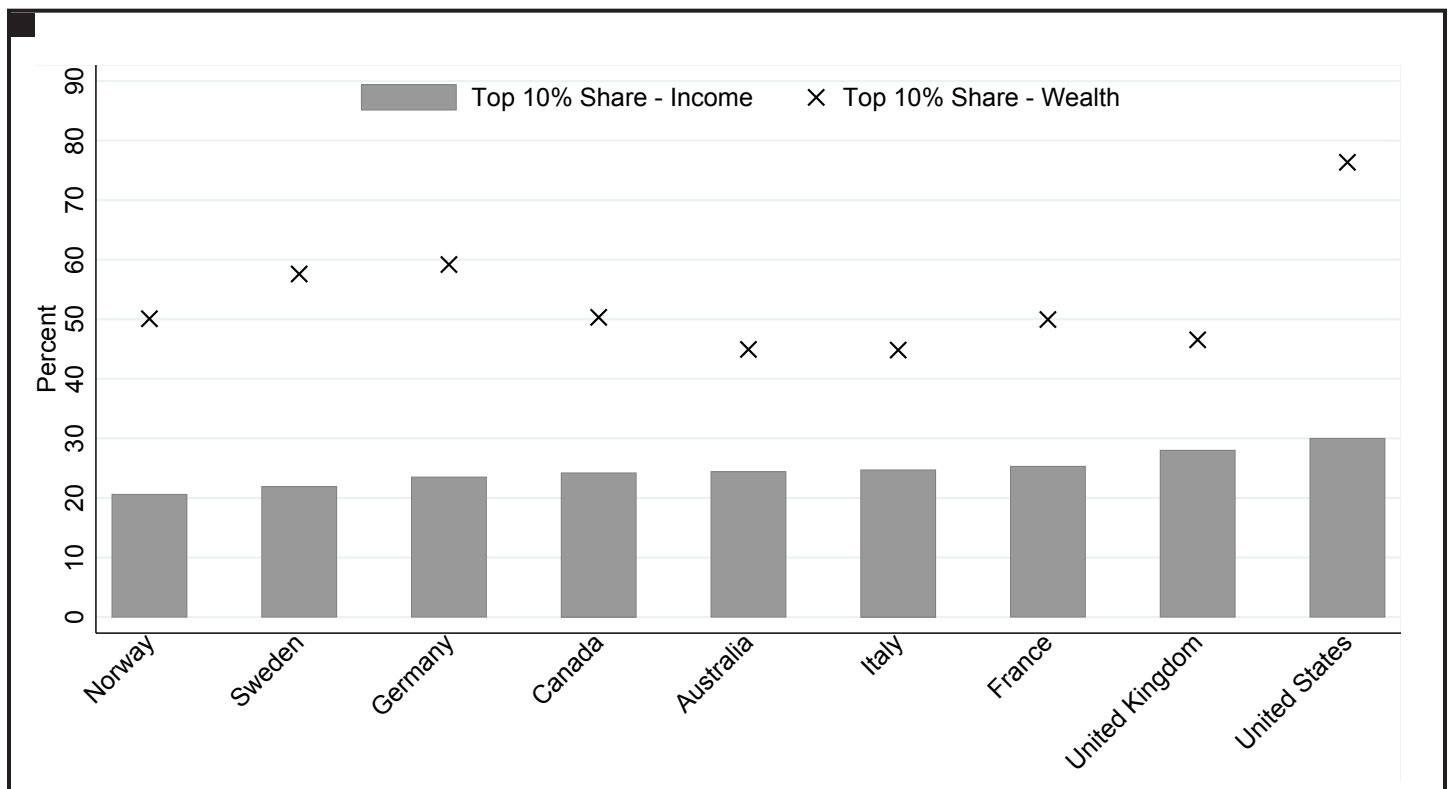
Note: 2012 or latest year available.
Source: OECD. 2015. *In It Together: Why Less Inequality Benefits Us All*. Paris: OECD Press; Luxembourg Wealth Study (LWS).

ing proportion of total employment. In some countries (esp. Germany), "permanent employment" labor market institutions have been able to forestall widespread unemployment in these sectors, even since the Great Recession. But even in these countries, there are rises in inequality due to changes at the high end of the earnings scale.[16] Because the U.S. is built around a low-wage market, with relatively high numbers of short-term and part-time jobs, the changes at the bottom of the labor market are especially important.[17]

We have also seen changes in income tax systems that have reduced marginal tax rates for high earners. According to the OECD,[18] taxes and benefits have tended to redistribute less in the period from the mid-1990s up to the Great Recession. It follows that rising inequality is generated not just by institutional changes in labor markets, but also by declining redistribution.

Where to Go from Here?
As long as the U.S. relies almost exclusively on the job market to generate incomes for working-age families, economic changes that reduce the earnings of less-skilled workers will inevitably have a big negative effect on inequality among children and prime-age adults, the vast majority of whom have little wealth. This means that if the U.S. wishes to reduce inequality, it can either (a) alter its labor market institutions to ensure that there are more workers and that workers are paid better, or (b) alter its redistributive institutions to reduce its reliance on the job market.

If the U.S. fails to alter its policies in either of these ways, the implications of such inaction would seem to be clear. The high direct and indirect costs of inequality are now becoming widely recognized in public debates, both nationally and cross-nationally.[19] Because of high inequality, U.S. economic growth and human capital growth have been lower and far below expectations. And social mobility in the U.S. is much lower than in other rich nations (as Miles Corak discusses in his chapter).[20] Although many economists favor globalization and free trade because—in the aggregate—the gains from

trade exceed the losses, the key problem under this formulation is developing institutions that allow the many winners (who pay lower prices for higher quality goods) to compensate the losers (whose jobs are lost to imports). The obvious point here is that—to date—the winners have not compensated the losers.

The further worry is that a high-inequality economy reduces the amount of social mobility and opportunity. As many have argued, inequality can affect growth and upward mobility by reducing educational opportunities for children from poor and lower-middle-class families, thus lowering their future earnings and incomes. It follows that inequality reduces social mobility and overall growth because of slow skill development.[21] In the U.S., rich parents provide a "private safety net" for their children, thus circumventing the problems arising from low levels of public support for education, health care, or other institutions. This private safety net allows rich children to exploit opportunities and thus reduces mobility and economic growth.

Up to now, the U.S. has shown its indifference to high and rising levels of inequality, although the outcry for change has recently grown louder and more insistent. This brief report has made it clear that ever-rising inequality is not inevitable, that declining mobility is not inevitable, and that rich countries have in fact made choices about their labor-market policies and their levels of redistribution. Although the high levels of inequality in the U.S. are the residue of past choices, there have of course been historic moments in U.S. history in which new pathways have been charted and new policies and institutions have been introduced. We cannot rule out that a moment of this sort is nearing in which the U.S. adopts more progressive policies that reduce inequalities and promote the general welfare. ∎

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NOTES

1. On American exceptionalism, see Kenworthy, Lane. 2015. "America is Exceptional… and Ordinary." *The Good Society*. Available at http://lanekenworthy.net/america-is-exceptional/.

2. In-kind transfers in the form of health and education benefits are not counted, nor are indirect taxes. For an analysis of cross-national income inequality that includes these items, see Garfinkel, Irwin, Lee Rainwater, and Timothy Smeeding. 2006. "A Reexamination of the Welfare State and Inequality in Rich Nations: How In-Kind Transfers and Indirect Taxes Change the Story." *Journal of Policy Analysis and Management* 25(4), 855–919.

3. Cross-National Data Center in Luxembourg, available at http://www.lisdatacenter.org/; OECD Income Distribution Database (IDD): Gini, Poverty, Income, Methods and Concepts, available at http://www.oecd.org/social/income-distribution-database.htm.

4. For instance, see Wilkinson, Will. 2009. *Thinking Clearly about Economic Inequality*. Policy Analysis, No 640. Washington, D.C.: Cato Institute. Available at http://object.cato.org/sites/cato.org/files/pubs/pdf/pa640.pdf.

5. Purchasing power parities (PPP) allow comparison of incomes across countries. Thus we are able to convert all income to U.S. dollars in order to compare incomes across countries. Our PPP data come from the OECD.

6. All data in Figure 2 come from LIS, except for Sweden, which comes from the IDD. The IDD only publishes the 90-10 ratio and not the actual values at the 90th percentile and 10th percentile.

7. See also Keeley, Brian. 2015. Income Inequality: T*he Gap between Rich and Poor.* OECD Insights. Paris: OECD Publishing. Available at DOI: http://dx.doi.org/10.1787/9789264246010-en. He finds even bigger differences by examining average incomes in the top and bottom deciles.

8. LIS key figures, available at http://www.lisdatacenter.org/lis-ikf-webapp/app/search-ikf-figures.

9. Organisation for Economic Co-operation and Development (OECD). 2015. *In It Together: Why Less Inequality Benefits All.* Paris: OECD Publishing. Available at DOI: http://dx.doi.org/10.1787/9789264235120-en; Gornick, Janet, and Branko Milanovic. 2015. *Income Inequality in the United States in Cross-National Perspective: Redistribution Revisited.* LIS Center Research Brief (1/2015). Available at https://www.gc.cuny.edu/CUNY_GC/media/CUNY-Graduate-Center/PDF/Centers/LIS/LIS-Center-Research-Brief-1-2015.pdf; and Pew Research Center. 2015. "The Lost Decade of the Middle Class: Fewer, Poorer, Gloomier." Washington, D.C.: Pew Research Center. Available at http://www.pewsocialtrends.org/2012/08/22/the-lost-decade-of-the-middle-class/.

10. OECD, 2015.

11. See Fisher, Jonathan, David Johnson, Jonathan Latner, Timothy Smeeding, and Jeffrey Thompson. 2016. "Inequality and Mobility Using Income, Consumption, and Wealth for the Same Individuals." Russell Sage Foundation Journal of the Social Sciences, forthcoming.

12. The reader should be aware that the top income and wealth shares are each calculated from different databases, so that the top 10 percent are different households in each database. Fisher et al. (2016), in contrast, examine wealth income and consumption in the U.S. for the same persons.

13. Osberg, Lars, Timothy Smeeding, and Jonathan Schwabish. 2004. "Income Distribution and Public Social Expenditure: Theories, Effects, and Evidence." In *Social Inequality* (K. Neckerman, Ed.). New York: Russell Sage Foundation.

14. Yellen, Janet L. 2014. "Perspectives on Inequality and Opportunity from the Survey of Consumer Finances." Presentation to the Conference on Economic Opportunity and Inequality, Federal Reserve Bank of Boston. October 17, 2014. Boston. Available at http://federalreserve.gov/newsevents/speech/yellen20141017a.htm (last accessed December 5, 2015); Fisher et al. (2016).

15. Autor, David. 2014. "Skills, Education, and the Rise of Earnings Inequality Among the 'Other 99 Percent'." *Science* 344(1866), 843–851.

16. Haveman, Robert, Carolyn Heinrich, and Timothy Smeeding. 2011. "Policy Responses to the Recent Poor Performance of the United States Labor Market." *Journal of Policy Analysis and Management*, 31(1), 177–186.

17. National Employment Law Project. 2012. *The Low-Wage Recovery and Growing Inequality*. Data Brief. New York: NELP. Available at http://www.nelp.org/content/uploads/2015/03/LowWageRecovery2012.pdf.

18. OECD, 2015.

19. OECD, 2015; Organisation for Economic Co-operation and Development (OECD). 2014. "Focus on Inequality and Growth – December 2014." Paris: OECD. Available at http://www.oecd.org/social/Focus-Inequality-and-Growth-2014.pdf; Kenworthy, Lane, and Timothy Smeeding. 2014. "The United States: High and Rapidly Rising Inequality." *Inequality and Its Impacts, Volume 2* (Brian Nolan and Wiemer Salverda, et al., Eds.). New York: Oxford University Press.

20. See also Corak, Miles. 2013. "Income Inequality, Equality of Opportunity, and Intergenerational Mobility." *Journal of Economic Perspectives* 27(3), 79–102.

21. Figure 1.6 in OECD, 2015.

WEALTH INEQUALITY

The Stanford Center on Poverty and Inequality

BY GABRIEL ZUCMAN

KEY FINDINGS

- Over the past four decades, only the very rich, the top 0.1 percent, have realized wealth increases in the U.S. In 2012, the top 0.1 percent included 160,000 households with total net assets of more than 20 million.

- At the same time, the middle class, those in the 50th-90th percentiles, have experienced a decline in their wealth share.

- Available data indicate that there is significantly less wealth inequality in Europe than in the United States. No other country analyzed has top wealth shares as high as the U.S.

With the takeoff in income inequality by now well-known, attention has shifted of late to trends in wealth inequality. Until recently, it had been difficult to gather empirical evidence on wealth inequality. However, important new evidence on wealth inequality has now become available, evidence that suggests that wealth concentration is rising fast in the U.S. and has reached levels last seen only during the Gilded Age. According to the latest available data, in 2012 the top 1 percent owns 42 percent of total U.S. wealth, up from 25 percent in the 1970s.[1]

The simple purpose of this article is to ask how such wealth inequality, which would appear to be quite extreme, compares to that of other developed economies. Has there been a takeoff in wealth inequality in other countries? Is it as spectacular as the takeoff in the U.S.? Does the current level of wealth inequality in other countries match the current level in the U.S.? We take on questions of this sort in this article.

What Is Wealth?

To compare the distribution of wealth across countries, it is of course critical to use the same definition of wealth across countries. Wealth is defined as the current market value of all the assets owned by households, net of all their debts. Following international standards codified in the System of National Accounts, assets include all the non-financial and financial assets over which ownership rights can be enforced and that provide economic benefits to their owners.

This definition of wealth includes all pension wealth—whether held in individual retirement accounts or through pension funds and life insurance companies—with the exception of Social Security and unfunded defined benefit pensions. It excludes all promises of future government transfers. Including such transfers is analytically difficult because these types of assets lack observable market prices. The wealth definition excludes human capital for this same reason.

New Data Sources on Wealth Inequality

With this definition in hand, wealth concentration can be studied using different data sources.[2] The ideal source would be high-quality wealth tax declarations for the entire population, with extensive and truthful reporting by financial institutions, domestic and foreign. No country in the world has such a perfect data source today. However, France, Spain, the Netherlands, Norway, and Switzerland all impose direct-wealth taxes that generate useful data on wealth. Among these countries, Norway's data are of the highest quality, as extensive information on most assets is collected for all Norwegians (whether subject to the wealth tax or not). Although Denmark stopped taxing wealth in 1997, it also still collects detailed full-population administrative data on wealth.

Other tax data can be used to estimate wealth indirectly. There are two main

approaches here. First, estates and inheritance tax returns provide information about wealth at death.[3] From these sources, one can infer how wealth is distributed across the living population, using the method known as the "mortality multiplier," which was invented shortly before World War I by British and French economists.[4] Second, one can use individual income tax returns and capitalize the dividends, interest, rents, and other forms of capital income declared on such returns. Drawing on the detailed U.S. income tax data and Financial Accounts balance sheets, Emmanuel Saez and I recently used the capitalization technique to estimate the distribution of U.S. wealth annually since 1913,[5] as discussed below.

Wealth inequality can also be studied using surveys. In the U.S., the Survey of Consumer Finances is available on a triennial basis from 1989 to 2013. In the euro area, the Household Finance and Consumption Survey (HFCS) provides harmonized micro-data on euro-area households' wealth and consumption. The development of wealth surveys has led to a new wave of comparative studies that attempt to model the distribution of wealth from the bottom—including groups with negative net wealth—to the top.[6] The key advantage of surveys is that they include detailed socio-demographic data and wealth questionnaires that allow us to measure broad sets of assets for the entire population, including tax-exempt assets and assets at the bottom of the wealth distribution that are not covered in tax data.

For all their promise, surveys also face two main limitations: (1) they are not available on a long-run basis, and (2) they raise serious difficulties regarding measurement at the top of the distribution. The wealthy are hard to reach in surveys (sampling error), and even those who respond may underestimate their wealth (non-sampling error). As a result, surveys are not representative of the richest individuals. In the Dutch wealth survey, for instance, there are only two individuals with more than €2 million in net wealth.[7] This is a serious issue because wealth is very concentrated (much more so than income). The richest 10 percent typically own between 60 percent and 80 percent of aggregate wealth. Thus, to properly study cross-country patterns in wealth inequality, it is critical to pay careful attention to those at the very top, and this leads us away from full reliance on surveys.

However, tax sources also raise difficulties at the top, especially for the recent period, given the large rise of the wealth held in offshore tax havens such as Switzerland, the Cayman Islands, Singapore, and so on.[8] The wealthiest individuals have incentives to hide assets. Evidence from Norway suggests that offshore tax evasion at the very top can have a significant effect on inequality measures, even in countries with otherwise high-quality administrative data on wealth.

FIGURE 1. Top 0.1% Wealth Share in the U.S., 1913-2012
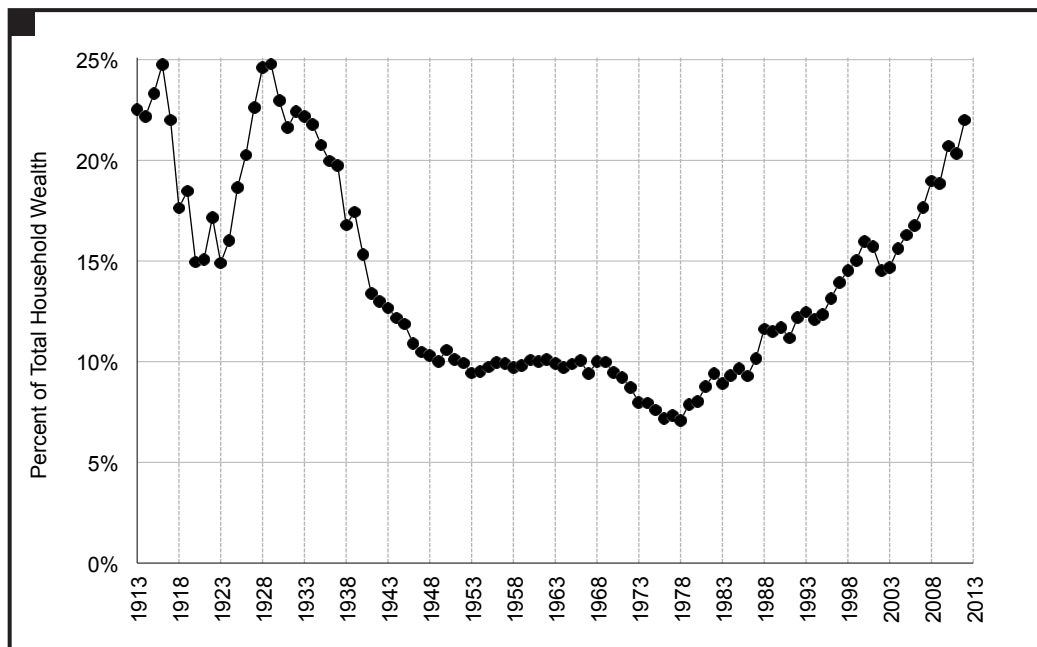
Note: This figure depicts the share of total household wealth held by the 0.1% richest families, as estimated by capitalizing income tax returns. In 2012, the top 0.1% includes about 160,000 families with net wealth above $20.6 million. Source: Saez and Zucman, 2016, Appendix Table B1.

Given the limitations of all existing data sources, one needs to be pragmatic and combine the various available data sources. Some countries, such as France and the U.S., attempt to integrate household wealth surveys with administrative tax data. Recently, Philip Vermeulen has proposed using a list of rich individuals, such as the Forbes 400 in the U.S. and similar rankings abroad, to improve survey data and better capture the top tail of the distribution.[9]

In this report, I combine the available data to provide evidence on how the U.S. compares to other countries. However, the reader should keep in mind that the available data on wealth are of disparate—and in many cases very insufficient—quality. To quantify wealth inequality, I will focus upon simple concentration indicators such as the Gini coefficient, and the share of aggregate wealth going to the top 10 percent, top 1 percent, and top 0.1 percent of households by wealth.

Wealth Inequality in the U.S.

It is useful to begin by considering what we know about wealth inequality in the U.S. Emmanuel Saez and I construct top wealth shares,[10] by year since 1913, using comprehensive data on the capital income reported on individual income tax returns—such as dividends, interest, rents, and business profits. We capitalize this income so that it matches the amount of wealth recorded in the Federal Reserve's Financial Accounts, the national balance sheets that measure aggre-

gate wealth of U.S. households. In this way, we obtain annual estimates of U.S. wealth inequality stretching back a century.

U.S. wealth inequality, it turns out, has followed a spectacular U-shaped evolution. From the Great Depression in the 1930s through the late 1970s, there was a substantial democratization of wealth. The trend then inverted, with the share of total household wealth owned by the top 0.1 percent increasing from 7 percent in the late 1970s to 22 percent in 2012. In the most recent data, the U.S. top 0.1 percent includes 160,000 households with total net assets of more than $20 million.

Figure 1 shows that wealth inequality has exploded in the U.S. over the past four decades. The share of wealth held by the top 0.1 percent of households is now almost as high as in the late 1920s, when *The Great Gatsby* defined an era that rested on the inherited fortunes of the robber barons of the Gilded Age.

In recent decades, only a tiny fraction of the population saw its wealth share grow. While the wealth share of the top 0.1 percent increased a lot in recent decades, that of the next 0.9 percent (i.e., 99–99.9) did not. And the share of total wealth of the "merely rich"—households who fall in the top 10 percent, but are not wealthy enough to be counted among the top 1 percent—actually decreased slightly over the past four decades. In other words, $20 million fortunes (and higher)

FIGURE 2. The Decline of Middle Class Wealth in the United States (Composition of the Bottom 90% Wealth Share)
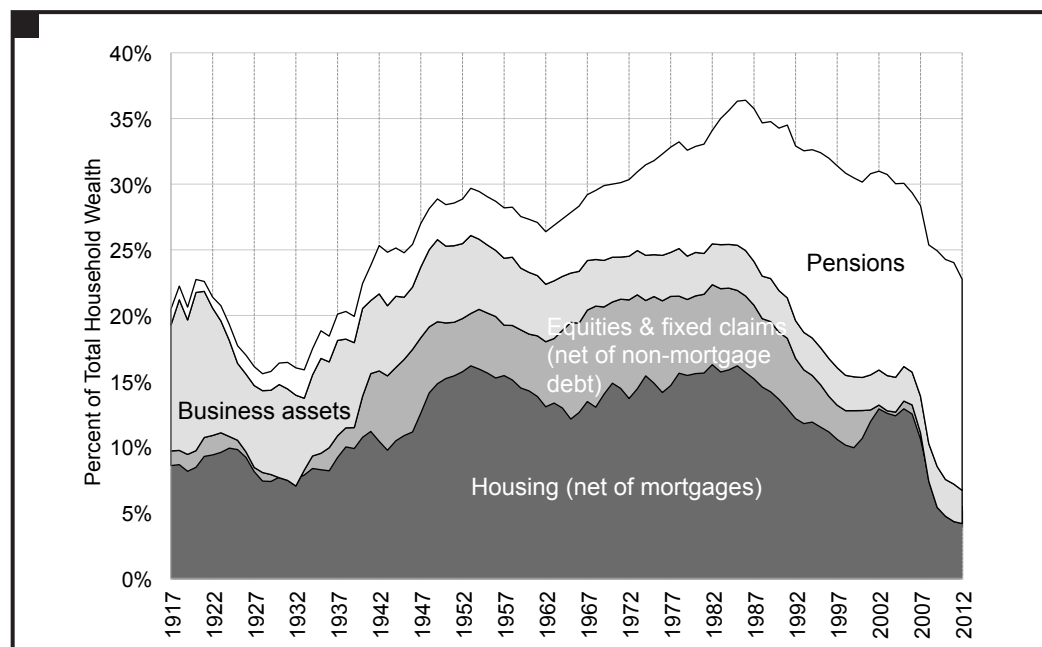
Note: This figure depicts the share and composition of the wealth held by families in the bottom 90% of the wealth distribution, as estimated by capitalizing income tax returns. Source: Saez and Zucman, 2016, Appendix Table B5.

TABLE 1. Wealth Distribution: U.S. vs. Norway

The distribution of houshold wealth in Norway and the United States in 2012, based on tax data		
	% of net household wealth at market value	
	Norway	U.S.
Bottom 50%	1.2%	2.5%
50%–90%	48.7%	20.3%
Bottom 90%	49.9%	22.8%
Top 10%	50.1%	77.2%
Top 1%	17.9%	41.8%
Top 0.1%	8.0%	22.0%
Top 0.01%	3.6%	11.2%

Note: This table shows the distribution of household wealth in Norway and the United States in 2012, based on tax data. Source: Norway: Alstadsæter, Johannesen and Zucman (2016) using wealth reported to tax authorities. U.S.: Saez and Zucman (2016) using capitlized income tax returns, and bottom 50% US obtained by Kennickell (2009, Figure A3a) for 2007 using the SCF.

TABLE 2. Wealth Inequality in the Euro Area

	Gini coefficient	Top 1% share	Top 10% share
Australia		13.3	44.9
Austria	0.762	24.0	61.7
Belgium	0.608	12.6	44.1
Canada		15.5	50.3
Cyprus	0.698		
Denmark		25.0	
Finland	0.664	12.4	45.0
France	0.679	18.0	50.0
Germany	0.758	24.5	59.2
Greece	0.561	8.5	38.8
Italy	0.609	14.3	44.8
Luxembourg	0.661	22.4	51.4
Malta	0.600		
Netherlands	0.654	23.9	59.6
Norway		17.9	50.1
Portugal	0.670	21.3	52.7
Slovak Republic	0.448	7.9	32.9
Slovenia	0.534		
Spain	0.580	15.2	43.5
Sweden			57.6
United Kingdom		17.5	46.6
United States		41.8	77.2

Source: U.S.: Saez and Zucman (2016); Norway: Alstadsæter, Johannesen and Zucman (2016); top shares for other countries: OECD wealth distribution database; Gini coefficients: Cowell and Van Kerm (2015), Table 2.

grew much faster than smaller fortunes in the single-digit millions.

The flip side of these trends at the top of the wealth ladder is the erosion of wealth among the middle class and the poor. This erosion challenges the widespread notion that rising middle-class wealth constituted a key structural change in the U.S. economy, due to the development of pensions and the rise in home ownership rates. Figure 2 shows that while the share of wealth of the bottom 90 percent did gradually increase from 15 percent in the 1920s to 36 percent in the 1980s, it dramatically declined thereafter. In the most recent data, the bottom 90 percent collectively owns just 23 percent of total U.S. wealth, about as much as in 1940.

In every country and historical period for which we have data, the share of aggregate wealth owned by the bottom 50 percent is extremely small, usually less than 5 percent. That is, assets are overall only slightly greater than debts across the bottom half of the distribution. This means that a decline in the wealth share of the bottom 90 percent can be interpreted as a decline in the wealth share of the "middle class," that is, the 50th–90th percentiles.

Contrasting the U.S. to Scandinavia

How does the U.S. compare to other countries? Because Scandinavian countries have the most comprehensive data on wealth, Scandinavia is a good starting point in addressing this question. In a recent paper, Annette Alstadsæter, Niels Johannesen, and I study the country that currently has the best administrative wealth data: Norway.[11]

We exploit administrative wealth tax records that cover the entire population of Norway, whether subject to the tax or not. Just like in the U.S., we include all forms of assets and liabilities at market value, so that our distributional figures cover 100 percent of the (recorded) aggregate wealth of households. Because we use the same concept of aggregate wealth in Norway as in the U.S., we can meaningfully compare wealth inequality in the two countries. Our unit of analysis is the household, as in the U.S. Households are defined as those headed by a single person age 20 or above or by a married couple.

Table 1 shows that wealth is much more equally distributed in Norway than in the U.S. today. In both countries, the bottom 50 percent of the distribution owns almost no wealth in total (its debts are as big as its assets), a key regularity across the world. But the top half of the distribution looks markedly different. The Norwegian middle class owns close to half of all wealth, versus just 20.3 percent of all wealth in the U.S. case.

In the U.S., the top 0.1 percent owns as much wealth as the bottom 90 percent does. In Norway, the top 0.1 percent share is much smaller (8.0%).

Both the U.S. and Norwegian top shares are likely to be substantially underestimated, because tax data fail to capture the wealth held in offshore tax havens. Accounting for this wealth would, we estimate, raise the top 0.1 percent wealth share by half in Norway (to about 12%), erasing part of the gap with the U.S.—but only part of it.

The trends for the other Scandinavian countries are similar. In Denmark, for instance, historical wealth concentration data exist from as early as 1789 and then more frequently during the 20th century. Danish wealth concentration decreased over the course of industrialization, and this continued throughout the 20th century. Today, the top 1 percent wealth share (~25%) is a bit higher in Denmark than in Norway, but it is not clear if this difference reflects a real economic phenomenon or measurement limitations.[12] In any case, the Danish top 1 percent share is far lower than that in the U.S.

Continental Europe and Other Countries
In most Continental European countries, wealth inequality comparisons are available only via survey data. Table 2 presents Gini coefficients computed from the HFCS. The HFCS aggregates euro-area surveys, some of which have serious deficiencies. The results accordingly should be interpreted with care.

As Table 2 shows, the Gini coefficient for net wealth ranges between 0.45 (Slovakia) and 0.76 (Austria and Germany). Data limitations make it hard to say whether these differences reflect real economic phenomenon or measurement issues.

What the data suggest more clearly, however, is that no country has top wealth shares as high as the U.S. Table 2 reports top 10 percent and top 1 percent wealth shares from a large number of OECD countries, which have very recently been published by the OECD. There is a considerable gap between the top 1 percent wealth share of the U.S. (41.8%) and all other OECD countries. The same is true for the top 10 percent. Although it is likely that the top shares of many European

countries countries are underestimated in Table 2 (due to the problems noted above with survey data), the gap seems too big to be entirely due to measurement errors. There is significantly less wealth inequality in Europe today than in the U.S.

This has not always been the case. In the 19th century, the U.S. was to some extent the land of equality, at least for white men. Wealth concentration was much less extreme than in Europe (except in the southern U.S.). Over the course of the 20th century, this was reversed, and wealth concentration is now significantly higher in the U.S., as shown in Figure 3.

Conclusions
In the introduction to this article, two key questions about the structure of cross-national variability in wealth inequality were posed, questions that have been taken on here. It is useful to conclude by reiterating the answers to these questions.

Is the distribution of wealth more extreme in the contemporary U.S. than in other well-off countries? Given limitations in data quality and comparability, real caution is in order in answering this question. But the available data suggest that, as with so many other poverty and inequality outcomes, the level of wealth inequality in the U.S. is quite exceptional. If one compares the U.S. to Scandinavian countries, where the data are of high quality, it is clear that wealth inequality is much more extreme in the U.S. If one instead compares to all euro-area

FIGURE 3. Top Wealth Shares, Europe vs. U.S., 1810-2010
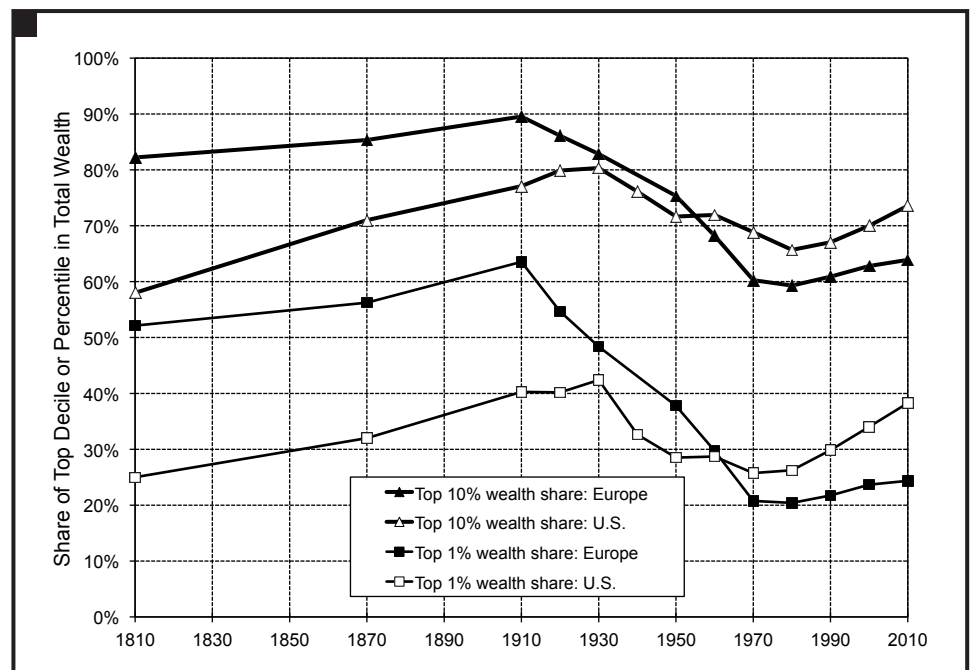
Source: Piketty and Zucman, 2015.

countries, the top wealth shares in the U.S. are still unusually high, although in this case the comparisons have to rest on lower-quality survey data.

Has there been an equally spectacular takeoff in wealth inequality in all countries? The evidence reveals a much more extreme takeoff in wealth inequality in the U.S. than in the euro-area countries. The rapid takeoff in the U.S. has reversed the U.S.-Europe ranking on wealth inequality: That is, whereas wealth concentration was once much less extreme in the U.S. than in Europe, now it is much more extreme in the U.S. than in Europe.

The emergence of extreme wealth inequality in the U.S. may be understood as the realization of long-standing concerns about the underlying dynamics of change in the U.S. It is notable that U.S. economists of the early 20th century were very concerned about the possibility that their country had become as unequal as Old Europe. Irving Fisher, then president of the American Economic Association, gave his presidential address in 1919 on this topic. He argued that the concentration of income and wealth was becoming as dangerously excessive in America as it had been for a long time in Europe. He called for steep tax progressivity to counteract this tendency. Fisher was particularly concerned that as much as half of U.S. wealth was owned by just 2 percent of

Americans, a situation that he viewed as "undemocratic."[13] One can interpret the spectacular rise of tax progressivity that occurred in the U.S. during the first half of the 20th century as an attempt to preserve the egalitarian, democratic American ethos, celebrated a century before by Tocqueville and others.

It might accordingly be imagined that, given that the U.S. now has higher levels of wealth inequality than Europe, there would be profound pressures to install a more progressive tax system in the U.S. The pressure to do so is in fact quite limited. Why? The key complicating development in this regard is that attitudes towards inequality are dramatically different today. Many U.S. observers now view Europe as excessively egalitarian, and many European observers view the U.S. as excessively unequal. There has in this sense been a great reversal not just in objective levels of wealth inequality but also in attitudes about the appropriate "target levels" of wealth inequality.

This change in the desired target level is likely to be consequential. If the growth in wealth concentration in the U.S. is now understood as unproblematic (rather than "undemocratic"), then of course it may well continue apace. ■

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NOTES

1. Saez, Emmanuel, and Gabriel Zucman. 2016. "Wealth Inequality in the United States Since 1913: Evidence from Capitalized Income Tax Returns." *Quarterly Journal of Economics*, forthcoming.

2. Piketty, Thomas, and Gabriel Zucman. 2015. "Wealth and Inheritance in the Long Run." *Handbook of Income Distribution*, 2, 1303–1368.

3. The difference between inheritance and estate taxes is that inheritance taxes are computed at the level of each inheritor, whereas estate taxes are computed at the level of the total estate (i.e., total wealth left by the decedent).

4. The "mortality multiplier" weights wealth-at-death by the inverse of the mortality rate conditional on age, gender, and wealth, in order to generate estimates for the distribution of wealth among the living population.

5. Saez and Zucman, 2016.

6. For a survey article using HFCS data for 15 euro-area countries, see Cowell, Frank A., and Philip Van Kerm. 2015. "Wealth Inequality: A Survey." *Journal of Economic Surveys*, 671–710.

7. Vermeulen, Philip. 2016. "How Fat Is the Top of the Wealth Distribution?" mimeo.

8. Zucman, Gabriel. 2013. "The Missing Wealth of Nations: Are Europe and the US Net Debtors or Net Creditors?" *Quarterly Journal of Economics,* 128(3), 1321–1364; Zucman, Gabriel. 2014. "Taxing Across Borders: Tracking Personal Wealth and Corporate Profits." *Journal of Economic Perspectives*, 28(4), 121–148; Zucman, Gabriel. 2015. *The Hidden Wealth of Nations*. Chicago, IL: University of Chicago Press.

9. Vermeulen, 2016.

10. Saez and Zucman, 2016.

11. Alstadsæter, Annette, Niels Johannesen, and Gabriel Zucman. 2016. "Tax Evasion and Inequality," mimeo.

12. Roine, Jesper, and Daniel Waldenström. 2015. "Long-Run Trends in the Distribution of Income and Wealth." *Handbook of Income Distribution*, 2A.

13. Fisher, Irving. 1920. "Economists in Public Service." *American Economic Review*, 9, 5–21.

EDUCATION

The Stanford Center on Poverty and Inequality

BY ANNA K. CHMIELEWSKI AND SEAN F. REARDON

KEY FINDINGS

- There is considerable variation across highly developed countries in the extent to which students from high-income families have higher academic test scores than students from low-income families (the "income achievement gap").

- The income achievement gap in the United States is quite large relative to the 19 other Organization for Economic Cooperation and Development (OECD) countries examined here.

- Countries with higher levels of poverty, inequality, and economic segregation (among schools) tend to have larger income achievement gaps.

- Countries with less differentiated education systems and more standardized curricula generally have smaller income achievement gaps.

The United States is an outlier on many measures of inequality. When compared to other well-off countries, it has unusually high levels of income inequality, unusually high levels of wealth inequality, and unusually high levels of poverty. The purpose of this article is, in part, to ask whether the "income achievement gap"—the test score gap between children from high- and low-income families—is also unusually high in the U.S. This gap is important because it reflects (a) the extent to which students experience different socioeconomic conditions in their early childhood and different schooling conditions once they reach school age, and (b) the extent to which these socioeconomic and schooling context differences lead to different educational outcomes (test scores, in this case). It may accordingly be understood as an early (albeit obviously imperfect) measure of the extent to which opportunities are unequal.

Although a main purpose of this article is simply to establish how the U.S. stacks up against its peer countries on this key measure of unequal opportunity, our follow-up objective is to cast some light on the sources of international differences in this measure. We examine, in particular, whether income inequality is an important source of the achievement gap. The evidence from the U.S. is at least suggestive of an "income inequality" effect: In the 1980s and 1990s, as income inequality in the U.S. grew sharply, so too did the academic achievement gap by family income. That family income

and family socioeconomic status (SES) are related to children's academic achievement is not surprising; that this relationship grew so rapidly in the U.S. in the last several decades, however, is rather surprising. The U.S. trends suggest that some of this growth may have been the result of rising income inequality.

As one way of investigating the relationships between income inequality, school system characteristics, and the income achievement gap, we examine data from multiple countries with widely varying levels of income inequality and school institutional structures. We investigate the association between the size of a country's income achievement gap and a host of characteristics, including its poverty and inequality levels, welfare policies, parental support policies, and national school system policies.

The Income-Achievement Association in the U.S.

The income achievement gap in the U.S. grew by roughly 40 percent between cohorts of students born in the mid-1970s and those born in 2000 (although the gap appears to have then declined by 15 percent in the subsequent decade). During this same period, income inequality among families with children grew sharply in the U.S., which is why one instinctively turns to income inequality as a source of the trend.

However attractive the income inequality hypothesis may be, it does not seem

to be straightforwardly driving the U.S. income achievement gap. This is because the *type* of changes in U.S. income inequality do not match up well with the *type* of changes in the U.S. achievement gap: Income inequality grew in the 1970s and 1980s largely because of stagnation at the bottom of the income distribution among families with children, while the income achievement gap grew mostly as children from families in the top half of the income distribution pulled away from their lower-income peers.

Still, income inequality may drive income achievement gaps indirectly through other social policies and conditions, such as a weakening social safety net, inadequate support for parents and families, and increasing segregation of neighborhoods and schools by income. Evidence from the U.S. shows that the income achievement gap is very large when children enter kindergarten and does not widen much between kindergarten and grade 12. This suggests that broader social

FIGURE 1. Estimated 90/10 Income Achievement Gaps in Reading, 2001–2012

Note: Elementary school estimates are based on the Progress in International Reading Literacy Study (PIRLS) reading tests administered to 4th graders in 2001; secondary school estimates are based on the Programme for International Student Assessment (PISA) reading tests administered to 15-year-olds in 2006, 2009, or 2012.

conditions may play a larger role in the income achievement gap than do schools.

It is difficult to adjudicate among the many possible explanations for increasing income achievement gaps using information from only the U.S. Examining income achievement gaps in other developed countries with widely varying income inequality, social conditions, and welfare and educational policies sheds new light on growing achievement disparities.

The Income-Achievement Association in Cross-National Comparison

We compare the U.S. to the 19 other developed countries for which we could obtain information both on students' academic achievement in either reading or math in elementary or secondary school and their household income.[1] For each country and study, we estimate the average difference in test scores between students at the 90th and 10th percentiles of the household income distribution within their respective country and cohort. Figure 1 shows the estimated reading achievement gaps, measured in terms of standard deviations, for each of the countries in our sample.
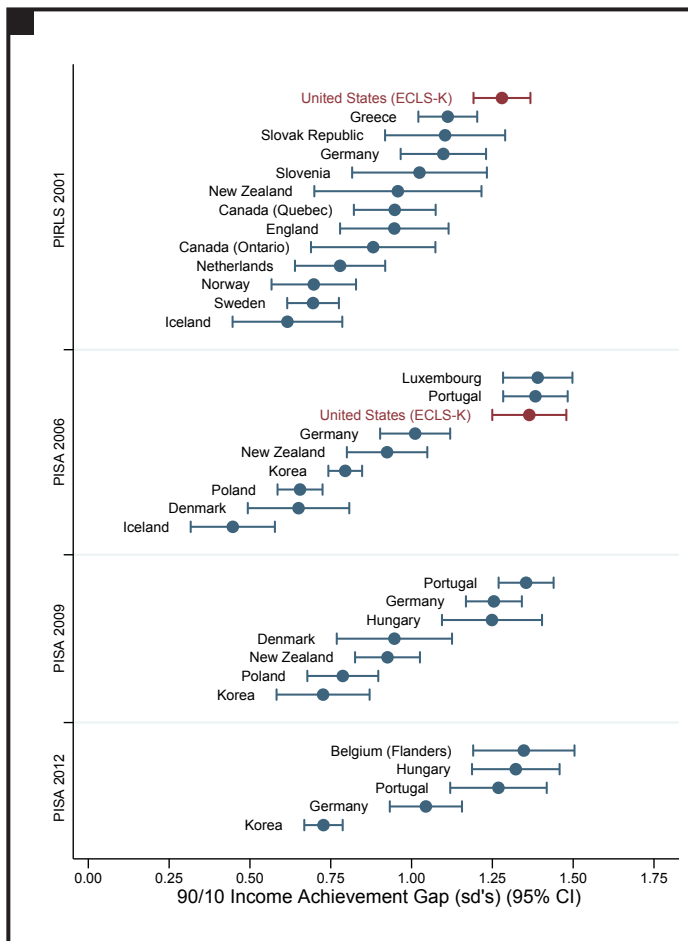
The evidence in Figure 1 is quite striking: The U.S. gaps for both elementary and secondary school rank among the largest across the available countries. Gaps in the U.S. are comparable in size to those of Portugal, Luxembourg, Hungary, and Belgium (Flanders). The countries with the smallest income achievement gaps are Iceland, Norway, Sweden, Poland, and Denmark.

The estimated gaps in elementary school appear somewhat smaller than those for secondary school, but this may be an artifact of our samples of countries for each study. There are very few overlapping countries across the elementary and secondary school studies; the only four countries in our sample for which we have data for both levels are Germany, Iceland, New Zealand, and the U.S. In our U.S. data, consistent with prior evidence from the U.S., the gaps are roughly the same size in elementary and secondary school. In the other three countries, we observe the same pattern. There is no evidence that gaps are markedly larger in secondary school than in elementary school. Thus, both U.S. and international evidence suggest that broader social conditions may play a larger role in the income achievement gap than do schools.

The Effects of Inequality

We turn next to the task of casting some light on the sources of this cross-national variation. We do so by examining the relationships between income achievement gaps and vari-

ous country characteristics. It is natural to lead off, as we have in Figure 2, by examining the simple bivariate association between country-level income inequality and income achievement gaps.

In this and all subsequent figures, we pooled elementary and secondary school achievement gaps in all available subjects and averaged the country characteristics across years within each country. The size of each circle indicates the precision of each achievement gap estimate, with the larger circles indicating the most precisely estimated gaps. Each of Figures 2 to 6 includes two fitted lines. The solid red line is the precision-weighted regression line through the 20 data points. Because the U.S. has extreme values on some of the country characteristics and because the gap data for the U.S. come from a different data source, we also fit precision-weighted regression lines that exclude the U.S. This allows us to examine whether the fitted lines are heavily influenced by the presence of the U.S in the sample. The estimates based on these regressions are shown as dashed blue lines in each figure.

We hypothesized that countries with higher income inequality would have larger income achievement gaps; Figure 2 shows a modest positive association between the two. Some of the countries with large income achievement gaps, notably the U.S. and Portugal, have very high levels of income inequality; others, such as Luxembourg and Belgium (Flanders), have moderately low levels of income inequality. Most of the countries with the smallest income achievement gaps are Scandinavian countries with low levels of income inequality. Poland, however, has both moderately high income inequality

FIGURE 2. Association Between Income Achievement Gap and Income Inequality, 2001–2012
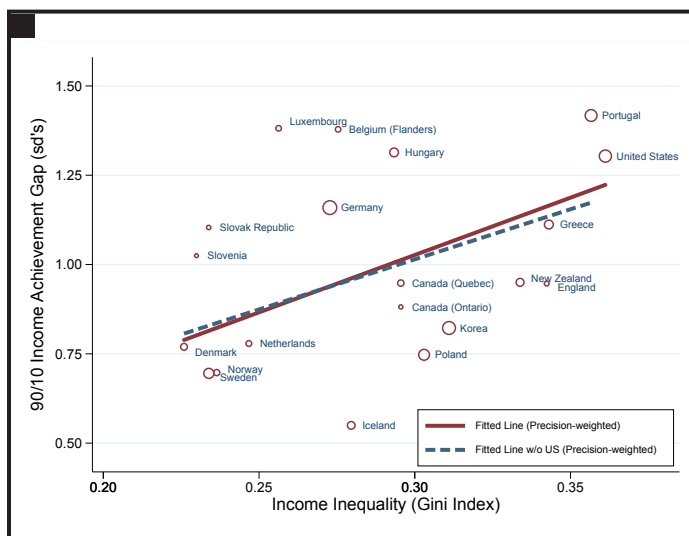
and low income achievement gaps.

This evidence, like that pertaining to trends within the U.S., does not suggest a straightforward relationship between income inequality and income achievement gaps. But income inequality may drive gaps indirectly through other social conditions that are correlated with (or caused by) income inequality. In developed countries, income inequality is strongly correlated with child poverty rates (because a high poverty rate in a rich country implies substantial income inequality), as well as other sequelae of poverty and inequality, such as high rates of teen childbirth, high rates of low birthweight, and high levels of segregation by income among schools.

We examine each of these characteristics in turn and find that all are, as predicted, positively associated with income achievement gaps. Figures 3 and 4 present the results for the two strongest associations: the association with child poverty and that with income segregation (among schools). Both relationships remain strong (or grow stronger) when the U.S. is excluded from the sample, an important finding given that its child poverty and income segregation measures are very high relative to the other OECD countries.

Although the association of income segregation and the income achievement gap is strong, the mechanisms that produce this association are not obvious. Because residential and school segregation are correlated, it is not clear whether this association arises from school segregation (and inequalities in school quality associated with segregation) or residential segregation (and inequalities in environment and opportunities associated with residential segregation). The relationships between the rates of teen childbirth and low birthweight and income achievement gaps are positive but weaker.

The Effects of Policy

The "direct approach" to reducing the size of the achievement gap is simply to reduce the amount of income inequality in a society. If indeed the gap is mainly a function of income inequality (and its sequelae), then a society could in principle opt to reduce the gap by reducing the amount of inequality. The rationale for doing so is that one cannot easily deliver equal opportunities to children when the resources available to their parents are so grossly different.

The alternative "indirect approach," however, is to leave such inequalities intact but devise state policies that at least reduce their effects. There are two main candidate policies in this regard: social welfare policy and parental support policy. We expect that countries with strong social welfare policy can reduce the effects of income disparities by "decommodifying"

achievement-enhancing resources. That is, insofar as such resources are provided to all families regardless of income, then the *effects* of income on achievement will presumably be reduced (without reducing the amount of income inequality itself). We constructed an index of social welfare policy that included public health expenditures, public spending on family benefits in cash, public spending on family benefits in services, and pre-primary school enrollment rates.

We also constructed an index of parental support measuring (albeit crudely) the extent to which a country requires paid parental leave following the birth of a child. We would have preferred a more general measure of early childhood support pertaining to social policies that support families with young children and that provide educational opportunities for young children. We would of course expect a reduction in the size of the achievement gap when children from poorer families tend to have parents at home during infancy and have more educational opportunities prior to enrolling in primary school. However, the only policy measures we were able to obtain were measures of parental leave policy, hence we were obliged to construct our index using (a) the maximum number of weeks of leave for mothers, (b) the number of weeks of paternity leave for fathers, (c) the paid leave full-rate equivalent pay for mothers, and (d) the paid leave full-rate equivalent for fathers.

Both the social welfare policy index and the parental support index were, as expected, negatively associated with income achievement gaps, but the relationships are weak (results not shown here). We are not confident, however, that the social welfare policy and parental support indices were sufficiently well-defined to capture the true relationship of social policies to income achievement gaps. The upshot is that, on the basis of the data available to us, the viability of a policy-based response remains very unclear.

The Surgical Approach

We conclude by examining a third and more "surgical" approach to reducing the size of the gap. If a country opts against both direct reductions in inequality, as well as against various types of "decommodifying" policies that reduce the effects of money, it may instead attempt to surgically intervene in the way in which education itself is delivered.

As such, we next examine the relationship between income achievement gaps and features of national educational systems. International research describing the institutional structures of educational systems often focuses on two key dimensions: differentiation and standardization. Differentiation, which pertains to whether students are placed in different curricular tracks on the basis of ability or prior achievement, may reproduce social class differences if lower-SES students are overwhelmingly assigned to lower tracks (either because of low prior performance or discrimination). Within lower tracks, educational expectations are lower, and curricula and instruction target less advanced academic skills, thus reducing achievement. In contrast, standardization of resources and curricula may produce greater homogeneity of educational quality across schools.

We created an index of differentiation measuring the extent to which the educational system is structured to provide highly differentiated learning environments for students. We

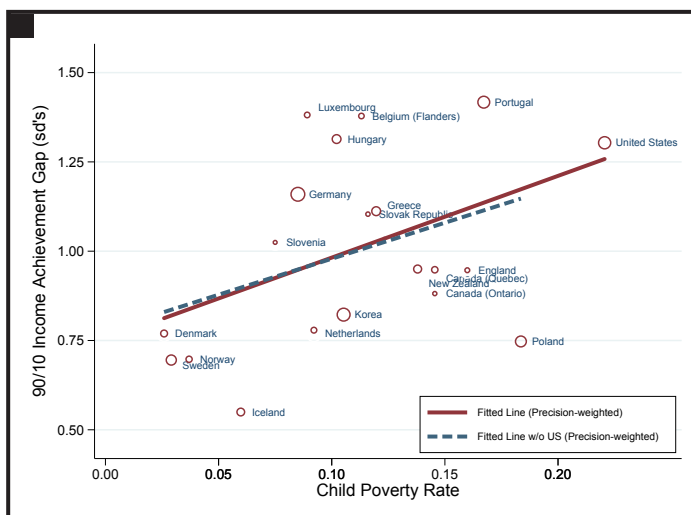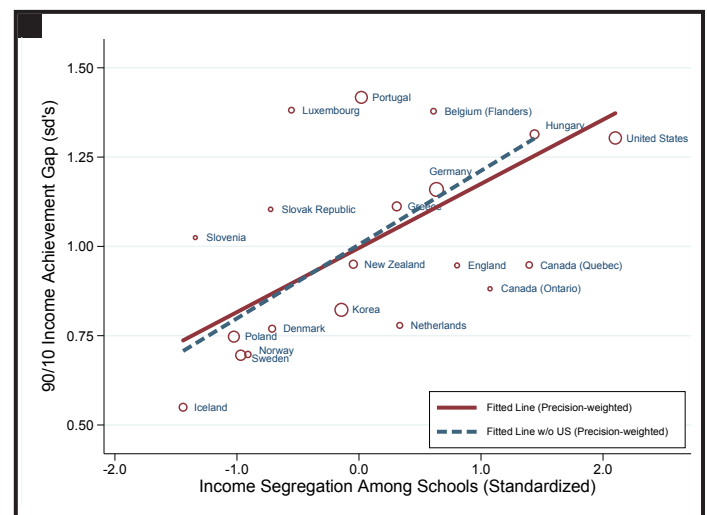FIGURE 3. Association Between Income Achievement Gap and Child Poverty Rate, 2001–2012

FIGURE 4. Association Between Income Achievement Gap and Income Segregation, 2001–2012

reason that a more differentiated system—one with high levels of tracking and a large private school sector—may lead to greater stratification of students both between and within schools. If this stratification is associated with family socio-economic background (as it generally is), more differentiation may contribute to widening academic achievement disparities. The index includes the proportion of students in private schools, the proportion of secondary school students in vocational tracks, the number of distinct tracks in secondary school, and the age at which students are first tracked (with lower ages implying greater differentiation). Figure 5 shows the relationship between this differentiation index and income achievement gaps. The relationship is strongly positive, as expected, and becomes even stronger when the U.S. is excluded.

To measure curricular standardization, we use a commonly-used proxy for standardization: the proportion of secondary school students required to take curriculum-based, high-stakes external exit exams. Such exams are typically created by a centralized educational authority and are used to determine whether students receive a secondary school diploma. Because they incentivize schools to focus on a common curriculum to which the tests are tied, they lead to standardized curricula. The measure ranges from 0 in countries with no centralized exams to 1 in countries where all students take centralized exams (and falls somewhere in between for countries with regional variation in exam policies). Figure 6 shows that, as predicted, the relationship between centralized exams and income achievement gaps is negative. It follows that there is also evidence—obviously only suggestive—for a more surgical approach to reducing the gap.

Multivariate Analyses

Many of the country characteristics examined above are strongly associated with one another. For example, countries with high income inequality also tend to have high levels of child poverty, high levels of school income segregation, and weaker social welfare and parental support policies. Countries with higher levels of school income segregation also tend to have lower levels of curricular standardization. The latter correlation may be generated through two possible causal pathways: in highly segregated places, people may demand more local control; or, conversely, in countries with more local control, families have more incentive to segregate by income.

A set of multivariate models (not shown here) predicting income achievement gaps as a function of our full set of national characteristics and educational policies indicate that the strongest independent predictors of gaps are school income segregation, educational differentiation, and curricular standardization.[2] These three factors together account for roughly 60 percent of the variance in the income achievement gap in our sample of 20 OECD countries. These results are consistent with a process in which (a) income inequality leads to wider income achievement disparities, largely through its effects on income segregation, and (b) the association between income and academic achievement is exacerbated by high levels of educational differentiation and low levels of curricular standardization.

If one were to take these results literally (and we of course caution against doing so), it would imply that there are various potential policy strategies for reducing the size of the income achievement gap. The direct approach of reducing

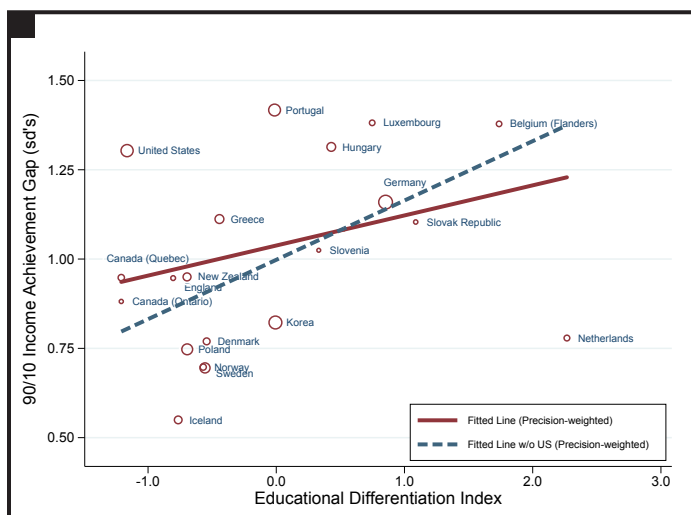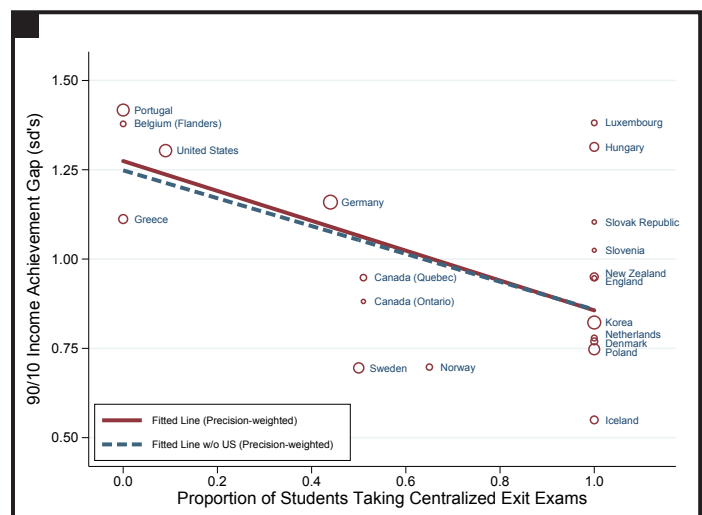FIGURE 5. Association Between Income Achievement Gap and Differentiation Index, 2001–2012

FIGURE 6. Association Between Income Achievement Gap and Curricular Standardization (Proportion Taking Centralized Exit Exams), 2001-2012

income inequality would suffice insofar as doing so leads to corollary reductions in school segregation. Alternatively, one might reduce segregation even while leaving the amount of income inequality intact, perhaps through zoning, housing, or school assignment and school choice policies. And, finally, there may also be payoff to "surgical" interventions in schools themselves, interventions that might focus on reducing educational differentiation and/or increasing curricular standardization.

Conclusion

There is much variation among wealthy countries in the extent to which children from richer and poorer households do well on standardized tests. We can conclude that, just as various economic outcomes (e.g., income, wealth) are very unequally distributed in the U.S. (relative to the OECD norm), so too are opportunities for academic achievement very unequally distributed. We have also shown that the achievement gap is related to income inequality, segregation, and features of the educational system. If we wanted, in other words, to reduce the size of the achievement gap in the U.S., this evidence at least suggests that there are various ways to make that happen.

And there is indeed good reason to care about the achievement gap. Most importantly, cross-national differences in income achievement gaps may have implications for patterns of social mobility in different countries, although we did not test that possibility here. If school performance (as proxied by performance on standardized tests) is an important mechanism for upward mobility, then we might expect socioeconomic attainment (whether measured by educational attainment, occupational status, or income) to be more strongly correlated with parental income in countries with large income achievement gaps. Income achievement gaps might therefore be one mechanism underlying the association between economic inequality and social mobility documented in international research. ∎

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NOTES

1. We define developed countries as OECD members with GDPs per capita of at least $20,000 in 2012. For elementary school income achievement gaps, we use data from the 2001 Progress in International Reading Literacy Study (PIRLS), which tested fourth grade students in reading. For secondary school income achievement gaps, we use data from the 2006, 2009, and 2012 Programme for International Student Assessment (PISA)

studies, which tested 15-year-old students in reading, math, and science. Both the elementary and secondary school studies also collected annual household income before taxes from parent surveys. Because the U.S. did not participate in the parent surveys, we estimate its elementary and secondary school income achievement gaps using data from the Early Childhood Longitudinal Study-Kindergarten Cohort (ECLS-K). ECLS-K tested

a nationally-representative sample of U.S. third graders in reading and math in 2002 and again as eighth graders in 2007.

2. After controlling for other country characteristics, the relationship between income inequality and income achievement gaps is weak.

ECONOMIC MOBILITY

The Stanford Center on Poverty and Inequality

BY MILES CORAK

KEY FINDINGS

• When compared to 24 middle-income and high-income countries, the U.S. ranks 16th in the amount of intergenerational earnings mobility.

• The relatively low level of mobility in the U.S. may arise in part because low-income children in the U.S. tend to have less stable and lower-income families, less secure families, and parents who have less time to devote to their children.

It is often claimed that there is much tolerance in the U.S. for high levels of inequality, as long as that inequality arises from a fair contest in which all children, no matter how poor or rich their parents, have the same opportunities to get ahead. This formula, insofar as it properly describes U.S. sensibilities, puts a premium on assessing whether indeed opportunities to get ahead in the U.S. depend much on one's starting point.

The standard way to assess whether the U.S. is living up to its high-mobility commitment is to compare rates of mobility across countries. This exercise, when carried out with the best available data, suggests that in fact the United States is a rather low-ranking country when it comes to intergenerational economic mobility.

The purpose of this report is to examine and re-examine this international evidence. It will be useful to first examine mobility rates within a broad swath of 24 middle-income and high-income countries. This is an important exercise; however, insofar as one wishes to draw conclusions that are relevant to the U.S. context, it is arguably even more instructive to focus the comparison on countries that share key features with the U.S. The balance of this article thus compares the U.S. to the United Kingdom, Canada, and Australia.

The Big Picture

The starting point, then, for our comparative analysis of mobility is a "big-picture"

examination of how the U.S. fares compared to other middle-income and high-income countries. The data used here are drawn from a survey of a growing economics literature measuring the association between the adult earnings of children and the incomes and earnings of their parents. Accurately measuring the degree of intergenerational earnings mobility requires a good deal of attention to a number of measurement issues and analytical decisions that researchers make. When these are accounted for, a consistent cross-national picture emerges.

Figure 1 demonstrates substantial variation in the degree of intergenerational earnings mobility across 24 countries, as measured by the percentage change in child earnings for each percentage change in parent earnings. The strength of the tie between parent and child earnings, when the child's earnings are measured in adulthood, varies more than threefold between the most and least fluid countries. At one extreme, a father who makes twice as much as another (i.e., 100% more) can expect his son to earn 50 to 60 percent more in adulthood, a very high level of intergenerational rigidity found in countries like Peru, South Africa, China, and Brazil. At the other extreme, the earnings disparity between such children shrinks to less than 20 percent in countries like Denmark, Norway, Finland, and Canada.

The U.S. sits at the upper end of this list, among a band of countries with rela-

tively low intergenerational mobility, where 40 to 50 percent of income inequality is passed on across the generations. As many have pointed out, the American Dream is evidently more likely to be found on the other side of the Atlantic, indeed most notably in Denmark.[1]

What accounts for this substantial cross-national variability? Alan Kreuger, the former chief economic advisor to the Obama administration, is one among many to point out that intergenerational mobility measured in this way is also related to cross-national differences in income inequality.[2] That is, high-inequality countries tend to be countries with low mobility, a relationship that led Krueger to suppose that, as income

inequality is increasing in the U.S., so too mobility may be declining.

There is nothing more likely to turn a politician's head than to show that his or her country is losing a race, stuck near the bottom of a league of nations. But does the U.S. really have anything to learn from these cross-national comparisons?

There are some inherent limitations to this ranking in Figure 1 that might lead policy makers to quite reasonably dismiss its relevance. After all, a study of social mobility requires us to observe the adult outcomes of children and then to relate them to their childhood experiences. This obviously takes time, and reliable indicators are only produced after a long lag. We might wonder about the contemporary relevance of statistics that refer to the life experiences of people born four and even five decades ago.

Moreover, even if the comparisons in Figure 1 were still relevant today, it is difficult to draw any clear policy prescriptions from them. How, for example, might we attempt to draw lessons for the U.S. from Denmark, where the mobility rate is the highest? As wonderful as Denmark might be, it is not clear that it has much in common with the U.S. Because the geography, demographics, labor market institutions, and political process in Denmark are so dramatically different from what prevails in the U.S., the intersecting set of possible policy options that the U.S. might usefully borrow are probably pretty slim. The configuration of forces that have lined up to promote a high degree of social mobility in Denmark may not be possible policy choices for American decision makers.

For these reasons it might make sense to couple the information in Figure 1 with more judicious comparisons of younger children in more similar countries. In what follows, I draw from a study co-authored with Bruce Bradbury, Jane Waldfogel, and Elizabeth Washbrook to offer a comparison of four- and five-year-olds during the mid- to late-1990s who are coming of age in more recent times, and who will be the focus of the next wave of intergenerational income mobility studies when they reach adulthood in a decade or more from now.[3]

This research focuses our attention on just four of the 24 countries listed in Figure 1: Australia, Canada, the United Kingdom, and the U.S. Arguably these four countries have more in common with each other than with any others. They have, in a very general sense, shared historical experiences, similar demographic diversity, and a demonstrated capacity for much policy learning and spillovers in a variety of domains. They are especially useful for our purposes because the U.S.

FIGURE 1. Countries Ranked by the Strength of the Tie Between Father and Son Earnings
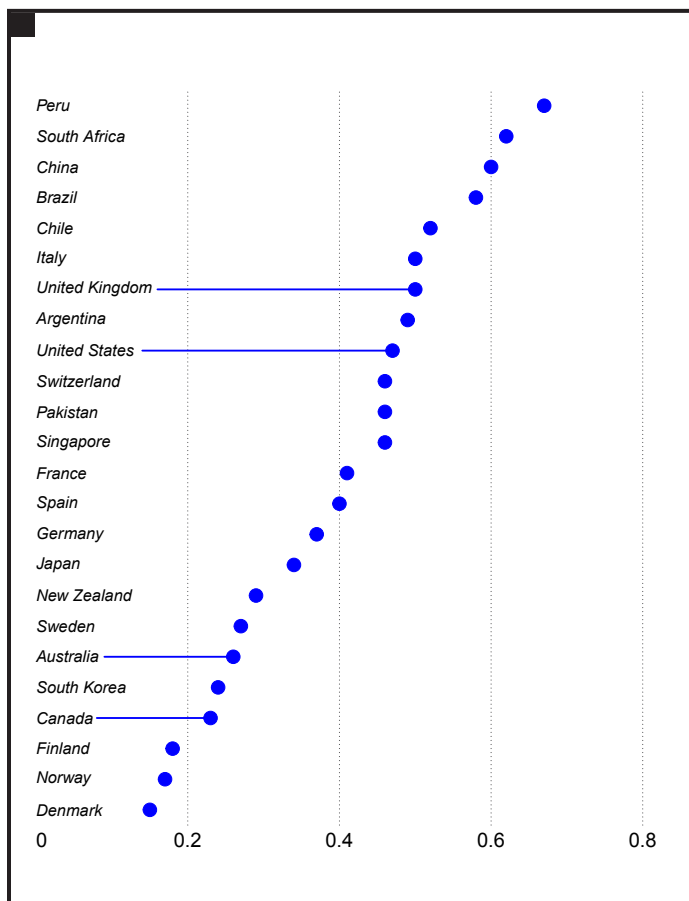
Note: The horizontal distance displays the intergenerational earnings elasticity between fathers and sons (i.e., the percentage difference between the adult earnings of a son for a one-percentage point difference in the father's earnings). The higher the value, the tighter the link between parent and child earnings, and the lower the degree of intergenerational mobility.

Source: Based upon an updated literature survey originally summarized in Corak, Miles. 2013. "Inequality from Generation to Generation: The United States in Comparison." In Robert Rycroft (editor), *The Economics of Inequality, Poverty, and Discrimination in the 21st Century*, ABC-CLIO. Detailed citations are available at http://milescorak.com/2012/01/12/here-is-the-source-for-the-great-gatsby-curve-in-the-alan-krueger-speech-at-the-center-for-american-progress/.

and the United Kingdom are high-inequality and low-mobility countries, while Australia and Canada are more equal and more mobile.

The key question that may then be asked: What resources are available to young children in these countries, and how are these resources skewed by household income and other fundamental inequalities that influence opportunities and chances for success? This question is taken on in the section below.

More than Money Matters
Children need many things from their parents. Most broadly put, they need the material resources coming from money and financial well-being, and they also need emotional security and an enriching environment, which in the early years means spending time with loving caregivers like their parents.

In thinking through why some children flourish and others do not, it follows that we should care about not just the purely economic implications of inequality, but also about the social ones.

But how can these social dimensions be measured? While there are many good proxies, a good place to start is with the education of the parents. It is helpful to group children in these four countries into three categories according to the highest level of schooling of the parent with the most schooling. In Figures 2 through 8, "high" means that at least one of the parents has a college degree; "low" means that neither has more than a high school diploma; and "medium" means that at least one has some education beyond high school graduation, but not a completed college degree. These three broad levels offer a good proxy for the underlying, or "permanent," income prospects of the family; they can be measured

FIGURE 2. Median Family Income of Children in a Family of Four
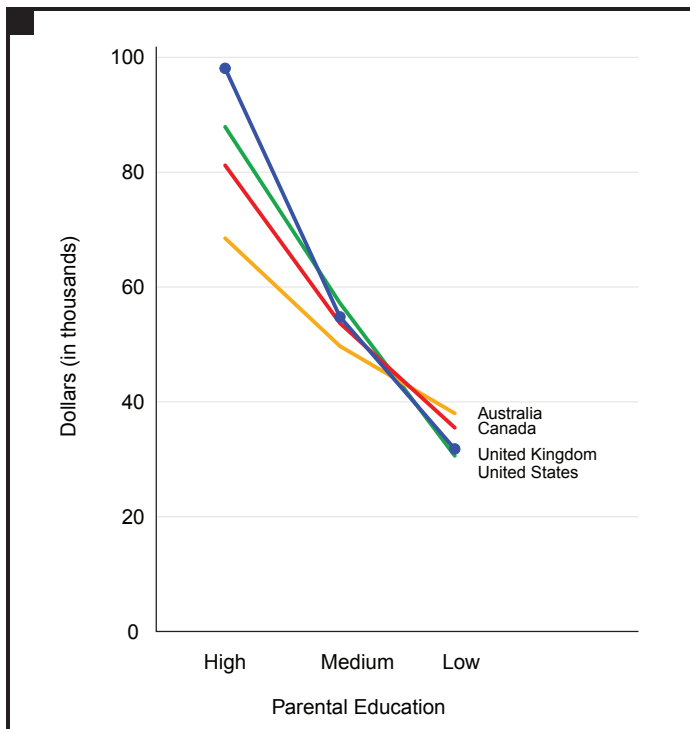
Note: The median equivalized total household income for a family of four is graphed here. Dollar amounts are expressed in 2011 constant dollars using national price indices, and the OECD Purchasing Price Parity index for "actual individual consumption" for the same year. Equivalent household income was derived using the square root of household size. The dollar amounts displayed are based upon an average of income at three points in the child's life cycle: at ages 5, 7, and 11. Income refers to total household income including imputed values for income support programs, like TANF, SNAP, and the EITC in the United States.

Source: Drawn by the author, based upon information in Bradbury, Bruce, Miles Corak, Jane Waldfogel, and Elizabeth Washbrook. 2015. *Too Many Children Left Behind: The U.S. Achievement Gap in Comparative Perspective*, New York: Russell Sage Foundation. Technical Appendix Table A3.2, available at https://www.russellsage.org/sites/all/files/Technical%20 Appendix%20to%20Bradbury%20et%20al%202015.pdf. Full details on the methodology used, including the conversion of categorical variables to continuous, and imputations for government transfers are given on pages 21 through 27 of this appendix.

FIGURE 3. Percentage of Children Read to Everyday by Their Parents
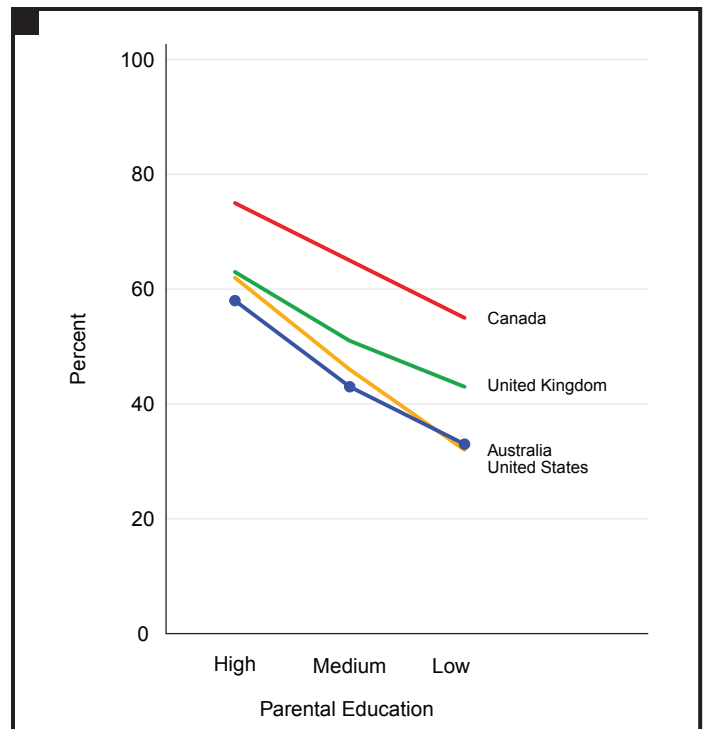
Note: The proportion of four- and five-year-old children read to on a daily basis is graphed here. Question wording differs slightly across countries: The question refers to any family member in the U.S. and Australia, to just the parent answering the survey question in the United Kingdom, and to the parent or any other adult in Canada.
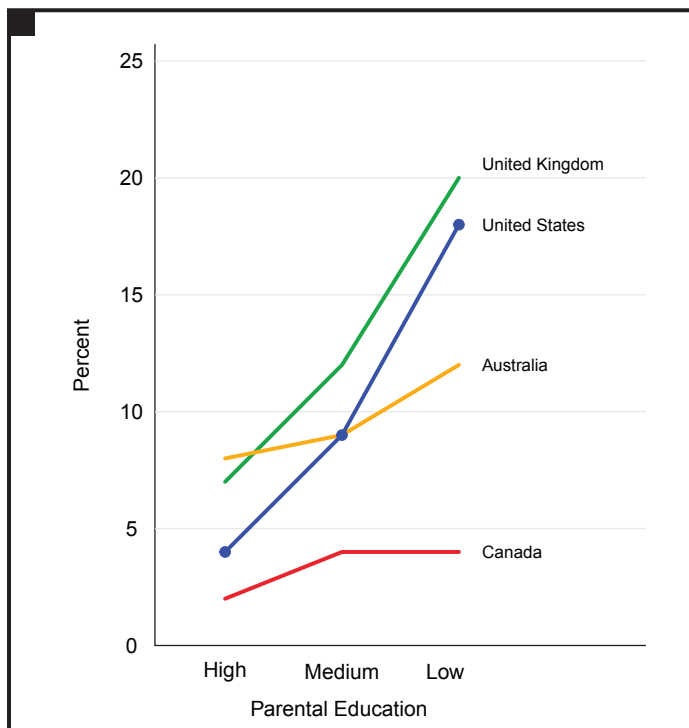
Source: Drawn by the author, based upon information in Bradbury et al. 2015. Technical Appendix Table A3.8, available at https://www.russellsage.org/sites/all/files/Technical%20 Appendix%20to%20Bradbury%20et%20al%202015.pdf.

across these four countries in reasonably comparable ways; and they signal important independent influences determining a child's development.

Figures 2 through 4 collectively make an important point. In all four countries, they show that more education does not just mean more money, but it also means more non-monetary resources. They also show that this socioeconomic gradient is steepest in the U.S. If these socioeconomic correlates of money matter, then there is good reason to worry that obstacles to mobility may be especially prominent in the U.S. This line of argumentation is laid out in more detail below.

We begin by considering cross-group differences in access to money. The monetary differences across these three social groups are very sharp in the U.S., where the median income of a family of four ranges from $98,100 for the high-education group to $31,800 for the low-education group. The between-group contrast is also substantial in the United Kingdom, with

FIGURE 4. Percentage of Children Whose Mother is in Poor Health

Note: The self-reported health status of mothers with four- and five-year-old children is graphed here. The proportions refer to the percentage of children whose mothers report being in fair or poor health, as indicated by the two lowest categories on a 5-point scale.

Source: Drawn by the author, based upon information in Bradbury et al. 2015. Technical Appendix Table A3.7, available at https://www.russellsage.org/sites/all/files/Technical%20 Appendix%20to%20Bradbury%20et%20al%202015.pdf

the median income of households with low education actually just a bit lower than in the U.S. But in Australia and Canada, the gradient is not as steep; the household incomes of children in the low-education group are 12 percent to almost 20 percent higher than in the U.S.

These differences reflect the fact that there is more inequality in American labor markets, more income poverty, and less generosity in government income support. Figure 2 suggests that these labor market and income transfer policies are shadowed in the financial resources available to children.

It is more difficult to quantify the between-group differences in non-monetary resources and the quality of time parents spend with their children. An often-used indicator of the quality of family time is the degree to which preschool children are exposed to books and other cultural resources that foster readiness to learn.

Canada seems to stand out in this regard. Figure 3 shows that the fraction of Canadian four- and five-year-olds who are read to on a daily basis by a parent or other adult is much higher than elsewhere. About 55 percent of Canadian children whose parents have no more than a high school diploma are read to on a daily basis. This is not much different from the proportion of American children whose parents have at least a college degree. At the same time, it should be noted that the extent of the inequalities across the three socioeconomic groups is roughly similar across the four countries and that there are slight differences in the way the associated survey questions are worded that may skew the comparisons.

But this is only one aspect of family socioeconomic differences and parenting style. Another marker might be found in the mental and physical health of parents. Children living in low-educated households in the U.S. and the United Kingdom are much more likely to have mothers who report being in only fair or poor health. This proportion is much lower in Australia, and noticeably lower in Canada, where there hardly appears to be any gradient across the three socioeconomic groups.

These inequalities in monetary and non-monetary resources should lead us to worry about (1) the capacity of low-education parents to balance work and family time in pursuit of the money their families need, and (2) the extent to which the early years are adequately enriching for children with low-education parents.

Time Slips Away from the Family

In Figure 5, we turn to the work-family balance. We see that the work patterns of mothers in the U.S. are distinctive. The main reason: Work takes priority in the U.S. Overall, American mothers are more likely to be working, and more likely to be working full-time (defined as usually spending more than 30 hours per week at work). About one-half of five-year-old children with highly educated parents in the U.S. live in a household where the mother works full-time. While this is similar in Canada, it is much lower in Australia and the United Kingdom.

The workplace is more likely to "win out" against the family in American households with low education. Figure 5 shows that 53 percent of children in low-education households have a mother who works full-time, compared to 49 percent among children in high-education households. Low-educated mothers are actually more likely to be working full-time than high-educated mothers.

These comparisons do not take into account the extent to which money can be used to compensate for lost parental time by purchasing high-quality childcare and other enrichment activities. Greg Duncan and Richard Murnane have shown that such compensatory purchases are much more common among families at the top of the American income distribution than among those at the bottom.[4]

What is also untold is that the flexibility to manage family and market responsibilities also seems more limited in the U.S., where working part-time is significantly less common than it is in the other three countries. Bruce Bradbury and his co-authors document that, overall, 15 percent of American five-year-olds have a working mother who works part-time (i.e., puts in no more than 29 hours per week), whereas over a third of mothers in Australia and the United Kingdom work part-time, and one-quarter in Canada work part-time. The capacity to balance work and family in this way is much lower in low-educated American households (i.e., 10%) than in the high-educated households (i.e., 22%).

Families in Flux

At the same time, the American family is less stable than families elsewhere, with the result that it is sometimes less primed
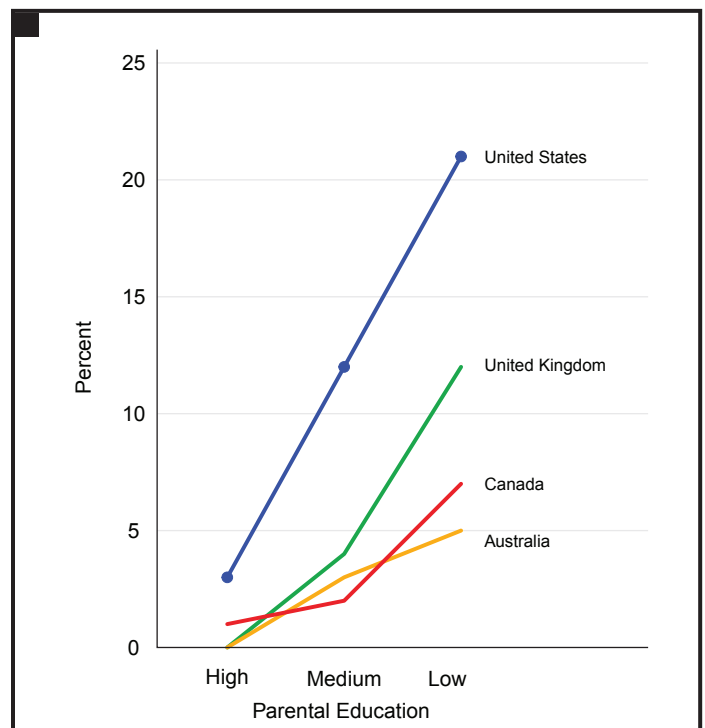
FIGURE 5. Percentage of Children Whose Mother Works Full Time
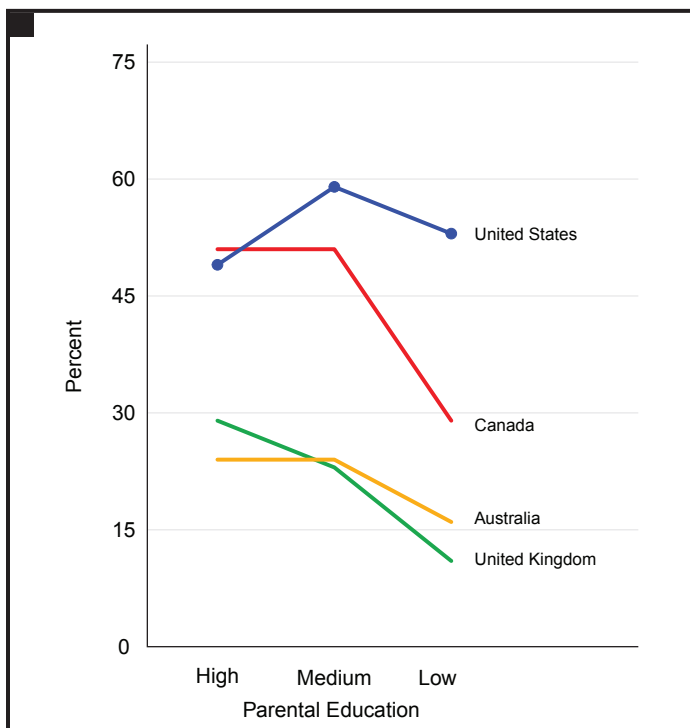
Note: The proportion of five-year-old children whose mothers usually work more than 30 hours per week is graphed here.

Source: Drawn by the author, based upon information in Bradbury et al. 2015. Technical Appendix Table A4.10, available at https://www.russellsage.org/sites/all/files/Technical%20 Appendix%20to%20Bradbury%20et%20al%202015.pdf.

FIGURE 6. Percentage of Children Born to a Teen Mother

Note: The proportion of four- and five-year-old children whose mother was 19 years or younger at the time of the child's birth is graphed here.

Source: Drawn by the author based upon information in Bradbury et al. 2015. Technical Appendix Table A3.6, available at https://www.russellsage.org/sites/all/files/Technical%20 Appendix%20to%20Bradbury%20et%20al%202015.pdf

to offer children an environment that is as enriching. More is being asked of families who are more vulnerable.

The most notable and clearest difference is reflected in the percentage of children born to a teen mother. Over one in eight (12%) of American four- and five-year-olds were born to a mother who was 19 or younger at the time of their birth. This is twice the proportion in the United Kingdom and is four times as high as that in Australia and Canada.

But Figure 6 also shows that the associated socioeconomic gradient is strikingly sharp in the U.S., rising from 3 percent of children in high-educated households to 12 percent in medium-educated households and all the way to 22 percent for those in low-educated households. More than one in five children in households with low levels of education were born to a teen mother.

This is the first step in what the sociologist Andrew Cherlin has called the "marriage-go-round," his metaphor for the very high dynamics in American family life.[5] The upshot is that, by the ages of four and five, children are much less likely to be

living with both biological parents in the U.S. While over 80 percent of American children in high-educated households live with both biological parents, this is noticeably lower than in the other countries, where 93 to 94 percent do so. Only about one-half of American children in low-educated households are still living with both biological parents at around ages four to five, significantly below the proportions elsewhere (Figure 7).

The American case is also distinctive because immigration is strongly tied to various types of socioeconomic disadvantage. The point here is *not* that the U.S. is a distinctively immigrant society. To the contrary, all four of our comparator countries stand out as being immigrant-receiving nations, although this is particularly so for Australia and Canada. Overall, one in five American children live in a household with at least one parent being an immigrant, which is higher than the 15 percent in the United Kingdom, but much lower than the 35 percent in Australia.

What is notable, however, is that American immigrant children are much more likely to be in households with low educa-
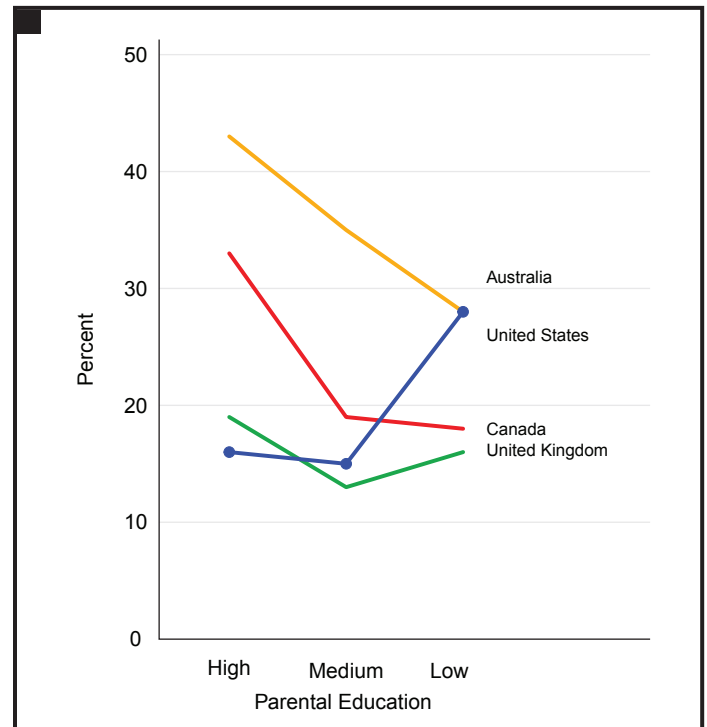
FIGURE 7. Percentage of Children Living with Both Biological Parents
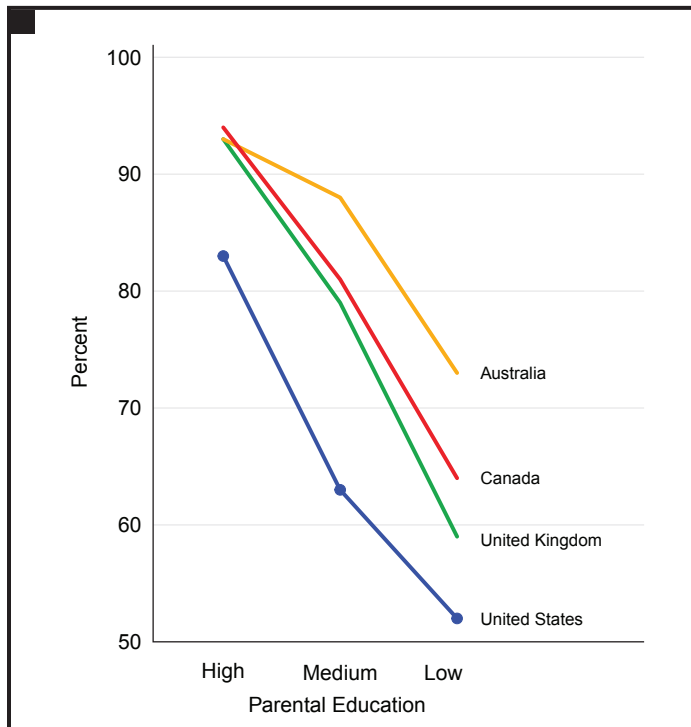
Note: The graph refers to the proportion of four- and five-year-old children living in a household with two parents, both of whom are reported as being the biological parents.

Source: Drawn by the author, based upon information in Bradbury et al. 2015. Technical Appendix Table A3.6, available at https://www.russellsage.org/sites/all/files/Technical%20 Appendix%20to%20Bradbury%20et%20al%202015.pdf

FIGURE 8. Percentage of Children Living with Immigrant Parents

Note: The proportion of four- and five-year-old children with a mother or a father born outside of the country is graphed here.

Source: Drawn by the author based upon information in Bradbury et al. 2015. Technical Appendix Table A3.6, available at https://www.russellsage.org/sites/all/files/Technical%20 Appendix%20to%20Bradbury%20et%20al%202015.pdf .

tion. The tilt is just the opposite in Australia and Canada: an astounding 43 percent of Australian children in high-education households have at least one immigrant parent, and fully a third of Canadian children do. In the U.S., a child in an immigrant household is more likely to be in a low-education household.

These low-education households may of course come with strong families. But we might still worry about their capacity to reach and connect with the broader American community and access the full complement of resources—from health care, to schools, to income support—of benefit to their children. We might also worry about the help or hindrance of public policies. Because immigrant families in Australia and Canada have more education and presumably stronger language skills and more advantaged social networks, they might be better able to connect to the wider community.

Prospects for the Next Generation

The resources children need to become successful and engaged adults come—first and foremost—from their families. But families don't exist in isolation. In providing for their children, parents interact and rely upon the communities to which they belong and the public programs that afford extra security, income, and investment. And most obviously, parents interact with the market, and the labor market institutions that determine access to jobs and living wages.

Family, state, and market all determine the resources available to children. It should be no surprise that economic mobility differs across countries, but also that it differs for different reasons. Some of these cross-national differences may be policy-relevant, and some may not.

They are most likely to be relevant in the four countries we've highlighted. The rankings of resources available to four- and five-year-olds in Australia, Canada, the United Kingdom, and the U.S. during the mid- to late-1990s echo the rankings of the economic outcomes of 40-year-olds born in the 1960s. These comparisons should make us wonder about the prospects for the next generation.

The U.S. continues to stand at the uncomfortable end of these more relevant comparisons. We conclude with three messages that are intended as provocations and that thus require more detailed discussion: (1) Stable and secure families are central to child development and equality of opportunity and should be promoted in a number of different ways; (2) the work-family balance has to move toward making the workplace more convenient for families, not the other way around; and (3) the playing field has to open up to the relatively disadvantaged early on because it's likely a lot harder to foster capabilities and develop opportunities afterward. ■

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NOTES

1. DeParle, Jason. 2012. "Harder for Americans to Rise from Lower Rungs." *The New York Times*, January 4. Available at http://www.nytimes.com/2012/01/05/us/harder-for-americans-to-rise-from-lower-rungs.html?_r=0.

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3. The information used for the comparison of the U.S. to Australia, Canada, and the United Kingdom draws from Bradbury, Bruce, Miles Corak, Jane Waldfogel, and Elizabeth Washbrook. 2015. *Too Many Children Left Behind: The U.S. Achievement Gap in Comparative Perspective*, New York: Russell Sage Foundation. Please consult the technical appendix available at https://www.russellsage.org/sites/all/files/Technical%20Appendix%20to%20Bradbury%20et%20al%202015.pdf . I am solely responsible for the figures, interpretations given, and any errors they may contain.

4. Greg Duncan and Richard Murnane document the evolution of what they refer to as "enrichment expenditures" in the U.S. in Figure 1.6, page 11 of Duncan, Greg J., and Richard J. Murnane. 2011. "Introduction: The American Dream, Then and Now." In Greg J. Duncan and Richard J. Murnane (editors). *Whither Opportunity? Rising Inequality, Schools, and Children's Life Chances*. New York: Russell Sage Foundation.

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HEALTH

The Stanford Center on Poverty and Inequality

BY JASON BECKFIELD AND KATHERINE MORRIS

KEY FINDINGS

- The U.S. population is not just sicker, on average, than the European population, but also has a higher level of health inequality than the European population (when data from the U.S. Current Population Survey and the European Union Survey of Income and Living Conditions are compared).

- The U.S. states that combine low self-rated health with high health inequality (Mississippi, Kentucky, Louisiana, North Carolina, Ohio, Tennessee, and South Carolina) look strikingly similar—in terms of their health profiles—to Central and Eastern European countries (Bulgaria, the Czech Republic, Estonia, Latvia, and Slovenia).

- At the other extreme are U.S. states that combine high self-rated health with low health inequality (Nevada, Idaho, Utah, Washington, and Wyoming). These states, although "high-performing" in the U.S. context, are nonetheless less healthy and less equal than the corresponding "high-performing" countries in the European context (Austria, Denmark, France, and Spain).

People living in the United States today can expect to live shorter and sicker lives, compared to people living in any other rich democracy.[1] This "health gap" between the U.S. and its peer countries is growing over time, as Canadian, British, Australian, French, German, and Swedish death rates among people aged 45–54 continue falling, and the U.S. fails to keep pace with such changes.[2]

But such comparisons—telling as they are—rely on the combination of mortality rates across entire populations, without regard for inequality within these societies. It is impossible to tell from these averages how much inequality there is between rich Americans and poor Americans, and between the rich British and poor British. Cross-national comparisons of life expectancy also depend on the assumption that people born into each society this year will experience the same mortality rates as people who were born over the past hundred years.

These two limitations of cross-national comparisons of aggregated-average population health matter because inequalities and averages can fit together in different ways. It could be the case, for example, that the American average is pulled down by a large number of unhealthy people who are sicker than unhealthy people in the United Kingdom, even as healthier people in the U.S. are as healthy as healthy people in the United Kingdom. It could also be the case that the current health of the U.S. population is underestimated in the calculation of life expectancy, if Americans living in the next hundred years will be healthier than Americans who have lived and died over the past hundred years.

In this report, we evaluate the state of the union by comparing health inequality among Americans to health inequality among people living in 27 European countries. Our evaluation extends the cross-national comparisons of aggregated-average life expectancies and mortality rates by comparing the health of richer people to the health of poorer people within each country. That is, our focus is on the distribution of population health, or health inequality. We then look across countries to evaluate whether and how the gap between the health of the rich and the health of the poor varies. We aim to answer the following two simple questions: If a person with a lower income could choose to live in the U.S. or in a different rich democracy, where should she choose to live? And, likewise, if a person with a higher income could choose to live in the U.S. or in a different rich democracy, where should she choose to live?

Health Inequality in the U.S.

The 2015 "State of the States" issue of *Pathways* included an excellent article by Sarah Burgard and Molly King, who used 2013 data from the U.S. Center for Disease Control and Prevention's Behavioral Risk Factor Surveillance System (BRFSS) to estimate health inequality in each of the 50 U.S. states (plus the District of Columbia).[3] We replicate their analysis using the 2008–2010 Integrated Public Use Microdata Series–Current Population Survey (IPUMS-CPS), to

set a baseline for our cross-national comparisons.[4]

We measure health with a questionnaire item that asked respondents to rate their own health: "Would you say that in general your health is excellent, very good, good, fair, or poor?" Consistent with earlier work using the same item, we combine "fair" and "poor" responses into one category (which we will dub as "poor health"), and we combine the remaining responses into another category (which we will dub as "good health"). We label those living in a household with an income at or below the 20th percentile for their state as "low income," and we label those living in a household with an income at or above the 80th percentile for their state as "high income." We then calculate a simple estimate of relative health inequality using relative risk ratios: the prevalence of poor health among low-income persons divided by the prevalence of poor health among high-income persons.

To paint a complete picture of health inequality, we must consider not just the inequality in the distribution of poor health across people that are grouped by income, but also the prevalence of poor health. To see why, imagine two societies: one that is on-average sicker, and another that is on-average healthier. Suppose that, in each society, low-income households are twice as likely as high-income households to report health that is poor. In the healthier society, the difference between the health of the high-income households and the health of the low-income households will be smaller in absolute terms, even though their relative inequality is exactly the same.

Following Burgard and King, we combine this information about relative health inequalities and the prevalence of sickness into a figure that shows four groups of states: unequal unhealthy states (UU), unequal healthy states (UH), equal healthy states (EH), and equal unhealthy states (EU).

Figure 1 shows clear regional differences in the states. There are 15 states in the UU group, and the most unhealthy, unequal states are the Southern states of Alabama, Kentucky, Louisiana, Mississippi, and Tennessee. These states have an above-median prevalence of poor health (thus the designation "unhealthy"), and an above-median level of relative health inequality between people in households with an annual income in the bottom quintile for their state and those in households with an annual income in the top quintile for their state. These are the states where it is the worst to be poor.

Consider, for example, Mississippi: Here, the prevalence of poor health is 0.23 (and the prevalence of good health is 0.77). The relative risk ratio comparing low-income to high-income

people is 5.57, meaning that low-income Mississippians are over five times more likely to report poor health than are high-income Mississippians.

In the opposite quadrant of the figure, we find those states that are both relatively equal and healthier. Idaho stands out for having both a low prevalence of poor health, at 11 percent of Idahoans, as well as a low level of inequality. Indeed, Idaho has the lowest relative risk ratio in the U.S., at 3.03. Hawaii also has a relative risk ratio of 3.03, but has a comparatively higher prevalence of poor health, indeed it is above the national median for these data.

The next lowest level of relative inequality in the group of healthy states is found in Nevada (with a relative risk ratio of 3.41), followed by Nebraska, Utah, and South Dakota. Indeed, what is striking about the figure is that there are few U.S. states (only 12, including Idaho) in the equal-healthy group. And three of those states (Alaska, Minnesota, and Washington) are barely on the more-equal side of the red line. The upshot, as we'll see, is that most of the healthy states are also unequal, and most of the equal states are also unhealthy.

A stark exception to this pattern is Massachusetts, which has a low prevalence of poor health (0.11) and by far the highest amount of inequality (with a relative risk ratio of 15.61). This staggering health inequity persists today and has been recognized by the Massachusetts Department of Public Health as a pressing policy concern.[5] Its European analogue is the small, Mediterranean country of Cyprus. While tiny Cyprus (population 1.1 million) is only about one-sixth the size of Massachusetts (population 6.7 million), larger Netherlands (population 16.8 million) also combines a very high level of health inequality with a healthy population average (Figure 2).

If we average these inequality calculations across states, and weight by the population in each state (so that big states like California, New York, and Texas contribute more information), we find that the relative risk ratio for the U.S. as a whole is about 5. We also find that, overall, the U.S. prevalence of reporting poor health is 13.6 percent. These two statistics establish the U.S. as an outlier with respect to both health inequality *and* overall healthiness. As we will discuss in greater detail below, the U.S. level of inequality is far higher than we observe in most European countries, and the prevalence of poor health is on par with the former Soviet-bloc states of Central and Eastern Europe. As we can see in Figure 2, in Europe, the overall relative risk ratio (weighted by the populations of the 27 societies for which we have data) is also about 5, and the overall prevalence of poor health is 9 percent.

However, the difference in health inequality between the U.S. and Europe becomes abundantly clear when we account for population differences in age, gender, marital status, education, and unemployment. To do so, we calculate the incident risk ratio for each state or country separately using modified Poisson regression models with robust error variances.[6,7] As we show below in Figures 5a and 5b, the incident rate ratio of poor health for low-income Americans across all 50 states and the District of Columbia is 2.3, while the incident rate ratio of poor health for low-income Europeans across all 27 countries included in the analysis is 1.6. It follows that Europeans are, on average, not just healthier than Americans, but are also more equal when accounting for population differences in key demographic and social characteristics.

Health Inequality in Europe
We now turn to a more thorough comparison of U.S. and European health and health inequality. To place health inequalities in the U.S. in comparative context, we use data from the European Union Survey of Income and Living Conditions (EU-SILC), which is currently the best source of population-representative, cross-nationally comparable, and individual-level information about health in European societies.

We must note that our analysis of the EU-SILC data differs from our analysis of the IPUMS-CPS data in an important respect. The wording of responses to the self-rated health item differs: in the EU-SILC data, the responses are "very bad," "bad," "good," "very good," and "excellent." We collapse the bottom two and top three categories, again drawing the line at good-or-better health versus less-than-good health. The EU-SILC categorization differs, then, from the IPUMS-CPS categorization by virtue of replacing the label "fair" with that of "bad" and the label "poor" with that of "very bad." If these inconsistencies in labeling have any effect, a reasonable hypothesis is that they would create the appearance of better health in Europe (given that those with objectively middling health might be more inclined to label it as "fair" in the IPUMS-CPS than "bad" in the EU-SILC).

FIGURE 1. Relative Health Inequality by Prevalence of Self-Rated Poor Health in U.S. States and the District of Columbia, 2008–2010
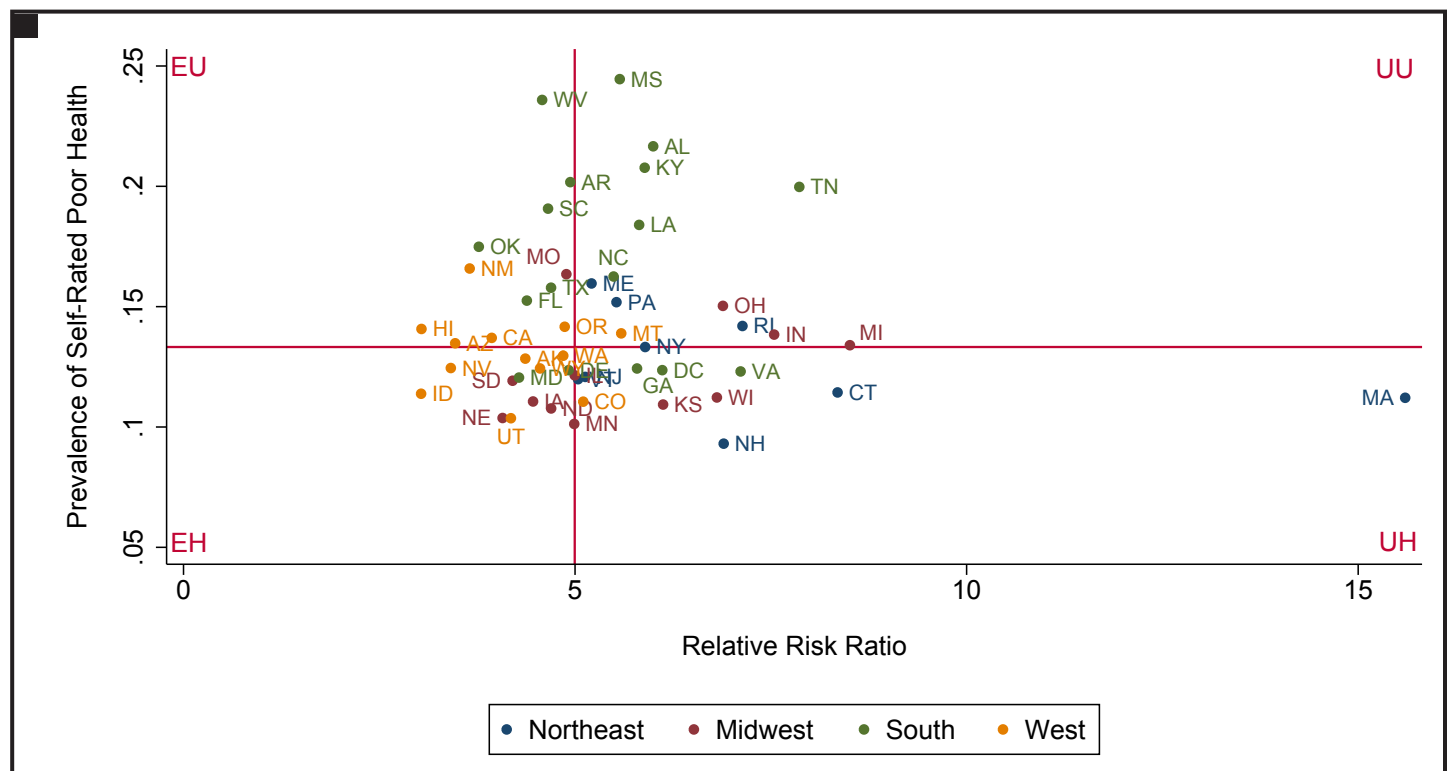
Note: Relative risk ratios are calculated as the prevalence of poor health among low-income persons (those with a household income in the bottom quintile for that state) divided by the prevalence of poor health among high-income persons (those with a household income in the top quintile for that state). All estimates are unweighted. Data are from the 2008-2010 IPUMS-CPS. N = 441,843. Poor health is defined as self-rated "fair" or "poor" health. Red lines represent the median values across all states. EU: Equal-Unhealthy; UU: Unequal-Unhealthy; EH: Equal-Healthy; UH: Unequal-Healthy. Regional divisions reflect Census Bureau categories. States are marked by their two-letter postal abbreviations: Alabama (AL); Alaska (AK); Arizona (AZ); Arkansas (AR); California (CA); Colorado (CO); Connecticut (CT); Delaware (DE); District of Columbia (DC); Florida (FL); Georgia (GA); Hawaii (HI); Idaho (ID); Illinois (IL); Indiana (IN); Iowa (IA); Kansas (KS); Kentucky (KY); Louisiana (LA); Maine (ME); Maryland (MD); Massachusetts (MA); Michigan (MI); Minnesota (MN); Mississippi (MS); Missouri (MO); Montana (MT); Nebraska (NE); Nevada (NV); New Hampshire (NH); New Jersey (NJ); New Mexico (NM); New York (NY); North Carolina (NC); North Dakota (ND); Ohio (OH); Oklahoma (OK); Oregon (OR); Pennsylvania (PA); Rhode Island (RI); South Carolina (SC); South Dakota (SD); Tennessee (TN); Texas (TX); Utah (UT); Vermont (VT); Virginia (VA); Washington (WA); West Virginia (WV); Wisconsin (WI); Wyoming (WY).

To facilitate U.S.-Europe comparisons, we show our EU-SILC results in graphs that are formatted in the same way as the graphs of IPUMS-CPS results. The first striking U.S.-Europe difference is the lower prevalence of "poor health" in all European societies. While in the U.S. this prevalence varies from a low of 0.09 in New Hampshire to a high of 0.23 in Mississippi, in Europe it ranges from a low of 0.04 in the Netherlands to a high of 0.21 in Lithuania. The simple, if unsurprising, conclusion: Good health is more prevalent in Europe than in the U.S. And this greater prevalence of good health in Europe would probably be even more pronounced if the large incarcerated population in the U.S. had been included in the calculations.[8]

Setting aside this overarching difference, there are also some similarities. In Europe, as in the U.S., equal-healthy places (the lower-left quadrant of Figure 2) are scarce. France and Spain are the only large countries in this quadrant. This equal-healthy group also includes Austria, Denmark, Iceland, Luxembourg, and Norway.

It is also instructive to compare the places falling into the unequal-unhealthy quadrant. The countries of Bulgaria, the Czech Republic, Estonia, Latvia, and Slovenia represent the clearest European cases of unequal-unhealthy societies in terms of simple relative inequality, while the U.S. analogues are Alabama, Kentucky, Louisiana, Mississippi, and Tennessee.

It would probably come as a surprise to Americans living in these states that they share a population health profile with people living in former Soviet-bloc societies. This result raises the question of what sort of ruptures in the social fabric these states might share with societies that so recently experienced the transition from socialism to capitalism.

Because the EU-SILC and the IPUMS-CPS use different response categories for the self-rated health question, we re-estimated the relative risk ratios for the other health items that are available in the EU-SILC. The first alternative measure is a binary indicator for having a chronic condition, defined as a "long-standing illness, disability, or infirmity." The second

FIGURE 2. Relative Health Inequality by Prevalence of Self-Rated Poor Health in 27 European Countries, 2008–2010
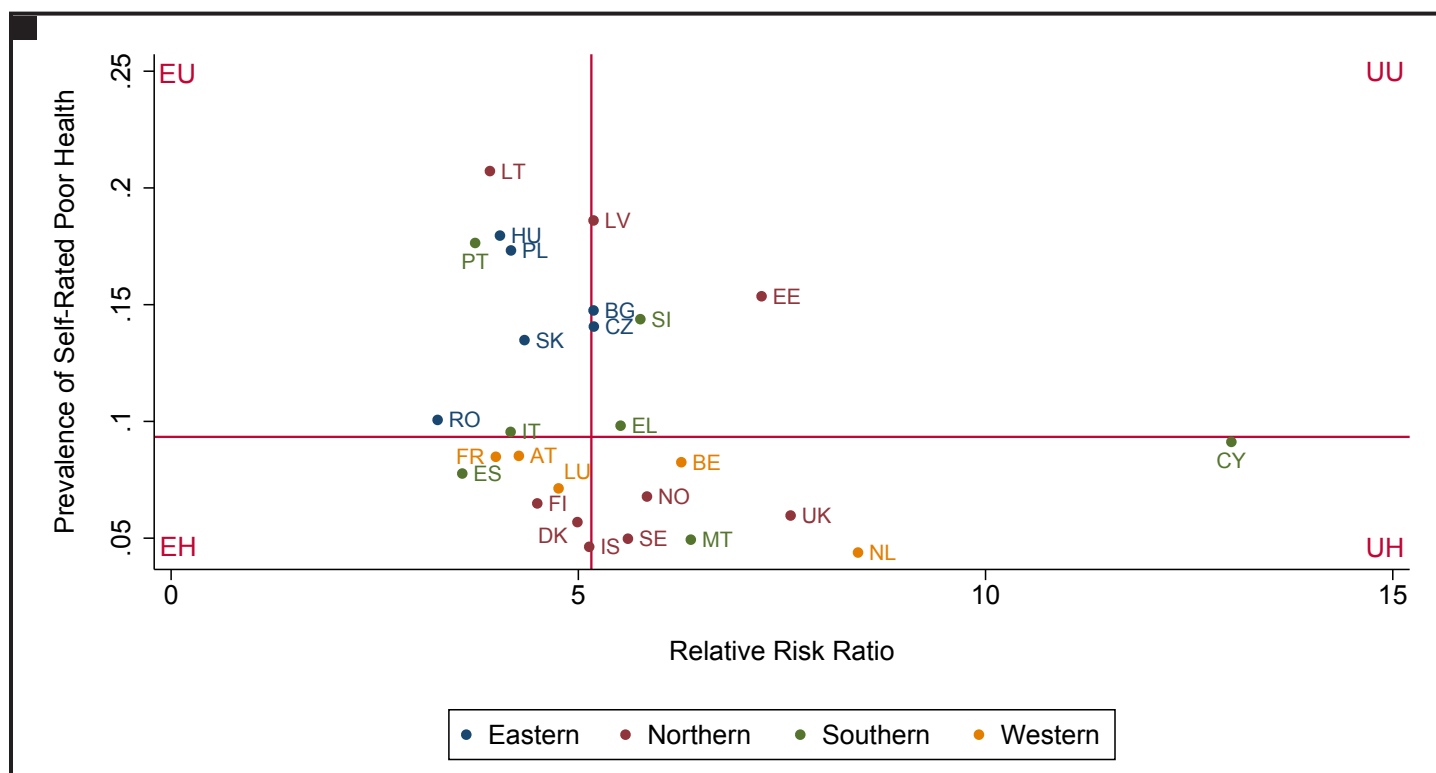
Note: Relative risk ratios are calculated as the prevalence of poor health among low-income persons (those with a household income in the bottom quintile for that country) divided by the prevalence of poor health among high-income persons (those with a household income in the top quintile for that country). All estimates are unweighted. Data are from the 2010 EU-SILC. N = 533,933. Poor health is defined as self-rated "bad" or "very bad" health. Red lines represent the median values across all countries. EU: Equal-Unhealthy; UU: Unequal-Unhealthy; EH: Equal-Healthy; UU: Unequal-Unhealthy. Regional divisions reflect United Nations categories. Eastern European countries are Bulgaria (BG), Czech Republic (CZ), Hungary (HU), Poland (PL), Romania (RO), and Slovakia (SK). Northern European countries are Denmark (DK), Estonia (EE), Finland (FI), Iceland (IS), Latvia (LV), Lithuania (LT), Norway (NO), Sweden (SE), and the United Kingdom (UK). Southern European countries are Cyprus (CY), Greece (EL), Italy (IT), Malta (MT), Portugal (PT), Slovenia (SL), Spain (ES), Austria (AT), Belgium (BE), France (FR), Luxembourg (LU), and the Netherlands (NL).

alternative measure is a binary indicator for having a physical limitation, defined as reporting any difficulty performing "activities people usually do" due to "an ongoing health problem."

The results from these additional analyses are shown in Figures 3 and 4. Overall, there is much less health inequality according to these measures. In both cases, Europeans in households with annual incomes in the bottom quintile are between two and three times as likely to report problems as Europeans in households with annual income in the top quintile.

The relative equality of European health may of course be a function of universal healthcare in Europe. When healthcare is universally provided, treatment for various conditions and limitations should not be as income-dependent as it is in the U.S. It is also striking that, despite the relatively high prevalence of chronic conditions and activity limitations (30% and 25%, respectively), the prevalence of self-rated "poor health" is so much lower than it is in the U.S. (9% vs. 13.6%).

Choosing Where to Live

At the outset of this article, we promised to weigh in on where one might choose to move under the conceit that individuals relocate on the basis of health considerations alone. If our hypothetical unhealthy poor person were suddenly geographically mobile, where should she move? Our results suggest that, if she were confined to the U.S., she would do best in the western states of Idaho, Nevada, or Utah. But she would do yet better in the countries of Austria or Spain.

FIGURE 3. Relative Health Inequality by Prevalence of Chronic Conditions in 27 European Countries, 2008–2010
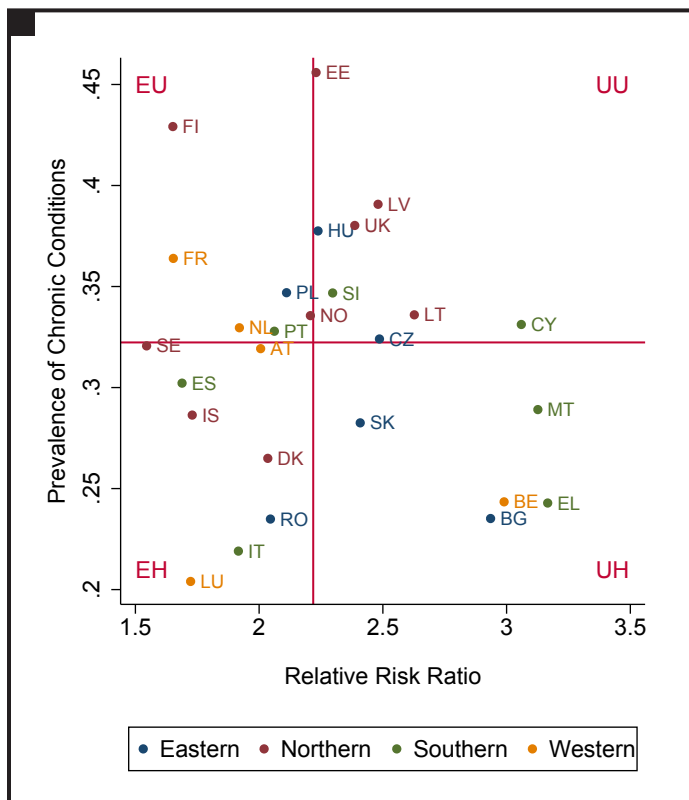
Note: Relative risk ratios are calculated as the prevalence of chronic conditions among low-income persons (those with a household income in the bottom quintile for that country) divided by the prevalence of chronic conditions among high income persons (those with a household income in the top quintile for that country). All estimates are unweighted. Data are from the 2010 EU-SILC. N = 533,933. Chronic conditions are defined as "any long-standing illness, disability or infirmity." Red lines represent the median values across all countries. EU: Equal-Unhealthy; UU: Unequal-Unhealthy; EH: Equal-Healthy; UU: Unequal-Unhealthy. Regional divisions reflect United Nations categories. Eastern European countries are Bulgaria (BG), Czech Republic (CZ), Hungary (HU), Poland (PL), Romania (RO), and Slovakia (SK). Northern European countries are Denmark (DK), Estonia (EE), Finland (FI), Iceland (IS), Latvia (LV), Lithuania (LT), Norway (NO), Sweden (SE), and the United Kingdom (UK). Southern European countries are Cyprus (CY), Greece (EL), Italy (IT), Malta (MT), Portugal (PT), Slovenia (SL), Spain (ES), Austria (AT), Belgium (BE), France (FR), Luxembourg (LU), and the Netherlands (NL).

FIGURE 4. Relative Health Inequality by Prevalence of Activity Limitations in 27 European Countries, 2008–2010
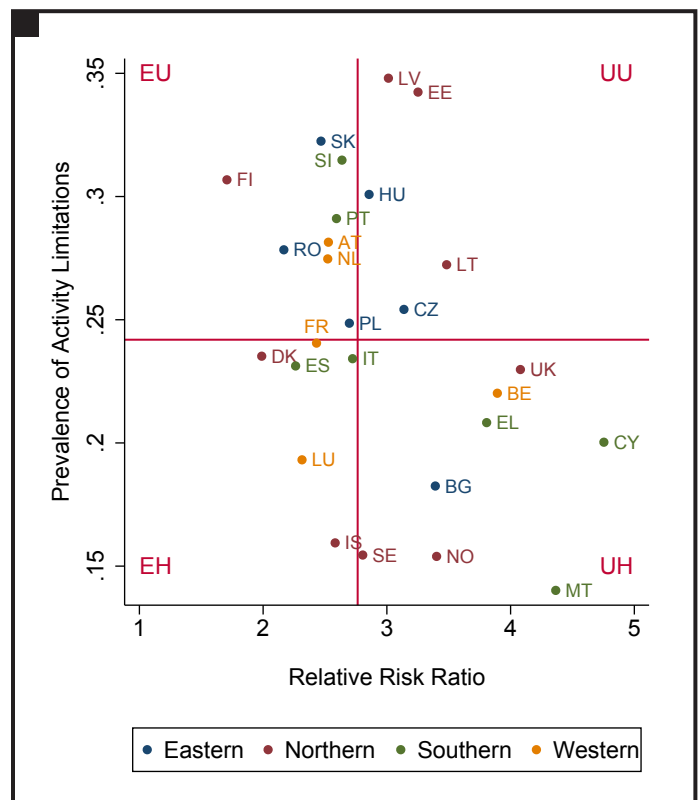
Note: Relative risk ratios are calculated as the prevalence of activity limitations among low-income persons (those with a household income in the bottom quintile for that country) divided by the prevalence of activity limitations among high-income persons (those with a household income in the top quintile for that country). All estimates are unweighted. Data are from the 2010 EU-SILC. N = 533,933. Activity limitations are defined as "any limit to daily activities" due to illness or disability. Red lines represent the median values across all countries. EU: Equal-Unhealthy; UU: Unequal-Unhealthy; EH: Equal-Healthy; UU: Unequal-Unhealthy. Regional divisions reflect United Nations categories. Eastern European countries are Bulgaria (BG), Czech Republic (CZ), Hungary (HU), Poland (PL), Romania (RO), and Slovakia (SK). Northern European countries are Denmark (DK), Estonia (EE), Finland (FI), Iceland (IS), Latvia (LV), Lithuania (LT), Norway (NO), Sweden (SE), and the United Kingdom (UK). Southern European countries are Cyprus (CY), Greece (EL), Italy (IT), Malta (MT), Portugal (PT), Slovenia (SL), Spain (ES), Austria (AT), Belgium (BE), France (FR), Luxembourg (LU), and the Netherlands (NL).

But what about a high-income person? Where should that person choose to live? Our results suggest that here too there are a range of consequential choices, with the best ones being the Netherlands, Iceland, Malta, or Sweden, certainly a disparate lot. In these places, the prevalence of "poor health" among people with household income in the top 20 percent for their country of residence is vanishingly low, below 5 percent. Crucially, our models predict that our hypothetical mover would not fare as well in *any* of the U.S. states that are best for the better-off: Connecticut, New Hampshire, Virginia, or Wisconsin.

Conclusions

Our analyses of health prevalence and relative health inequality demonstrate that many of the very places with the least health inequality are also those with the best overall popula-

tion health. It follows that our hypothetical low-income person and high-income person are healthiest in exactly the same places: Austria, France, and Spain. These populations are both very healthy by international standards and have a very low level of health inequality by international standards (especially in terms of absolute inequality).

People living in the U.S. are often reluctant to draw lessons from the European experience, in part because the U.S. is so much larger and heterogeneous than many European countries. We tackle this problem by disaggregating the U.S. into its 50 states, plus the District of Columbia. Furthermore, our regression results in Figure 5 demonstrate the persistence of these differences when controlling for population differences in key demographic and social characteristics.

FIGURE 5A. Rank Ordered Self-Rated Health Inequality in U.S. States and the District of Columbia, Controlling for Socio-Demographic Characteristics, 2008–2010
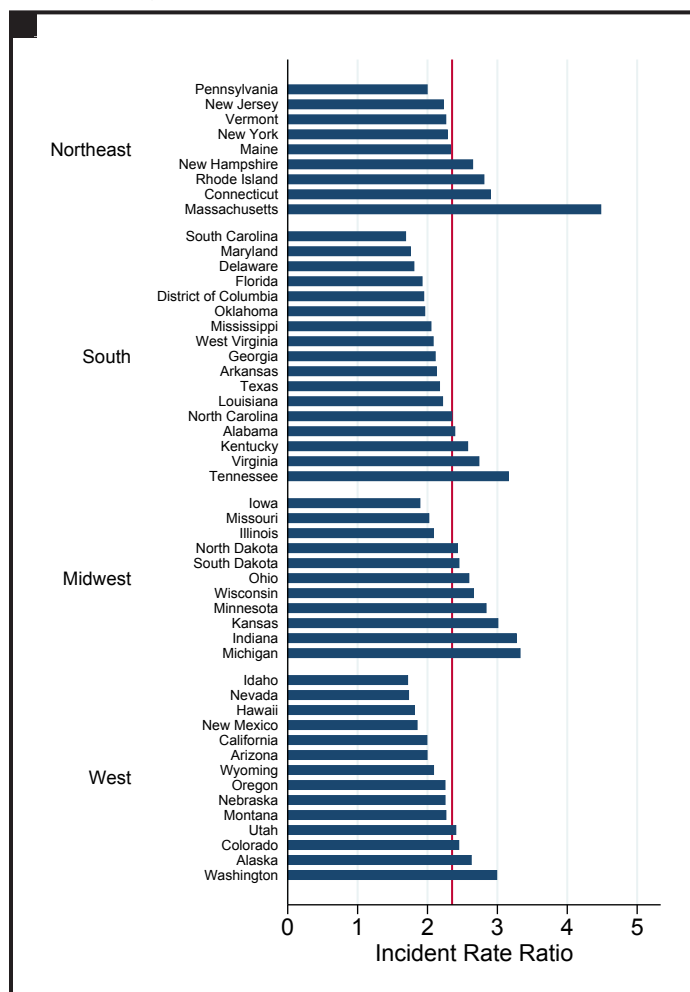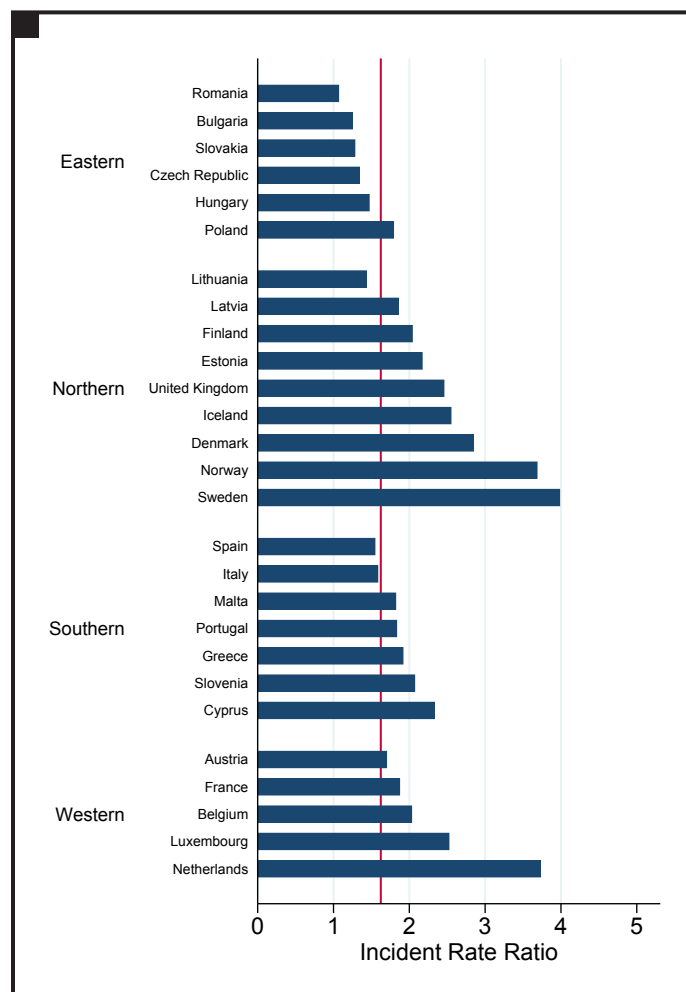
FIGURE 5B. Rank Ordered Self-Rated Health Inequality in 27 European Countries, Controlling for Socio-Demographic Characteristics, 2008–2010

Note: The bar charts above display the relative risk of reporting poor health for low-income persons (household income in the bottom quintile) compared to high-income persons (household income in the top quintile), controlling for age, gender, marital status, education, and unemployment. The incident rate ratios (IRRs) were estimated using separate modified Poisson regression models with robust error variances for each state (5a) or country (5b). Red lines reflect the IRR from a full model with all states (5a) or countries (5b).

Our results suggest that, much like income growth and income equality, population health and health equality can go together. As is so often the case in the analysis of income inequality and poverty, social policy choices may be the key to combining better health and health equality. Perhaps we should not be surprised that market-fundamentalist states in the U.S. have levels of average health and health inequality that are remarkably similar to the post-Soviet "shock therapy" countries of Central and Eastern Europe. Indeed, compared to a peer group of 27 European nations, even the U.S. states that are unusually healthy and have unusually low health inequalities have a long way to go. ∎

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NOTES

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3. Burgard, Sarah and Molly King. 2015. "Health." *Pathways* Special issue, 49–54.

4. We use data from the 2008–2010 IPUMS-CPS rather than the 2013 BRFSS in order to calculate the 80/20 percentile ratio and to subsequently harmonize our U.S. analyses with the 2010 EU-Statistics on Income and Living Conditions (EU-SILC) Longitudinal File, Version 4.

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RESIDENTIAL SEGREGATION

The Stanford Center on Poverty and Inequality

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KEY FINDINGS

- Although there are large differences in the sizes of minority populations in Europe and the U.S., there nevertheless is rather remarkable similarity in macro-segregation across countries in Europe and states in the U.S.

- The magnitude of minority segregation in new U.S. gateway cities is much greater than in European cities experiencing recent immigrant growth.

- Segregation often overlaps with many other place-based inequalities—poverty, unemployment, crime, and housing quality and overcrowding. These overlapping disadvantages are seemingly much more common in the U.S. than in European countries, where government efforts to promote integration (e.g., social and mixed-income housing) provide a clear contrast to the market-driven solutions preferred in the U.S.

- Policy choices will affect whether segregation in ethnic communities or neighborhoods represents a way station or platform for full integration or a chronic or permanent social condition that institutionalizes majority-minority social and economic inequality.

The United States is a nation of immigrants. More than 1 million foreign-born U.S. residents each year become legal permanent residents, nearly 60 percent of whom eventually attain citizenship.[1] In stark contrast, most European countries have had a long history of exporting population. During the 18th and early 19th centuries, the U.S. was a major destination for European émigrés from Ireland, Germany, Italy, Scandinavia, and elsewhere. Today, the U.S. remains the world's leading immigrant-receiving country, but the massive flow from Europe overall has ended, replaced by new arrivals from Asia, Latin America, and sub-Saharan Africa. The historical record in the U.S. not only highlights the ebb and flow of immigration but also reveals the cultural conflicts and political unrest created by new ethnic and racial divisions and uneven integration among new immigrant populations.

Indeed, immigration reform, affirmative action, ethnic profiling, and the new racial re-concentration of urban poverty (e.g., Ferguson, East Baltimore, and North Charleston) continue to be politically charged issues, as the 2016 presidential election tells us. Interestingly enough, in some ways Europe today is not unlike the U.S. a century ago or more. For much of Europe, the recent influx of immigrants, coupled with unprecedented labor mobility within the European Union (i.e., the Schengen Agreement), has raised new questions about national identity (and allegiance),

cultural unity, and assimilation.[2] Moreover, the current European refugee crisis caused by the massive population exodus from war-torn Syria is only the latest of several previous examples (e.g., Somalia, Kosovo). Some European countries, facing massive new immigration for the first time, have looked to the U.S. for answers, hoping to learn important lessons that might ease the difficulties associated with growing diversity and mounting ethnic and religious conflict.[3]

Here, we start with a straightforward assumption: The extent to which minority populations (including immigrants) share the same spatial and social spaces provides tangible, albeit indirect, evidence of integration or spatial assimilation. Specifically, we compare recent patterns of minority group segregation in the U.S. and Europe. At a minimum, declining residential segregation suggests that minority populations are increasingly able to afford to live in the same neighborhoods or communities as natives and that they are not limited by housing market discrimination. Perhaps most importantly, declines in segregation indicate that majority and minority populations may increasingly prefer (or are indifferent to) living together in the same communities or neighborhoods, where they increasingly share the same cultural values, national identity, and education. Residential integration suggests a breakdown or diminution of majority-minority social and economic boundaries.

Of course, country-to-country differences in data collection and measurement, including differences in ethnic and racial identification and geography, make strict comparisons of minority residential segregation difficult. We focus our attention on perhaps the most important axes of minority spatial differentiation: ethnoracial background in the U.S. and immigration (citizenship status and foreign origin are used) in Europe. In doing so, we identify the main group that is regarded as the "other" in each society and then compute segregation indices relative to the "other-nonother" distinction. Of course, current and past immigration and growing racial and ethnic diversity are highly interrelated, both in Europe and the U.S. For example, the large majority of American Asians and Hispanics are first- or second-generation immigrants; most arrived after 1965 with the enactment of the Immigration and Nationality Act of 1965 (sometimes known as the Hart-Celler Act). Moreover, racial minorities account for only about 20 percent of all third-generation Americans (i.e., native-born of native-born citizens).[4]

Our fundamental goal is to document patterns of U.S. ethnoracial segregation across all 50 states, 3,100 counties, and select metropolitan or big-city populations (i.e., those with recent influxes of new immigration and that are comparable to their European counterparts). These estimates are juxtaposed with patterns in Europe, where our analyses focus on the changing distribution of immigrant patterns in 26 countries (in the European Union), 1,396 county equivalents (so-called NUTS categories),[5] and several illustrative metropolitan immigrant gateways. We focus on Amsterdam, Rotterdam, Brussels, and London, but also draw on other recent case studies of neighborhood segregation in the United Kingdom, France, Germany, Spain, and Italy.

Why Segregation in the U.S. and Europe May Be Different

Whether new racial and ethnic minority immigrants—both in the U.S. and Europe—will become fully integrated into majority society is far from clear. On the one hand, Europe's more generous social policy regime (e.g., integrated social housing and generous welfare programs) may provide a hedge against high rates of residential segregation while even promoting greater minority integration, unlike the market-driven housing in the U.S. Compared to those in the U.S., immigrant and racial and ethnic minority populations in Europe are typically much smaller in size (absolutely and relative) and less diverse, and are therefore perhaps less "threatening" to native populations. Europe arguably has fewer major immigrant "gateways," and each country, unlike the U.S., tends to be dominated by a comparatively small number of distinct national origin groups,

which presumably eases the integration process. Moreover, unlike the case in the U.S., where roughly one-quarter of all foreign-born residents are unauthorized (and highly segregated in minority communities), the immigrants in Europe are more often legal residents. More reliable, inexpensive, and extensive citywide systems of public transportation in Europe have had the effect of dispersing low-income and immigrant populations more widely throughout the metropolitan region and beyond.

On the other hand, the recent rise of nationalist political parties and the right-wing backlash against immigrant populations in France, the Netherlands, Hungary, and Sweden, among others, indicate perhaps even greater antipathy toward immigrants than in the U.S. Integrating non-Christian immigrant minorities—especially Muslims from Africa, the Middle East, and Southeast Asia—also sometimes represent a larger political problem and a different set of issues regarding integration and national identity than the case in the U.S., which has a long history of incorporating religious minorities and of extolling religious freedom.

Residential Segregation: Some Empirical Results

Our empirical approach differentiates between macro- and micro-segregation.[6] By macro-segregation, we mean the spatial concentration of minority populations over European countries and over U.S. states. Macro-segregation also is revealed empirically by the uneven distribution of minority populations over counties (or county-equivalent units) in each European country and each U.S. state. In contrast, micro-segregation refers to differences in the spatial distribution of minority and majority population across neighborhoods in specific cities (i.e., census tracts in U.S. cities and districts within European cities). Estimates of macro- and micro-segregation are measured by D (i.e., the index of dissimilarly), which indicates the percentage of minorities that would have to move to another county (or neighborhood) in order to achieve similar percentages of minorities across all counties (or neighborhoods) in the country (or city). D varies from 0 (i.e., no segregation) to 100 (i.e., complete segregation of minorities). For additional details about data and measurement, see the Appendix "Measuring Segregation."

### Macro-Segregation: The Big Picture of Minority Population Concentration

We begin by providing county-level maps of the ethnoracial and immigrant populations in the U.S. (Figure 1) and Europe (Figure 2), respectively. We distinguish counties by whether the percentage minority is above the U.S. and European averages, below one-half the average, or somewhere

in between. The mean state percentage of nonwhites across the U.S. is 23.58, while the mean percentage of immigrants in Europe is much lower at 5.88. This large U.S.-Europe difference reflects, first and foremost, the long history of minority immigration (including forced migration from slavery) in the U.S. In many parts of Europe, massive immigration, especially of minority (or nonwhite) populations, is a more recent phenomenon.

The data clearly illustrate the concentration of U.S. minority populations in the South (a legacy of slavery and indigenous native populations, including Indians and Mexicans), along the Atlantic and Pacific seaboard states, and in major metropolitan areas. Appalachia and the rural North Central and Northeast regions in the U.S. remain overwhelmingly white. In Europe, large parts of Eastern Europe are overwhelmingly native-born, as is the case in much of Finland. Although Italy, France, and the United Kingdom have experienced substantial recent immigration, the spatial distribution of immigrants is much more highly concentrated (e.g., in the London area in the United Kingdom, in the north of Italy, and in Paris, Lyon, and Marseille in France).

Tables 1 and 2 provide the cross-county segregation indices (D's) for each U.S. state and European country. The overall D in the U.S. is 40.2, while it is 38 in all 26 European counties (and 40.8 if limited to EU countries). These estimates of segregation vary substantially across states and countries. In the U.S., segregation varies from a high of roughly 44 in New

FIGURE 1. Percent Non-White in U.S. Counties, 2010
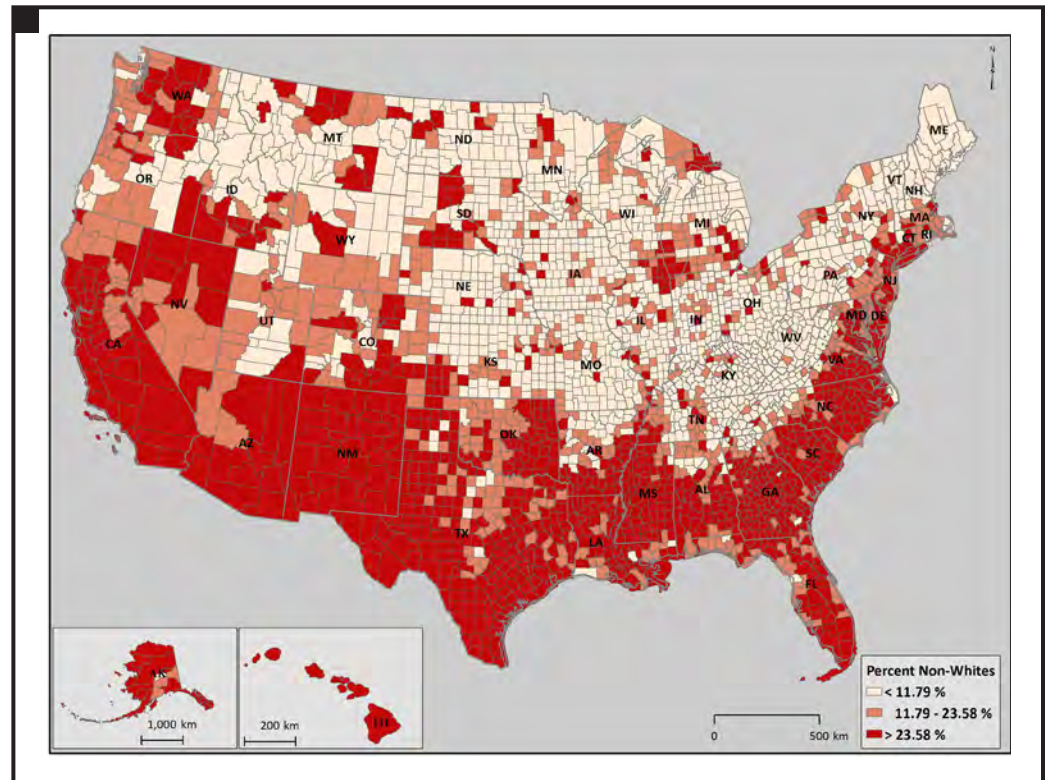
Source: U.S. Census Bureau, 2010 Decennial Census.

FIGURE 2. Percent Non-Citizen in European Counties, Circa 2010
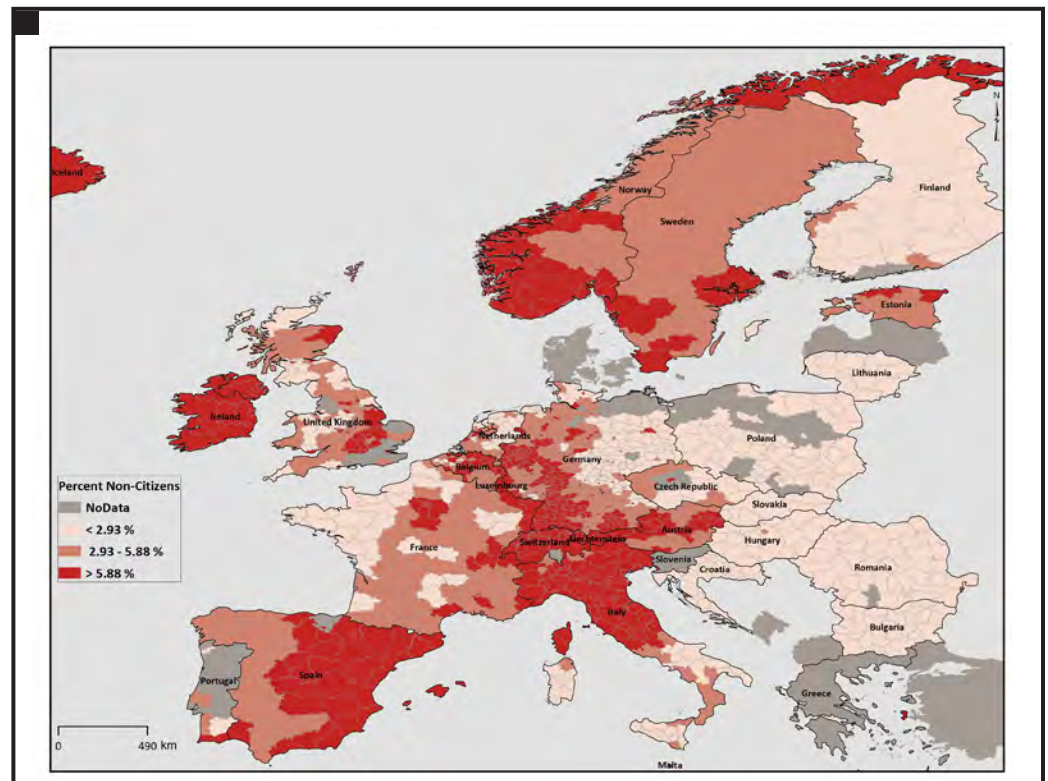
Source: Eurostat.

TABLE 1. County White-Nonwhite Segregation Indices by State, U.S., 2010

States	All Ethnicities	Black, Asian, & Hispanic	Black	Asian	Hispanic
Alaska	25.3	28.4	34.6	35.8	19.5
Alabama	29.5	30.9	36.4	34.0	22.4
Arkansas	34.0	36.9	56.3	39.9	34.0
Arizona	8.8	9.1	14.3	13.8	9.7
California	20.1	21.0	33.4	29.1	24.9
Colorado	26.0	28.0	47.9	25.0	29.2
Connecticut	17.0	18.1	20.9	12.1	18.1
District of Columbia	0.0	0.0	0.0	0.0	0.0
Delaware	9.9	10.9	12.3	24.8	7.5
Florida	34.6	35.6	32.4	27.3	44.4
Georgia	30.5	31.2	35.7	44.2	32.5
Hawaii	14.7	16.9	31.3	18.6	5.3
Iowa	28.5	30.7	40.4	38.9	33.4
Idaho	23.1	27.9	29.5	27.3	33.5
Illinois	35.5	36.7	43.8	38.1	38.9
Indiana	38.3	40.7	51.3	36.7	37.3
Kansas	29.9	33.2	40.4	36.7	35.8
Kentucky	37.2	40.2	45.8	42.6	30.9
Louisiana	24.0	25.3	27.3	36.8	28.5
Massachusetts	20.4	23.1	32.7	32.7	33.2
Maryland	40.0	41.2	48.1	41.6	43.3
Maine	16.1	23.3	40.4	21.8	11.4
Michigan	32.3	35.2	44.2	36.5	26.1
Minnesota	30.2	34.2	43.8	38.4	27.4
Missouri	40.4	44.6	54.8	36.3	31.0
Mississippi	31.0	32.1	35.0	34.6	23.9
Montana	33.2	14.2	26.8	18.1	15.1
North Carolina	28.2	28.6	33.3	40.4	22.0
North Dakota	29.2	26.3	38.1	36.3	18.3
Nebraska	28.8	31.3	48.4	34.9	30.1
New Hampshire	19.9	23.9	25.4	20.9	29.0
New Jersey	30.4	31.1	37.7	34.6	34.2
New Mexico	15.0	15.0	23.8	25.6	15.1
Nevada	18.0	19.2	29.6	22.0	15.3
New York	44.2	45.4	43.8	49.1	45.8
Ohio	35.8	38.4	44.8	35.9	30.9
Oklahoma	17.5	30.2	39.5	33.8	28.0
Oregon	22.1	25.8	45.1	35.8	22.8
Pennsylvania	37.6	39.6	51.5	39.0	41.3
Rhode Island	33.8	35.8	35.8	23.8	38.6
South Carolina	22.1	23.0	28.2	21.0	16.1
South Dakota	37.7	27.3	42.7	28.2	25.2
Tennessee	44.5	46.9	54.3	40.7	31.8
Texas	33.8	34.6	33.0	36.5	39.2
Utah	17.5	19.1	25.9	28.3	17.5
Virginia	28.4	29.2	37.1	46.5	36.6
Vermont	14.8	21.5	29.2	31.5	11.4
Washington	20.5	23.6	35.9	33.4	27.3
Wisconsin	39.5	43.8	63.3	33.0	36.6
West Virginia	29.3	33.7	38.9	34.2	27.7
Wyoming	21.7	22.0	37.3	25.1	20.9
Overall U.S.	40.2	42.2	47.2	50.1	50.9

Source: Authors' analyses of U.S. Census Bureau data.

York State and Tennessee to lows of less than 10 in Arizona and Delaware. In Europe, the *D*'s range in size from 40.1 in Estonia to lows in the island countries of Iceland (1.2) and Ireland (4.8). Although there are large differences in the sizes of minority populations in Europe and the U.S., there never-theless is rather remarkable similarity in macro-segregation across countries in Europe and states in the U.S.

Of course, these U.S. and European estimates hide variation in segregation across different minority populations. In the U.S., the most segregated minorities (data not shown) originate from Central and South America (68.1) and Oceania (65.1), while these origins account for the least amount of minority

segregation in European countries in the EU (40.8). The range of overall *D*'s in the U.S. are much smaller. They range from a low of 42.2 among blacks to highs of 50.1 among Asians and 50.9 among Hispanics, differences that presumably reflect regional differences in minority population concentration (i.e., Asians in the West and Hispanics in the Southwest).

Micro-Segregation: Segregation within Cities

Both in the U.S. and Europe, racial and ethnic minorities tend to settle in areas that are disproportionately composed of other minorities, often made up of their own ethnoracial back-ground or nationality. In the U.S., previous studies show that racial neighborhood segregation between blacks and whites

TABLE 2. European County Equivalent Citizen-Noncitizen Segregation Indices, Circa 2010

Countries	All	European Union	Non-EU	Non-EU Europe	Africa	Central & South America	North America	Asia	Oceania
Austria	24.6	22.0	28.9	27.2	42.8	31.7	36.8	32.2	33.3
Belgium	31.0	32.6	34.4	27.4	42.9	43.9	49.2	31.9	44.2
Bulgaria	19.1	25.9	19.7	14.2	41.5	31.5	37.4	37.2	48.6
Croatia	19.1	25.0	19.0	18.3	49.0	37.5	28.2	36.2	41.4
Czech Republic	30.2	22.7	34.7	38.2	41.0	47.1	61.9	31.9	49.4
Estonia	40.1	17.1	40.9	41.0	35.2	35.3	24.3	30.9	40.1
Finland	16.8	19.2	17.5	24.8	25.0	23.6	21.0	17.1	19.8
France	26.7	23.5	31.5	36.8	32.6	45.5	37.9	35.3	42.8
Germany	27.2	27.4	28.7	28.9	40.2	30.2	39.7	29.7	39.8
Greece	16.5	21.0	16.3	13.2	39.6	30.9	29.3	31.9	27.5
Hungary	24.6	22.5	36.9	27.9	45.1	41.2	42.9	53.1	49.9
Iceland	1.2	0.9	8.9	1.3	10.0	10.5	12.3	11.5	14.7
Ireland	4.8	2.4	11.4	8.8	10.5	16.2	6.3	14.2	6.4
Italy	23.9	23.2	26.8	30.3	31.4	41.0	27.4	34.4	29.0
Lithuania	26.0	22.6	26.6	26.9	23.2	27.1	30.3	25.2	42.4
Netherlands	23.5	23.0	26.2	21.1	33.4	33.0	38.4	25.1	38.1
Norway	14.0	14.4	13.7	14.2	12.8	22.2	24.1	16.8	21.6
Poland	30.8	30.4	33.4	32.0	33.4	47.0	47.0	49.2	80.0
Portugal	35.6	31.7	37.7	30.2	52.5	35.2	29.5	31.1	29.3
Romania	39.4	35.4	44.1	34.2	58.6	48.7	42.0	55.8	78.1
Slovakia	13.5	15.2	15.1	18.5	19.4	24.0	20.5	21.3	25.1
Slovenia	14.4	16.6	14.3	14.1	24.9	20.8	26.9	23.0	25.0
Spain	23.7	27.8	24.3	28.2	31.6	23.5	26.3	33.0	29.6
Sweden	14.1	20.8	9.8	15.0	16.5	31.8	22.1	13.0	21.7
Switzerland	14.3	17.5	14.8	16.6	30.9	31.5	41.8	17.4	39.9
United Kingdom	38.9	35.8	36.9	39.0	42.1	50.6	40.2	37.8	45.9
Overall Europe	38.0	40.8	39.3	52.5	50.4	68.1	49.6	45.0	65.1

Source: Eurostat. Note: Noncitizens are considered as minorities in this analysis. All = All countries in the world other than the reporting country; European Union = Members of the European Union; Non-EU = All countries in the world except EU members; Non-EU Europeans = Countries of Europe that are not members of European Union.

is high (averaging roughly 60 across the largest U.S. cities in 2010), while Asian-white neighborhood segregation is comparatively low (*D* at roughly 40), with Hispanics occupying an intermediate position (*D*'s centering around 50).[7] Despite long-term declines, African Americans continue to face substantial residential segregation, along with its correlates of concentrated poverty, older dilapidated housing stock, and chronic joblessness. Previous studies also show that segregation among America's fastest-growing minority populations is now at a standstill or even increasing in some metropolitan areas, especially those with large numbers of Hispanic or Asian immigrant populations (e.g., Los Angeles). In Europe, there are many fewer ethnically diverse metropolitan cities, especially if levels of diversity are benchmarked against those in large cities in the U.S., where 58 of the largest 100 cities now have majority-minority populations.

To highlight comparative patterns of neighborhood segregation in Europe, we begin by mapping the distribution of immigrants across neighborhoods in Amsterdam and Rotterdam, which are distinguished from Brussels and London—two of the most diverse cities in Europe, with large and growing immigrant populations.[8] In each case, these maps (Figure 3) reveal highly uneven patterns of minority concentration, with unusually large concentrations in the city centers and smaller concentrations at the periphery. The *D*'s in these cities (Table 3), however, are much lower than they are for previously published U.S. estimates of segregation of big-city ethnoracial minority and immigrant populations. *D*'s range in size from 19.21 in Brussels to 30.54 in Rotterdam (a city that is generally regarded as the most diverse city in the Netherlands, with a large immigrant population).

To be sure, it is no easy task to identify cities in the U.S. with comparable patterns of recent immigration and growing racial and ethnic diversity. For our purposes, we have mapped neighborhood racial composition (white-nonwhite) in U.S. cities that demographer Audrey Singer has recently identified as "post-WWII gateways" (Dallas, Houston, Los Angeles, Miami, Riverside, San Diego, and Washington, D.C.) and "major emerging gateways" (Atlanta, Austin, Charlotte, Las Vegas, Orlando, and Phoenix).[9] These 13 cities are distinguished

TABLE 3. Citizen-Noncitizen Segregation in European Cities, Circa 2010

City	D
Amsterdam	23.00
Brussels	19.21
London	24.24
Rotterdam	30.54

Source: Central Bureau of Statistics (Amsterdam and Rotterdam), Statistics Belgium (Brussels), and Office for National Statistics (London).

FIGURE 3. Neighborhood Noncitizen Population in European Cities
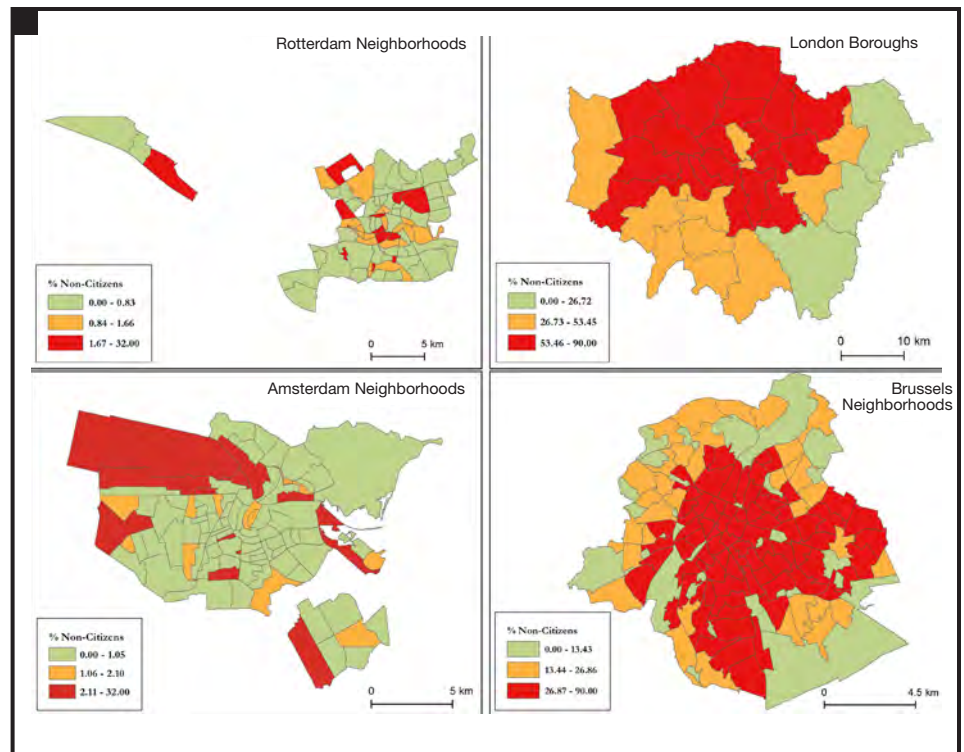
Source: Eurostat, Statistics Netherlands Population Register, Statistics Belgium Census Data.

by their recent immigrant growth and therefore are arguably most closely matched to the contemporary immigrant experiences in the four European cities considered above, all of which experienced immigration in large numbers after World War II.

The maps shown in Figures 4 and 5 reveal highly centralized minority populations in the central (or principal) city and nearby older surrounding suburbs and much lower minority shares in the newer suburbs and peripheral or exurban areas, which typically are much less densely settled but within easy commuting distance to employment in the city. Although these segregation patterns are similar *in kind* to those found in Amsterdam, Rotterdam, Brussels, and London, the magnitude of minority segregation in these U.S. cities is much greater (see Table 4). For example, segregation within the city limits is often very high, a pattern of neighborhood exclusion that is evident in the maps (which highlight largely "white" neighborhoods). For example, in Atlanta, a major emerging immigrant gateway, our estimate of white-nonwhite segregation is 66.6, even as segregation for the entire metro region

is much lower at 50.4. This lower estimate seemingly reflects the spatial spread of nonwhite minorities into nearby metropolitan suburbs.

Comparatively low segregation rates are found in the city of Las Vegas and its metro region overall (37.4 and 32.8), and in Riverside, California, where *D*'s for the city and metro area are 30.2 and 38.9, respectively. Riverside, along with Miami, were the only places where segregation in the city was lower than segregation throughout the entire metropolitan region, a finding that may suggest the relative concentration of whites in the city vis-à-vis suburban areas, perhaps providing some evidence of white gentrification. The bottom line is nevertheless clear: Levels of minority segregation within contemporary U.S. immigrant gateway cities far exceed segregation levels in Amsterdam, Rotterdam, Brussels, and London.
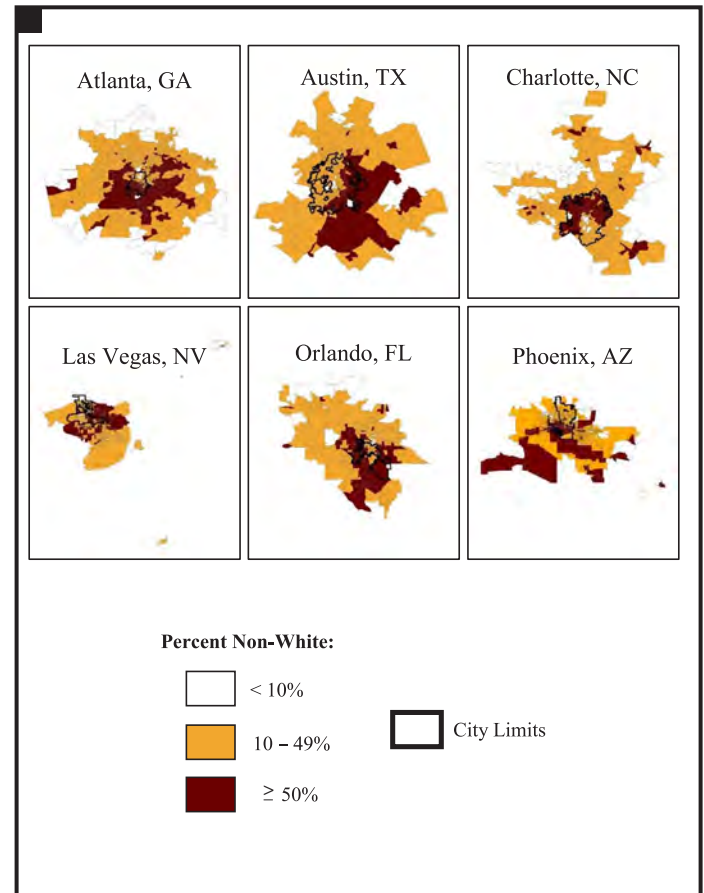
Other Studies of Immigrant Segregation
Our attempt at providing comparative empirical estimates of segregation (across alternative geographic scales) in the U.S. and Europe has arguably come at the expense of highlighting

FIGURE 4. U.S. Post-WWII Gateways, 2010
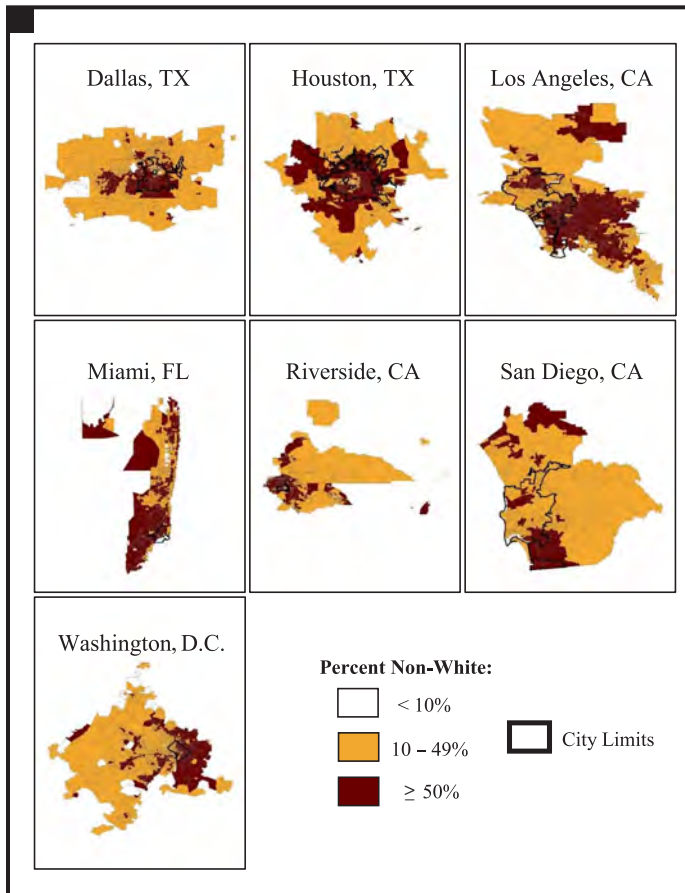
Source: U.S. Census Bureau, 2010 Decennial Census.

FIGURE 5. U.S. Emerging Gateways, 2010

Source: U.S. Census Bureau, 2010 Decennial Census.

the diversity of immigrant experiences across different national origin populations and the European continent. Recently published reviews by Richard Alba and Nancy Foner, John Iceland, and Douglas S. Massey have documented several case studies of segregation across many different European cities (see reference section for complete citations). These estimates are summarized in Figure 6.

These city-specific segregation estimates provide at least three generalizations. First, minority-majority segregation is less extreme among European (or EU) immigrants than it is among other new arrivals originating from non-Western continents (i.e., Asia, Africa, or South America). Second, neighborhood segregation from the native population (most white ethnicities) tends to be much higher among dark-skinned immigrants (e.g., Bangladeshis in UK, Ethopians and Somalians in Sweden, or Turks in France) than lighter-skinned immigrants, which is a pattern similar to the relatively high black-white segregation rates found historically in the U.S. Third, some national-origin groups, especially those with

colonial histories, often are less segregated than more recent immigrant groups. This finding may suggest more cultural and economic integration among older immigrant groups than recently arrived groups. These groups would include, for example, Moroccans in Amsterdam or Milan, Turks in Frankfurt or Cologne, or Algerians in Marseille.

Lessons Learned
High rates of majority-minority segregation throughout the Western world present real social, cultural, and economic barriers to full integration and social inclusion. Indeed, if segregation is viewed as a proxy measure of "social distance" or cultural and economic integration between groups, the evidence presented here suggests that minorities in the U.S. are perhaps less spatially assimilated than their immigrant counterparts in Europe. Although we found that macro-segregation—the uneven minority distribution across counties—is remarkably similar in Europe and the U.S., micro-segregation (within cities) of minorities from whites is much higher on average in the U.S. than in most European countries.

Of course, in the case of African Americans in the U.S., segregation clearly remains "exceptional" and continues to be shaped by past slavery and a history of social exclusion and discrimination in the job and housing markets. Segregation is seemingly passed down from generation to generation.[10] Although some observers claim that there is no parallel case in Europe, this remains a debatable point. A small but growing literature suggests that many Muslim populations (e.g., Bangladeshis in London or Arabs in Paris) experience exceptionally high rates of both macro- and micro-segregation. Still, compared with the size of the U.S. African-American population, these ethno-religious minorities are comparatively small in number or percentage. And there is little indication that today's European immigrant communities or neighborhoods will become similarly ghettoized anytime soon on the broad spatial scale observed in the U.S.[11] The recent immigrant experiences in much of Europe may more closely parallel patterns of residential segregation among America's Asians and Hispanics.

Segregation reflects and reinforces economic inequality and therefore represents an important component of the stratification system, both in the U.S. and Europe. Indeed, segregation often overlaps with many other place-based inequalities—poverty, unemployment, crime, and housing quality and overcrowding. These overlapping disadvantages are seemingly much more common in the U.S. than in European countries, where government efforts to promote integration (e.g., social and mixed-income housing) provide

TABLE 4. Non-Hispanic White-Nonwhite Segregation (*D*) in U.S. Major Emerging and Post-WWII Gateways, 2010

	City	Metro Area
Major Emerging Gateway		
Atlanta	66.56	50.38
Austin	43.34	38.48
Charlotte	48.50	46.07
Las Vegas	37.40	32.80
Orlando	42.32	38.24
Phoenix	52.35	43.46
Post-WWII Gateway		
Dallas	58.30	45.85
Houston	57.32	49.99
Los Angeles	58.44	54.54
Miami	49.42	54.15
Riverside	30.18	38.90
San Diego	47.26	42.70
Washington, D.C.	63.11	46.62

Source: U.S. Census Bureau, 2010 Decennial Census.

a clear contrast to the market-driven solutions preferred in the U.S.[12] Our analysis of contemporary patterns of minority segregation provides an empirical baseline for future research that explicitly links minority segregation to other place-based inequalities, to patterns of concentrated poverty, and to the specific social and demographic processes (e.g., native- or white-flight, self-segregation, and housing discrimination) that are responsible for minority segregation and spatial inequality.

An important unanswered question, of course, is whether current patterns of minority segregation—segregation of "the other"—will persist into the future. In the U.S., the law of the land applies equally to citizens and noncitizens, and the motivations to emigrate to the U.S. often involve the pursuit of the "American Dream." For those who come legally, America provides the opportunity for immigrants to develop a new national identity and to move up the socioeconomic ladder. Whether this is true for immigrants in Europe is less

FIGURE 6. Segregation Indices for Groups in Europe and the U.S., Circa 2010
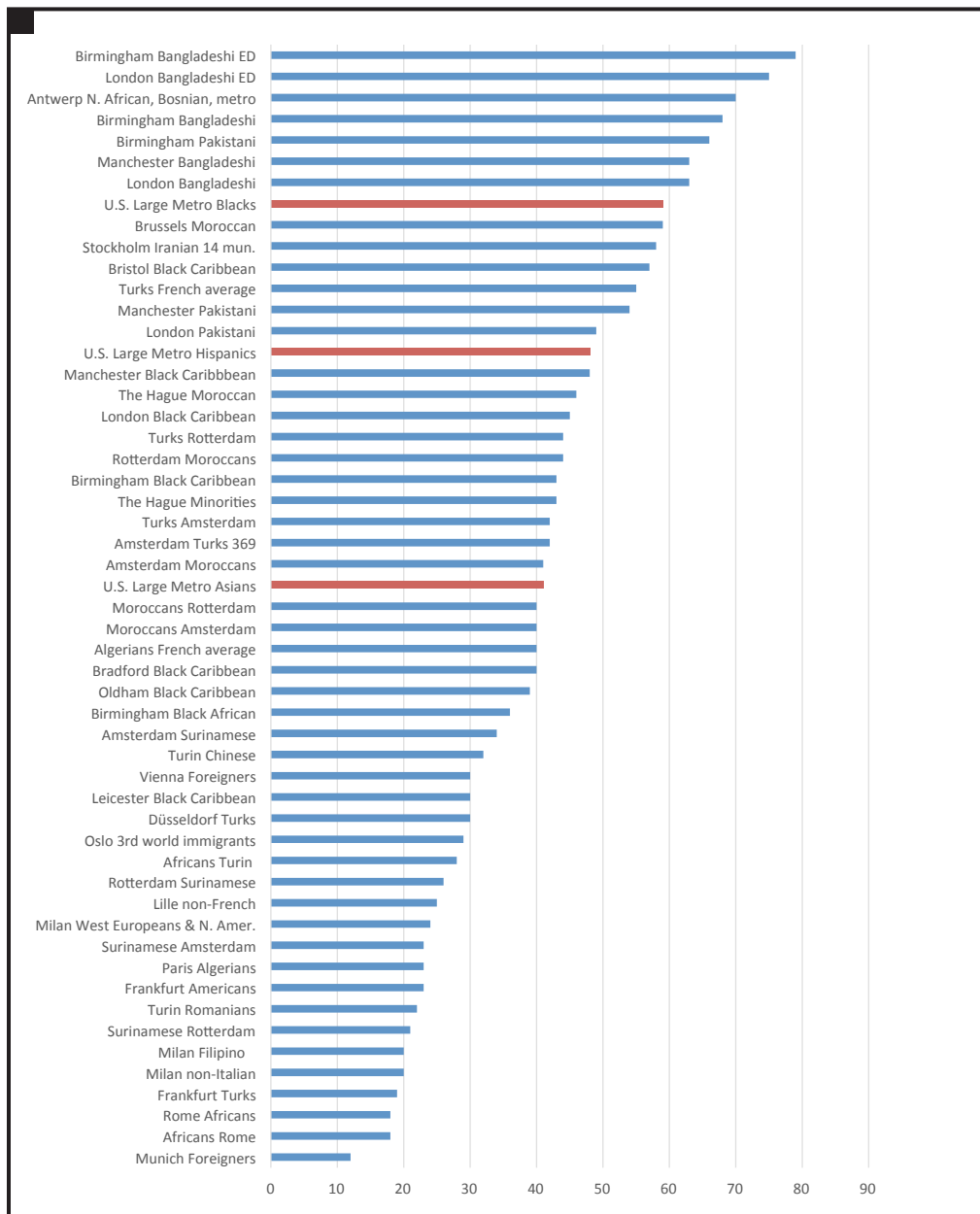
Source: Adapted from Sako (2005), Iceland (2014), Alba and Foner (2015), Logan and Stults (2011), and Arbaci and Malheiros (2010).

clear; many new arrivals are refugees or lack a clear route to citizenship or economic integration. Indeed, institutional and legal accommodations in Europe may lag demographic realities. Residential segregation across European countries are often wide-ranging and differ sharply among different minority populations. Whether today's patterns will persist in the future is much less obvious in the aftermath of the current period of unprecedented international migration and ongoing economic globalization.[13] One concern is whether the growing anti-immigrant movement in Europe and in the U.S. will not only result in new restrictions on immigration, but also, perhaps more importantly, lead to cutbacks in government efforts to promote integration through social housing, cash assistance, or educational programs that directly or indirectly promote minority integration into society. Policy choices will affect whether segregation in ethnic communities or neighborhoods represents a way station or platform for full integration or a chronic or permanent social condition that institutionalizes majority-minority social and economic inequality. ∎

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Appendix: Measuring Segregation
To compare recent patterns of residential segregation in Europe and the U.S. requires data that are similar in spatial scale (i.e., territorial size) and racial and ethnic (and immigrant) categories. Here we compare segregation across 26 countries in Europe and all 50 states in the U.S. Data for each European country, county (or county equivalent), and neighborhood (census tract or district) come from the most recent data available from Eurostat (circa 2010), while data from the U.S. come from the 2010 decennial census. Segregation is typically measured using the index of dissimilarity (*D*), which is defined as:

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

where m_{it} and w_{it} are the respective percentages of the minority and majority populations residing in neighborhood (or other geographical scale) *i* at time *t*. This index is based on pairwise 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.

ADDITIONAL RESOURCES

Arbaci, Sonia and Jorge Malheiros. 2010. "De-Segregation, Peripheralisation and the Social Exclusion of Immigrants: Southern European Cities in the 1990s." Journal of Ethnic and Migration Studies 36, 227–255.

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

Johnson, Kenneth M., Layton Field, and Dudley L. Poston. 2015. "More Deaths than Births: Subnational Natural Decrease in Europe and the United States." *Population and Development Review* 41(4), 651–680.

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

Musterd, Sako. 2005. "Social and Ethnic Desegregation in Europe: Levels, Causes, and Effects." *Journal of Urban Affairs* 27(3), 331–348.

NOTES

1. A comprehensive national portrait of immigration and integration is provided in the recently released report of the National Academy of Science: Waters, Mary C., and Marisa Gerstein Pineau. 2015. *The Integration of Immigrants into American Society.* Washington, D.C.: National Academies Press. One of the unexpected findings was the low rates of naturalization in the U.S. compared to those in most European countries with large immigrant influxes. The full report is available online at http://sites.nationalacademies.org/dbasse/cpop/integration_of_immigrants/.

2. Beginning with the Schengen Agreement in 1985, the free movement of Europeans throughout the continent has been made easier by eliminating or easing border checks and visa requirements while still imposing controls on movement into and out of much of Europe itself (i.e., the so-called Schengen Area). Incipient native depopulation and natural decrease, in turn, have created labor shortages and new demands for immigrant workers. Transnational migration also has accelerated globally. The European Union has been reshaped by an unprecedented south-to-north movement of workers due to guest worker programs (e.g., Turks in Germany or Moroccans in the Netherlands) and the rapid growth of new immigrant groups from former European colonies. For example, France (especially in the Paris region) is now home to immigrants from outside of Europe, often from ex-colonies in Northern Africa, West Africa, and Indochina. Since the late 1990s, net immigration in England has spiked upward, with large influxes of low-skill workers from Eastern Europe (e.g., Bulgaria and Romania) and of noncitizens from outside the EU. Europe has been on the frontline of refugee and displaced populations outside of Europe. Germany is on pace to accept more than 1 million new Syrian refugees in 2015 alone.

3. Of course, some European countries, such as Germany and Sweden, became new destinations much earlier after WWII than others (such as Finland or Eastern Europe), attracting new immigrants from Turkey, Italy, Spain, and elsewhere. For a useful comparative discussion of immigration and integration in North America and Europe, see Alba, Richard, and Nancy Foner. 2015. *Stranger No More: Immigration and the Challenges of Integration in North America and Western Europe.* Princeton, NJ: Princeton University Press.

4. A 2013 Pew report ("Second-Generation Americans: A Portrait of the Adult Children of Immigrants") based on the 2012 American Community Survey showed that America's immigrant stock—defined as first and second generations—is overwhelmingly composed of racial and ethnic minority populations.

5. We estimate minority concentration and segregation in Europe using the units defined by the Nomenclature of Territorial Units for Statistics (NUTS), which, according to Johnson et al. (2015:655), takes into account "existing geographic and political divisions in each European country to produce standard spatial units that permit cross-national comparisons." For our purposes we use NUTS3 units, which closely resemble counties as defined in the U.S.

6. For discussions of segregation at different scales of geography, see Lichter, Daniel T., Domenico Parisi, and Michael Taquino. 2015. "Toward a New Macro-Segregation? Decomposing Segregation Within and Between Metropolitan Cities and Suburbs," *American Sociological Review*, 80, 843–873; 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. We recognize, of course, that the sizes of different accounting units (e.g., tracts or districts, counties or NUTS units) can affect estimates of D, a fact that argues for cautious interpretations.

7. 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. This book 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.

8. David Coleman has coined the term "Third Demographic Transition," which refers to the rapid ethnic transitions in many European countries and reflects native depopulation, coupled with high rates of immigration, along with above-replacement levels of fertility. See Coleman, David. 2006. "Immigration and Ethnic Change in Low-Fertility Countries: A Third Demographic Transition." *Population and Development Review*, 32(3), 401–446.

9. See the report titled *Metropolitan Immigrant Gateways Revisited*, 2014, which is available online at http://www.brookings.edu/research/papers/2015/12/01-metropolitan-immigrant-gateways-revisited-singer.

10. See Sharkey, Patrick. 2013. *Stuck in Place: Urban Neighborhoods and the End of Progress Toward Racial Equality.* Chicago, Il: University of Chicago Press.

11. See Alba and Foner (2015).

12. See Alba and Foner (2015); Iceland, John. 2014. *Residential Segregation: A Trans-Atlantic Analysis*. Washington, D.C.: Migration Policy Institute; and Massey, Douglas S. 2016. "Segregation and the Perpetuation of Disadvantage." In *The Oxford Handbook of Social Science and Poverty* (David Brady and Linda M. Burton, eds.). New York: Oxford University Press, 369–393.

13. In fact, Douglas Massey (2016) suggests that segregation in Europe and the U.S. is now converging at "moderate" levels, a pattern he attributes to declining segregation in the U.S. (especially among blacks and immigrant populations) and to increasing segregation in Europe.

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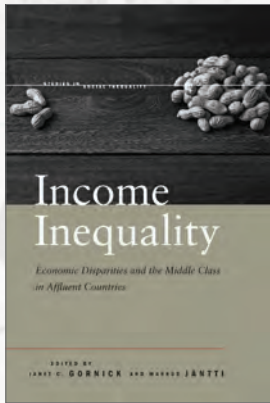
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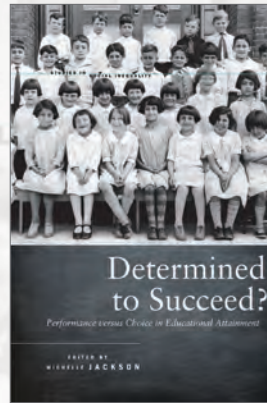
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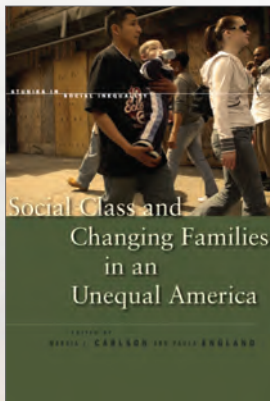—Douglas S. Massey, Princeton University
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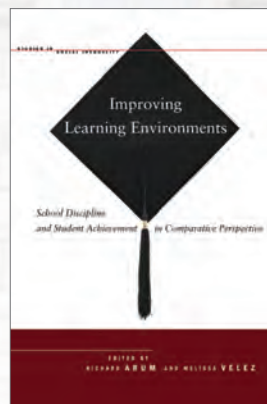
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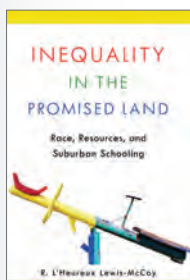
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