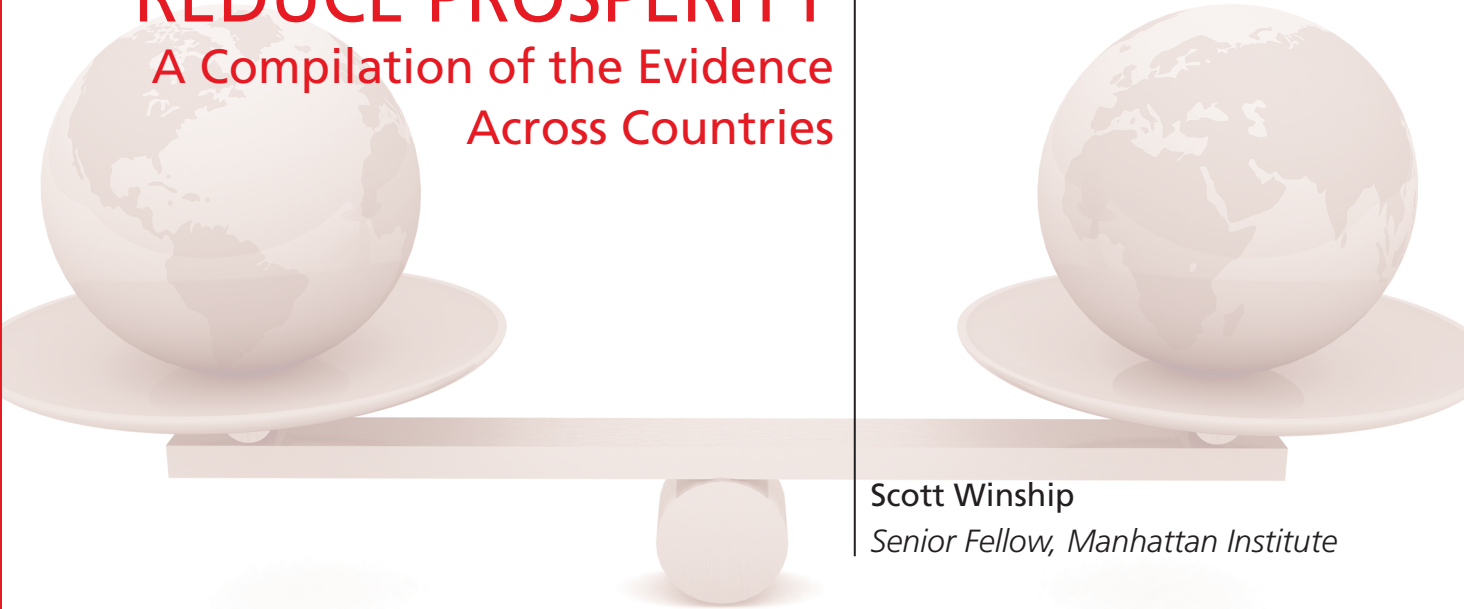


INEQUALITY DOES NOT REDUCE PROSPERITY

A Compilation of the Evidence
Across Countries



Scott Winship
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EXECUTIVE SUMMARY

Since the Great Recession, inequality has loomed large in policy debates in the United States and around the world. Losses from the recession and the slow pace of recovery since have fueled concerns that inequality is not simply unfair but harmful. It is now commonplace to see claims that high and rising inequality levels have held back or worsened living standards among the poor and the middle class, a theme of Thomas Piketty's best-selling *Capital in the Twenty-First Century*.

Such concerns may nevertheless be misplaced. The prospect of vast economic returns might, for instance, incentivize more innovation and investment, producing stronger economic growth and higher incomes even among those who do not amass fortunes. By rewarding work and human capital investment, inequality between the upper middle class and the poor could also promote stronger earnings growth for everyone over time.

Georgia Levenson Keohane, a fellow at the Roosevelt Institute, conveys well the shortsightedness of equating low inequality with broad-based prosperity, writing of Americans: "We are living, some argue, in a North American banana republic: our income inequality is worse than that of Guyana, Nicaragua, and Venezuela. When it comes to shared prosperity, we keep company with Iran and Yemen."¹

Similarly, Nobel laureate Joseph Stiglitz writes that the United States is nearing "the level of inequality that marks dysfunctional societies—it is a club that we would distinctly not want to join, including Iran, Jamaica, Uganda, and the Philippines."²

That inequality levels convey limited information about living standards below the top is easily seen by considering the incomes of the middle class and the poor among Keohane's and Stiglitz's inequality laggards. Middle-class Americans enjoy incomes more than three times higher than their counterparts in Venezuela and Iran, more than ten times higher than those in the Philippines, Jamaica, Guyana, Yemen, and Nicaragua, and more than 40 times higher than middle-class Ugandans. Americans in the bottom fifth have incomes 4.5 to 34 times larger than their counterparts in these countries.³

Is it the case more generally that having higher inequality lowers living standards below the top? This paper examines the relationship between income inequality and living standards among the middle class and the poor worldwide. Part 1 focuses on income inequality below the top 1 percent, over a wide range of countries. Part 2 focuses on income concentration within the top 1 percent, over a more narrow range of nations. Part 3 weighs the merits of various interpretations of the findings discussed in Parts 1 and 2. Key findings include:

1. Across the developed world, countries with more inequality tend to have, if anything, higher living standards. The exception is that countries with higher income concentration tend to have poorer low-income populations.
2. However, when changes in income concentration and living standards are considered across countries—a more rigorous approach to assessing causality—larger increases in inequality correspond with sharper rises in living standards for the middle class and the poor alike.
3. In developed nations, greater inequality tends to accompany stronger economic growth. This stronger growth may explain how it is that when the top gets a bigger share of the economic pie, the amount of pie received by

the middle class and the poor is nevertheless greater than it otherwise would have been. Greater inequality can increase the size of the pie.

- 4.** Below the top 1 percent of households—and prior to government redistribution—developed nations display levels of inequality squarely in the middle ranks of nations globally. American income inequality below the top 1 percent is of the same magnitude as that of our rich-country peers in continental Europe and the Anglosphere.
- 5.** In the English-speaking world, income concentration at the top is higher than in most of continental Europe; in the U.S., income concentration is higher than in the rest of the Anglosphere.
- 6.** Yet—with the exception of small countries that are oil-rich, international financial centers, or vacation destinations for the affluent—America’s middle class enjoys living standards as high as, or higher than, any other nation.
- 7.** America’s poor have higher living standards than their counterparts across much of Europe and the Anglosphere, while faring worse than poor residents of Scandinavia, Germany, Austria, Switzerland, the Low Countries, and Canada.

These findings cast doubt on claims that rising inequality is responsible for slowed income growth in America—and they suggest that attempts to reduce income inequality, in the U.S. and elsewhere, may not produce higher living standards among the poor and the middle class.

CONTENTS

1	Part 1: Inequality Below the Top 1 Percent
7	Part 2: Income Concentration Within the Top 1 Percent
10	Part 3: Making Sense of the Evidence
14	Conclusion
15	Endnotes

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PART I: INEQUALITY BELOW THE TOP 1 PERCENT

An important distinction in looking at “income” is the distinction between market and disposable income. The concern that income inequality hurts the living standards of the poor and the middle class is implicitly one about the inequality produced by markets, that is, inequality before government redistributes income via taxation and transfers. The fear is that market economies produce high inequality that is only partly remedied through redistribution. High market inequality may even strengthen the political power of the rich, allowing them to block policymakers’ efforts to redistribute income. Inequality of disposable (posttax and -transfer) incomes will tend to correspond with low living standards below the top only because taxes and transfers do not fully mitigate even higher market income inequality. This paper therefore focuses on inequality measures that reflect the distribution of market income.

The most widely used measure of income inequality is the Gini coefficient, ranging from zero (perfect equality, where everyone has the same income) to one (complete inequality, where one household enjoys all the income and everyone else gets nothing). The Gini coefficient can be expressed in other ways, too.⁴ For example, if the coefficient is multiplied by two, it approximately equals the average difference in income across all possible pairs of households, divided by average household income.⁵ Dividing the average difference by the average level means that rich countries do not automatically have higher income inequality. Knowing a country’s Gini coefficient does not, of itself, reveal anything about the living conditions of the poor or the middle class.

The Gini coefficient is generally regarded as a measure of overall inequality; but when estimated from surveys, it is best thought of as measuring inequality below the top 1 percent. For confidentiality purposes, surveys often put a ceiling on the reported incomes of the richest households; when income concentration is high, that ceiling can artificially produce lower levels of recorded inequality. Even absent this problem, the superrich are, by virtue of their rarity, often missed in surveys that randomly select households to interview. (And when such households are selected, they are often reluctant to participate.)

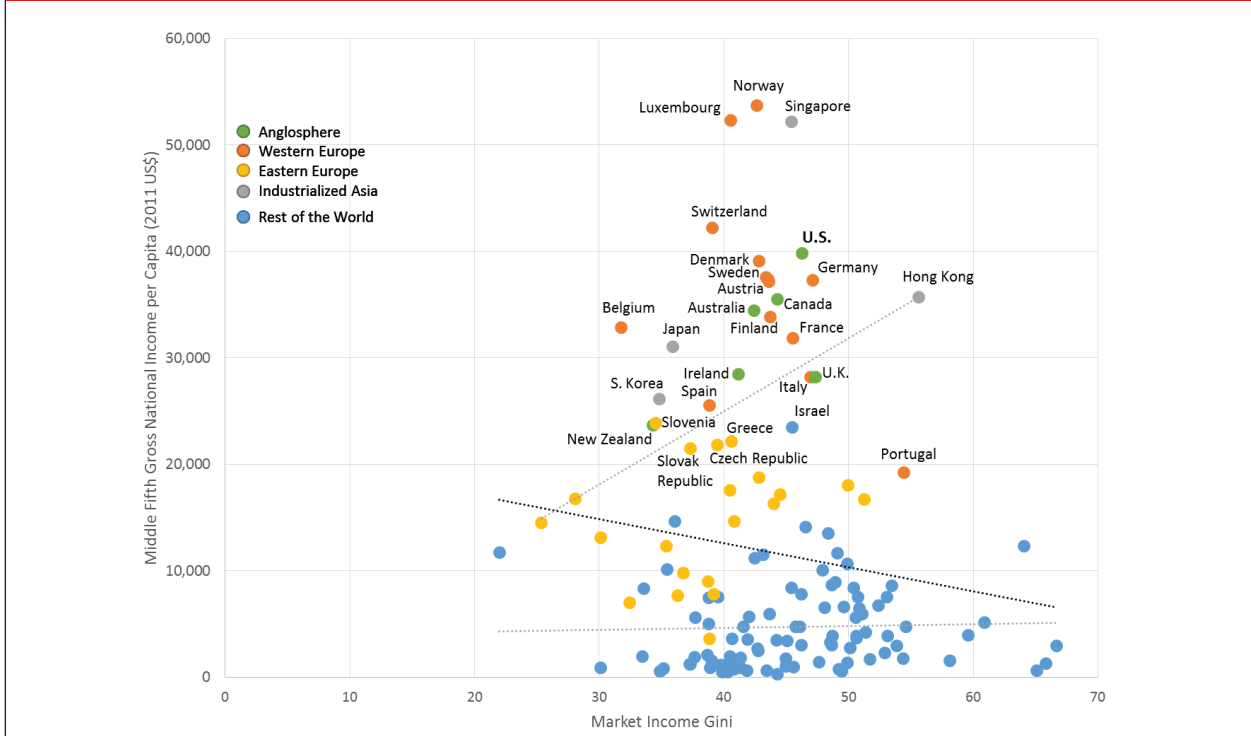
To illustrate the issue, the 2005 U.S. Gini coefficient for market income is 49 in the data used in this paper (multiplying it by 100). Alternatively, consider Gini estimates from the Congressional Budget Office. To better capture the incomes of the richest households,

CBO statistically combines tax-return data with survey data. It estimates a market income Gini of 59 for 2005.⁶ However, when CBO excludes the top 1 percent of households, the Gini falls to 50.

All this suggests that: (i) measured adequately, Gini coefficients are highly sensitive to income concentration at the top; (ii) household surveys do not adequately capture incomes at the top, thereby understating true Ginis; and (iii) Ginis from surveys may nevertheless sufficiently reflect inequality levels present below the top 1 percent of households.⁷

The Gini estimates used in this paper come from the Standardized World Income Inequality Database (SWIID), compiled by University of Iowa political scientist Frederick Solt.⁸ One can examine patterns of inequality across 149 countries where Gini

Figure 1. Market Income Inequality vs. Middle-Class Living Standards Across 136 Countries



Sources include the SWIID and the World Bank. The bold dotted line is the best-fitting line through all 136 data points. The two lighter dotted lines correspond with (i) the richer nations of the Anglosphere, Western and Eastern Europe, and industrialized Asia, and (ii) the rest of the world. "Eastern Europe" includes east-central Europe (e.g., Czech Republic and Hungary), the Balkans, and former members of the Soviet Union (including the Russian Federation). "Western Europe" includes the rest of Europe except for the United Kingdom and Ireland. "Anglosphere" includes the U.K., Ireland, Canada, the U.S., Australia, and New Zealand. "Industrialized Asia" includes Japan, South Korea, Singapore, Hong Kong, and Taiwan.

coefficients are available for 2005.⁹ (A spreadsheet including all the data compiled and estimated for this paper is available on the web.)¹⁰

Living standards, unlike inequality, are best measured in terms of disposable income rather than market income; purchasing power, after all, depends on how much income families have *after* redistribution. The basic question of interest in this paper is the extent to which countries with high market income inequality have people at the bottom and in the middle with low disposable incomes. Figure 1 provides the first look at the answer to this question.

Figure 1 shows market income Gini coefficients for 136 countries, rising from less to more inequality as one progresses from left to right across the chart. As one moves up the chart, Figure 1 shows increasingly high middle-class incomes. The middle-class income measure is, roughly, the gross national income per capita received by people in the middle fifth of the disposable household income distribution in 2011 (in U.S. dollars).¹¹ While neither ideal nor precisely estimated, this measure makes international comparisons possible across a broad range of countries—and offers safe qualitative conclusions (validated later in this paper by superior indicators of living standards) about the relationship between inequality and living standards.

As Figure 1 indicates, if there is a relationship between income inequality and middle-class living standards, it is far from obvious at first glance. The rich nations of the Anglosphere (the large English-speaking countries of the former British Empire), Western Europe, and industrialized Asia have generally moderate levels of income inequality by international standards. Eastern European countries display somewhat lower inequality levels but are significantly poorer, too. The rest of the world, mostly developing nations, tends to be poor and to have unequal income distributions.

With its Gini of 46, the U.S. ranks 97th—about equidistant between the least and most equal countries. Apart from New Zealand (Gini, 34), other Anglosphere countries have market income Ginis ranging from 41 to 47. Apart from Belgium (32) and

Portugal (54), Ginis for Western Europe range from 39 to 49. These are not large differences. Denmark's Gini of 43 means, for instance, that the average inter-household income gap in 2005 was 86 percent of mean income; in the U.S., it was 92 percent.¹²

As for middle-class incomes measured in Figure 1, the U.S. ranks fifth. (These measures are, however, fairly rough. This paper later looks separately at incomes of the middle class and the poor in rich nations, using higher-quality data.)

Cross-national analyses commonly estimate the “best-fitting” straight line through data points such as those in Figure 1. The downward-sloping bold dotted line in the figure indicates that countries with higher inequality have lower middle-class living standards. Yet in Figure 1, this best-fitting line clearly fails to characterize the data cloud in any meaningful way. If all one knew about nations' living standards were their market income Ginis, using the bold line to predict their middle-class incomes would miss over 85 percent of the international variation in living standards.

Figure 1 displays two other best-fitting lines, this time dividing the world into two groups of countries: (i) Eastern and Western Europe, the Anglosphere, and industrialized Asia; and (ii) the rest of the world. The line for the latter is largely flat, indicating no relationship between inequality and living standards. The line for the former suggests that more income inequality is associated with *higher* middle-class living standards.

These lines also poorly predict middle-class incomes. Although income inequality levels—at least those below the top 1 percent—appear unlikely to be important drivers of cross-national differences in middle-class living standards, less equal countries generally have higher incomes, after accounting for the level of development and associated historical, cultural, and geographical factors.¹³

The relationship between higher market Ginis and better middle-class living standards persists if Eastern European countries are grouped within the “rest of the world” category; and it holds within Europe

(combining Western and Eastern Europe), the Anglosphere, industrialized Asia, Eastern Europe, for countries with middle-class incomes above \$20,000, for countries with incomes below \$10,000, and for countries with incomes between \$10,000 and \$20,000. Only within Western Europe does a higher market income Gini correspond with lower middle-class living standards.

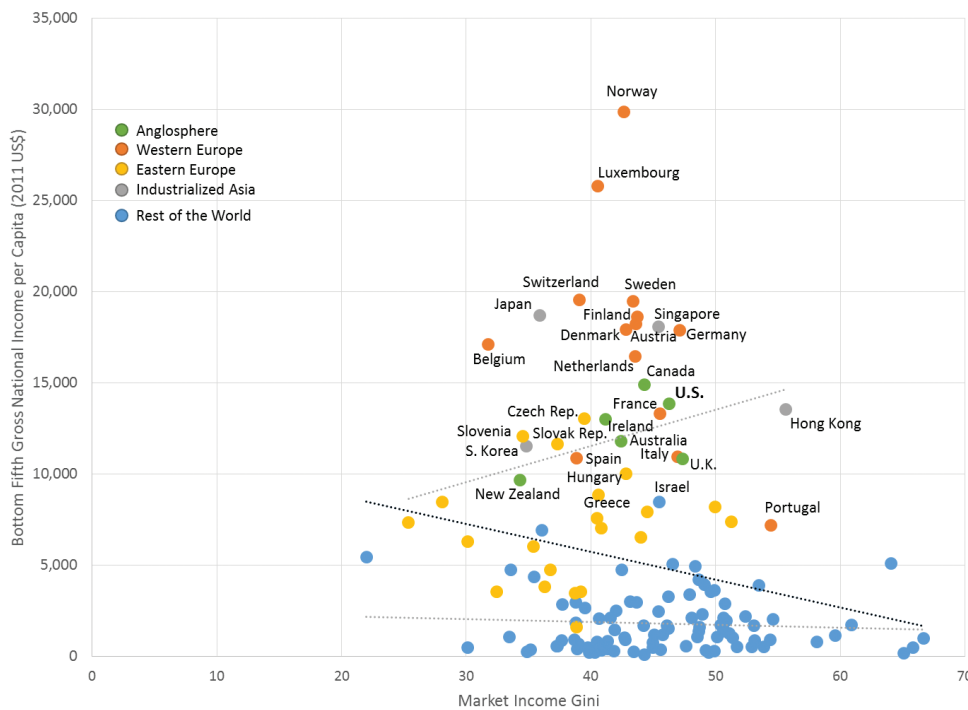
Another way to see the relative unimportance of inequality levels for understanding a nation's middle-class living standards is to determine how the bold best-fitting line in Figure 1 changes after statistically controlling for a country's membership in one of the five groups shown in the chart. The results are not shown, but doing so flattens the line (it actually points slightly upward) while at the same time increasing the ability to predict countries' middle-

class incomes, from 2 percent accuracy to 82 percent accuracy.¹⁴ Cultural, historical, and geographical factors, in other words, affect living standards far more greatly than does inequality.

Figure 2 tells a similar story about the living standards of the poor. The data, extracted from the same previous sources, cover the distribution of per-capita disposable income for the bottom fifth, rather than for the middle fifth.

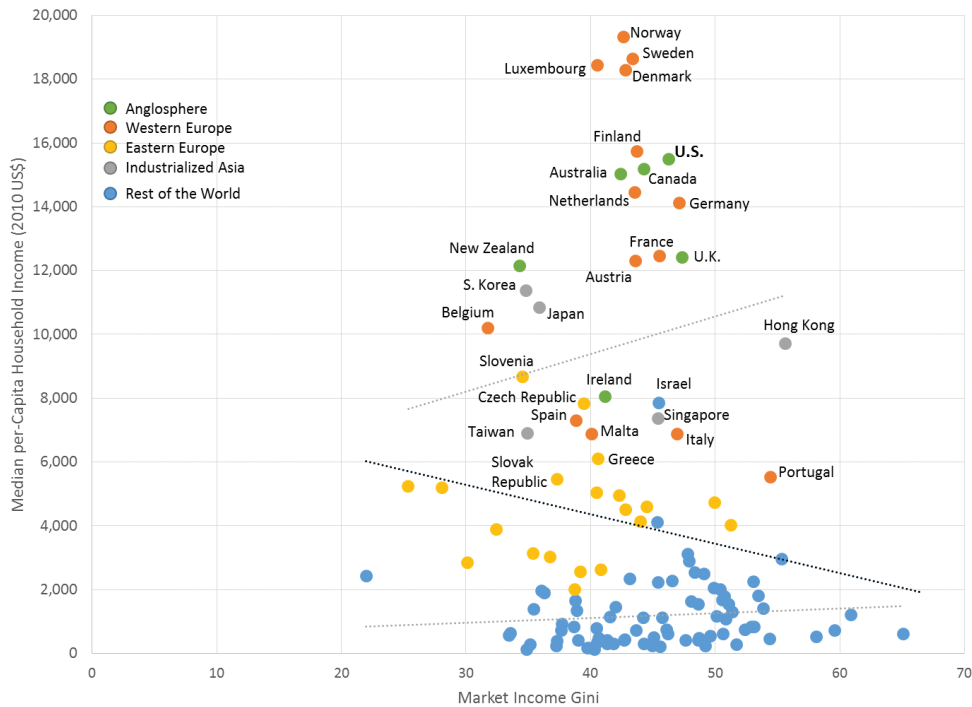
Across the developed world, Figure 2 reveals, more inequality corresponds with higher living standards among the poor. Among other nations, there is essentially no relationship between inequality and living standards—though this time, the “rest of the world” line slopes slightly downward rather than slightly upward. When Eastern Europe is

Figure 2. Market Income Inequality vs. Living Standards of the Poor Across 136 Countries



Sources include the SWIID and the World Bank. The bold line is the best-fitting line through all 136 data points. The two lighter lines correspond with (i) the richer nations of the Anglosphere, Western and Eastern Europe, and industrialized Asia, and (ii) the rest of the world. “Eastern Europe” includes east-central Europe (e.g., Czech Republic and Hungary), the Balkans, and former members of the Soviet Union (including the Russian Federation). “Western Europe” includes the rest of Europe except for the United Kingdom and Ireland. “Anglosphere” includes the U.K., Ireland, Canada, the U.S., Australia, and New Zealand. “Industrialized Asia” includes Japan, South Korea, Singapore, Hong Kong, and Taiwan.

Figure 3. Market Income Inequality vs. Middle-Class Living Standards Across 121 Countries



Sources include the SWIID and the Gallup World Poll. The bold line is the best-fitting line through all 121 data points. The two lighter lines correspond with (i) the richer nations of the Anglosphere, Western and Eastern Europe, and industrialized Asia, and (ii) the rest of the world. "Eastern Europe" includes east-central Europe (e.g., Czech Republic and Hungary), the Balkans, and former members of the Soviet Union (including the Russian Federation). "Western Europe" includes the rest of Europe except for the United Kingdom and Ireland. "Anglosphere" includes the U.K., Ireland, Canada, the U.S., Australia, and New Zealand. "Industrialized Asia" includes Japan, South Korea, Singapore, Hong Kong, and Taiwan.

grouped in the "rest of the world" category, a negative relationship (driven by Western European countries) between inequality and living standards at the bottom emerges among the remaining richer nations. A mildly negative relationship also emerges when countries are grouped into "bottom-fifth incomes" of less than \$5,000, \$5,000 to \$10,000, and greater than \$10,000. In general, these correlations between inequality and living standards at the bottom are uniformly weak, except among Anglosphere countries, where higher inequality generally corresponds with higher living standards.

As previously noted, the estimates of living standards used in Figures 1 and 2 are imprecise. They are based, in part, on share-of-income figures averaged over a long period of time, including years that fall before 2005, when inequality is measured. Happily, one

can compare this paper's middle-class estimates to median pretax incomes across 131 countries from the Gallup World Poll (121 also have Gini coefficients in the Solt data).¹⁵ These estimates come from surveys between 2006 and 2012. Were they to take taxes into account, the Gallup estimates would be ideal. As they stand, they are not technically measures of disposable income. Still, the results shown in Figure 3 are consistent with those displayed in Figure 1. (Note that Gallup reports incomes in 2010 U.S. dollars while most of the charts in this paper use 2011 U.S. dollars.)

While some countries move up or down relative to Figure 1, the correlation in middle-class incomes across countries common to both charts is 0.94, where 1.00 means that the measures are effectively identical (and 0.00 means that they measure completely

different things). The negative relationship between inequality and middle-class living standards turns positive once industrialized nations are separated from the rest of the world.

The single best source of comparable household income data across countries is the Luxembourg Income Study (LIS).¹⁶ For a subset of 23 mostly Anglosphere and European countries, one can compare the living standards estimates from Figures 1, 2, and 3 with estimates of the median and tenth percentile of size-adjusted disposable household income from the LIS.

The median is the household income in the middle of a country's income distribution. The tenth percentile is the income of the person whose household income is lower than that of 90 percent of people in a country. This paper averages one to four years of income data

for each country between 2000 and 2010.¹⁷ Figures 4 and 5 show, respectively, the medians and tenth percentiles of the 23 LIS countries, ranked according to their 2004 incomes.¹⁸ Shaded bands demarcate blocks of countries with similar incomes (given the imprecisions involved in cross-national comparisons, ranking countries within these blocks is inadvisable).

For living standards at the middle *and* the bottom, the correlation between this paper's World Bank-based measures of living standards and those in the LIS range from 0.89 to 0.90 (where 0 would mean that estimates from the two sources are wholly unrelated and 1 would mean that they essentially measure the same thing). These correlations are extremely high and indicate that, at least for the 23 nations listed in Figures 4 and 5—which include nearly half of those, in Figures 1 and 2, situated in Europe, the Anglosphere, or industrialized Asia—this

Figure 4. Median Size-Adjusted Household Income Across 23 Countries

	2000	2004	2007	2010
Luxembourg	33,795	38,702	38,604	38,132
United States	31,467	31,742	32,215	31,165
Switzerland	29,081	29,779		
Austria	25,860	27,480		
Norway	25,313	27,372		
Denmark	25,074	26,333		
Canada	24,617	26,282	28,550	29,497
Ireland	22,517	25,500	28,240	24,075
Germany	25,378	25,359	24,885	25,302
Netherlands	24,377	24,137	26,553	26,192
Belgium	24,118			
Sweden	20,090	23,110		
Finland	20,094	22,683	24,776	25,371
United Kingdom	18,572	22,037	23,354	22,692
France	20,756	21,654		
Australia	20,747	21,029		
Spain	19,374	19,013	21,046	18,872
Italy	18,196	18,674	19,469	18,882
Greece	14,906	18,046	19,562	17,789
Israel	15,447	15,203	16,460	17,052
Poland	8,325	8,139	9,798	11,499
Estonia	6,035	7,991	12,397	10,948
Mexico	4,231	4,658	6,507	6,136

Figure 5. Tenth Percentile of Size-Adjusted Household Income Across 23 Countries

	2000	2004	2007	2010
Luxembourg	19,297	20,352	21,033	21,157
Switzerland	15,807	15,998		
Norway	14,333	15,321		
Austria	14,119	15,195		
Denmark	14,169	14,809		
Netherlands	14,311	13,894	15,265	15,207
Germany	13,980	13,415	13,140	12,843
Sweden	11,422	13,308		
Finland	11,373	12,510	13,178	13,656
Belgium	12,676			
United States	12,257	11,974	12,005	11,109
Canada	11,361	11,746	13,295	13,490
Ireland	9,440	11,494	13,900	12,289
France	11,323	11,302		
United Kingdom	8,565	10,679	9,295	9,454
Australia	9,706	9,832		
Italy	8,062	8,534	9,177	8,647
Greece	6,456	8,364	9,383	8,012
Spain	8,586	8,330	9,418	7,622
Israel	6,659	5,696	6,259	6,251
Poland	4,302	3,964	5,049	5,834
Estonia	2,763	3,626	5,600	5,147
Mexico	1,358	1,618	1,986	1,912

Source for Figures 4 and 5: LIS. Countries ranked by 2004 medians (or tenth percentiles) in 2011 U.S. dollars (with Belgium ranked approximately, based on 2000 estimates). Shading distinguishes groups of countries with roughly comparable incomes. For 2000, Netherlands and U.K. values are for 1999, Australia and Israel for 2001. For 2004, Australia values are for 2003; and France, Sweden, and Israel for 2005. For 2007, Italy values are for 2008. Incomes adjusted for household size by dividing by square root of the number of members.

paper’s measures of living standards are sufficient for comparing countries.

The LIS estimates also facilitate comparisons of living standards among countries. Only the small nation of Luxembourg enjoys middle-class incomes higher than those in the U.S., while Switzerland, Austria, Norway, Denmark, and Canada rank comparably. The living standards of poor Americans, however, are in the middle of the pack. In general, the Anglosphere and nations bordering the Mediterranean have poorer low-income populations than do Scandinavia, Central Europe, and the Lowland Countries.

PART 2: INCOME CONCENTRATION WITHIN THE TOP 1 PERCENT

In the U.S., the inequality estimates that have garnered the most attention—those popularized by Thomas Piketty and his colleague Emmanuel Saez—relate to income concentration: the ubiquitous “top 1 percent” figures.

As previously discussed, estimates of the share of income received by the top 1 percent derived from household surveys typically understate income concentration. Yet for a small number of mostly rich

countries, data from income-tax returns can be used to examine income concentration.

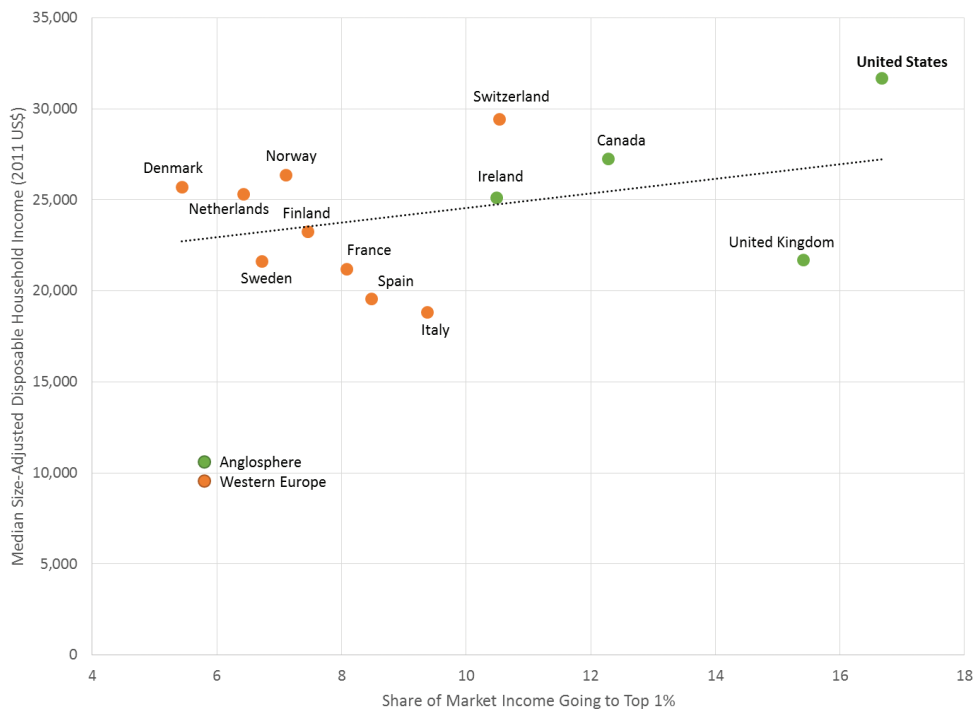
The World Top Incomes Database (WTID)—assembled by Facundo Alvaredo, Anthony Atkinson, Piketty, and Saez from their own and others’ research—includes income concentration measures for 29 nations.¹⁹ Part 2 examines 20 of these countries for which information is available on the share of market income received by the top 1 percent in 2009.²⁰ Such estimates are sensitive to measurement and data issues around capital gains, stock options, and tax policy differences that affect the richest taxpayers’ recorded incomes on individual tax returns. They are also likely to be only roughly comparable across countries. Nonetheless, the estimates are the best available.

Of the 20 countries with an estimate of the top 1 percent share, 13 have median incomes in the LIS data. Figure 6 plots these 13 countries so that, from

left to right, market income concentration rises and, from bottom to top, median size-adjusted income increases. Unlike in the Gini coefficient rankings, Anglosphere countries have significantly higher income concentration than do the nations of Western Europe.

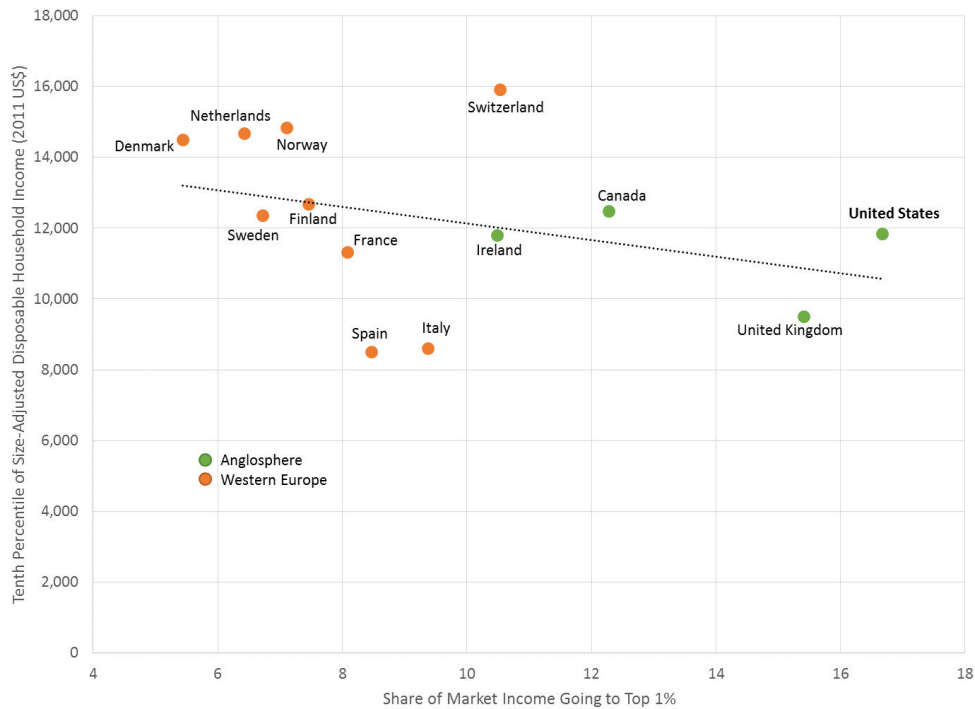
In Figure 6, the dotted line indicates that countries in which the top 1 percent of tax units receive a greater share of income generally have higher median incomes, too. In other words, when the richest tax filers secure more of the pretax and -transfer economic pie, the middle class still gets *more* posttax and -transfer pie than in low-inequality countries. If, instead of median incomes, Figure 6 showed the middle fifth’s gross national income per capita, Japan, Singapore, and New Zealand could be included, but the measure of middle-class living standards would suffer. The best-fitting line would still tilt upward slightly.²¹ (The line would also slope upward if Figure 6 showed, instead of the top 1 percent, the share of income received by the top 10 percent.)

Figure 6. Market Income Concentration vs. Middle-Class Living Standards Across 13 Countries



Sources include the LIS and WTID. Income concentration estimates are not available for Eastern Europe; median income estimates are not available for Colombia, Japan, Malaysia, Singapore, South Africa, and Uruguay.

Figure 7. Market Income Concentration vs. Living Standards of the Poor Across 13 Countries



Sources include the LIS and WTID. Income concentration estimates are not available for Eastern Europe; median income estimates are not available for Colombia, Japan, Malaysia, Singapore, South Africa, and Uruguay.

Figures 1, 2, 3, and 6 refute the assertion that living standards are lower when income inequality is higher. The cross-national relationship between income concentration and living standards at the bottom is, however, at least consistent with such an assertion.

As shown in Figure 7, there is a readily apparent statistical relationship between the share of market income received by the top 1 percent and the tenth percentile of disposable income. Among the 13 countries, more income concentration does accompany lower incomes at the bottom. At -0.34 , the correlation is of moderate strength—about the same as in Figure 6. In Western Europe and the four Anglosphere countries, the correlation is negative. The correlation is also negative when World Bank-based bottom-fifth income measures are used.

To reiterate, these negative correlations are no stronger as evidence that income concentration *causally* lowers

the incomes of the poor than the positive correlations in Figures 1, 2, 3, and 6 are evidence that inequality increases incomes among the poor and middle class.

Evidence looking at *changes* in the living standards of the poor and in income concentration, discussed in Part 3, fail to support the assertion that inequality hurts the poor. In all the aforementioned analyses, knowing which of the three groups a country falls into—the wealthy nations of Western Europe, the Anglosphere, and industrialized Asia; Eastern Europe; or the rest of the world—allows for better predictions of living standards than do measures of inequality. Indeed, knowing which of the three groups a country belongs to generally predicts its inequality as well as, or better than, inequality predicts living standards. This observation suggests that larger historical, cultural, and geographical factors are likely behind the correlation between inequality and living standards.

PART 3: MAKING SENSE OF THE EVIDENCE

How might high-inequality countries manage to have more prosperous middle-class and poor populations? When more income accrues to the top, isn't less left over for everyone else?

One possible explanation is that many factors other than income inequality affect living standards and differ across countries. The fact is that higher inequality does *not* correspond with lower living standards across nations; but within countries, rising inequality *might* translate into falling living standards below the top. However, when cultural, historical, and geographical differences are controlled for by grouping countries into less diverse categories, inequality looks less, not more, worrisome.

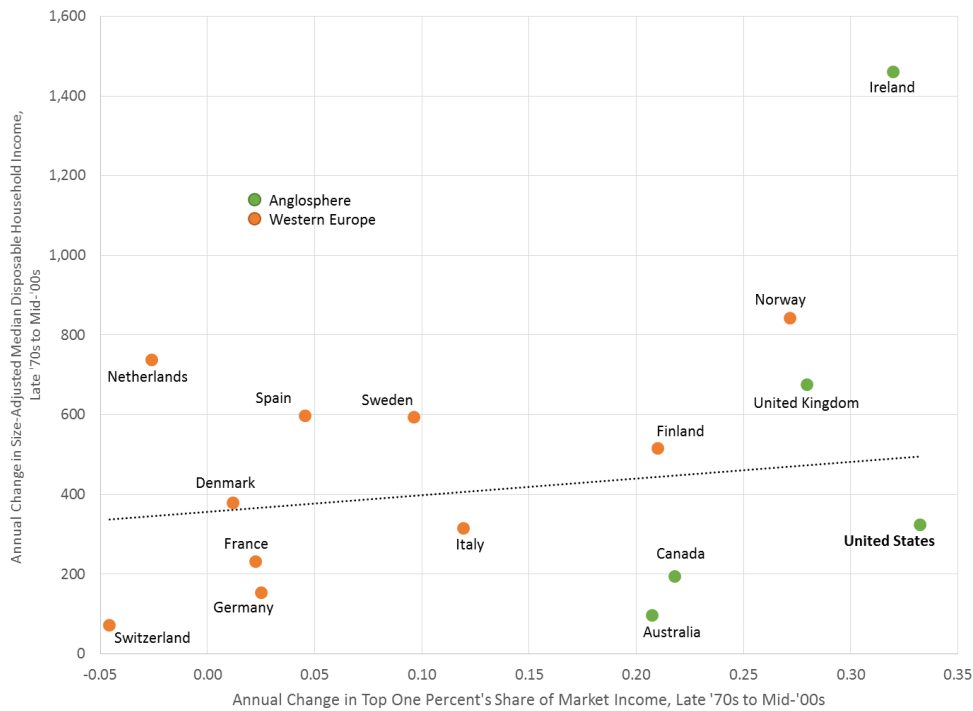
Furthermore, research by sociologist Lane Kenworthy,

examining how changes in inequality correlate with changes in living standards across countries, yields results consistent with the evidence presented in this paper.²² Examining cross-national differences in changes means that country-specific factors cannot explain the estimated relationship between inequality and living standards. (Of course, other factors that change within countries could drive any observed relationship.)

Kenworthy found that, across 15 countries in the LIS and WTID, having a bigger increase in the top 1 percent's share between the late 1970s and mid-2000s corresponded with larger increases in median income.

Figure 8 shows a modified version of Kenworthy's original chart, using estimates that Kenworthy has made publicly available.²³ The best-fitting line shown excludes Ireland, a clear outlier. (The line would

Figure 8. Changes in Market Income Concentration vs. Changes in Middle-Class Living Standards Across 15 Countries



Source: Lane Kenworthy, using LIS and WTID data. See <https://lanekenworthy.files.wordpress.com/2014/07/2013hasrisinginequalityreduced-data.xlsx>. In addition to Ireland, Kenworthy omits Norway, another outlier. Ireland's income growth was heavily driven by foreign investment, Norway's by oil discoveries. The change in income is expressed in U.S. dollars, probably 2000 U.S. dollars (see endnote 23).

be steeper including Ireland.) Kenworthy presents results showing that the slope points downward after statistically accounting for changes in economic growth and in transfers to the lower middle class. But because rising inequality might be expected to increase growth and redistribution, the case for such adjustments is, in fact, quite weak. (Later in Part 3, these two plausible explanations for why higher inequality does not correspond with lower living standards below the top are explored.)

A complementary paper by Kenworthy conducts a similar analysis, examining the relationship across 14 countries between changes in the top 1 percent's share of market income and changes in the tenth percentile of disposable income.²⁴ Kenworthy finds that growth in income concentration largely corresponds with growth in the incomes of the poor. Though this correlation is driven by the unique cases of Ireland and Norway over this period, the best-fitting line still

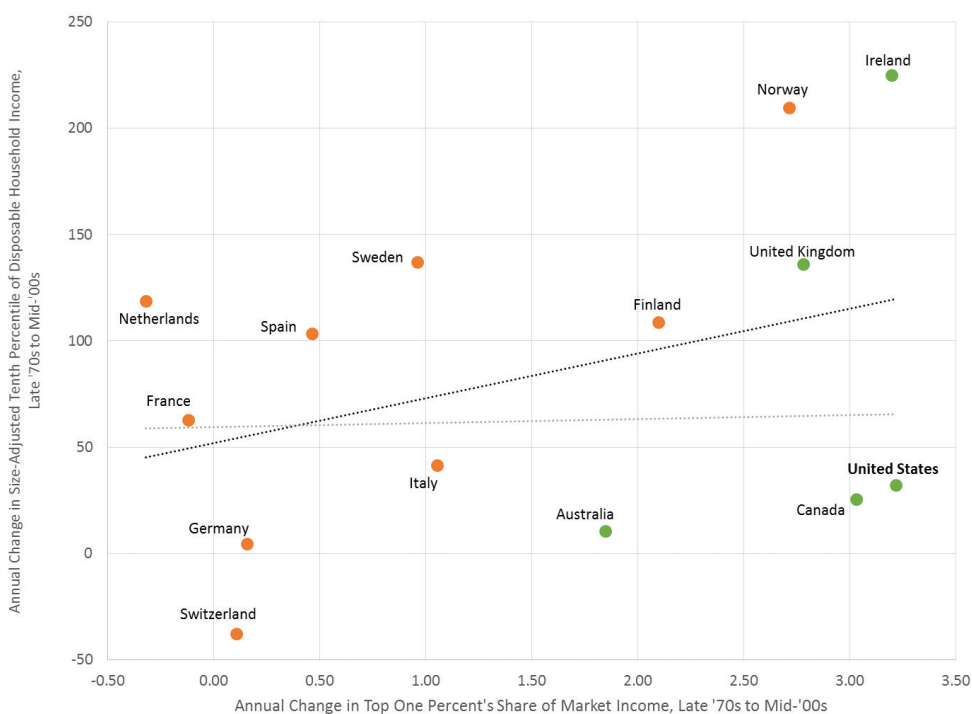
tilts upward slightly when both countries are removed from the analysis.

Figure 9 is a modified version of Kenworthy's chart, using the data that he has made publicly available. The bold and light dotted lines indicate, respectively, the best-fitting line through the countries before excluding Norway and Ireland and after.²⁵

As just noted, another reason that living standards below the top in more unequal countries might equal, or exceed, those in countries with less inequality is that income inequality may foster faster economic growth. In such conditions, a smaller share of a bigger pie translates into more pie, overall, for the poor and the middle class.

Earlier research on this question tended to indicate that countries with more inequality suffered slower growth.²⁶ But these studies relied on low-quality

Figure 9. Changes in Market Income Concentration vs. Changes in Living Standards of the Poor Across 14 Countries



Source: Lane Kenworthy, using LIS and WTID data. See <https://lanekenworthy.files.wordpress.com/2014/07/2010challenge-inequalitypolicy-poverty-data.xls>. The lighter best-fitting line omits Ireland and Norway. Ireland's income growth was driven by heavy foreign investment, while Norway's was driven by oil discoveries. The change in income is expressed in 2000 U.S. dollars.

data, requiring largely unconvincing methods to be deployed. Eventually, an improved data set on nations' inequality levels was developed. The first paper to use it found that taking account of the region to which a country belonged caused the relationship between inequality and growth to fall substantially—and *not* to be reliably negative.²⁷

Other papers soon followed, using the same data set to examine how changes in inequality affect economic growth within a country. (Looking at changes in inequality accounts for the other country-specific factors that influence economic growth but remain static.) These studies found that increases in inequality led to increases in growth over the ensuing five to ten years.²⁸

Another study, using the LIS, found that inequality between the top and the middle—the kind of inequality receiving the most attention in recent years—increases economic growth, while inequality in the bottom half of the income distribution hurts growth.²⁹ Recent research examining, for the first time, income concentration at the very top found that inequality was associated with stronger economic growth.³⁰

Consistent with the argument presented in this paper that one must distinguish between affluent and impoverished countries, some studies find that inequality retards growth in poor countries but spurs growth, or does not affect it, in rich countries.³¹ Other research indicates that inequality may be bad for growth in Europe but good for growth in the Anglosphere—also consistent with the evidence in this paper.³² All this research is fraught with methodological difficulties, but it does offer more support for the conclusion that inequality encourages economic growth than for the idea that it limits growth.³³

Yet another reason that countries with high inequality before taxes and transfers may have richer posttax and -transfer low- and middle-income populations is that they may redistribute more from the top downward. Yet few developing countries, which account for the highest inequality levels, redistribute much at all.

Among richer nations, there is a clear split between European countries and those of the Anglosphere and Asia driving cross-national differences in redistribution. In comparison, income inequality levels are inconsequential for redistribution.

Figure 10 plots countries' market income inequality (using Gini coefficients) along the x axis and their disposable income inequality along the y axis.³⁴ The diagonal line shows how countries would compare if inequality after taxes and transfers always equaled pretax and -transfer inequality. (Most countries lie below the diagonal line because taxes and transfers are progressive, in the aggregate.)

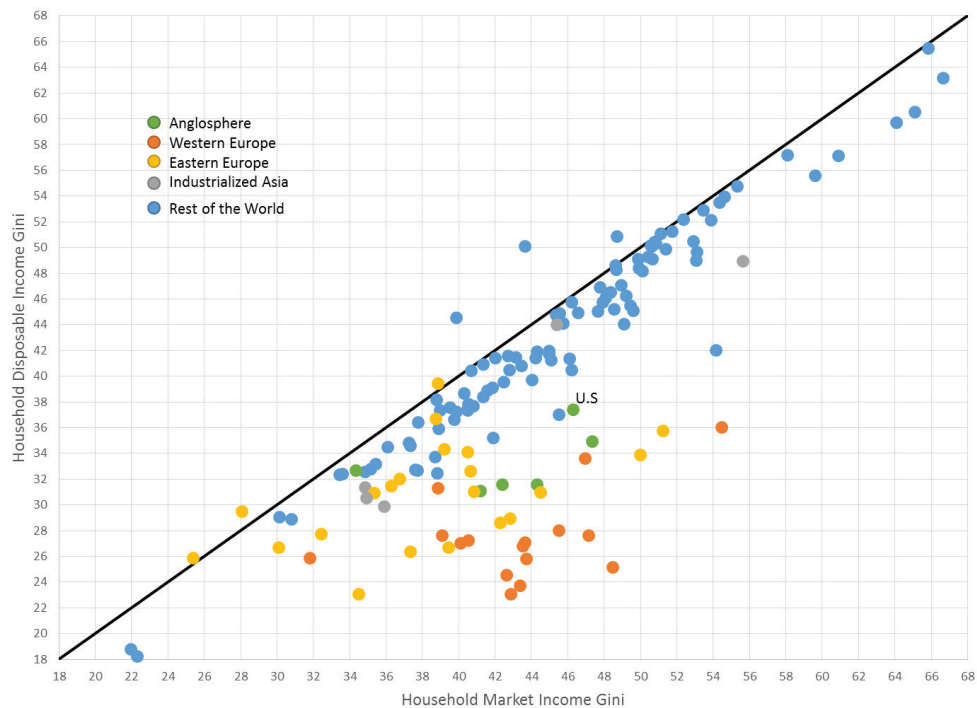
Figure 10 clearly demonstrates that, given the close proximity of points to the 45-degree line, most countries redistribute market incomes only modestly. Figure 10 also makes clear that there is a continental European welfare state distinctive not only from the poor nations of Africa, Asia, and Latin America but from the rich nations of Asia and the Anglosphere, too.

Anglosphere countries redistribute more than poor nations and rich Asian nations but generally less than continental Europe. Such patterns strongly suggest that historical and cultural factors explain the different welfare states adopted by different rich nations. That the U.S. starts out with market income inequality levels similar to those in Europe (below the top 1 percent) but winds up with higher disposable income inequality does not necessarily represent a failure on the part of American economic and political institutions: Americans may collectively choose higher inequality.

Do Americans prefer more inequality than other nations, or do the country's political institutions thwart European-like preferences for more equality?

Cross-national public opinion research reveals an American (and probably non-European) tolerance for higher inequality. For example, in 1999 respondents from 27 countries were asked if they agreed that "it is the responsibility of government to reduce differences in income."³⁵ Only 35 percent of Americans agreed, lower than in any of the other countries surveyed.

Figure 10. Market Income Inequality vs. Disposable Income Inequality Across 149 Countries, 2005



Sources include the SWIID and the World Bank. “Eastern Europe” includes east-central Europe (e.g., Czech Republic and Hungary), the Balkans, and former members of the Soviet Union (including the Russian Federation). “Western Europe” includes the rest of Europe except for the United Kingdom and Ireland. “Anglosphere” includes the U.K., Ireland, Canada, the U.S., Australia, and New Zealand. “Industrialized Asia” includes Japan, South Korea, Singapore, Hong Kong, and Taiwan.

In the six Anglosphere countries, no more than 68 percent agreed, with half or fewer agreeing in Australia, New Zealand, and Canada. In Japan, only 52 percent agreed.

In Europe, however, the percentage agreeing that government should reduce inequality ranged from 57 percent in Cyprus to 90 percent in Portugal. (In the former West Germany, 52 percent agreed, balanced out by 76 percent of former East Germans.) In 11 of 16 European countries surveyed (12 of 17, with Russia included), the percentage agreeing exceeded 70 percent. The rich countries that redistribute are those whose citizens prefer redistribution.

The income distribution is, of course, influenced by politics and policy well before taxes and transfers are factored in—policies that Yale political scientist Jacob Hacker has termed “pre-distribution.”³⁶ Policies such

as minimum wages affect “market” incomes, as do regulatory regimes (which impose costs on employers of labor), systems of property rights, infrastructure spending, trade policies, and numerous other decisions made by governments.

It is striking, however, how similar “market” income inequality is in the continental European and Anglosphere models. Pre-distribution doesn’t seem to matter very much below the top.

Alternatively, market income inequality below the top might look higher in the U.S. and other Anglosphere countries if not for outsize gains received by the top 1 percent. In this interpretation, gains at the top have come primarily at the expense of the rest of the top fifth or tenth of households. This is the fourth reason that rising income inequality might not affect the living standards of the poor and the middle class:

the gains of the spectacularly rich may just hurt the merely well-off.

This interpretation also seems unlikely. If increases in the top 1 percent's share of income came, for instance, at the expense of the rest of the top 10 percent, one would expect that across countries and over time, annual increases in the top 1 percent's share would co-occur with declines in the rest of the top 10 percent's share of income within the bottom 99 percent. In reality, these two indicators of income concentration generally move in the same direction. The correlation between the two, across all annual changes in all rich countries in the WTID, is 0.58—solidly positive, not negative.

CONCLUSION

From one perspective, it may be meaningful that Manhattan's Gini coefficient is nearly as high as South Africa's.³⁷ Different people pass different judgments on the fairness of inequality—views that may be driven primarily by differences in values, rather than evidence that inequality is harmful. But most people who worry about inequality do so because of its presumed ill effects on people below the top.

The analyses discussed in this paper drive home the commonsense notion that the answer to empirical questions about inequality's effects cannot simply be inferred from inequality levels. That Manhattan and South Africa possess similar Gini coefficients does not imply that one ought to be indifferent between living in the two places. Nor does it imply that reducing Manhattan's Gini would improve the living standards of its poor and middle-class residents. It is entirely possible, in fact, that lowering South Africa's Gini would benefit most South Africans while

lowering Manhattan's would have the opposite effect on Manhattanites.

As this paper makes clear, it makes little sense to think that inequality has the same consequences in affluent and impoverished parts of the world. Among the world's wealthy nations, market income inequality below the top varies less than is widely believed; if anything, countries with higher inequality have richer low-income and middle-class populations. Market income concentration among the top 1 percent does vary across rich countries but does so in geographically and culturally patterned ways.

Continental Europe has less income concentration than the Anglosphere, just as it tends to have more redistribution and lower disposable income inequality below the top 1 percent. The evidence strongly suggests that these differences primarily reflect deep-seated value differences across countries.

Regardless, among rich nations, more income concentration tends to go hand in hand with higher middle-class incomes, not lower ones. In contrast, countries with higher income concentration tend to have poorer low-income populations. But since increases in income concentration within a country tend not to correspond with declines in the incomes of the poor, this correlation is unlikely to signal a causal relationship.

Rather than being the defining challenge of our time, as many observers believe, income inequality may be a distraction from the goal of raising living standards among the poor and the middle class. The analyses in this paper suggest that efforts to reduce inequality are more likely to damage living standards than to improve them.

ENDNOTES

¹ Georgia Levenson Keohane, “Inequality in America: Pox and Progress,” Roosevelt Institute, <http://www.nextnewdeal.net/inequality-america-pox-and-progress>.

² Joseph E. Stiglitz (2012), *The Price of Inequality* (New York: W. W. Norton), p. 22.

³ Iran is not included in the analyses below, but it and Venezuela had similar living standards in 2005.

⁴ As one way of understanding the Gini coefficient, imagine lining households up from poorest to richest. If there were no inequality, the poorest 10 percent of households would receive 10 percent of national income, the poorest 25 percent would receive 25 percent of income, and so on. You could walk down the line of households and, at any point, know what fraction of income was received by households no richer than the household you were facing. Alternatively, in the most unequal world possible, no one would receive any income until you arrived at the very end of the line, where the richest household would receive 100 percent of national income.

Imagine, then, a chart with two axes, where the horizontal axis indicates points in the line of households (with the poorest household at zero and the richest at one) and the vertical axis indicates the cumulative share of income received by households. Under perfect equality, any point on the x axis—say, the midpoint—will have the same value on the y axis (in this case, indicating that the bottom half of households receives half of national income). The line $y=x$, projecting from the origin at a 45-degree angle from the x axis, would indicate perfect equality.

If there is any inequality, the y value, for at least the poorest households, will fall below the line of perfect equality. The bottom 10 percent, for instance, might receive less than 10 percent of income. If there is perfect inequality, y will equal zero for everyone except for the richest household—all the way to the right side of the chart, which will have a value of one. Whatever the distribution of incomes, connecting the y values, from the poorest to the richest household, creates a curved line showing the cumulative income share. The Gini coefficient represents the fraction of the area under the line of perfect equality ($y=x$) that is left after subtracting the area under this cumulative-income line.

⁵ Horst Mendershausen (1946), *Changes in Income Distribution During the Great Depression* (Cambridge, Mass.: National Bureau of Economic Research), 162–64. Mendershausen cites Corrado Gini himself. Technically, in computing the average income difference, the sum of income differences must be divided by the number of income comparisons, including comparing each household with itself.

⁶ See <http://www.cbo.gov/publication/42729>.

⁷ These same patterns show up in Gini estimates for “disposable income”—household income after taxes and transfers are taken into account. CBO finds that the disposable income Gini (including the top 1 percent) was 45 in 2005 (see <http://www.cbo.gov/publication/44604>). That is higher than the posttax and -transfer estimate of 38 in the data used in this report—again reflecting the sensitivity of the Gini to the richest 1 percent.

This sensitivity is apparent in another careful study that took great pains to measure top incomes more accurately. Economist Richard Burkhauser and his colleagues found that when the top 1 percent of households was excluded, the post-transfer (but pretax) U.S. Gini for 2005 fell from 45 to 40. See Richard Burkhauser et al. (2012), “Recent Trends in Top Income Shares in the USA: Reconciling Estimates from March CPS and IRS Tax Return Data,” *Review of Economics and Statistics* 94(2): 371–88. Taking taxes into account would have lowered the Gini below 40, putting it fairly close to the estimate in this report.

⁸ See <http://myweb.uiowa.edu/fsolt/swiid/swiid.html>. Solt’s figures are taken directly from the Luxembourg Income Study data for the U.S. and other countries included in the LIS for the years that they are available. The other estimates are derived by standardizing Gini estimates from other data sets to ensure comparability with the LIS estimates and interpolating between years. See <http://myweb.uiowa.edu/fsolt/papers/Solt2009pre.pdf>. Ideally, analyses looking at variation in market income inequality should account for differences in the size of the retiree population; yet as far as I know, none do. Retirees have less market income than the working-age population because they do not work.

⁹ The SWIID includes 173 countries, but fewer countries have Gini estimates for any given year. The years between 2002 and 2005 have the largest number of estimates (149 in each year, with 151 in 2003); the number drops off thereafter (to 71 in 2011 and 15 in 2012). Even combining multiple recent years, just 105 countries have a Gini coefficient between 2009 and 2012. Using estimates from 2000 to 2007 would add just seven countries to my sample: Andorra, Anguilla, the Bahamas, Dominica, Haiti, São Tomé and Príncipe, and Serbia and Montenegro. The best alternative to the SWIID for Gini estimates is the World Bank data, but those estimates represent inconsistent income concepts and populations across countries, as Solt discusses. Furthermore, in the World Bank data, just 91 countries have at least one Gini estimate between 2005 and 2008, and just 63 have a Gini coefficient between 2009 and 2012.

¹⁰ See https://drive.google.com/file/d/0B7pVM6_AI3-fSkxMQjNaRzJNUTA/view?usp=sharing.

¹¹ These estimates were created using World Bank data on per-capita gross national income and the share of disposable household income received by individuals in the middle fifth of the distribution of disposable household income per person. See the World Bank's "World Development Indicators," <http://databank.worldbank.org/data/views/variableSelection/selectvariables.aspx?source=world-development-indicators>. This paper assumes that the share of gross national income received by individuals in the middle fifth of the distribution of disposable household income per capita is the same as the share of disposable household income they receive. I multiply the per-capita gross national income estimates by the middle-fifth shares, then multiply by five (equivalent to multiplying gross national income by the middle fifth's share, then dividing by one-fifth the population).

Gross national income is defined as the total value of goods and services produced by residents of a country, plus taxes (less subsidies), plus income received by citizens living abroad (less income received in the country by foreigners). Household income in World Bank data comes from household surveys and may represent income or consumption, depending on the country (though consumption and disposable income are the favored measures). Where necessary, shares are estimated from grouped data rather than from microdata. Quantiles are based on the per-capita household income of people (individuals' household income after dividing by household size). (From the metadata in the World Development Indicators database: "The portions ranked lowest by personal income receive the smallest shares of total income.... The distribution data have been adjusted for household size, providing a more consistent measure of per capita income or consumption.... Income distribution and Gini indexes for high-income economies are calculated directly from the Luxembourg Income Study database, using an estimation method consistent with that applied for developing countries.")

There are 2011 gross national income figures available for 182 countries. In contrast, just 122 countries have a value for 2005. Using all available estimates from 1990 to 2012 would not increase the number of countries above 182.

Income share estimates are available in different years in different countries. This paper averages all of a country's estimates in the 20 years between 1993 and 2012, maximizing the number of major countries for which data are available—153 for the middle fifth, plus Qatar for the bottom fifth—while keeping estimates as recent as possible. I confirmed that these shares tend to be fairly stable over time. Of 153 countries with at least one value for the middle-fifth share between 1993 and 2012: 31 percent had only one such value, or the same value in multiple years; about 16 percent had multiple values with the high and low within one point of each other; 28 percent were within one to two points of each other; 14 percent were within two to three points of each other; 5 percent were within three to four points of each other; 3 percent were within four to five points of each other; 2 percent were within six to seven points of each other; and 1 percent were within seven to eight points of each other. Of 105 countries with at least two values for the middle-fifth share between 1993 and 2012: 24 percent had high and low values within one point of each other; 40 percent were within one to two points; 20 percent were within two to three points; 8 percent were within three to four points; 4 percent were within four to five points; 2 percent were within six to seven points; and 1 percent within seven to eight points. All 16 countries with a difference between the high and low middle-fifth-share values of at least three points were low-income nations. Finally, the correlation between (i) the number of years between the highest and lowest middle-

fifth-share values and (ii) the difference between the highest and lowest middle-fifth-share values among countries with multiple values was just 0.08. In other words, there is practically no relationship between how far apart in time a country's high and low middle-fifth-share values are and the magnitude of the difference between those values. International rankings are likely to be imprecise, but the primary results distinguishing rich and poor countries are not affected.

Extending back to 1978 would increase the number of countries with a middle-fifth share only to 154. Restricting to 2011 would limit the number to ten countries, and restricting to 2005 would include only 47 countries. Limiting the analyses to 1998–2012 would include 140 countries but would exclude several major nations.

¹² In developed countries, underreporting of income among the poorest households can artificially raise the Gini coefficient, making inequality look greater than it is. Many researchers believe that poorer households more accurately report consumption levels in surveys than they do income levels. The consumption Gini for 2005 appears to be roughly 30, compared with 38 for disposable income in the Solt data. See Kevin A. Hassett and Aparna Mathur (2012), "A New Measure of Consumption Inequality," American Enterprise Institute, http://www.aei.org/files/2012/06/25/-a-new-measure-of-consumption-inequality_142931647663.pdf; and Dirk Krueger and Fabrizio Perri (2001), "Does Income Inequality Lead to Consumption Inequality? Evidence and Theory," Centre for Economic Policy Research, working paper, <http://www.cepr.org/meets/wkcn/6/696/papers/krueger.pdf>.

¹³ None of the conclusions discussed here changes when log-linear and log-log models are used instead.

¹⁴ Technically, the coefficient of determination, or R-squared value, increases from 0.02 to 0.82.

¹⁵ Gallup asked survey respondents about their "monthly household income" from all sources before taxes, and then multiplied the estimates by 12. For richer nations, it asked only about annual income. Incomes are reported and recorded in the local currency, converted to international dollars, and then inflated to 2010 dollars. This paper uses the "per-capita income" medians, which divide a household's income by the number of people living in it. See <http://www.gallup.com/poll/166358/new-measures-global-income-gallup-world-poll.aspx> for methods; see <http://www.gallup.com/poll/166211/worldwide-median-household-income-000.aspx#2> for the data.

¹⁶ LIS researchers, in conjunction with *New York Times* staff, recently assembled new disposable income estimates for 23 countries in inflation-adjusted U.S. dollars for all the years in the LIS database. See the LIS/*New York Times* Income Distribution Database, <http://www.lisdatacenter.org/news-and-events/new-york-times-launches-new-site-the-upshot-with-study-based-on-lis-data>. I start with the "equivalized" purchasing-power-parity adjusted figures in the spreadsheet available on that site. Household income is equivalized by dividing it by the square root of household size to adjust for differences in need, and then individuals are arrayed from poorest to richest according to their equivalized household income. The intuition is that a household of four needs only twice as much income as a household of one, not four times as much. A household of four does not have to pay the rent four times each month, for example.

The LIS/*NYT* database provides estimates in 2005 U.S. dollars. Recently completed research comparing the cost of living across countries suggests that the 2005 "purchasing power parity" estimates on which the earlier figures were based are inferior to the new 2011 figures and that country-specific differences in inflation might change the international comparisons, even absent improved PPP adjustments. See Angus Deaton and Bettina Aten (2014), "Trying to Understand the PPPs in ICP2011: Why Are the Results So Different?," National Bureau of Economic Research, <http://www.nber.org/papers/w20244>. Therefore, I convert the LIS/*NYT* estimates to 2011 U.S. dollars. Following the methodological notes provided in the LIS spreadsheet, I use the 2005 purchasing-power parities for household final consumption from the Organisation for Economic Co-operation and Development (OECD) to back-transform the PPP-adjusted figures in the spreadsheet to 2005 dollars in each nation's currency. I then use each nation's Consumer Price Index (again, from OECD) to adjust the figures to 2011 dollars in each nation's currency and finally use the 2011 purchasing-power parities to adjust the figures to 2011 U.S. dollars. See <http://stats.oecd.org>, under the Prices and Purchasing Power Parities section, Prices and Price Indices subsection. All computations available from the author upon request.

The countries in the data include Australia, Austria, Belgium, Canada, Denmark, Estonia, Finland, France, Germany, Greece, Ireland, Israel, Italy, Luxembourg, Mexico, the Netherlands, Norway, Poland, Spain, Sweden, Switzerland, the United Kingdom, and the United States.

¹⁷ I compute estimates for 2000, 2004, 2007, and 2010. The Netherlands, Poland, and the U.K. values for “2000” are actually from 1999, and the values for Australia and Israel are from 2001. Australia “2004” values are from 2003; and France, Israel, and Sweden values are from 2005. Italy and Mexico “2007” values are from 2008. While 2000 and 2004 predate the 2005 Gini coefficients in the SWIID data, fewer countries have income estimates in the LIS after 2004. All 23 countries have “2000” estimates; all but Belgium have “2004” estimates. Just 15 have estimates in “2007” and “2010.”

¹⁸ Belgium is placed impressionistically, based on its 2000 income.

¹⁹ See Facundo Alvaredo, Anthony B. Atkinson, Thomas Piketty, and Emmanuel Saez (2014), *The World Top Incomes Database*, <http://topincomes.g-mond.parisschoolofeconomics.eu>.

²⁰ “Income” excludes capital gains for all countries. Except as indicated, the unit of observation in these data is a “tax unit” (a tax return, with income imputed to tax returns not filed because no tax liability was due). The 20 countries are Canada, Colombia, Denmark, Finland, France, Ireland, Italy, Japan, Malaysia, the Netherlands, New Zealand, Norway, Singapore, South Africa, Spain, Sweden, Switzerland, the United Kingdom, the United States, and Uruguay. Estimates for the U.K., New Zealand, and Denmark are for all adults rather than all tax units. The estimates for Italy exclude several types of capital income. The estimates for Finland exclude individuals with \$0 in income. Excluded from the analyses are Argentina, Australia (available in 2009 but income includes transfers), China (unavailable in 2009 and based on household survey data rather than tax data), Germany (unavailable in 2009 and only estimates including capital gains), India, Indonesia (unavailable in 2009 and based on household survey data), Mauritius, Portugal, and Tanzania.

²¹ Adding the poorer “rest-of-the-world” countries of Colombia, Malaysia, and South Africa (as well as Singapore, the lone industrialized Asian country) yields the familiar downward-pointing slope.

²² See Lane Kenworthy (2013), “Has Rising Inequality Reduced Middle-Class Income Growth?,” in Janet C. Gornick and Markus Jantti, eds., *Income Inequality: Economic Disparities and the Middle Class in Affluent Countries* (Palo Alto, Calif.: Stanford University Press), <https://lanekenworthy.files.wordpress.com/2014/07/2013hasrisinginequalityreduced.pdf>.

²³ See <https://lanekenworthy.files.wordpress.com/2014/07/2013hasrisinginequalityreduced-data.xlsx>. Kenworthy reports that his income changes are in U.S. dollars but does not indicate the year that the dollars represent. If he used the same methodology as in his article about inequality and low incomes, the income changes are in 2000 U.S. dollars.

²⁴ See Lane Kenworthy (2010), “Rising Inequality, Public Policy, and America’s Poor,” *Challenge* 53(6): 93–109, <https://lanekenworthy.files.wordpress.com/2014/07/2010challenge-inequalitypolicy-poverty.pdf>.

²⁵ A recent paper looking at the relationship between inequality and income growth across U.S. states finds that initially high inequality hurts the subsequent income growth of the poor but not of the middle class. Initial inequality within the top 40 percent hurts the subsequent income growth of the poor and the middle class, while inequality within the bottom 40 percent hurts income growth among the poor. However, the inequality measure looks at post-transfer income rather than market income, and the income growth measures do not represent disposable income because they do not account for taxes. Consequently, their analyses are confined to how inequality after redistributing via transfers affects income before progressive taxation redistributes further. See Roy van der Weide and Branko Milanovic (2014), “Inequality Is Bad for Growth of the Poor (but Not for That of the Rich),” World Bank Group Policy Research, working paper 6963. Another paper examines the relationship between inequality and the incomes of the poor and the middle class across states and finds a negative relationship. The paper, however, uses an idiosyncratic approach by looking at the effect of inequality on subsequent income *levels*, rather than changes. Instead, the authors impose state-specific linear trends on the data so that the “effect” of inequality essentially indicates how much off of this imposed trend inequality moves subsequent income. Since the average incomes of the middle class and the poor in any given year are

likely to depart from these linear trend lines, it is unclear how to interpret their results. See Jeffrey P. Thompson and Elias Leight (2012), "Do Rising Top Income Shares Affect the Incomes or Earnings of Low and Middle-Income Families?," *B.E. Journal of Economic Analysis and Policy* 12(1): article 49.

- ²⁶ Alberto Alesina and Dani Rodrik (1994), "Distributive Politics and Economic Growth," *Quarterly Journal of Economics* 109(2): 465–90; Torsten Persson and Guido Tabellini (1994), "Is Inequality Harmful for Growth?," *American Economic Review* 84(3): 600–621; George R. G. Clarke (1995), "More Evidence on Income Distribution and Growth," *Journal of Development Economics* 47(2): 403–27; Roberto Perotti (1996), "Growth, Income Distribution, and Democracy: What the Data Say," *Journal of Economic Growth* 1(2): 149–87. For a review of this early literature, see Roland Benabou (1996), "Inequality and Growth," in Ben S. Bernanke and Julio J. Rotemberg, eds., *NBER Macroeconomics Annual* 1996 11: 11–92.
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- ³¹ Robert J. Barro (2000), "Inequality and Growth in a Panel of Countries," *Journal of Economic Growth* 5: 5–32; Patrizio Pagano (2004), "An Empirical Investigation of the Relationship Between Inequality and Growth," Bank of Italy, discussion paper 536; Robert J. Barro (2008), "Inequality and Growth Revisited," Asian Development Bank, Working Paper Series on Regional Economic Integration, no. 11; Amparo Castello-Climent (2010), "Inequality and Growth in Advanced Economies: An Empirical Investigation," *Journal of Economic Inequality* 8: 293–321.
- Note that two oft-cited IMF studies purporting to find a link between inequality and slower growth either omit Europe and the Anglosphere or lump developed countries in with developing ones. See Andrew G. Berg and Jonathan D. Ostry (2011), "Inequality and Unsustainable Growth: Two Sides of the Same Coin?," IMF Staff Discussion Note; and Jonathan D. Ostry, Andrew Berg, and Charalambos G. Tsangarides (2014), "Redistribution, Inequality, and Growth," IMF Staff Discussion Note.
- ³² Castello-Climent (2010); Andrea Brandolini and Nicola Rossi (1998), "Income Distribution and Growth in Industrial Countries," in Vito Tanzi and Ke-Young Chu, eds., *Income Distribution and High-Quality Growth* (Cambridge, Mass.: MIT Press).
- ³³ On the methodological challenges, see Abhijit V. Banerjee and Esther Duflo (2003), "Inequality and Growth: What Can the Data Say?," *Journal of Economic Growth* 8: 267–99. Banerjee and Duflo find that changes in inequality in either direction are associated with lower economic growth. A small literature on inequality and growth focusing on state comparisons within the U.S. has produced mixed findings but suggests that, if anything, more inequality is good for economic growth. See Mark Frank (2009), "Inequality and Growth in the United States: Evidence from a New State-Level Panel of Income Inequality Measures," *Journal of Economic Inquiry* 47(1): 55–68; Frank (2009), "Income Inequality, Human Capital, and Income Growth: Evidence from a State-Level VAR Analysis," *Atlantic Economic Journal* 37(2): 173–85; Ugo Panizza (2002), "Income Inequality and Economic Growth: Evidence from American Data," *Journal of Economic Growth* 7: 25–41; Mark D. Partridge (1997), "Is Inequality Harmful for Growth? Comment," *American Economic Review* 87(5): 1019–32; Partridge (2005), "Does Income Distribution Affect U.S. State Economic Growth?," *Journal of Regional Science* 45(2): 363–94.

³⁴ The disposable income Gini coefficients, like the market income ones, are from Solt's SWIID. The linear correlation between the two measures across the 149 countries is a very high 0.82.

³⁵ International Social Survey Programme tabulations from <http://zacat.gesis.org/webview/index.jsp?object=http://zacat.gesis.org/obj/fStudy/ZA3430>. For additional evidence of American exceptionalism, see the other questions in that survey, summarized in John E. Morton and Isabel Sawhill (2007), "Is the American Dream Alive and Well?" (Washington, D.C.: Pew Economic Mobility Project), http://www.pewtrusts.org/~media/Imported-and-Legacy/uploadedfiles/wwwpewtrustsorg/reports/economic_mobility/EMPAmericanDreamReportpdf.pdf.

³⁶ Jacob Hacker (2011), "The Institutional Foundations of Middle-Class Democracy," in *Priorities for a New Political Economy: Memos to the Left*, Policy Network, <http://www.policy-network.net/publications/4002/Priorities-for-a-new-political-economy-Memos-to-the-left>.

³⁷ See *New York Times* columnist Eduardo Porter's tweet, <https://twitter.com/portereduardo/status/512625148961509376>, referencing Census Bureau data at http://www.census.gov/content/dam/Census/library/publications/2014/acs/acsbr13-02.pdf?eml=gd&utm_medium=email&utm_source=govdelivery.

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