WEALTH INEQUALITY

The Stanford Center on Poverty and Inequality

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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

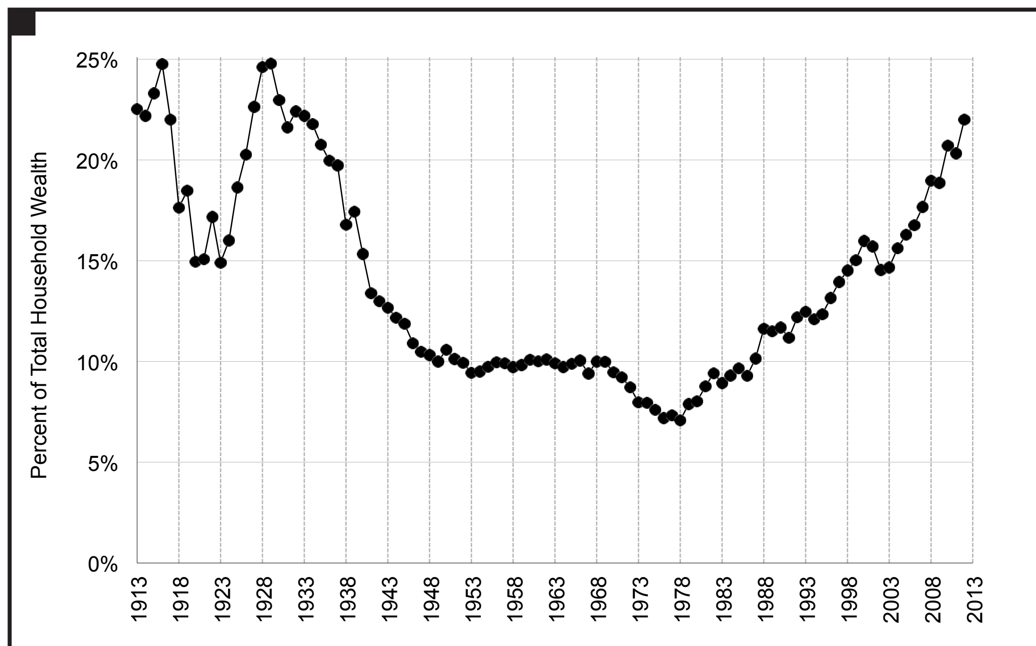
approaches here. First, estates and inheritance tax returns provide information about wealth at death.[3] From these sources, one can infer how wealth is distributed across the living population, using the method known as the "mortality multiplier," which was invented shortly before World War I by British 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.

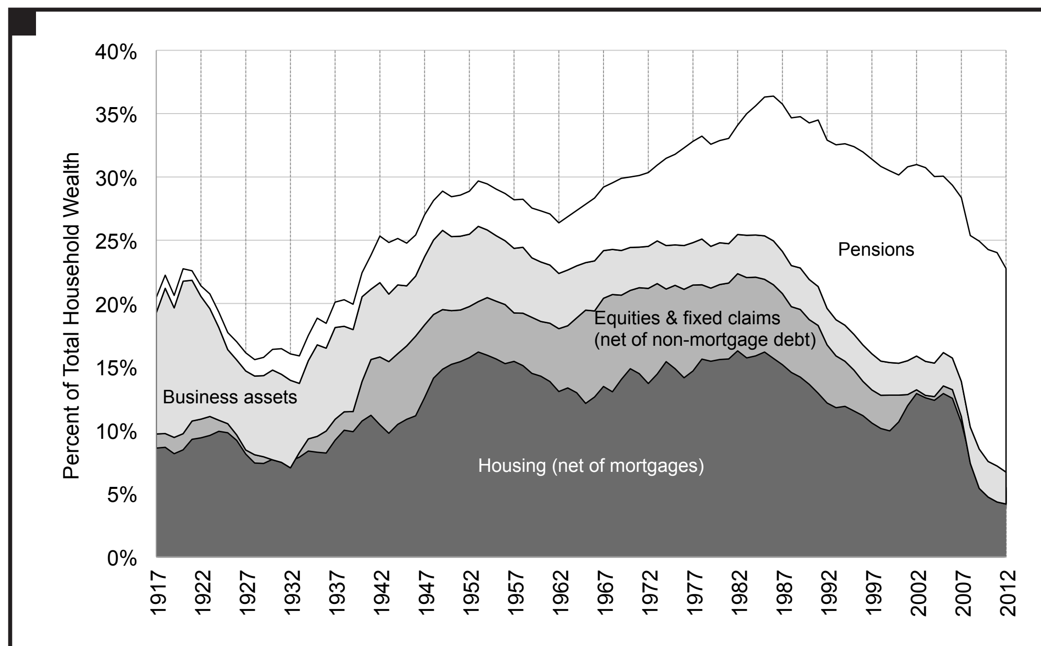
It is useful to begin by considering what we know about wealth inequality in the U.S. Emmanuel Saez and I construct top wealth shares,[10] by year since 1913, using comprehensive data on the capital income reported on individual income tax returns—such as dividends, interest, rents, and business profits. 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 aggregate 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.

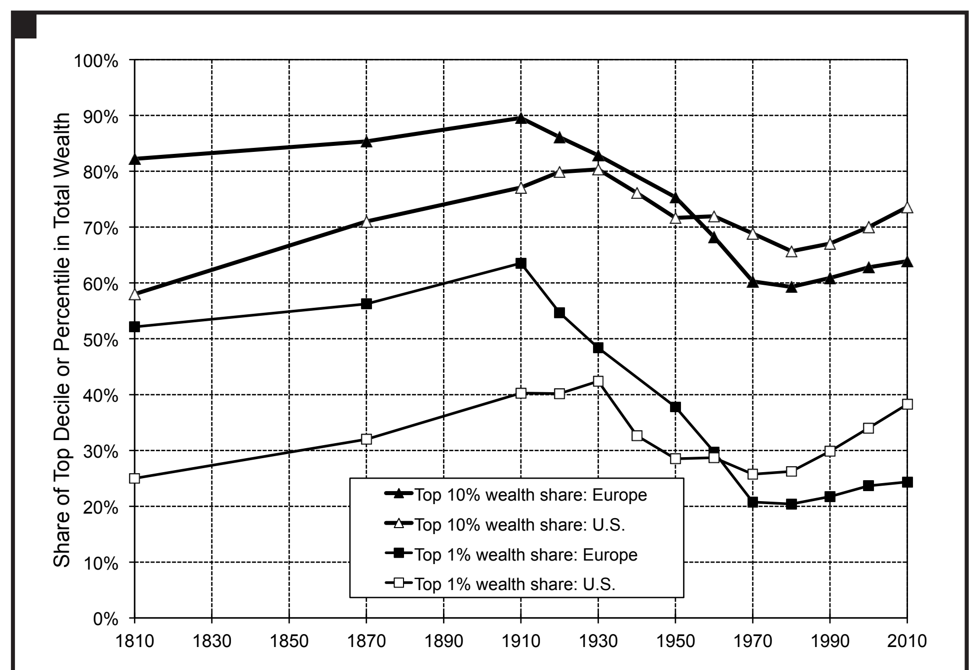
This has not always been the case. In the 19th century, the U.S. was to some extent the land of equality, at least for white men. Wealth concentration was much less extreme than in Europe (except in the southern U.S.). Over the course of the 20th century, this was reversed, and wealth concentration is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