

## Measuring wealth and wealth inequality: Comparing two U.S. surveys

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Household wealth and its distribution are topics of broad public debate and increasing scholarly interest. We compare the relative strength of two of the main data sources used in research on the wealth holdings of U.S. households, the Survey of Consumer Finances (SCF) and the Panel Study of Income Dynamics (PSID), by providing a description and explanation of differences in the level and distribution of wealth captured in these two surveys. We identify the factors that account for differences in average net worth but also show that estimates of net worth are similar throughout most of the distribution. Median net worth in the SCF is 6% higher than in the PSID and the largest differences between the two surveys are concentrated in the 1–2 percent wealthiest households, leading to a different view of wealth concentration at the very top but similar results for wealth inequality across most of the distribution.

Keywords: Wealth, inequality, measurement

### 1. Introduction

Recent work on wealth inequality [11] has spurred much public interest and scientific debate on the distribution of wealth, its determinants, and its consequences (e.g. [10]). At the backdrop of this debate, an accurate measurement of wealth that allows a nuanced understanding of the financial position of households has seldom been a more pressing issue. This article compares the two main surveys commonly used to study the household wealth holdings of U.S. families, the Survey of Consumer Finance (SCF) and the Panel Study of Income Dynamics (PSID), and describes the differences in the estimates of total wealth and asset portfolios that they yield. Doing so supports the careful use of these data sources by researchers who seek to contribute to this ongoing and important debate.

The SCF is often considered the gold standard for estimates of the wealth holdings of American families. The SCF is typically conducted every three years, overseen by the Federal Reserve Board and collected by NORC at the University of Chicago. The

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data are publicly available from the website of the Board of Governors of the Federal Reserve System (<http://www.federalreserve.gov/econresdata/scf/scfindex.htm>). Wealth in SCF is measured with an extensive array of questions. Moreover, the survey design features an oversample of households likely to hold very high levels of wealth. This feature is important because a large share of total wealth in the US is held by a relatively small number of households.

The PSID is managed and collected by the Institute for Social Research at the University of Michigan. The PSID data are publicly available and accessible online (<http://psidonline.isr.umich.edu/>). Beginning in 1984 the PSID asked respondents a series of questions about their wealth. While accurate wealth measurement is an important goal for PSID, this survey must also allocate interview time to collect a wide array of economic, social, and health data for responding households. Therefore, the amount of interview time devoted to measuring wealth holdings is much smaller in the PSID than in the SCF. Moreover, the PSID is longitudinal in design, while the SCF is a cross-sectional survey.

A handful of prior studies have examined comparisons of wealth holdings of American families as estimated by different household surveys. Curtin et al. [1] compared SCF, PSID, and the Survey of Income and Program Participation (SIPP) for survey years in the early 1980s, and Wolff [13] extended this examination to the late 1980s and early 1990s. Sierminska et al. [12], compared PSID, SCF, the Health and Retirement Study for ages 55 and older in 2001/2002. Czajka et al. [2] evaluated estimates from the late 1990s from the SIPP, with comparisons made to SCF and PSID. All three of these studies find that wealth holdings at the top 1% are much higher as estimated in the SCF. Juster et al. [5] and Wolff's [13] comparison between the PSID and SCF for the 1980 and early 1990s are the studies that are most comparable to ours. They conclude that differences in estimates between the two surveys are likely driven by the fact that SCF better represents very high wealth households and that it has a more detailed list of questions. Our analyses differ from these two papers in that we can estimate wealth with the SCF including and excluding the oversample to directly determine the importance of oversampling in the SCF. In addition, we provide more specific estimates of the share of the difference in overall net worth that is due to particular components of wealth which helps identify likely explanations for the divergence in estimates. Finally, our estimates are for 2007. Providing more current estimates is particularly important at the backdrop of Wolff's overall conclusion that the PSID wealth estimates – like those based on the SIPP – started to diverge from the SCF during the late 1980s and early 1990s.

In this study we compare estimates of wealth holdings of American families based on the PSID and the SCF. We compare estimates of various subcomponents of wealth to determine which components have the greatest discrepancy across the two data sources. Furthermore, given the growing concern about economic inequality, we compare estimates of wealth inequality. We begin by describing the two data sources and our approach for mapping wealth components between the two data sources.

## 2. Data and approach

The SCF is generally conducted on a triennial basis as a cross-sectional survey of U.S. households. The survey is specialized on wealth measurement and the questionnaire includes a wide variety of specific questions on different types of assets and liabilities. The sample includes both a multi-stage area-probability sample and a supplemental sample based on statistical records derived from tax returns that is intended to provide an over-sampling of wealthy households (Kennickell, 2007).<sup>1</sup> Weights are computed for both the area-probability sample alone and for the combined samples. Thus, it is possible to estimate the wealth distribution from a sample more comparable to that used in the PSID.<sup>2</sup> In 2007 45% of interviews were completed by telephone and 55% were completed in person [6].

The PSID is a longitudinal study of individuals and families that began in 1968. (See Panel Study of Income Dynamics [8] for a detailed discussion of the sample design). A module of questions assessing wealth was first introduced in 1984. The module was administered again in 1989, 1994, and then every wave beginning in 1999. The most recent year of data available from both surveys where the data were collected in the same calendar year is 2007; therefore, our analyses are restricted to this year.<sup>3</sup> The PSID longitudinal weights, which adjust for attrition but do not post-stratify based on other surveys, are used for the PSID analyses [3]. In 2007, 98% of interviews were completed over the telephone and just 2% face-to-face [8].

Wealth is defined as net worth, excluding public and private pensions.<sup>4</sup> Wealth is assessed in the PSID using many fewer questions than used in the SCF. While in 2007 the PSID sought to capture household wealth in just 10 different asset categories, the 2007 SCF collects information in more than 20 high-level categories with many sub-categories, many at the level of individual assets or liabilities. The first step in our analyses is to map the detailed SCF questions into the PSID questions/categories of wealth. The results of this process – and the wording of the questions used to assess wealth – are included in Table A.1. This table demonstrates there are numerous differences across the two surveys in question wording and specificity, and we discuss some of the more salient differences when we describe disparities in estimates of components of wealth below.

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<sup>1</sup>The sample uses observed income to generate an index that is highly correlated with wealth. This index is used for stratifying the sample to support oversampling among the strata predicted to be the wealthiest. Only the internal version of the data allows for distinguishing the area-probability sample.

<sup>2</sup>Estimates from the SCF reported here are rounded to the nearest \$100. Such rounding is a conventional step in the release procedure for estimates from this survey.

<sup>3</sup>The average month of interview was May in the PSID and July in the SCF. Over these two months, the Case Shiller index fell by just 2.1% and the Dow Jones declined by 3.1%. Therefore, differences in the distribution of month of interview can account for only a small share of the differences in estimates between the two surveys.

<sup>4</sup>SCF includes trusts as a component of wealth (average of \$8700 in 2007 across all households), but we exclude them because they are not assessed in PSID.

The unit of analysis for the SCF is what SCF calls the “primary economic unit (PEU).” A PEU consists of an economically dominant single individual or couple (whether married or living together as partners) and all other persons in the household who are financially interdependent with that economically dominant person or couple. The PSID “family unit” is a group of people living together who are economically interdependent. They are generally related by blood, marriage, or adoption but include unrelated people who are economically interdependent. In some instances, two separate PSID “family units” move in with each other. This occurs most often when an adult child, who had sometime in the past moved out of their parents’ home and become economically independent, moves back in with their parents. In this case, the adult child continues to be interviewed as their own “family unit” distinct from their parents’ “family unit” even if they are economically interdependent with their parents. In 2007, 6.3% of “family units” lived with another PSID “family unit.” We aggregate wealth information across the “family units” living together in the PSID to more closely align with SCF’s PEU. Throughout the manuscript we will refer to these units as households.

We begin by comparing estimates of sociodemographic characteristics in the two surveys. Our analyses then proceed to compare estimates of wealth in the various categories measured in the PSID and a net worth measure that sums all asset components. We report ownership rates, average asset values conditional on ownership of the asset, as well as selected percentiles of the unconditional net worth distribution. We calculate estimates of the SCF both with and without the oversample to assess the importance of that sample. We calculate the simple difference in estimates of average wealth for each asset category and assess how much it contributes to the observed difference in overall net worth. To further shed light on the sources of the difference in the estimated net worth between these two surveys, we also report the share of the disparity in total net worth explained by (a) different rates of ownership of a particular asset and (b) different asset values conditional on ownership. In essence, we show what the average net worth of the PSID would be if (a) it had the asset ownership rate observed in the SCF and (b) if it had the asset values observed in the SCF, for each asset category separately. All analyses are conducted with public use data files except for the SCF tabulations that exclude the oversample of households expected to have high levels of wealth. These analyses were conducted with a restricted use file by Kennickell. The statistical software used were Stata (v14) for the analysis of PSID data and SAS (v9.3) for the analysis of the SCF.

### **3. Results**

In both surveys, the average number of family members is 2.4 and the average age of the household head is 50 (Table 1). The percent of households headed by an African-American is also quite similar in the two surveys. The PSID shows a slightly lower share of households headed by individuals holding a high school diploma or

Table 1  
 Socio-demographic characteristics of household heads in each survey, 2007

	SCF, total sample	SCF, excluding oversample	PSID
Average number of family members	2.4	2.4	2.4
Average age of head	50	50	50
Percent African American	12.8	12.5	12.9
Percent Hispanic	12.7	12.2	8.3
Percent less than HS/GED	12.3	11.9	13.2
Percent HS/GED only	32.9	32.9	29.5
Percent greater than HS/GED	53.6	54.1	57.4

Note: Weighted using weight appropriate to each sample.

GED. Estimates of the percent of household heads who are Hispanic are lower in the PSID.

Average net worth is 31% higher based on the SCF than the PSID: \$507,100 versus \$387,625, as reported in Table 2. The standard error of average wealth holdings is \$9,200 in the SCF and \$16,990 in the PSID, therefore the estimated gap is highly statistically significant. The difference in median wealth is much more modest: \$102,100 in SCF and \$96,700 in PSID (Table 2), or a difference of 6% for the median instead of 31% for the mean.

The gap in average wealth holdings is explained to a large degree by differences in estimates of business assets: \$128,300 for the SCF versus \$69,874 for PSID. The difference between the two surveys in the value of business assets of \$58,426 accounts for 49% of the difference in total net worth. Differences in estimates of business assets between the two surveys are largely due to differences in the reported value of businesses as opposed to the proportion of American families who report to own a business. The SCF estimates business ownership at 13.6% while the PSID estimates it at 11.1%. Conditional on owning a business, the average value of business assets is \$1,071,100 in the SCF versus \$629,159 in the PSID for a gap of 70%.

To illustrate the importance of differences in estimates of business ownership, we calculate the value of PSID-based net worth but replace the ownership rate with the rate estimated by SCF. Similarly, we calculate the value of PSID-based net worth by replacing the estimate of average wealth, conditional on business ownership, with the estimate of average wealth in the SCF, again conditional on business ownership. The results of these calculations for business assets – and all other components of wealth – are reported in the final set of columns in Table 2. Differences in estimates of the incidence of business ownership explain 13% of the total gap in net worth. The majority of the difference in net worth is driven by estimates of the value of business assets conditional on business ownership: 41% of the difference in total net worth in the SCF and the PSID is solely accounted for by the value of business assets among business owners.

A large share of business assets are held by individuals at the very top of the wealth distribution, and this can be seen by comparing average business assets with (\$128,300, Table 2) versus without (\$99,100, Table 3) the oversample. The implica-

Table 2  
Wealth holdings by component, SCF (total sample, N = 4,421) and PSID Household (N = 8,021)

Wealth component	Average wealth among all households				Proportion with any holdings				Average wealth   > 0				PSID net worth if it had SCF ...		
	SCF	PSID	SCF/PSID	SCF minus PSID	Share of difference in total wealth	SCF	PSID	SCF/PSID	PSID	SCF	PSID	SCF/PSID	Proportion explained	Average	% of gap explained
Business assets	128,300	69,874	1.84	58,426	49%	13.6	11.1	1.22	1,071,100	629,159	1.70	403,316	13%	436,795	41%
Checking/savings	43,500	29,094	1.50	14,406	12%	91.2	83.5	1.09	47,700	34,856	1.37	390,320	2%	398,345	9%
Stocks	66,600	56,042	1.19	10,558	9%	23.8	24.7	0.96	279,800	226,436	1.24	385,475	-2%	400,833	11%
IRA/private annuities	42,200	46,332	0.91	-4,132	-3%	32.2	33.3	0.97	129,100	139,340	0.93	386,161	-1%	384,220	-3%
Net worth of vehicles	14,100	14,692	0.96	-592	0%	84.9	84.5	1.00	16,700	17,380	0.96	387,688	0%	387,052	0%
Equity in primary residence	135,100	117,167	1.15	17,933	15%	68.6	64.7	1.06	196,800	181,506	1.08	394,971	6%	397,719	8%
Equity in real estate excluding primary residence	61,500	55,155	1.12	6,345	5%	18.9	16.0	1.18	326,700	344,118	0.95	397,508	8%	384,838	-2%
Other assets	25,500	10,249	2.49	15,251	13%	35.5	17.7	2.00	71,900	57,788	1.24	397,890	9%	390,128	2%
Other debts	9,000	10,980	0.82	-1,980	-2%	56.9	51.8	1.10	14,200	21,198	0.67	388,707	1%	384,000	-3%
Total net worth	507,100	387,625	1.31	119,475		88.9	86.1	1.03	572,500	453,621	1.26	403,269	13%	493,152	88%

Table 3  
Wealth holdings by component, SCF (without oversample, N = 2,914) and PSID Household (N = 8,021)

Wealth component	Average wealth among all households										Proportion with any holdings			Average wealth   > 0			PSID net worth if it had SCF ...		
	SCF	PSID	SCF/PSID	SCF/PSID	Share of difference in total wealth	SCF/PSID	SCF/PSID	SCF/PSID	SCF/PSID	SCF/PSID	SCF/PSID	Proportion	Share*	Average	Share*	Average	% of gap explained	% of gap explained	
Business assets	99,100	69,874	1.42	29,226	68%	14.2	11.1	1.28	777,600	629,159	1.24	89,341	407,091	45%	86,424	404,175	38%	38%	
Checking/savings	38,500	29,094	1.32	9,406	22%	91.2	83.5	1.09	42,200	34,856	1.21	31,789	390,320	6%	35,223	393,754	14%	14%	
Stocks	43,300	56,042	0.77	-12,742	-29%	23.9	24.7	0.97	181,300	226,436	0.80	54,118	385,701	-4%	44,872	376,455	-26%	-26%	
IRA/private annuities	39,500	46,332	0.85	-6,832	-16%	32.9	33.3	0.99	120,800	139,340	0.87	45,843	387,136	-1%	40,167	381,460	-14%	-14%	
Net worth of vehicles	13,400	14,692	0.91	-1,292	-3%	85.3	84.5	1.01	15,700	17,380	0.90	14,825	387,758	0%	13,274	386,207	-3%	-3%	
Equity in primary residence	135,400	117,167	1.16	18,233	42%	68.6	64.7	1.06	197,400	181,506	1.09	124,513	394,971	17%	127,649	398,107	24%	24%	
Equity in real estate excluding primary residence	46,300	55,155	0.84	-8,855	-20%	19.8	16.0	1.24	235,900	344,118	0.69	68,135	400,605	30%	37,813	370,283	-40%	-40%	
Other assets	23,900	10,249	2.33	13,651	32%	35.4	17.7	2.00	67,500	57,788	1.17	20,457	397,833	24%	11,972	389,347	4%	4%	
Other debts	8,500	10,980	0.77	-2,480	-6%	56.4	51.8	1.09	13,900	21,198	0.66	11,956	388,601	2%	7,200	383,845	-9%	-9%	
Total net worth	430,900	387,625	1.11	43,275		89.1	86.1	1.03	485,600	453,621	1.07	404,176	404,176	38%	418,296	418,296	71%	71%	

tion is that the gap in estimated business assets between the PSID and the SCF falls by half, from \$58,426 to \$29,226, when the oversample is excluded. This pattern is consistent with the hypothesis that the PSID sample simply does not include the very wealthiest families, the kind that would be captured by the oversample included in the SCF. The remaining difference of \$29,226 is likely explained at least in part by the fact that PSID did not explicitly ask about some types of businesses like corporations and limited partnerships.

Differences in estimates of four other asset categories account for lower, yet still substantial, proportions of the difference in total net worth: value of primary residence (15%), other assets (13%), checking and savings (12%), and stocks (9%). Estimates of the proportion with positive equity in primary residence and the equity value of primary residence conditional on having positive equity are both higher in the SCF than the PSID. Moreover, the percentage of the gap in total net worth that can be explained by differences in positive ownership (6%) and the equity value of primary residence (8%) are roughly similar.

Average wealth holding in “other assets” are much higher in the SCF: \$25,500 versus \$10,249 in the PSID. The vast majority of this difference is due to the fact that the estimated ownership rate of such assets is twice as high in SCF (35.5% versus 17.7%). Indeed, if the PSID had the same ownership rate of “other assets” as the SCF, the difference in estimates of net worth between the two data sources would be reduced by 9%. Conditional on reporting such assets, the contribution of differences in average values is relatively minor (2%).

A likely explanation for the difference in ownership of “other assets” is that the PSID lumps more assets into this catchall category. Moreover, the catchall question in the PSID explicitly lists fewer such assets. The PSID question mentions “bond funds, cash value in a life insurance policy, a valuable collection for investment purposes, or rights in a trust or estate that you haven’t already told us about.” The SCF includes a separate, specific question about the cash value of whole life insurance policies, and it includes questions about tax-free bond mutual funds, government bond mutual funds, and other bond mutual funds. Furthermore, the SCF asks respondents the amount of money owed to them from a variety of sources: “Altogether how much are you owed by friends, relatives, businesses or others? What is the total dollar value that you have in loans to friends/relatives, other loans/debts, cash, future proceeds from a lawsuit, future proceeds from an estate, deferred compensation, insurance settlement, futures contracts, stock options, derivatives, royalties, patents, non-publicly traded stock, future lottery/prize receipts, other obligations, child support owed, remaining payment from a sale or an asset, other cash due from dissolution of business, Paypal or other online cash account, including online gambling accounts?”

It is also the case that the difference in estimates of “other assets” between the two surveys does not change substantially once the oversample in the SCF is excluded. The average holding in other assets is \$15,251 higher in the SCF versus the PSID when the oversample is included, and \$13,651 when it is excluded. The fact that



this gap is similar regardless of whether the oversample is included suggests that a substantial share of assets of this type are held by individuals below the very high wealth categories.

Estimates of checking and savings balances are 50% higher in the SCF, accounting for 12% of the overall difference in net worth. SCF generates a substantially higher rate of ownership of checking/savings: 91.2% versus 83.5% in the PSID. However, it is the difference in the estimate of the amount of such assets conditional on ownership that is most significant. If the PSID had the same level of assets in checking/savings as the SCF, conditional on ownership of such assets, 9% of the gap in total net worth would be accounted for. Furthermore, the estimated difference between the two data sources is much smaller when the oversample is excluded from the SCF: \$14,406 with the oversample versus \$9,406 without the oversample. Therefore, again, a significant difference between the estimates in the two data sources is likely due to the fact that the PSID may not accurately represent the small number of very high wealth households, who also own a large share of all such assets.

Estimates of the rate of stock ownership are very similar in SCF and PSID: 23.8% versus 24.7%, respectively. The reason that the amount of wealth held in stocks is 19% higher in the SCF – \$66,600 versus \$56,042 – is that conditional on ownership of stocks, the balances are much greater in the SCF. Very high wealth individuals are more likely to own large stock portfolios, and therefore it is not surprising that eliminating the oversample of the SCF lowers estimates of wealth held in stocks substantially. Somewhat surprising is that with the oversample excluded, estimates of stock wealth are actually higher in the PSID, but not by a lot.

#### 4. Wealth inequality

Various percentiles in the wealth distribution are reported in Table 4 for the PSID and for the SCF both including and excluding the oversample. At the very low end of the distribution, the PSID actually has higher levels of negative net worth. SCF has higher estimates of net worth between roughly the 10th percentile and the 50th percentile. The two surveys provide fairly similar estimates between the 50th percentile and roughly the 95th percentile. Estimates begin to diverge in the top few percentiles. For example, at the 95th percentile, the SCF estimate is 10% higher than PSID estimate, but it is 73% higher at the 98th percentile and more than 100% higher at the 99th percentile.

Exclusion of the high-income oversample substantially changes the distribution in the top two percentiles. The SCF – PSID ratio drops from 1.73 to 1.33 at the 98th percentile when the high-income sample is excluded. The drop in the SCF – PSID ratio is even greater at the 99th percentile, falling from 2.02 to 1.45.

The bottom panel in Table 4 provides measures of inequality at different points in the wealth distribution. The 50/20 ratio is higher in the PSID than the SCF. However, estimates in the bottom 20–30% of the distribution are sensitive to small perturbations in wealth given the low levels of wealth at these percentiles.

Table 4  
Distribution of total net worth

Percentile	SCF, total sample	SCF, excluding oversample	PSID	Ratio, SCF/PSID	
				SCF, total sample	SCF, excluding oversample
1	-42,200	-42,800	-61,000	0.69	0.70
5	-6,800	-6,700	-11,500	0.59	0.58
10	0	0	-946		
20	5,600	5,700	3,000	1.87	1.90
30	19,800	20,000	16,500	1.20	1.21
40	53,700	55,300	48,200	1.11	1.15
50	102,100	105,800	96,700	1.06	1.09
60	168,900	177,100	169,667	1.00	1.04
70	255,800	274,100	274,750	0.93	1.00
80	413,900	467,000	463,000	0.89	1.01
90	800,100	901,600	860,000	0.93	1.05
95	1,608,900	1,670,300	1,468,000	1.10	1.14
98	4,323,900	3,308,200	2,495,000	1.73	1.33
99	7,777,400	5,568,100	3,845,000	2.02	1.45
Ratio of percentiles					
50/20	18.2	18.6	32.2		
90/50	7.8	8.5	8.9		
95/50	15.8	15.8	15.2		
99/50	76.2	52.6	39.8		

The estimates of the 90/50 ratio are very similar in the PSID – 8.9 – and the SCF – 7.8. Even the 95/50 ratio is quite similar: 15.2 in the PSID and 15.8 in the SCF. It is in the very top percentiles where substantial differences arise, with the 99/50 ratio estimated at 76.2 in the SCF and 39.8 in the PSID.

More than half of the differential in the 99/50 ratio between the SCF and PSID is accounted for by the oversample in the SCF. Excluding the oversample reduces the 99/50 ratio from 76.2 to 52.6.

## 5. Conclusions and discussion

Estimates of average net worth are 31% higher in the SCF than the PSID, and half of this gap is accounted for by differences in estimates of business assets. The difference in estimates of total net worth between the two data sources is lowered to 11% if the oversample of the SCF is excluded. Excluding the oversample has the largest effect on three components of net worth: business assets (\$128,300 versus \$99,100), stocks (\$66,600 versus \$43,300), and equity in real estate excluding primary residence (\$61,500 versus \$43,600). The concentration in these three categories is perhaps not surprising given that very high wealth households – the kind targeted for inclusion in the SCF by its oversample – hold a disproportionate share of assets in these three components. Furthermore, this pattern indicates that for these components of wealth, the primary explanation for the difference between the PSID

and SCF is the fact that PSID likely does not fully represent the top 1–2% wealthiest individuals. However, even when the oversample is excluded from the SCF, business assets are larger in SCF than PSID. This difference is likely due to the fact that SCF and not the PSID explicitly asks about various types of business enterprises, and PSID should consider modifying their survey instrument accordingly.

A different pattern and explanation arises for disparities in estimates of “other assets.” Here, we believe that the analyses indicate that the PSID underestimates assets in this category because the PSID questionnaire does not include various types of assets, none of which are individually commonly held or large, but collectively amount to an important source of wealth holdings. The PSID should consider modifying its survey instrument to capture these assets.

The amount of assets – or debt – in the bottom 20 – 30% of the wealth distribution is sensitive to small values given the limited assets of a large share of American families. As a result, estimates of inequality at the bottom of the distribution can change substantially even though the amount of wealth holdings might vary by only a few hundred dollars.

Estimates of inequality throughout the rest of the distribution are quite similar in the SCF and the PSID. The only exception is the very top percentiles. Furthermore, estimates of the top few percentiles are influenced heavily by the inclusion of the oversample in the SCF.

Macroeconomic data from the Flow of Funds Accounts (FFA) is an alternative source for estimates of wealth holdings. Prior studies have compared estimates between the FFA and the SCF. The most recent such study found that, after adjusting for differences in measurement between the two sources, wealth was about 15% higher in the SCF than the FFA in 2007 (Henriques and Hsu, 2014, Fig. 3). Therefore, estimates based on the FFA fall roughly halfway between estimates from the SCF and PSID.

The comparability of wealth estimates between the SCF and PSID for the majority of the wealth distribution is reassuring. The two surveys have different designs that imply complementary roles in supporting research on wealth. The SCF is the gold standard measure of household wealth, providing detailed estimates of all asset components and more accurately representing very wealthy households, which is tremendously important given the concentration of wealth at the top of the distribution. The PSID assesses a wide array of household socio-economic wellbeing and behavior including earnings, employment, income, health, child development, expenditures, philanthropy, and much more. Assessing wealth and all of these other dimensions of American’s lives within the same survey allows rich analyses of the connections across these domains. Furthermore, PSID’s longitudinal design allows for assessments of changes in wealth holdings across the life course and the genealogical design supports intergenerational and intra-generational analyses within families. Together, these two data resources provide complementary design features that allow researchers and policy analysts to address a wide array of important questions.

## Acknowledgements

Funding for this research was provided by the National Institute on Aging (R01AG019802). The collection of PSID data used in this study was partly supported by the National Institutes of Health (R01 HD069609) and the National Science Foundation (1157698). The authors currently hold affiliations or held affiliations in the past with the studies assessed in this contribution (Pfeffer, Schoeni, and Andreski with the PSID, Kennickell with the SCF). The views presented are those of the authors and are not necessarily those of the funding agencies of the PSID or of the Federal Reserve Board or its staff.

## References

- [1] R.T. Curtin, T. Juster and J.N. Morgan, Survey estimates of wealth: assessment of quality, In *The Measurement of Saving, Investment, and Wealth*. Robert E. Lipsey and Helen Stone Tice, editors. University of Chicago press, 1989. <http://www.nber.org/chapters/c8126.pdf>, 1989.
- [2] J.L. Czajka, J.E. Jacobson and S. Cody, 2003/2004. Survey estimates of wealth: a comparative analysis and review of the Survey of Income and Program Participation. *Social Security Bulletin*, Vol. 65 No. 1.
- [3] E. Gouskova, S.G. Herringa, K. McGonagle, R. Schoeni and F. Stafford, Construction and evaluation of the longitudinal sample weight 2007. Panel Study of Income Dynamics Technical Report, August, 2009.
- [4] A.M. Henriques and J.W. Hsu, Analysis of wealth using micro and macro data: a comparison of the Survey of Consumer Finances and Flow of Funds Accounts, In *Measuring Economic Sustainability and Progress*, editors Dale W. Jorgensen, J Steven Landefeld, and Paul Schreyer. University of Chicago Press, 2014.
- [5] F.T. Juster, J.P. Smith and F. Stafford, The measurement and structure of household wealth, *Labour Economics* 6 (1999), 253–275.
- [6] A. Kennickell, The Role of Over-sampling of the Wealthy in the Survey of Consumer Finances, <http://www.federalreserve.gov/econresdata/scf/files/isi2007.pdf>, 2007.
- [7] A. Kennickell, Codebook for 2007 Survey of Consumer Finances. <http://www.federalreserve.gov/econresdata/scf/files/codebk2007.txt>, 2009.
- [8] Panel Study of Income Dynamics. 2013. PSID Main Interview User Manual: Release 2013. Institute for Social Research, University of Michigan, July, 2013.
- [9] Panel Study of Income Dynamics, public use dataset. Produced and distributed by the Survey Research Center, Institute for Social Research, University of Michigan, Ann Arbor, MI (2015).
- [10] F.T. Pfeffer and R.F. Schoeni, eds, forthcoming. *Wealth Inequality. Sources and Consequences*. Special Issue of the *Russell Sage Foundation Journal of the Social Sciences*.
- [11] T. Piketty, *textitCapital in the Twenty-First Century*. Cambridge, MA: Belknap Press, 2014.
- [12] E. Sierminska, Pierre-Carl Michaud, and Susann Rohwedder. 2008. Measuring wealth holdings of older households in the US: a comparison using the HRS, PSID and SCF. [https://psidonline.isr.umich.edu/Publications/Workshops/2008/LC/MRS\\_WealthCompsv10.pdf](https://psidonline.isr.umich.edu/Publications/Workshops/2008/LC/MRS_WealthCompsv10.pdf)
- [13] E. Wolff, The Size Distribution of Wealth in the United States. A Comparison among Recent Household Surveys, pp. 209–32 in *Wealth, Work, and Health. Innovations in Measurement in the Social Sciences*, edited by J.P. Smith and R.J. Willis. Ann Arbor: University of Michigan Press, 1999.

**Appendix**

PSID wealth component (variable name)	PSID survey question	SCF wealth component (variable name)	SCF survey question
Business assets (S803)	Do you (or anyone living there) own part or all of a farm or business? If you sold all that and paid off any debts on it, how much would you realize on it?	Business with either an active or non-active interest (BUS)	What is the networth of this business? How much does the business owe you? How much do you owe the business (not recorded earlier)? How much of the business is collateralized? For the remaining business you own and actively manage, what could you sell your share for? <b>PROBE:</b> What is your share worth? What could you sell your share of all these Limited Partnerships/Other Partnerships/Subchapter S Corporations for/Other Corporations/Sole-Proprietorships/Other types for? Could you tell me the current value of all the land and buildings – that is, what would it bring if it were sold today? Do not include any farm animals, implements or crops? What is still owed on the land contract?
Checking/savings (S805)	Do you (or anyone living there) have any money in checking or savings accounts, money market funds, certificates of deposit, governmental savings bonds, or treasury bills – not including assets held in employer-based pensions or IRAs? If you added up all such accounts (for all of your family living there), about how much would they amount to right now?	Bonds (BOND): Sum of tax-exempt bonds (NOTXBND), mortgage-backed bonds (MRTBND), US Govt & gov't agency bonds & bills (GOVTBND), corporate and foreign bonds (OBND)  Certificates of Deposit (CDS) Savings Bonds (SAVBND)  Money market accounts (MMA)	What is the face value of all of the state or municipal bonds, or other taxfree bonds that you have? What is the face value of all of the mortgage-backed bonds that you have? What is the face value of all of the U.S. Government bonds or Treasury bills that you have? What is the face value of all of the corporate or any other type of bonds that you have? What is the face value of all of the foreign bonds that you have? What is the total dollar value of all these CDs? What is the total face value of all the savings bonds that you have?  Checking or Savings Accounts identified as Money Market Accounts and Institution = commercial bank, savings and loan or savings bank or credit union

PSID wealth component (variable name)	PSID survey question	SCF wealth component (variable name)	SCF survey question
		Checking accounts, excl. money market (CHECKING)	How much is in this [Checking] account? What was the average over the last month? No to money-market-type account; How much is in all your remaining checking accounts? PROBE; What was the average over the last month? PROBE; What was the average over the last month?
		Savings accounts (SAVING)	How much is in this [Savings] account? What was the average over the last month? No to money-market-type account and sweep account; How much is in all your remaining savings accounts? (What was the average over the last month?)
		Call accounts(space (CALL)	What is the total dollar value of all the cash or call money accounts that you have? That you and your family living here have?
Stocks (S811)	Do you (or anyone living there) have any shares of stock in publicly held corporations, mutual funds, or investment trusts – not including stocks in employer-based pensions or IRAs? If you sold all that and paid off anything you owed on it, how much would you have?	Directly held stocks (STOCKS); Directly held pooled investment funds, excluding money market funds (NMMF); Sum of stock mutual funds (STMUTF); Combination of other mutual funds (COMUTF); Other mutual funds (OMUTF)	What is the total market value of all of the stock mutual funds that you have? What is the total market value of all of the combination funds that you have? What is the total market value of all of these other funds (mutual funds or hedge funds) you have?

PSID wealth component (variable name)	PSID survey question	SCF wealth component (variable name)	SCF survey question
IRA/private annuities (S819)	Do you (or anyone living there) have any money in private annuities or Individual Retirement Accounts (IRAs)? How much would they be worth?	Other managed assets (OTHMA)	How much would you receive if you cashed in these annuities? How much would you receive if you cashed in these accounts (trust or managed investment)?
Pension Wealth (Head pension amounts: ER37761, ER37809, ER37815 + Wife pension amounts: ER37993, ER38041, ER38047)	Current pension for Head and Wife: What is the approximate amount in your account now? Pension with previous employer for Head and Wife: For the part of your pension where money is accumulated in an account, how much money was in your account when you left that employer? For retirees: How much is in your account now?	Quasi-liquid retirement accounts (RETQLIQ)	How much is in your/your husband/wife/partner's/other family members' Roth IRA, roll-over IRA accounts, regular or other IRA accounts, Keogh accounts?
Net worth of vehicles (S813)	What about the value of what you (or anyone in your family living there) own on wheels? Including personal vehicles you may have already told me about and any cars, trucks, a motor home, a trailer, or a boat – what are they worth all together, minus anything you still owe on them?	Retail value of vehicles, inc. RVs, planes, boats, etc. (VEHIC) – vehicle loans (VEH_INST)	What is the prevailing retail value of vehicles as of fall 2007 according to industry guidebook (NADA)? How much are all other such vehicles that you own worth in today's prices?

PSID wealth component (variable name)	PSID survey question	SCF wealth component (variable name)	SCF survey question
House value (A20)	Could you tell me what the present value of your [house/apartment] is – I mean about how much would it bring if you sold it today?	Primary residence (HOUSES)	Could you tell me the current value of the site/mobile home/home and site? I mean, about what would it bring if it were sold today? What is the current value of this (home and land/apartment/property)? I mean, without taking any outstanding loans into account, about what would it bring if it were sold today? Could you tell me the current value of all the land and buildings – that is, what would it bring if it were sold today? Do not include any farm animals, im- plements or crops?
Mortgage balances (A24 – 2 mentions)	About how much is the remain- ing principal on this mortgage? (includes land contract, loan from seller, home equity loans, home improvement loans, line of credit loans)	Mortgages and home equity loans by primary residence (NH_MORT)	How much do you still owe [on loans for property]? How much is still owed on: substantial land and seasonal or other residence, substantial land and trailer/mobile home, seasonal/vacation home; other additional home, time-share ownership, single family home, multiple single family houses, duplex 2 unit residence, triplex, fourplex, condo, residential n.e.c., burial lot, misc vacation property? What is still owed on the land contract/loan? What is owed on [line of credit secured by equity in your home]? What is the total amount that you currently owe on all other re- maining lines of credit?
Net worth of real estate excluding primary residence (S809)	Do you (or anyone living there) have any real estate other than your main home, such as a second home, land, rental real estate, or money owed to you on a land contract? If you sold all that and paid off any debts on it, how much would you realise on it?	Home equity lines of credit secured by primary residence (HELOC)	How much is still owed on this note [loan, land contract, mortgage]? About how much in total is owed to you on the remaining notes, land contracts or mortgages? How much are the following worth: substantial land and seasonal or other residence, substantial land and trailer/mobile home, seasonal/vacation home; other additional home, time-share ownership, single family home, multiple single family houses, duplex 2 unit residence, triplex, fourplex, condo, residential n.e.c., burial lot, misc vacation property?



PSID wealth component (variable name)	PSID survey question	SCF wealth component (variable name)	SCF survey question
Other assets (S815)	Do you (or anyone living there) have any other savings or assets, such as bond funds, cash value in a life insurance policy, a valuable collection for investment purposes, or rights in a trust or estate that you haven't already told us about? If you sold that and paid off any debts on it, how much would you have?	Cash value of whole life insurance (CASHLI)  Other misc. financial assets (OTHFIN)	If you cancelled these policies now, how much would you receive from the insurance company for the payments you have made up to now? That is, what is the current "cash value" of the policies? What is the total cash value of these policies?  Altogether how much are you owed by friends, relatives, businesses or others? What is the total dollar value that you have in [loans to friends/relatives, other loans/debts, cash, future proceeds from a lawsuit, future proceeds from an estate, deferred compensation, insurance settlement, futures contracts, stock options, derivatives, royalties, patents, non-publicly traded stock, future lottery/prize receipts, other obligations, child support owed, remaining payment from a sale or an asset, other cash due from dissolution of business, Paypal or other online cash account, including online gambling accounts?  What is the total dollar value that you have in this asset [other assets not mentioned]? Altogether, how much are you owed?
		Other nonfinancial assets (OTHNFN)	What is the total market value of all of the tax-free bond mutual funds that you have? What is the total market value of all of the government or government backed bond mutual funds that you have? What is the total market value of all of the other bond mutual funds that you have?
		Tax-free bond mutual funds (TFBMUTF), govt bond mutual funds (GBMUTF), other bond mutual funds (OBMUTF)	

PSID wealth component (variable name)	PSID survey question	SCF wealth component (variable name)	SCF survey question
Other debt (S807)	Aside from the debts that we have already talked about, like any mortgage on your main home or vehicle loans – do you [or anyone in your family living here] currently have any other debts such as credit card charges, student loans, medical or legal bills, or loans from relatives? If you added up all these debts [for all of your family living here], about how much would they amount to right now?	Credit card balances (CCBAL)  Educational loans (EDN_INST) Loan balance on pension plan (ODEBT)	Do you have any credit cards or charge cards?(After the last payments were made on these accounts, roughly what was the balance still owed on these accounts? How much is still owed on [Educational] loans? What is the current loan balance [against your pension plan]? Altogether, what is the current balance on these margin loans? How much is currently borrowed [against insurance policies]?

Notes: SCF Home Equity = HOUSES-NH\_MORT-HELOC SCF Primary economic unit (PEU) = economically dominant single individual or couple (whether married or living together as partners) and all other persons in the household who are financially interdependent with that economically dominant person or couple; PSID Family Unit = a group of people living together as a family. They are generally related by blood, marriage, or adoption, occupy the same housing unit and are economically interdependent.