Reassessing Wealth Data Quality in the Survey of Income and Program Participation*

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ABSTRACT: The Survey of Income and Program Participation (SIPP) and the Survey of Consumer Finances (SCF) are two principal sources of wealth data for the U.S. population. The Social Security Administration sponsored Mathematica Policy Research to write a report that identified considerable discrepancies in wealth estimates across these surveys using data from 1998. While one might expect SIPP and SCF to deliver different estimates for a variety of reasons, the magnitude of differences in levels and trends across surveys fostered questions about SIPP wealth data quality. To address these concerns, SIPP implemented various strategies that the report recommended to close the gaps between wealth estimates. We conduct the first analysis of the impact of these changes. We offer potential explanations for why these two surveys continue to yield different estimates, and we discuss the broader implications for the wording and design of asset questions.

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1. Introduction

The Survey of Income and Program Participation (SIPP) is our nation's premier source of information about program participation. Since eligibility for many social programs depends on means and asset tests, SIPP is also a major source of information about the wealth of individuals, families, and households. Government agencies and researchers commonly use these data to model eligibility for programs such as the Supplemental Nutrition Assistance Program, formerly known as food stamps.[1] SIPP also offers a rich set of observable characteristics to describe wealth holders and to analyze the connection between wealth and outcomes such as employment status.[2] Additionally, the large sample size enables wealth comparisons across subgroups.[3]

Another major source of information about the wealth of families in the United States is the Survey of Consumer Finances (SCF), which has been referred to as the "gold standard" for wealth data.[4] Researchers commonly use these data to describe the wealth distribution and to highlight changes in the wealth distribution over time.[5] This survey offers the most detailed micro-level information available about families' wealth holdings. SCF oversamples high-income households in an effort to improve representativeness in the right tail of the heavily skewed wealth distribution.[6] SCF also offers a rich set of observable characteristics to describe

[1] Blank and Ruggles (1996) derive measures of eligibility for the Aid to Families with Dependent Children program, commonly known as welfare, and food stamps.
[2] See Chetty (2008), Gruber (2001), and Sullivan (2008) for studies of wealth among unemployed individuals.
[3] Vornovitsky, Gottschalck, and Smith (2014) compare the distribution of wealth by the age, race and ethnicity, and education of the household head.
[4] National Research Council (2009) is one among many sources that have applied this label in reference to SCF.
[5] See Wolff (1998, 2014) for examples.
[6] Bricker et al. (2014) use SCF data to establish that the median family net worth was approximately $81,200 in 2013 and the mean family net worth was approximately $534,600. Such a large difference between the median and mean of a distribution is characteristic of heavy right skewness. They also document that the 95th percentile of the wealth distribution – approximately $1,871,800 – exceeds the 82.5th percentile – approximately $505,800 – by more than a factor of 3. Even within the top decile of the wealth distribution, the mean net worth of approximately $4,024,800 greatly exceeds the median.

wealth holders and to analyze the connection between wealth and outcomes such as employment status.[7]

Since both SCF and SIPP are nationally representative surveys, estimated statistics of the wealth distribution should compare well across surveys, with sampling error largely explaining any disagreement. However, differences in sample design between SCF and SIPP have given rise to the concern that estimates from these surveys might not compare well. While SCF oversamples high-income households, SIPP oversamples households in low-income areas to improve representativeness among program recipients and households in poverty. To address this concern, Curtin, Juster, and Morgan (1989) and Wolff (1999) provided early comparisons of wealth estimates in SCF and SIPP. They found the level and distribution of wealth to be similar in general across these surveys upon excluding the wealthiest individuals.

However, the gap between SCF and SIPP wealth estimates grew over the course of the 1990s. In response to this trend, the Social Security Administration sponsored Mathematica Policy Research to study wealth estimates from the 1996 panel of SIPP and corresponding estimates from SCF. Czajka, Jacobson, and Cody (2003) reported on this analysis, which "seeks to attribute the observed disparities to differences in survey design and implementation, explores ways to improve the quality of the SIPP estimates…, and presents recommendations regarding both the use and production of SIPP wealth data." They documented that the aggregate net worth estimate in SIPP data was just under half of the analog in SCF data, while the median net worth estimate in SIPP data was approximately two-thirds of the analog in SCF data. They attributed these gaps to a relatively large discrepancy between SCF and SIPP estimates of assets and a relatively small discrepancy between SCF and SIPP estimates of liabilities. Czajka et al.

[7] Carroll, Dynan, and Krane (2003) examine whether job-loss risk affects savings. Bricker et al. (2014) describe how median wealth varies with demographic characteristics

(2003) argued that estimated medians in SIPP and SCF compare more favorably than estimated aggregates because SIPP underestimated both the number of wealthy families and their average wealth.

Czajka et al. (2003) offered recommendations aimed at narrowing the gap between SCF and SIPP wealth estimates. SIPP subsequently implemented several of these recommendations. To our knowledge, this paper represents the first evaluation of whether these changes have made SCF and SIPP wealth estimates more comparable. We begin by updating the analysis of Czajka et al. (2003) using Wave 7 of the 2008 panel of SIPP and the 2010 SCF. Specifically, we compare estimates of net worth both in aggregate and at various percentiles of its distribution. We then report how these comparisons vary across asset and liability categories. After studying asset and liability values in aggregate, we consider the correlation between households' assets and liabilities. We separate relatively wealthy families from less wealthy families to account for the influence of outliers that SCF and SIPP cover differentially. Finally, we examine how differences between SCF and SIPP wealth estimates influence conclusions about how wealth varies across demographic groups.

We find that the impact of the changes recommended by Czajka et al. (2003) has been mixed.[8] The difference between some key wealth estimates in SCF and SIPP has narrowed; SIPP aggregate net worth is approximately three-quarters of the corresponding estimate in SCF, while median net worth in SIPP is roughly 84 percent of its SCF analog.[9] Nevertheless, the

[8] Note that we do not have access to standard errors for the estimates presented in Czajka et al. (2003). Consequently, whenever relevant we compare point estimates of our results to those from Czajka et al. (2003). Apparent differences between our estimates and those from Czajka et al. (2003) may not be statistically significant.
[9] All comparisons are statistically significant at the 90 percent level unless stated otherwise. The estimates in this paper are based on responses from a sample of the population and may differ from actual values because of sampling variability or other factors. As a result, apparent differences between the estimates for two or more groups may not be statistically significant. For more information on the source of the data and the accuracy of the estimates, see http://www.census.gov/programs-surveys/sipp/tech-documentation/source-accuracy-statements.html.

difference between other key wealth estimates in SCF and SIPP has widened; the 25th percentile of the net worth distribution in SIPP is about 28 percent of its SCF analog. Within asset categories, estimates are similar across surveys for home values, which are a key portfolio component for a majority of households. The SIPP median home value is 100.1 percent of the SCF counterpart. On the other hand, SIPP median business equity underestimates its SCF analog by almost a factor of 4. Within debt categories, estimates are especially similar across surveys for vehicle debt, which is a key liability for many households. SIPP median vehicle debt is 102.7 percent of its SCF counterpart. SIPP median mortgage debt is less comparable at 109.9 percent of its SCF analog. We find that while since Czajka et al. (2003), SIPP continues to measure mean debt value well relative to SCF and the mean asset value compares more favorably across surveys, the correlation of asset values and debt values for our entire sample has declined.[10] In general, the gap between SCF and SIPP estimates narrows for aggregate and mean net worth when we exclude relatively wealthy families from our sample. Finally, we conclude that the differences in wealth estimates that we document across surveys yield no statistically significant difference in estimating the Black-White wealth gap.

Our results have broader implications for the survey methodology literature, especially relating to the wording and design of wealth questions. While SIPP and SCF might yield different estimates for a variety of reasons, some of these differences are likely to stem from differences in question text wording. First, we find evidence consistent with the hypothesis that SCF ownership rates for some asset and liability classes exceeds the SIPP analog because the SCF questions list more examples of that class. Tourangeau, Conrad, Couper, and Ye (2014) argue that providing examples can influence how individuals interpret and answer a question.

[10] However, the point estimate of the correlation we calculate is similar to Czajka et al. (2003) once we exclude outliers from our sample.

Second, we find suggestive evidence that small differences in question text wording might impact how respondents interpret a question, thereby affecting estimates of asset and debt values. Finally, we propose that simpler questions elicit better quality answers. Ideally, one would conduct an experiment to determine the effects of variation in question wording on survey response. However, relatively few studies offer this kind of insight for wealth questions.[11]

The remainder of this paper proceeds as follows. In Section 2, we summarize the findings of Czajka et al. (2003). Section 3 describes the data that we employ. We highlight our methodology and salient issues that complicate a comparison of SCF and SIPP wealth estimates in Section 4. We report on statistics of net worth, assets, and liabilities implied by these two datasets in Section 5, and we consider what implications the differences in wealth estimates between the two datasets have for comparisons of wealth by demographic characteristics such as race. Section 6 concludes.

2. Background

The impetus for the report by Czajka et al. (2003) was the finding that SIPP estimates of median wealth showed little change over the 1990s, during which time SCF estimates rose markedly. This gave rise to a question of whether the Social Security Administration should continue to employ SIPP wealth data, and if so how SIPP wealth estimates should be adjusted to resemble SCF estimates more closely. To that end, Czajka et al. (2003) compared wealth estimates between the 1998 SCF and Wave 9 of the 1996 SIPP panel. Both data sources covered the period of late 1998 and early 1999.

[11] Couper et al. (2013) conducts an experiment on a question which requests respondents to consult asset records.

One important complication in comparing these two surveys is that they each collect data from different units of observation. SCF collects data at the level of the "primary economic unit" (PEU), which includes a household's economically dominant individual or couple and their financial dependents. By contrast, SIPP collects data at the level of the individual, regardless of that individual's relationship to the household's economically dominant individual or couple. Since SIPP does not collect information about economic dominance within households, Czajka et al. (2003) constructed a grouping of SIPP household members to mimic the SCF primary economic unit for the sake of comparability. They term this unit an "SCF-like family". They began by including individuals in the primary family.[12] Second, they included unmarried partners of the household reference person and all of that unmarried partner's children who are younger than age 25. Third, if a subfamily within the primary family had a reference person who is age 25 or older, then they excluded that subfamily.[13] Finally, they excluded siblings and other individuals who are age 25 or older and who are related to the household reference person.

After constructing the SCF-like family, they computed the wealth of this unit as the sum of two components. First, SIPP collects data about most assets and debts by asking each person about the account values of assets and liabilities owned either jointly or in own name only. They summed these asset and debt values across members of the SCF-like family to calculate the first

[12] The primary family in a household is determined by the householder or household reference person. By definition, this person owns or leases the housing unit. If more than one person fits this description, then only one person is identified as the household reference person, although this distinction bears no economic significance. In addition to the household reference person, the primary family includes all individuals living in the household who are related to the household reference person by blood, marriage, or adoption.

[13] By definition, subfamilies within the primary family are related to, but do not include, the household reference person. For example, if a daughter and her spouse live in a house that her parents own, the daughter and her spouse would be categorized as a subfamily within the primary family. If that daughter is 25 years older or more, she and her spouse would be excluded from the SCF-like family using the algorithm of Czajka et al. (2003). However, she and her spouse would be excluded from the primary economic unit as defined by SCF only if they are economically independent of the household reference person. Because of this, Czajka et al.'s (2003) algorithm could potentially exclude some individuals from the SIPP sample who would be in the primary economic unit if the household were interviewed by SCF.

component of this unit's wealth. Second, SIPP collects data about all remaining assets and debts at the level of the household. For example, only the household reference person provides the value of the home, if owned, and the value of any mortgages on the home.[14] SIPP also asks the household reference person to identify up to three people in the household who own the home. Czajka et al. (2003) summed these household-level asset and debt values, including only portions held by individuals who are in the SCF-like family, to calculate the second component of this unit's wealth.[15]

Czajka et al. (2003) found that the aggregate net worth of SCF-like families in SIPP was $14.4 trillion, or 49.5 percent of the SCF estimate of $29.1 trillion for the aggregate net worth of primary economic units during the late 1990s. The median net worth of SCF-like families in SIPP was $48,000, while the median net worth of primary economic units in SCF was $71,800. This large gap in net worth estimates across surveys stemmed primarily from a gap in estimates of asset values across surveys. SCF-like families in SIPP had aggregate asset values that were 55 percent of the SCF estimate of $34.1 trillion. By contrast, SCF-like families in SIPP had aggregate debt values that were 90 percent of the SCF estimate of $5.0 trillion.

Czajka et al. (2003) attempted to understand the drivers of the differences in wealth estimates by comparing SCF and SIPP estimates of account values held by owners of each type of asset and liability. They found evidence of wide variation across categories. At one extreme, the SIPP estimate of aggregate 401(k) and thrift account values was 99 percent of the SCF estimate. At the opposite extreme, the SIPP estimate of aggregate business equity was 17 percent of the SCF estimate. Czajka et al. (2003) found evidence that SCF and SIPP estimates

[14] SIPP also collects information about vehicles, other real estate, and recreational vehicles at the level of the household.
[15] Czajka et al. (2003) assume that asset values and debt values that SIPP collects at the household level are split evenly among all owners.

generally compared well within debt categories. The SIPP estimate of aggregate mortgage values, by far the largest component of a typical household's liabilities, was 95 percent of the SCF estimate. Czajka et al. (2003) also explored the extent to which these differences in aggregate values within asset and debt categories stem from differential estimates of ownership rates. They document similar ownership rates of some key assets and debts in SCF and SIPP, including primary residences, motor vehicles, and mortgages against a primary residence. However, estimated SIPP ownership rates of checking and savings accounts, IRA and Keogh accounts, and real estate other than the primary home fall short of their SCF analogs.

Given SCF's overrepresentation of high-income households and its heightened focus on collecting even less common components of portfolios held by wealthy families, it is unclear that one should expect SCF and SIPP to deliver the same estimates. To that end, Czajka et al. (2003) examine the extent to which differences in SCF and SIPP wealth estimates can be attributed to differences in the number of wealthy families and the value of these families' portfolios across surveys. They report that SIPP underestimates the fraction of all families with wealth exceeding $2 million by a factor of 5 relative to SCF. When excluding these families from both surveys, the SIPP estimate of aggregate net worth, aggregate assets, and aggregate debts rise to 75 percent, 80 percent, and 101 percent of their SCF analogs, respectively. The gap between SCF and SIPP estimates of aggregate values held within asset and debt categories also generally narrows when excluding wealthy primary economic units.

Czajka et al. (2003) also examine the implications of differences in wealth estimates across SCF and SIPP for estimates of wealth inequality by demographic group. For example, they show that differences in median net worth by race tend to be more pronounced in SIPP than

in SCF.[16] The median net worth of SCF-like families headed by a White individual exceeded that of SCF-like families headed by a Black individual by a factor of 11.5, while this factor was only 6.1 in SCF. They decompose these differentials by race to show that differences in median asset values by race are stronger in SIPP than in SCF, while differences in median debt values by race are weaker in SIPP than in SCF.

3. Data

We update the Czajka et al. (2003) analysis using the 2008 panel of SIPP. SIPP is a large, nationally representative, longitudinal survey, which interviews households every four months. During every interview, each person who usually resides in a sampled household answers the same core group of questions about the preceding four months. These responses provide detailed monthly information about demographics, ownership of interest-earning assets, and a variety of other characteristics. Respondents also answer a separate group of topical questions that vary from one interview, or wave, to the next. We utilize the topical modules accompanying wave 7 of the 2008 panel that collect wealth data.[17] These interviews were administered between September and December 2010.

We also employ the 2010 SCF, which is another nationally representative dataset. Interviews were conducted mostly between May and December 2010. SCF is administered triennially and is cross-sectional, so households are usually interviewed only once.[18]

[16] While median net worth differences by race tended to be more pronounced in SIPP than in SCF in percentage terms, they were less pronounced in SIPP than in SCF in absolute terms. Median asset value differences exhibited the same pattern.

[17] Specifically, these are the Assets and Liabilities Topical Module; the Real Estate, Dependent Care, and Vehicles Topical Module; and the Interest Accounts, Stocks, Mortgages, Value of Businesses, Rental Properties, and Other Assets Topical Module

[18] 2007 SCF respondents were interviewed again in 2009 to obtain information about how the wealth of these households evolved through the 2008 financial crisis. These SCF panels occur only infrequently.

Respondents provide detailed information about demographics, wealth, and a variety of other characteristics.

The designs of SCF and SIPP differ in four salient ways for our purpose. First, high-income households are overrepresented in SCF while low-income areas are overrepresented in SIPP. The SCF high-income oversample aims to improve coverage of the wealthiest families, thereby accommodating the heavy right skewness of the wealth distribution and the thinly held assets that are concentrated among the wealthiest families' portfolios. By contrast, the SIPP low-income oversample aims to improve coverage of the families who receive social programs, thereby accommodating the unique dynamics of their income, wealth, health insurance, and household structure.[19] To the extent that families in the left tail, the middle, and the right tail of the income distribution structure their portfolios differently, we might expect these coverage improvement efforts to produce differential wealth estimates across surveys.

Second, the purpose of SCF is primarily to collect information on wealth in the United States, whereas the purpose of SIPP is primarily to measure program participation. Consequently, SCF includes questions about the value of some relatively uncommon assets and liabilities that SIPP does not mention.[20] In principle, SIPP respondents can report the value of any remaining financial investments in a catch-all question, but relatively few people exploit this opportunity. Even when SCF and SIPP ask about the same type of asset or liability, in some

[19] SIPP measures participation in and income from many social programs including SNAP; Old Age, Survivors, and Disability Insurance (commonly referred to as social security); Temporary Assistance for Needy Families (commonly referred to as welfare); Supplemental Security Income; the Special Supplemental Nutrition Program for Women, Infants, and Children; Medicare; and Medicaid.

[20] Examples of these assets and liabilities include: miscellaneous non-financial investments; annuities; trusts; mortgage-backed bonds; miscellaneous bonds; call accounts; hedge funds; real estate investment trusts (REITs); account-based pension plans other than 401(k), 403(b), thrift savings, and supplemental retirement annuity plans; non-actively managed businesses; loans owed for property that has already been sold; loans taken out against life insurance; and loans taken out against pension plans. The forthcoming 2014 SIPP panel has introduced questions about the value of annuities, trusts, and non-actively managed businesses.

instances SCF collects the value of more accounts than SIPP does.[21] For example, SIPP asks respondents to report the value of up to three loans against the primary residence and the values of and debts against up to three cars and trucks, up to two recreational vehicles, and up to two actively managed businesses. By contrast, SCF asks respondents to report the value of all loans against the primary residence and the values of and debts against all cars, trucks, recreational vehicles, and actively managed businesses.[22] For both of these reasons, SCF might yield a larger and more accurate estimate of net worth than SIPP does.

Third, SCF and SIPP impute missing data using different techniques. SCF imputes missing asset and debt values using a sequential regression multiple imputation technique.[23] By contrast, SIPP imputes missing asset and debt values singly using a hot deck procedure.[24] Although the SCF imputation procedure is more demanding computationally than the SIPP imputation procedure, it bears at least two potential advantages. First, sequential regression techniques allow data producers to condition on a wide array of observable characteristics when imputing missing data. The curse of dimensionality makes it infeasible to condition on such a large number of observables when imputing data via a hot deck procedure. Second, multiple imputation allows users to estimate the uncertainty associated with imputed data. No existing study considers how using hot deck imputation versus multiple imputation affects asset data.

[21] Even when SIPP and SCF both ask about the same asset, in some instances these two surveys define that asset's contribution to net worth differently. For example, SIPP uses the market value of U.S. government securities, municipal bonds, and corporate bonds to construct net worth. By contrast, SCF uses the face value of these assets to construct net worth.

[22] As another example, SCF respondents provide the value of each individual checking account for up to 6 checking accounts, and then provide the combined value of all remaining checking accounts for families with 7 or more checking accounts. By contrast, SIPP respondents provide only the combined value of all checking accounts. To the degree that respondents incur arithmetic errors when combining values, SCF yields more accurate estimates of net worth than SIPP does. The varying degree of mathematical abilities in the population (OECD 2013) suggests that this measurement error problem may be large and correlated with observables.

[23] See Kennickell (1998) for an in depth description of the SCF imputation process.

[24] Refer to Chapter 4 of U.S. Census Bureau (2001) for an in depth description of the SIPP imputation process. In brief, hot deck imputation assigns nonrespondents data that was reported by individuals with similar observable characteristics.

Andridge and Little (2010) employ health outcome data to show that parametric regression and hot deck regression yield quite comparable empirical bias and root mean squared error, while multiple imputation yields lower variance estimates than single imputation. Tang et al. (2005) concluded that multiple imputation produced different estimates for longitudinal clinical trials.

Finally, SCF has a considerably smaller sample size than SIPP. In the 2010 SCF, 6,942 families were interviewed, while 33,795 households were interviewed in wave 7 of the 2008 SIPP panel. SIPP's larger sample size aids subgroup analysis. Sample size concerns are especially relevant to the analysis of wealth data given the generally high rates of non-response to wealth questions. Consequently, wealth data are not well suited to the common strategy of excluding imputed data from analysis. The need to include imputed data underscores the potential for differences in imputation techniques to explain differences in wealth estimates across surveys.

In light of their findings, Czajka et al. (2003) submitted a variety of recommendations for improving the quality of SIPP wealth data. The Census Bureau subsequently implemented some of these recommendations, so the SIPP wealth data that we employ differs from the wealth data in wave 9 of the 1996 SIPP panel in three important ways. First, SIPP incorporated debts into the imputation of some asset values. Consequently, we might expect to find a stronger correlation between individual families' assets and debts for wave 7 of the 2008 panel than existed for the 1996 SIPP panel.[25] Second, imputation hot decks were updated to improve consistency. Finally, SIPP made improvements that resulted in a lower imputation rate for vehicle values. Both SIPP and SCF construct vehicle values by asking respondents to report the

[25] See Thibaudeau, Gottschalck, and Palumbo (2006) for a description of this methodology.

year, make, and model of their vehicles and using this information to assign a value based on assessed values published by the National Automobile Dealers Association (NADA). For wave 9 of the 1996 panel, SIPP utilized a book of assessed values that extended back only 7 model years. Values for all older vehicles were imputed. By wave 7 of the 2008 panel, SIPP utilized a book of assessed values that extended back 20 model years.[26]

4. Methodology

For the sake of comparability, our methodology strongly resembles the methodology applied in Czajka et al. (2003). We employ the same algorithm to construct SCF-like families in SIPP data that mimic the primary economic unit in SCF.[27] Our method of aggregating SIPP wealth data to the level of the SCF-like family differs slightly from that of Czajka et al. (2003). They excluded the portion of an asset's value that was owned by household members outside of the SCF-like family by assuming that the asset's value was split equally among all owners. By contrast, we compute the net worth of an SCF-like family by aggregating the full value of all assets owned by at least one member of the primary economic unit. One rationale for this decision is that we lack the information to know whether an asset's value would be split evenly among owners if sold. Additionally, SIPP does not identify the owners of most jointly held assets, including bank accounts, stocks, and mutual funds. Finally, for some assets, such as

[26] A third change between the 1996 and 2008 SIPP panels is the introduction of a question about the cash value of life insurance policies. Czajka et al. (2003) estimated that asset values such as the cash value of life insurance policies that SCF collected and SIPP did not collect accounted for about 10 percent of the SCF estimate of aggregate net worth. However, Gottschalck and Moore (2006) provide evidence that the current SIPP cash value of life insurance question actually captures a mix of face and cash values. Consequently, the cash value of life insurance is excluded from the SIPP total net worth and total asset value recode variables. Similarly, we exclude the cash value of life insurance from SIPP estimates in this paper. Thus, the additional question about the cash value of life insurance cannot explain any change in comparisons of SCF and SIPP wealth estimates that we document since Czajka et al. (2003).

[27] This sample selection criterion excludes from our analysis 9.9 percent of all respondents to the wave 7 topical module of the 2008 SIPP panel.

vehicles, SCF asks respondents to report all assets owned by their family. Including the entire value of such assets when computing the net worth of SCF-like families in SIPP might generate an estimate that is more comparable to the net worth of primary economic units in SCF. For these reasons, we prefer not to exclude the portion of an asset's value that is held by individuals outside of the SCF-like family. Instead, we interpret our estimate of an SCF-like family's net worth as one extreme of a range of estimates.

We also typically apply the approach of Czajka et al. (2003) in accommodating the varying degrees of detail with which SCF and SIPP collect wealth data. To illustrate, SCF asks respondents to report the value of all checking accounts, savings accounts, and CDs separately. On the other hand, SIPP asks respondents to report the combined value of all interest-earning checking accounts, savings accounts, and CDs. This distinction disappears after aggregating all asset and debt values to compare the total net worth of SCF-like families in SIPP and primary economic units in SCF. In order to investigate the sources of differences in net worth across surveys, Czajka et al. (2003) defined asset and debt categories that are consistent across SCF and SIPP. We only deviate from this categorization when analyzing retirement accounts and residual debt. We discuss the motivation for these deviations when discussing our results.

One key deviation of our methodology from that of Czajka et al. (2003) is that we compute SIPP wealth statistics using restricted-use, uncensored value data. In the 2008 panel, SIPP censors values that surpass some threshold by replacing the outlying value with the threshold itself.[28] By contrast, SCF pursues a variety of methods for altering outlying values.[29] Czajka et al. (2003) list this difference in topcoding procedures as a potentially important source

[28] Most censored values lie in the right tail of a variable's distribution. For a few assets, such as business values, censored values also lie in the left tail of a variable's distribution.
[29] Fries, Johnson, and Woodburn (1997) and Kennickell (1997) describe the methods used to alter dollar values in the 2010 SCF. Kennickell and Lane (2007) report that SCF relies on topcoding and bottomcoding only sparingly.

of the difference in aggregate net worth estimates across surveys.[30] Since the wealthiest households claim such a large portion of aggregate wealth, differential treatment of outliers across surveys could be especially impactful for discrepancies in mean estimates. One possible mitigating factor is that the SIPP topcoding procedure is designed to censor only 0.5 percent of all observations or 3 percent of all in-universe observations. Consequently, we do not expect that our use of uncensored data will impact significantly estimates of the 25th, 50th, and 75th percentiles.[31]

Next, we discuss how we account for the multiple imputation of missing data in SCF and the complex sample design of both SCF and SIPP to construct our point estimates and standard errors. For SCF, we utilize all 5 implicates of missing data when computing wealth estimates to account for uncertainty due to item non-response. We denote an estimate using implicate i and the main sample weight in SCF by $\hat{\beta}_{0,i}^{SCF}$. We average these estimates across all implicates to construct the point estimates that we present in the tables below. We denote these point estimates by

$$\hat{\mu}^{SCF} = \frac{1}{5}\sum_{i=1}^{5} \hat{\beta}_{0,i}^{SCF}.$$

We compare this point estimate to the corresponding point estimate in SIPP when applying sample weights, denoted by $\hat{\mu}^{SIPP}$.

[30] In future work, we plan to replicate our analysis using censored data in order to evaluate the extent to which our use of uncensored data explains differences between our comparisons of SCF and SIPP wealth estimates and those of Czajka et al. (2003).

[31] Czajka et al. (2003) constructed SIPP net worth estimates by aggregating topcoded components. Therefore, it is possible in principle for their estimates of the 25th, 50th, and 75th net worth percentiles to reflect censored data. For example, suppose that a household owes $500,000 of principal on the primary residence, and that this debt exceeds the value of that residence. SIPP topcodes values of principal owed in excess of $420,000. Such a large liability could place this household at the 25th percentile of the net worth distribution implied by censored data, whereas uncensored debt values might imply a lower position in the net worth distribution.

When estimating standard errors, we utilize replicate weights to account for the complex sample designs of SCF and SIPP. We estimate standard errors via balanced repeated replication with 160 replicate weights in SIPP data[32] and 999 replicate weights constructed for the first implicate in SCF data. We denote the estimate of the wealth statistic based on replicate weight r in SIPP data by $\hat{\beta}_r^{SIPP}$ and the estimate of the wealth statistic based on replicate weight r by $\hat{\beta}_{r,1}^{SCF}$.[33] In SIPP, $\hat{\beta}_0^{SIPP} = \hat{\mu}^{SIPP}$ since replicate weight 0 is the main sample weight. Based on Fay and Train (1995), the formula for the standard error of a SIPP estimate is

$$\hat{\sigma}_E^{SIPP} = \sqrt{\frac{4}{160}\sum_{r=1}^{160}\left(\hat{\beta}_r^{SIPP} - \hat{\beta}_0^{SIPP}\right)^2}.$$

Based on Rubin (1987) and SCF (2010), the formula for the standard error of an SCF estimate is

$$\hat{\sigma}_E^{SCF} = \sqrt{\left(1+\frac{1}{5}\right)\left(\frac{1}{4}\right)\sum_{i=1}^{5}\left(\hat{\beta}_{0,i}^{SCF} - \frac{1}{5}\sum_{i=1}^{5}\hat{\beta}_{0,i}^{SCF}\right)^2 + \frac{1}{998}\sum_{r=1}^{999}\left(\hat{\beta}_{r,1}^{SCF} - \frac{1}{999}\sum_{j=1}^{999}\hat{\beta}_{j,1}^{SCF}\right)^2}.$$

For ease of exposition, we often refer to the difference in point estimates between the surveys, $\hat{\mu}^{SCF} - \hat{\mu}^{SIPP}$. Since SCF and SIPP are independent samples, the standard error of this difference is

$$\sqrt{(\hat{\sigma}_E^{SIPP})^2 + (\hat{\sigma}_E^{SCF})^2}.$$

[32] When estimating standard errors for SIPP data, we apply Fay's method with a perturbation factor of $k = 0.5$ following the recommendation of U.S. Census Bureau (2001).
[33] SCF only constructs replicate weights for the first implicate of imputed data.

We occasionally find it useful to cite the ratio of a SIPP estimate to an SCF estimate, $\hat{\mu}^{SIPP}/\hat{\mu}^{SCF}$. We use the multivariate delta method to construct the standard errors, given by

$$\sqrt{\left(\frac{1}{\hat{\mu}^{SCF}}\right)^2 (\hat{\sigma}_E^{SIPP})^2 + \left(\frac{-\hat{\mu}^{SIPP}}{\hat{\mu}^{SCF\,2}}\right)^2 (\hat{\sigma}_E^{SCF})^2}.$$

5. Results

In this section, we give an overview of how the wealth data from the 2008 SIPP compares with the 2010 SCF and present possible explanations for the differences in summary statistics between the two surveys. First, we show how the net worth variables compare between SIPP and SCF and we discuss how these differences in net worth have changed since Czajka et al. (2003). Table 1 shows that median net worth in SCF is $77,006, while the estimate from SIPP is $64,699, which is about 84 percent of the SCF estimate. While the SIPP estimate is lower than its SCF analog, the point estimate of the difference is much less compared with Czajka et al. (2003). They found that for the 1998 SCF and the 6th wave of the 1996 SIPP panel, the SCF estimate for median net worth was $71,933 while the SIPP estimate was $48,566, which is about two-thirds of the SCF estimate. Similar improvements are found for estimates of mean and aggregate wealth, with the current SIPP estimates being about 75 percent of the SCF estimates, while in Czajka et al. (2003) the SIPP estimates were 49.5 percent of the SCF estimates. While this lower discrepancy for point estimates of mean and aggregate wealth could reflect improvement in SIPP data, it could also reflect our use of uncensored values.

Table 1: Overview of Net Worth Estimates

Statistic	SIPP Estimate	SCF Estimate	Difference	Difference Standard Error	SIPP/SCF Ratio	Ratio Standard Error	Czajka et al. (2003) Ratio
25th Percentile	2,317	8,362	6,045***	481	27.7	2.5	41.8
Median	64,699	77,006	12,307***	2,982	84.0	3.4	66.9
75th Percentile	260,373	300,410	40,037***	13,762	86.7	4.0	74.0
Mean	374,489	498,386	123,897***	31,105	75.1	6.0	49.5
Aggregate (Sum, in trillions)	44.3	58.6	14.3***	3.7	75.6	6.1	49.5

Note: Table gives net worth estimates from a sample of all SCF-like families in 2008 SIPP (Wave 7) and all primary economic units in 2010 SCF. SCF-like families include the primary family in a household, any unmarried partners of the household reference person, and all of that partner's children younger than age 25. SCF-like families exclude subfamilies within the primary family that are headed by someone age 25 or older and siblings and other relatives of the household reference person who are age 25 or older. The SIPP and SCF estimates are given in 2010 dollars, and the ratio is in percentage terms. The standard error for the difference was calculated using replicate weights from both surveys and the five imputation implicates for SCF. The SIPP standard errors were constructed though balanced repeated replication with Fay's adjustment factor of 0.5, and the SCF standard errors were constructed via bootstrapping. The standard error for the ratio was calculated using the delta method. Significance asterisks: *** p<.01, ** p<.05, * p<.1.

We next explore SIPP and SCF estimates throughout the wealth distribution. For the 75th percentile, the SIPP estimate is about 87 percent of the SCF estimate, while for the 25th percentile the SIPP estimate is about 28 percent of the SCF estimate. In Czajka et al. (2003), the SIPP estimate was 75 percent of the SCF estimate for the 75th percentile and 42 percent of the SCF estimate for the 25th percentile point estimate. It is unclear why the SIPP and SCF estimates are closer together for the upper tail of the wealth distribution but further apart for the lower tail.[34] The economic environment was much different for the 2008 SIPP than for the 1996 SIPP, which could affect the composition of households with net worth around the 25th, 50th, and 75th percentiles. If the SIPP estimates of net worth are different from the SCF estimates for certain

[34] Note that although the SIPP and SCF estimates of the 25th percentile of the net worth distribution are further apart than Czajka et al. (2003) documented, this does not necessarily imply that this SIPP estimate has declined in quality. Such an inference would require knowledge of the true distribution of net worth. While survey datasets likely provide information about this distribution, it is unlikely that analysts can recover the distribution itself from survey data. Administrative data on asset and debt values holds the most promise to reveal the true distribution of net worth. At present, administrative data in the United States offer information on asset incomes rather than asset and debt values. Saez and Zucman (2014) employ capitalization methods to infer the distribution of net worth based on these asset incomes. While this might yield more information about the true distribution of net worth than survey data can offer, the distribution itself remains unknown.

types of households, then changes in the composition of households at various points in the wealth distribution could affect the estimates of these percentiles. Another possible explanation is that the trends at the 25th, 50th, and 75th percentiles of net worth are driven by growing or shrinking disparities in certain asset classes across surveys. We return to this possibility later in this section.

5.1 Breakdown by Asset Type

The previous section showed how SIPP and SCF differ in key estimates of net worth. This overall discrepancy reflects differences in the data for the underlying asset and debt components. In this section, we discuss how the ownership rates and values for each asset and debt category vary between the two surveys. We discuss each asset and debt class separately, explaining how the question texts differ and why these differences might affect the data.

Table 2: Ownership Rates

Statistic	SIPP Estimate	SCF Estimate	Difference	Difference Standard Error	Czajka et al. (2003) Difference
Checking Accounts	60.4	85.1	24.7***	0.6	—
Non-Checking Bank Accounts	57.0	61.6	4.6***	0.8	—
Bank Accounts (Any)	72.7	91.6	18.8***	0.5	13.4
Bonds	2.3	1.5	-0.8***	0.2	—
Savings Bonds	10.1	12.0	1.9***	0.4	4.2
Stocks and Mutual Funds	17.3	19.5	2.2***	0.5	5.3
Business Equity (Positive)	9.2	12.2	3.0***	0.4	3.8
Other Assets	2.0	8.5	6.5***	0.4	7.6
IRA/Keogh	28.0	28.0	0.0	0.6	6.7
401(k)/Thrift	38.7	34.9	-3.8***	0.6	1.3
Retirement Account (Any)	49.5	50.4	0.9	0.7	—
Primary Residence	65.5	67.2	1.7***	0.2	-0.3
Mortgages	41.5	47.0	5.5***	0.6	1.4
Rental Properties	9.8	18.3	8.5***	0.4	6.4
Rental Property Debt	2.4	5.4	3.0***	0.3	0.9
Vehicles	83.0	86.7	3.7***	0.4	-1.5
Vehicle Debt	30.4	33.2	2.8***	0.6	-0.3
Credit Cards	38.8	39.4	0.6	0.7	-6.5
Residual Debt	21.8	27.7	5.9***	0.6	—

Note: Table gives net worth estimates from a sample of all SCF-like families in 2008 SIPP (Wave 7) and all primary economic units in 2010 SCF. SCF-like families include the primary family in a household, any unmarried partners of the household reference person, and all of that partner's children younger than age 25. SCF-like families exclude subfamilies within the primary family that are headed by someone age 25 or older and siblings and other relatives of the household reference person who are age 25 or older. The SIPP and SCF estimates are given in percentage terms. The standard error for the difference was calculated using replicate weights from both surveys and the five imputation implicates for SCF. The SIPP standard errors were constructed through balanced repeated replication with Fay's adjustment factor of 0.5, and the SCF standard errors were constructed via bootstrapping. Significance asterisks: *** p<.01, ** p<.05, * p<.1.

Table 3: Median Values Conditional on Ownership

Statistic	SIPP Estimate	SCF Estimate	Difference	Difference Standard Error	Czajka et al. (2003) Difference
Bank Accounts	2,600	4,000	1,400***	164	600
Bonds	35,000	130,680	101,800***	29,130	—
Savings Bonds	800	1,000	200	163	0
Stocks and Mutual Funds	30,000	37,400	7,400**	3,393	4,000
Business Equity (Positive)	25,000	99,800	74,800***	4,045	60,000
Other Assets	41,000	5,000	-36,000***	3,685	-21,000
IRA/Keogh	30,578	40,120	9,542***	2,853	0
401(k)/Thrift	30,000	31,200	1,200	2,311	-4,558
Retirement Account (Any)	44,567	44,000	-567	2,804	—
Primary Residence	170,000	169,800	-200	4,281	0
Mortgages	120,000	109,200	-10,800***	2,208	-3,000
Rental Properties	125,000	98,600	-26,400***	8,874	500
Rental Property Debt	125,000	97,200	-27,800***	9,358	-500
Vehicles	9,563	15,000	5,437***	293	1,725
Vehicle Debt	10,000	9,740	-260	225	-800
Credit Cards	4,000	2,612	-1,388***	172	-700
Residual Debt	10,000	10,040	40	519	—

Note: Table gives net worth estimates from a sample of all SCF-like families in 2008 SIPP (Wave 7) and all primary economic units in 2010 SCF. SCF-like families include the primary family in a household, any unmarried partners of the household reference person, and all of that partner's children younger than age 25. SCF-like families exclude subfamilies within the primary family that are headed by someone age 25 or older and siblings and other relatives of the household reference person who are age 25 or older. The SIPP and SCF estimates are given in 2010 dollars. The standard error for the difference was calculated using replicate weights from both surveys and the five imputation implicates for SCF. The SIPP standard errors were constructed through balanced repeated replication with Fay's adjustment factor of 0.5, and the SCF standard errors were constructed via bootstrapping. Significance asterisks: *** p<.01, ** p<.05, * p<.1.

Table 2 presents household-level ownership rates for each asset and debt variable, and Table 3 presents median values conditional on ownership. Overall, SCF tends to have higher ownership rates, although generally the ownership rates are quite comparable across surveys. SCF also tends to have higher values conditional on ownership. Various features of these two surveys could lead to this result. For one, SCF has many more asset and debt questions. This could generate higher ownership rates, as probing respondents with more questions about wealth might help them remember owning less salient components of their portfolio. For example, SIPP employs a residual question ("Do you own any other assets you have not yet told me about?") in the hope of capturing less common assets, such as annuities and trusts. If the

respondent's only opportunity to mention owning an obscure asset is in a residual question, then the respondent might forget to mention that asset. Given that recognition is easier than recall in general (Tourangeau 1984), requiring respondents to recall all the other assets they own rather than recognize them in a list of asset categories could produce lower ownership rates. The differential imputation techniques across surveys and the wider use of an account-by-account approach to reporting asset values might also explain the SCF-SIPP gap in median values. However, it is unclear why these differences would cause SIPP to underestimate SCF.

Bank Accounts

Next, we discuss how SIPP and SCF compare for particular asset and debt groups. For bank accounts, the largest source of discrepancy relates to the ownership rates for checking accounts.[35] The SIPP ownership rate for checking accounts is 60.4 percent, while the SCF ownership rate for checking accounts is 85.1 percent. The ownership rate for non-checking bank accounts is also lower in SIPP, but the difference is not as large compared with checking accounts. For ownership rates of any type of bank account, the SCF estimate is 18.8 percentage points higher. This is a greater point estimate of the SCF-SIPP gap than in Czajka et al. (2003), which calculated a 13.4 percentage point higher rate for SCF. For median values, the point estimate of the difference between SIPP and SCF is larger now than it was in Czajka et al. (2003). They estimate that the

[35] For our analysis, bank accounts include interest earning and regular checking accounts, savings accounts, certificates of deposit, and money market deposit accounts.

median value was $600 higher in SCF, while we estimate that the median value is $1,400 higher in SCF.[36]

Checking account ownership rates could vary across data sets for a number of possible reasons. In SIPP, there are separate questions for interest-earning checking account and non-interest earning checking accounts. One possible explanation for the discrepancy results from the wording of question about non-interest earning checking account ownership: "Did you own any checking accounts in your OWN name which did NOT earn interest? (Do not include any interest-earning checking accounts reported earlier.)" Respondents might have been confused by the qualifier "which did NOT earn interest". In this case, they might not respond affirmatively, even if they do have a checking account that pays no interest. The SCF question asks if the respondent owns a checking account without any additional qualifiers.

In addition, SIPP asks about non-interest earning checking account ownership only in occasional topical modules, while it asks about interest-earning checking account ownership at every interview. Additionally, questions about non-interest earning checking accounts occur much later in the interview than questions about ownership of interest earning checking account. When they receive the question about interest-earning checking account ownership, respondents do not know that they will also receive questions about non-interest earning checking account ownership. This gap between the two checking account questions could cause some respondents

[36] As discussed in Section 1, we do not have access to standard errors for the estimates presented in Czajka et al. (2003). Consequently, whenever relevant we compare point estimates of our results to those from Czajka et al. (2003). We make no claim about the statistical significance of these comparisons. As a result, apparent differences between our estimates and those from Czajka et al. (2003) may not be statistically significant.

to forget that they have not said "yes" to any of the checking account ownership questions, resulting in lower ownership rates in SIPP than in SCF.[37]

Retirement Accounts

The difference between SIPP and SCF ownership rates for IRAs is statistically insignificant at 27.99 percent and 28.02 percent, respectively. The point estimate of this difference is an improvement over Czajka et al. (2003), in which SCF had a 6.7 percentage point higher ownership rate. SIPP's median value for IRAs is about $10,000 less than the SCF's value ($30,600 SIPP vs. $40,120 SCF). SCF asks about the value of different types of IRAs separately (*e.g.* Roth, Roll-Over), so this difference could somehow lead to differences in median values.

As for 401(k) and other employer-sponsored retirement plans, SIPP and SCF have fairly different questions. SIPP asks respondents if they have a "401k, 403b, or thrift plan." On the other hand, SCF takes a three-pronged approach to collecting data on these plans. First, respondents answer whether they are "included in any pension, retirement, or tax-deferred savings plans connected with the job [the respondent] just told [the interviewer] about". Second, respondents answer whether they have "earned rights to any other pensions or retirement accounts from a previous employer." Third, respondents answer whether they are "currently receiving any (other) type of retirement, pension, or disability payments" or if they are "making withdrawals from a pension or retirement account".

[37] In the 2014 SIPP Panel, the question text for non-interest earning checking account ownership is simplified and placed immediately after the question about interest earning checking account ownership. These changes might reduce the discrepancy between SIPP and SCF for checking accounts.

When comparing SIPP and SCF data, Czajka et al. (2003) only consider SCF data on retirement accounts from the current job. By contrast, we include data on retirement accounts from all employers in SCF data. We argue that this yields a more even comparison because the SIPP 401(k) question elicits data on all employer-sponsored plans with a personal account balance.

Given this construction of the 401(k) variable, SIPP has a higher ownership rate (38.7 percent vs. 34.9 percent), but the difference in median values is statistically insignificant. As the structure of the 401(k) questions is very different between the two surveys, there are a number of possible reasons why SIPP has a higher ownership rate. One consistent explanation is that SCF does not use the word 401(k) in the ownership questions for employer-sponsored plans. Respondents might identify with the word "401k" but perhaps not recall that a 401(k) is classified as a retirement account. Another possibility is that respondents latch on to the word "pension" and interpret the question as asking about defined benefit plan ownership only.[38]

Finally, since respondents might be unable to distinguish types of retirement accounts, we aggregate these plans and compare the resulting estimates for SIPP and SCF. This exercise causes the disparities between the surveys to disappear. The difference in ownership rates (49.5 percent SIPP vs 50.4 percent SCF) and the difference in median values ($44,567 SIPP vs. $44,000 SCF) are both statistically insignificant. Therefore, while the surveys do have some differences for particular types of retirement accounts, it appears that both surveys do collect comparable data about retirement accounts as a whole.

Primary Residence

[38] Tourangeau et al. (2014) discuss how changing the examples provided in survey questions can have a large effect on how respondents interpret a question.

The SIPP estimates for primary residences are very close to their SCF analogs. The SIPP ownership rate is 1.7 percentage points lower (65.5 percent SIPP vs. 67.2 percent SCF), but there is no statistically significant difference in median values conditional on ownership ($170,000 SIPP vs $169,800 SCF). The point estimates of these differences in ownership rates are comparable to Czajka et al. (2003), in which SIPP had a 0.3 percentage point higher ownership rate. The median values in SIPP and SCF estimates were identical in Czajka et al. (2003). The SIPP and SCF question texts are fairly similar to each other, which could explain the very similar values across surveys. SCF asks "What is the current value of this property? I mean, without taking any outstanding loans into account, about what would it bring if it were sold today?" and SIPP asks "What is the current value of this property; that is, how much do you think it would sell for on today's market if it were for sale?" Both questions ask about value and then define value as the amount that the respondent would receive if the residence were sold today.

For home-related debt, SCF has higher ownership rates (41.5 percent SIPP vs. 47.0 percent SCF) but lower median values ($120,000 SIPP vs. $109,200 SCF).[39] One consistent explanation for this finding is that SCF has separate questions on home-equity loans, while the SIPP question text primarily mentions mortgages. The SIPP question asks if the respondent has any "mortgages or loans" for the property without mentioning any examples. Respondents might not consider a home-equity loan to be a "mortgage or loan." However, many people who have home-equity loans also have mortgages, so it is

[39] The estimated ownership rate was calculated for our entire sample, including SCF-like families that were not homeowners. The estimated median value was calculated for the sample of SCF-like families who had home-related debt.

unclear how the separate question on home-equity loans would explain the observed differences in ownership rate and value.

Vehicle Values

The SIPP estimate of median vehicle value is about $5,400 less than the SCF estimate ($9,600 SIPP vs. $15,000 SCF). The point estimate of this disparity is larger than the $1,725 SCF-SIPP gap documented by Czajka et al. (2003). Recall that both surveys follow similar procedures to assign values to cars, vans, and trucks. For recreational vehicles, such as boats and motorcycles, both surveys ask respondents to estimate the vehicle values. Even with these similarities, there are a variety of methodological differences between the surveys which could result in SIPP having a lower estimate. For one, SIPP uses average trade-in values, while SCF uses the average retail values. Trade-in values are lower than retail values typically. A second difference is how SIPP incorporates depreciation. In the 2008 Panel, SIPP assigned vehicle values based on NADA data at the start of the panel. Rather than repeating this process for later waves of the panel, a constant and uniform rate of depreciation was applied for all vehicles to construct vehicle values for those waves.[40] SCF, on the other hand, directly referenced NADA assessments for each survey. These differences would lead to the observed differences in vehicle value if the constant depreciation rate assumed by SIPP overestimates the true average depreciation rate. Third, the incorporation of assessments for vehicles between 7 and 20 years old in the 2008 SIPP panel might explain the wider SCF-SIPP gap in our results relative to Czajka et al. (2003). If the average values previously imputed based on model year tended to overestimate the value of older vehicles, the less frequent imputation in the 2008 SIPP panel

[40] The 2014 SIPP Panel will directly reference NADA assessments for each wave.

could yield a lower median vehicle value relative to SCF than was present in the 1996 SIPP panel.

Rental Properties

SIPP has lower ownership rates for rental properties (9.8 percent SIPP vs 18.3 percent SCF) but higher value conditional on ownership ($125,000 SIPP vs. $98,600 SCF). The differences potentially are due to the examples of rental properties that SCF gives. For instance, the SCF question text lists timeshares as an example of a rental property, while the SIPP question does not list any examples. If survey respondents do not associate timeshares with rental property unless prompted, and if a timeshare is less valuable than other types of rental property on average, this could lead to lower ownership rates but higher value conditional on ownership.[41]

Bonds

SIPP and SCF have comparable ownership rates and similar median values for U.S. Savings Bonds. The SIPP ownership rate is 10.1 percent and the SCF rate is 12.0 percent. The difference in median value between these datasets is statistically insignificant ($800 SIPP vs $1,000 SCF). This comparability might be due to the high similarity in question text. For municipal and corporate bonds, SIPP has higher ownership rates (2.3 percent SIPP vs 1.5 percent SCF) but substantially lower value conditional on ownership. The SIPP median is $35,000, while the SCF median is $130,680. The reasons for the large discrepancy are unclear. SCF asks whether the respondent owns any bonds and then asks about ownership of particular types of bonds, including municipal and corporate bonds as well as mortgage-backed bonds and foreign

[41] In the 2014 SIPP Panel, examples of rental properties were added to the question text.

bonds. The SIPP question asks whether the respondent owns any municipal or corporate bonds, and does not ask about other types of bonds collected by SCF. The additional questions in SCF might explain part of the difference in values. Because such a small proportion of the population owns bonds, the differential coverage of high-income households could also explain part of the SCF-SIPP gap. In SCF, 55.5 percent of bond owners have net worth over $2 million. Because of this, sampling error in the proportion of high wealth households who own bonds could have especially large effects on estimated median values conditional on ownership.

Stocks and Mutual Funds

SCF has higher ownership rates for directly-owned stocks and mutual funds, and higher medians as well.[42] The SIPP ownership rate is 17.3 percent and the SCF rate is 19.5 percent. The SIPP median is $30,000 and the SCF median is $37,400. The reasons for this are unclear. SIPP asks whether the respondent owns any "stocks" and whether they own any "mutual funds". SCF asks whether the respondent has any "mutual funds or hedge funds?" or owns any "stock which is publicly traded?" This variation in wording could change responses, but it is unclear why this would lead to a higher ownership rate and value for SCF.

Business Equity

For business equity, SIPP has a lower ownership rate (9.2 percent SIPP vs. 12.2 percent SCF) and a lower median value ($25,000 SIPP vs. $99,800 SCF).[43] In Czajka et al. (2003), SCF had a median value point estimate that was $60,000 higher. To collect business data, both surveys use questions which vary in structure and placement in the survey. SIPP asks about business ownership first during the questions on employment status. SCF, on the other hand,

[42] These are stocks and shares in mutual funds a respondent owns outside of any retirement account.
[43] Czajka et al. (2003) discuss that SCF asks respondents how much they would receive if they sold their share of a business. By construction, this variable cannot be negative. Because of this, they transform the SIPP variable as the business value minus the business debt, and they bound this number from below by zero.

asks the business questions in a similar manner to other asset questions. Another notable difference is that 2008 SIPP does not ask about businesses owned as an investment but actively managed.[44] Since respondents who own such businesses are most likely high individuals, this could explain the higher estimated value in SCF.

Other Assets

For the other asset category, SIPP has a lower ownership rate (2.0 percent SIPP vs 8.5 percent SCF) but a higher value ($41,000 SIPP vs. $5,000 SCF). The SIPP question asks if the respondent owns "any other financial investments", while SCF asks if the respondent owns "any other substantial assets that I haven't already recorded for example, artwork, precious metals, antiques…" The SIPP help screen for the other assets question does provide examples, but help screens in SIPP are used infrequently.[45] Moreover, respondents are unlikely to recognize their assets in this help screen as the list consists of relatively uncommon assets, such as "a non-corporate business venture managed by others (*e.g.* a limited partnership), investments in a corporation, and … part-ownership of a race horse." Respondents might not consider assets that do not generate income to be financial assets unless primed to think of these objects as assets. Such assets might have lower values than financial assets that do generate income. This would be consistent with a lower ownership rates yet a higher value conditional on ownership in SIPP relative to SCF.

Credit Cards

[44] The 2014 SIPP Panel introduced questions about non-actively managed businesses

[45] To our knowledge, no evidence exists regarding the frequency with which interviewers access help screens in the 2008 panel of SIPP. Fee, Campanello, and Marlay (2014) document that interviewers access help screens infrequently in wave 1 of the 2014 SIPP panel.

SIPP and SCF have similar ownership rates for credit card debt (38.8 percent SIPP vs. 39.4 percent SCF), with a difference that is not statistically significant. This point estimate is different from Czajka et al. (2003), in which SIPP had a 6.5 percentage point higher ownership rate. SIPP has a higher median, with a value of $4,000 compared to SCF's $2,612. The higher median value could be due to the timeframe referenced in the question. SCF asks "after the last payment was made, what was the total balance still owed?" The SIPP analog asks what the amount was "as of the last day of the reference period."[46] Respondents might interpret the SIPP question as asking for the credit card balance at the end of the reference period, regardless of whether that balance will be erased with the next payment. This is consistent with a larger median credit card debt in SIPP than in SCF to the extent that the time of the last payment does not align with the end of the reference period. However, this difference in timing should also increase ownership rates in the SIPP. Respondents who have a credit card balance at the end of the reference period but who pay the balance off completely would be classified as credit card debt owners by SIPP but not by SCF. Our finding that ownership rates are not statistically different between the surveys does not support that hypothesis.

Residual Debt

Both SIPP and SCF have an "Other Loan" and "Other Debt" question, which asks respondents to provide the value of any other loans or debt that the respondent has not already reported. When comparing the SIPP "Other Loan" and "Other Debt" data to their SCF analogs, we combine these two SIPP variables. We also combine SCF data on other debt, other loans, and forms of debt about which SIPP does not ask respondents to report separate values. Student loans, home-improvement loans, lines of credit besides credit cards, and other debt from a

[46]The ownership question for credit card debt also mentions the last day of the reference period, asking "As of the last day of the reference period, did ... owe any money for store bills or credit card bills?"

property purchase all fit into this category. Some of these types of debt, such as student loans, are given as examples in SIPP's "other debt" question.

Our combination of the "Other Loan" and "Other Debt" is in contrast with Czajka et al. (2003), who consider these variables separately. We combine these two variables because the "Other Loan" question differs between the surveys.[47] In addition, it is unclear whether some of the additional SCF debt variables should be placed in the "Other Loan" or "Other Debt" category.[48] For this residual debt variable, SCF has higher ownership rates (21.8 percent SIPP vs. 27.7 percent SCF), but the median values are not statistically different from each other ($10,000 SIPP vs. $10,040 SCF). The difference in ownership rates might be due to the additional questions in SCF which allow respondents to recognize rather than recall which types of debt they hold.

[47] The SCF "Other Loan" question asks respondents whether they "owe any money or have any other loans for any reason," while the SIPP question asks if respondents whether they "owe any money for loans obtained through a bank or credit union," which has an additional qualifier for the source of the other loan that SCF does not have. This additional qualifier might yield uneven comparisons.

[48] For example, SIPP gives student loans as an example in its "Other Debt" question. However, SIPP's "Other Loan" question asks about loans from banks, which some respondents might interpret as asking about their student loans.

Table 4: Ownership Rates By Net Worth Percentiles

Asset	25th Percentile		50th Percentile		75th Percentile	
	Rate	S.E.	Rate	S.E.	Rate	S.E.
Bank Accounts (Any)	61.0	0.8	75.8	0.7	85.0	0.6
Bonds	0.1	0.0	0.7	0.1	2.4	0.2
Savings Bonds	3.0	0.2	8.0	0.5	16.0	0.6
Stocks and Mutual Funds	2.7	0.2	11.6	0.5	27.4	0.7
Business Equity (Positive)	3.3	0.3	8.2	0.5	12.2	0.5
Other Assets	0.1	0.1	1.5	0.2	3.2	0.3
Retirement Account (Any)	21.6	0.7	51.2	0.9	71.3	0.7
Primary Residence	18.8	0.7	84.7	0.6	94.5	0.4
Mortgages	13.9	0.6	55.9	0.8	52.3	0.7
Rental Properties	0.9	0.1	5.2	0.4	16.0	0.6
Rental Property Debt	0.2	0.1	1.3	0.2	3.5	0.3
Vehicles	85.6	0.6	87.8	0.6	91.6	0.4
Vehicle Debt	24.0	0.7	35.0	0.9	30.9	0.7
Credit Cards	25.1	0.7	41.7	0.9	40.7	0.8
Residual Debt	13.8	0.5	23.1	0.7	15.8	0.6

Note: Table gives ownership rates of assets for households around the 25th, 50th, and 75th percentiles of the net worth distribution from a sample of all SCF-like families in 2008 SIPP (Wave 7). SCF-like families include the primary family in a household, any unmarried partners of the household reference person, and all of that partner's children younger than age 25. SCF-like families exclude subfamilies within the primary family that are headed by someone age 25 or older and siblings and other relatives of the household reference person who are age 25 or older. We construct the ownership rates in this table using only households within ±5 percentiles of a given net worth percentile. We weighted each household equally within each 10 percentile band. The standard errors were constructed through balanced repeated replication with Fay's adjustment factor of 0.5.

Ownership Rates by Percentile in Net Worth Distribution

The trends in how SIPP and SCF estimates compare by asset class established above could in part account for the trends in how SIPP and SCF estimates of total net worth compare at the 25th, 50th, and 75th percentiles of the net worth distribution. For example, the point estimate of the SCF-SIPP gap between median estimates of both bank account values and vehicle values conditional on ownership has increased since Czajka et al. (2003). If these assets comprise a large proportion of net worth for households around the 25th percentile of the net worth distribution, then the trends for these underlying assets could explain the increased SCF-SIPP gap at this area of the net worth distribution. To examine this hypothesis, Table 4 shows how ownership rates by asset class vary across the net worth distribution in SIPP. Table 4 shows that bank accounts and vehicles are commonly owned by households around the 25th percentile

of the net worth distribution. This suggests that the larger point estimate of the SCF-SIPP gap in median bank account and vehicle values since Czajka et al. (2003) helps to explain the larger point estimate of the SCF-SIPP gap in the 25th percentile of the net worth distribution since Czajka et al. (2003).

Table 4 might also explain in part why in the cross-section we find a closer correspondence between SIPP and SCF at the 50th and 75th percentiles than we do at the 25th percentile. While ownership rates for all assets increase between the 25th and 50th percentiles of the wealth distribution, some ownership rates increase more than others do. For example, ownership of vehicles only increases from 85.6 to 87.8 percent between the 25th and 50th net worth percentiles. By contrast, ownership of primary residences increases from 18.8 to 84.7 percent and ownership of retirement accounts increases from 21.6 to 51.2 percent. Table 3 demonstrates that there is no statistical difference in median primary residence values and median retirement account values between SCF and SIPP. This difference in the average portfolio composition at the 25th and 50th percentiles of the net worth distribution suggests that variation in ownership rates potentially explains part of the closer correspondence between SIPP and SCF for higher net worth percentiles.

Summary of Asset and Debt Analysis

In Section 5.1, we discussed how ownership rates and median values of asset and debt categories compare between the 2008 SIPP and 2010 SCF. When possible, we argue how these disparities for given asset and debt variables could result from question text or other survey design differences between the SIPP and SCF. We believe these analyses help further explain why SIPP and SCF have different estimates for net worth percentiles. To the extent that these discrepancies stem from question text or other

survey design differences, our investigation gives guidance to survey methodologists about how to design wealth questions. One as yet unresolved question is whether these question text differences contributed to the changes in net worth estimates over time that we have documented. Between the 1996 and 2008 SIPP Panels, there were some changes in how asset income was collected and dependent interviewing was introduced to collect asset ownership data in subsequent interviews, but there were very few question text changes to the asset ownership and value questions.[49] Consequently, while these question text differences may help explain the current cross-sectional difference between the SIPP and SCF net worth estimates, they do not give guidance for why these net worth estimates have changed over time. More promising potential sources of these time trends include the changes implemented on the basis of Czajka et al. (2003) and our use of uncensored wealth amounts to derive estimates.

5.2 Asset and Debt Comparisons

Up to now, we have shown how SIPP and SCF wealth estimates compare in aggregate and within asset and debt categories. Next, we explore how well correlated households' assets and debt are to each other. Table 5 presents summary statistics of total asset values and debt values as well as correlations between certain variables. We exclude households with net worth over $2 million to mitigate the effect of outliers in our analyses. Czajka et al. (2003) offered comparisons between total assets and total debt in order to investigate further the differences in net worth estimates. They find that SIPP matches SCF estimates of mean assets and debt well, with the SIPP estimate of mean assets being 79.2 percent of the SCF estimate in 1998 and the SIPP estimate of mean debt being 99.5 percent of the SCF estimate in 1998 for households with

[49] See Moore and Griffiths (2003) for a detailed discussion on the changes made to the SIPP Asset Income and Ownership questions between the 2001 and 2004 Panels.

net worth under $2 million. In the 2008 Panel, we find that the ratio of point estimates for mean assets is higher, with the SIPP estimate being 89.4 percent of the SCF estimate. The SIPP estimate of mean debt in the 2008 Panel is 100 percent of the SCF estimate, which is similar to the point estimates from Czajka et al. (2003). This shows that SIPP and SCF continue to compare well with respect to mean debt, and the point estimate for assets has improved over time.[50]

Table 5: Asset and Debt Comparisons (Excluding High-Wealth Households)

Statistic	SIPP Estimate	SCF Estimate	Difference	Difference Standard Error	Ratio SIPP/SCF	Ratio Standard Error	Czajka et al. (2003) Difference
Asset Mean	267,813	299,681	31,868***	5,971	89.4	1.8	44,369
Debt Mean	85,400	85,404	4.0	2,991	100.0	3.5	216.0
Asset & Debt Correlation	23.5	53.7	30.3***	7.9	—	—	—
Primary Residence Value & Debt Correlation	50.6	72.6	22.0***	6.5	—	—	—
Vehicle Value & Debt Correlation	55.5	50.3	-5.2	5.4	—	—	—
Rental Property Value & Debt Correlation	77.1	39.3	-34.8**	15.9	—	—	—

Note: Table gives net worth estimates from a sample of all SCF-like families in 2008 SIPP (Wave 7) and all primary economic units in 2010 SCF. SCF-like families include the primary family in a household, any unmarried partners of the household reference person, and all of that partner's children younger than age 25. SCF-like families exclude subfamilies within the primary family that are headed by someone age 25 or older and siblings and other relatives of the household reference person who are age 25 or older. The SIPP and SCF estimates for Asset & Debt Mean are expressed in 2010 dollars, and the correlations are expressed in percentages. All statistics exclude observations with net worth over $2 million. For the Primary Residence, Vehicle, and Rental Property Correlations, we condition on both the value and debt variables being greater than zero. The standard error for the difference was calculated using replicate weights from both surveys and the five imputation implicates for SCF. The SIPP standard errors were constructed through balanced repeated replication with Fay's adjustment factor of 0.5, and the SCF standard errors were constructed via bootstrapping. The standard error for the ratio was calculated using the delta method. Significance asterisks: *** p<.01, ** p<.05, * p<.1.

[50] Czajka et al. (2003) also created estimates of mean asset and debt values including families with more than $2 million in net worth. SIPP and SCF estimates compared less well for this sample, especially for asset values. We also computed mean asset and debt values including families with more than $2 million in net worth. We find that the point estimate of the SCF-SIPP gap has narrowed since Czajka et al. (2003). Estimates are available upon request.

However, Czajka et al. (2003) found that the correlation between asset values and debt values in SIPP was very low compared to SCF, which could account for some of the SIPP-SCF gap in net worth estimates. For example, if SIPP imputes mortgage values without taking into account the value of the house, then SIPP could have a sizable difference in median net worth relative to SCF even if the median asset values and debt values are similar across the two surveys. Using the entire sample from both surveys, the 1998 SCF had a correlation between total assets and total debt of 0.401, while SIPP's correlation for waves around the 1998 calendar year were 0.066 in wave 6 of the 1996 Panel and 0.118 in wave 9 of the 1996 Panel. The Census Bureau has since modified its imputation method for some asset and debt variables to improve their correlation. We find that excluding high wealth households, the correlation for SIPP is 0.234 and the SCF estimate is 0.537. We exclude high wealth households because it appears that this correlation is particularly sensitive to outliers. Therefore, the low point estimate of correlations found in Czajka et al. (2003) for SIPP might have been driven by outliers rather than a low quality of SIPP wealth data. For example, SIPP's correlation for our entire sample is only 0.020. Recall that the Census Bureau implemented the change recommended by Czajka et al. (2003) of imputing home values and home debts jointly in the hope of improving the correlation between asset values and debt values. Our finding that the point estimate of this correlation for the entire sample has declined suggests that this change was insufficient to increase the correlation for the entire sample.

To decompose this correlation further, we examine the correlation between primary residence values and mortgage debt, vehicle values and vehicle debt, and rental property values and debt. We find that the SIPP correlation for primary residence values and debt is lower than the SCF correlation, while the SIPP correlation for vehicles and rental properties is higher than

the SCF estimate. Home equity is often a large portion of a household's net worth. Consequently, the discrepancy between the correlation of primary residence values and mortgage values in SIPP and SCF is likely one of the driving factors for the discrepancy between the correlation of overall asset values and overall debt values in SIPP and SCF.

5.3 High Wealth Analysis

Table 6: Net Worth Estimates for High Wealth Analysis

Sample: Statistic	SIPP Estimate	SCF Estimate	Difference	Difference Standard Error	Czajka et al. (2003) Difference
High-Wealth HH: Net Worth Mean (in millions)	11.7	6.6	-5.1***	1.7	2.1
Non-High-Wealth HH: Net Worth Mean	182,413	217,901	35,489***	5,550	44,154
High-Wealth HH: Net Worth Sum (in trillions)	23.1	34.1	11.0***	3.7	10.4
Non-High-Wealth HH: Net Worth Sum (in trillions)	21.2	24.5	3.3***	0.6	4.3
Proportion of High-Wealth HH in Sample	1.7	4.4	2.8***	0.3	1.4
Unweighted Sample Size of High-Wealth HH	550	1,082	—	—	—

Note: Table gives net worth estimates from a sample of all SCF-like families in 2008 SIPP (Wave 7) and all primary economic units in 2010 SCF. SCF-like families include the primary family in a household, any unmarried partners of the household reference person, and all of that partner's children younger than age 25. SCF-like families exclude subfamilies within the primary family that are headed by someone age 25 or older and siblings and other relatives of the household reference person who are age 25 or older. The statistics on net worth are expressed in 2010 dollars, and the proportion is expressed in percentages. In this table, a high-wealth household is a household with net worth over $2 million. For the proportion of high-wealth households, the ratio of the SCF estimate to the SIPP estimate is 2.66, with a standard error of 0.19 as constructed by the delta method. The standard error for the difference was calculated using replicate weights from both surveys and the five imputation implicates for SCF. The SIPP standard errors were constructed through balanced repeated replication with Fay's adjustment factor of 0.5, and the SCF standard errors were constructed via bootstrapping. Significance asterisks: *** p<.01, ** p<.05, * p<.1.

One use of wealth data is measuring wealth inequality. To understand how we might expect SIPP and SCF estimates of inequality to compare, we analyze aggregate and mean net worth of high wealth households. Given the highly skewed nature of the wealth distribution, we expect differences in SCF and SIPP estimates for the upper tail of the wealth distribution to drive differences in wealth inequality estimates. SCF oversamples high-income households while SIPP oversamples low-income areas, so SCF is inherently designed to obtain more representative wealth estimates for the upper tail than SIPP.

Nevertheless, many researchers are interested in wealth inequality and aggregate wealth, so it is important to investigate how well the SIPP estimates of the net worth of high-wealth households correspond to their SCF analogs.

Table 6 presents mean and aggregate wealth, both for higher wealth households and lower wealth households. As in Czajka et al. (2003), we classify a household as high wealth if that household's net worth is over $2 million dollars. There are 550 unweighted high wealth households in the SIPP sample and 1,082 in the SCF sample.[51] Therefore, even though SCF oversamples high-income households, the large sample size of SIPP somewhat mitigates this coverage difference. The estimated proportion of high wealth households in the U.S. population is 1.7 percent for SIPP and 4.4 percent for SCF. In Czajka et al. (2003), the estimated proportion of high wealth households was 1.8 percent in SCF vs. 0.3 percent in SIPP. While the point estimate of the gap between the SIPP and SCF estimates has increased in percentage points (1.4 for Czajka et al. (2003) vs. 2.8 for our estimates), the point estimate of the ratio of the SCF estimate to the SIPP estimate has gone down (5.3 for Czajka et al. (2003) vs. 2.7 for our estimate). Therefore, in certain respects, the SIPP estimate of the proportion of high wealth households has improved. However, any improvement is likely due to our use of uncensored values, at least in part.

The SIPP estimates of mean and aggregate net worth are lower than their SCF analogs for most estimates. However, SIPP has a *higher* estimate of mean net worth for high wealth households ($11.7 million for SIPP vs. $6.6 million for SCF). The reasons for this are unclear,

[51] Note that we classify households as high wealth using uncensored SIPP data but censored SCF data. These counts of high wealth sample households might vary when we compute net worth using censored data for both surveys. However, Board of Governors of the Federal Reserve System (2011) note that the SCF censoring procedure is designed "to ensure that any distortions induced in key population statistics would be minimal," so our SCF estimates might be similar to those obtained with uncensored data.

but could be due to sampling error. With so few wealthy households, each response has an especially large impact on estimates of aggregate and mean wealth for this subpopulation.

5.4 Implication for Racial Wealth Inequality

Many analysts are interested in how wealth varies across racial groups (e.g. National Urban League 2015, Altonji and Doraszelski 2005). In Table 7, we analyze how wealth varies between White and Black households.[52] Overall, the wealth gap is similar for SIPP and SCF. The SIPP estimate of the median net worth of White households is about $101,600, while SCF estimates it at about $104,600, a difference that is statistically insignificant. For Blacks, the SIPP estimate of median net worth is about $5,000, while the SCF estimate is about $15,600. Thus, the difference in wealth between Black and White households is $96,600 in SIPP and $89,100 in SCF. The difference in these differences across surveys of -$7,531 is not statistically significant. In other words, there is no statistically significant difference in the wealth gap as measured by the two surveys. This suggests that even though the two surveys that we examine yield different estimates of key statistics, these differences have no implications for estimates of median wealth differences for Black and White households.

[52] We define the race of the household by the race of the household reference person.

Table 7: Wealth by Race

Statistic	SIPP Estimate	SIPP Standard Error	SCF Estimate	SCF Standard Error	Difference	Difference Standard Error	Czajka et al. (2003) Difference
White Median	101,618	1,711	104,638	5,735	3,020	5,985	24,500
Black Median	5,003	486	15,554	1,606	10,551***	1,678	9,400
White - Black Difference	96,615***	1,730	89,084***	5,706	-7,531	5,962	15,100

Note: Table gives net worth estimates from a sample of all SCF-like families in 2008 SIPP (Wave 7) and all primary economic units in 2010 SCF. SCF-like families include the primary family in a household, any unmarried partners of the household reference person, and all of that partner's children younger than age 25. SCF-like families exclude subfamilies within the primary family that are headed by someone age 25 or older and siblings and other relatives of the household reference person who are age 25 or older. The SIPP and SCF estimates are given in 2010 dollars. The standard error for the difference was calculated using replicate weights from both surveys and the five imputation implicates for SCF. The SIPP standard errors were constructed through balanced repeated replication with Fay's adjustment factor of 0.5, and the SCF standard errors were constructed via bootstrapping. The standard errors for the difference between black and white households for each survey do not incorporate the covariance between the estimates within each survey. The standard error for the ratio was calculated using the delta method. Significance asterisks: *** p<.01, ** p<.05, * p<.1.

The point estimate of this difference-in-differences is an improvement over the results presented in in Czajka et al. (2003). They estimate a wealth gap in SIPP of $64,300 but a wealth gap of $79,400 for SCF, with a difference-in-differences of $15,100. These improvements appear to be driven by the improved correspondence between net worth estimates for White households across surveys. In Czajka et al. (2003), the gap in net worth estimates between the two surveys for White households was $24,500, while we find a current gap of only $3,020. For Black households, Czajka et al. (2003) estimated that the gap was $9,400, which is not statistically different from our estimate of $10,551.[53]

The improvement for White households is potentially related to the evidence in Table 1 that the gap between SIPP and SCF net worth estimates has narrowed for the 75th percentile.

[53] Note that even though we do not have access to standard errors for the estimates in Czajka et al. (2003), we can infer that our estimates of the SCF-SIPP gap in median wealth of Black households are not statistically different. Specifically, we test for the equality of these two estimates by treating the estimate in Czajka et al. (2003) as a constant. This test assumes incorrectly that the estimate in Czajka et al. (2003) has a standard error of zero. We should instead construct the difference of the two estimates and the standard error of that difference, testing the null hypothesis that the difference is equal to zero. The standard error of our estimate alone necessarily understates the standard error of the difference between our estimate and that of Czajka et al. (2003). Therefore, if we fail to reject the null hypothesis when treating the Czajka et al. (2003) estimate as a constant, then we must also fail to reject the null hypothesis of an equivalent test that treats the Czajka et al. (2003) estimate as uncertain.

Vornovitsky, Gottschalck, and Smith (2014) document that White individuals tend to have higher wealth than Black individuals do across the wealth distribution. This suggests that White households are more likely to fall at the 75th percentile of the wealth distribution than Black households. However, Table 1 also shows that the gap between SIPP and SCF net worth estimates of the 25th percentile has widened. If Black households are more likely to fall at the 25th percentile of the wealth distribution than White households, we would expect to see the SCF-SIPP gap for Black households widen as well, yet we observe no difference.

6. Conclusion

In this paper, we compare various wealth estimates between the 2010 Survey of Consumer Finances and wave 7 of the 2008 panel of the Survey of Income and Program Participation. Czajka, Jacobson, and Cody (2003) issued recommendations for improving SIPP wealth data after documenting considerable gaps between wealth estimates from the 1998 SCF and wave 9 of the 1996 SIPP panel. We provide the first evaluation of the extent to which SIPP wealth estimates have improved relative to SCF since implementing some of these recommendations. Our methodology strongly resembles that of Czajka et al. (2003) for the sake of comparability.

We find mixed evidence regarding the comparability of SIPP and SCF estimates. The difference between some key point estimates in SCF and SIPP has narrowed compared to Czajka et al. (2003). Specifically, SIPP mean net worth increased from approximately half to approximately three-quarters of the corresponding estimate in SCF, while median net worth in SIPP increased from roughly two-thirds to 84 percent of its SCF analog. Nevertheless, the

difference between other key wealth estimates in SCF and SIPP has widened. For example, the 25th percentile of the net worth distribution in SIPP declined from about 42 percent to about 28 percent of its SCF analog. Within asset and debt categories, SIPP and SCF continue to compare well with respect to home values, savings bond values, 401(k) account values, and vehicle debt relatively well. However, the SCF-SIPP gap has grown for bank account values, vehicle values, and mortgage values. We find that while SIPP continues to measure the mean debt value relatively well, and the SIPP estimate of the mean asset value compares more favorably to SCF, the correlation of asset values and debt values for the full sample has declined. We also show that the gap between SCF and SIPP estimates narrows for mean and aggregate net worth and the correlation of asset values and debt values when we exclude wealthy families from our sample. Finally, we conclude that despite the differences in wealth estimates across surveys, there is no statistical difference across surveys in an estimate of the Black-White wealth gap.

We offer several explanations for why SIPP and SCF data might deliver different estimates. First, respondents might report better quality data about asset ownership by recognizing rather than recalling the assets that they own. Second, we argue that small variations in question text wording condition how respondents interpret questions, and these varying interpretations yield differences in wealth estimates. Finally, we propose that simpler questions elicit better quality answers. These conclusions support hypotheses that have been offered by the survey methodology literature, and they are especially informative for producers and users of wealth data.

The scope for future work is tremendous given the forthcoming 2014 SIPP panel. As with much of the survey, the wealth data have been redesigned with an eye towards improving quality. The 2014 panel continues to incorporate the suggestions of Czajka et al. (2003) by

editing home values and mortgage debt jointly, utilizing assessed vehicle values to assign average trade-in values for vehicles up to 20 years old, and comprehensively reevaluating hot decks.

Moreover, the 2014 panel has implemented various additional initiatives which were originally recommended by Czajka et al. (2003). First, SIPP now collects the value of annuities and trusts. Second, SIPP incorporates debts into the imputation of assets and vice versa for more asset categories, including other real estate and rental properties. Third, the 2014 panel has overhauled its approach to assigning vehicle values by updating value assessments rather than assuming a fixed depreciation rate, applying hot deck imputation more broadly to yield a distribution of values, and using more comparable vehicles to impute average trade-in values for newer vehicles when no assessment is available. Fourth, the 2014 panel publishes means of asset and debt values above the topcode threshold, allowing public data users to estimate aggregate and mean net worth more precisely. Finally, non-response range follow-up questions have been introduced for various asset and debt categories, and the range options have been evaluated for consistency and revised where necessary.

The 2014 SIPP panel will also introduce changes which Czajka et al. (2003) did not discuss. For example, SIPP incorporates incomes into the imputation of asset values and vice versa for more asset categories. Second, the 2014 panel collects the market value of educational savings accounts and non-actively managed businesses for the first time. Third, the 2014 panel collects both the face value and cash value of life insurance policies in order to improve the data on cash values for life insurance. The 2008 panel asked respondents about cash values only, but Gottschalck and Moore (2007) argue that the reported cash values actually reflect a mix of cash and face values. Finally, the text for questions relating to other financial investments has been

revised to prime respondents better with examples of these assets in the hope of closing the gap between SIPP and SCF in the ownership rate and aggregate value of these assets.

The substantial changes to SIPP wealth data for the 2014 panel underscore the importance of future evaluations of the extent to which these initiatives have closed the persistent gap with SCF wealth data. These evaluations will also have broader implications, informing data producers and users about how changes in survey question text and imputation procedures affect wealth data quality.

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