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Do the Rich Really Save More? Answering an Old Question Using the Survey of Consumer Finances with Direct Measures of Lifetime Earnings and an Expanded Wealth Concept*

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The question of whether affluent households save at a higher rate than other parts of the distribution has been asked by economists on numerous occasions since the 1950s. It is standard in this research to define affluent, or "rich," households as those with high lifetime earnings or income to better ground the empirical question in relevant theory. However, results in the literature are mixed regarding whether rich households in fact save more than others, with some studies suggesting a generally flat saving-rate profile across the distribution and others supporting the notion that the rich do indeed save more. Many empirical papers do not include direct measures of lifetime earnings, relying instead on proxies. Additionally, few include the full range of assets that low- and middle-income households depend on to finance their retirement, and even fewer use data that include sufficient samples of households that are in the extreme upper tails of the wealth or income distribution. The primary contribution of this paper is to combine all three in an examination of U.S. households. We use the 2022 Survey of Consumer Finances (SCF), which oversamples high-net-worth households, in combination with direct estimation of lifetime earnings, to explore wealth-to-lifetime-earnings ratios—the cumulative impact of saving over time—across the lifetime earnings distribution. In addition, we use an expanded measure of wealth that includes the asset value of defined benefit pensions and Social Security, the public pension program. We find a steep gradient of saving when defining rich households by their lifetime earnings, which crucially includes business income in household earnings. The steepness, though, does not manifest until the top deciles of lifetime earnings. Recent research draws attention to the outsized contribution of capital gains in driving wealth accumulation of the rich; when we remove unrealized capital gains from our metrics, however, the gradient of the wealth–lifetime-earnings ratio is reduced but not removed.

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1. Introduction

The question of whether the "rich"—typically identified as those with high levels of lifetime income or earnings—save a greater share of their income than less affluent households is relevant to several important policy issues and to economic theory. For one, the answer to the question helps us better understand the root causes of inequalities in wealth and economic well-being across households. In an era when discussions of inequality are ubiquitous in media, research, and politics, understanding the factors driving observed wealth disparities has emerged as a first-order question. Does the variation in wealth emerge primarily from differences in lifetime earnings (LE) across households? Or does a higher rate of saving or investing play a larger role? More generally, these questions also have direct application to optimal tax theory, specifically whether capital income should be taxed. Some work in this area (for example, Saez 2002) argues that if high-ability individuals save more, then taxation of capital income can be welfare-improving. In addition, empirical estimates of differential saving behavior across the distribution can be helpful for parametrizing heterogeneous agent macro models.

Most of this literature references Friedman's (1957a, 1957b) original research and discussion, highlighting the shortcomings of the intuitive link between affluence and rate of saving based on observations of a single year of current period income. We expect households to smooth consumption over time and save at higher rates during periods when their incomes are relatively high and at lower rates when their incomes are relatively low. Given these theoretical predictions, the underlying question about the relationship between resources and saving cannot be answered without using a lifetime resource measure.

However, measuring this seemingly simple and fundamental relationship is complicated by the fact that reliable measures of saving and lifetime earnings are hard to find. Researchers have proposed a variety of approaches to overcoming measurement and data-availability problems—which have yielded a wide range of answers to the question of whether the "rich save more." Some studies report a positive relationship between the rate of saving and lifetime income/earnings (for example, Dynan, Skinner, and Zeldes 2004), while others suggest a "U-shaped" pattern to saving across the income distribution (for example, Bozio et al. 2017). Still others conclude that the rate of active saving flattens or even falls as you rise in the distribution of economic affluence (Gustman and Steinmeier 1999; Alan, Atalay, and Crossley 2015; Bach,

Calvet, and Sodini 2018; Fagereng et al. 2021 [revised 2025]), and even others find that the relationship between the rate of saving and lifetime income/earnings appears flat or U-shaped when using means but upward-sloping when using medians (Venti and Wise 1998; Hendricks 2007.)[1]

In addition to these conflicting findings, each paper in this literature faces many data and/or methodological challenges. In our analysis, we comprehensively address these challenges, including the concept of wealth reflected in household "savings" and the merits of the "lifetime resources" measure used to determine the rate of saving *and* to rank households. Further, the data we use—from the Federal Reserve Board's triennial Survey of Consumer Finances (SCF)—includes an oversample of high-net-worth households, allowing us to measure the behavior of households in the extreme tails of the distribution. Finally, earlier papers exploring the case of the Unites States rely on data that are 20 (Hendricks 2007) to 30 (Dynan et al. 2004; Venti and Wise 1998; Gustman and Steinmeier 1999) years old, while we revisit this question for the United States using recent data.[2]

Most previous research comparing saving behavior across the distribution excludes important sources of savings and wealth, namely defined benefit (DB) pensions and Social Security, which overwhelmingly accrue to households that are not rich. Currently, total DB pension assets are on par with those held in defined contribution (DC) pension plans; each accounts for about 15 percent of aggregate household wealth. While DB plans are rare among low earners and accrue primarily to households in the top half of the earnings distribution but below the highest rungs (Devlin-Foltz, Henriques, and Sabelhaus 2016).[3] Social Security represents the single-largest asset for a large majority of households (Thompson and Volz 2021). The public retirement system is financed with a federally mandated payroll contribution from workers and their

[1] The other side of the savings coin is consumption, which is explored by Straub (2019). He also finds heterogeneity across the permanent income distribution. Though a full discussion of the heterogeneity of consumption is beyond the scope of this paper, Straub (2019) is notable for his focus on ranking households by a measure of permanent income.

[2] Some recent work, notably Mian, Straub, and Sufi (2020 [revised 2025]), measures the U.S. annual saving rate across the distribution using recent data, but the authors rank households by wealth, and their saving metrics are based on current income. These choices are appropriate for their objective to weave rising inequality into the relationship between private savings and the financial sector but less appropriate for addressing more fundamental questions of household wealth accumulation over the life cycle in relation to lifetime resources.

[3] Devlin-Foltz et al. (2016) and Sabelhaus and Volz (2019, 2022) find that including the implied assets from future DB pension benefits modestly reduces inequality in the distribution of wealth.

employers, providing a promised inflation-adjusted annuity for all workers with 40 quarters of qualified employment. A realistic determination of whether the "rich save more" must reflect a financial reality that includes both DB pensions and Social Security, which we provide in this paper.

Most of the existing research also relies on data sources that are not designed to effectively sample rich households. The SCF, with its unique sampling design, reaches high-net-worth households. That the top 5 percent of households held 61 percent of net worth in the United States in 2022 demonstrates that accounting for these households is vitally important for answering questions about saving behavior at the top of the distribution. That these households are disproportionately likely to own businesses and have asset compositions that are very different from those of less affluent households raises doubts about whether their behavior can be inferred from even the most affluent households observed in the Panel Study of Income Dynamics (PSID), the Survey of Income and Program Participation (SIPP), or even the Health and Retirement Survey (HRS). Using the SCF allows us to arrive at a clearer answer as to whether the "rich save more."

There are nearly as many different measures of lifetime resources as there are papers in the literature. Many previous studies, in the absence of actual lifetime data, rely on proxies or instruments based on current consumption, educational attainment, or other factors. As Alan et al. (2015) demonstrate, however, findings can be highly sensitive to the choice of proxy. Household-level panel data are potentially ideal, but, in practice, the period covered in available panels falls well short of a "lifetime," and missing data require substantial imputation. Following Jacobs et al. (2021), this paper uses the earnings and job-tenure data from the SCF work-status and work-history module, in conjunction with a synthetic panel of earnings from the Current Population Survey (CPS), to estimate lifetime earnings data for survey respondents and their partners. This approach yields estimated earnings covering 30 to 44 years of work history for each respondent and spouse/partner surveyed.

Similarly to Hendricks (2007) and Bozio et al. (2017), we use the ratio of wealth to lifetime earnings as our measure of "saving" for "near-retirement" households, that is, those aged 48 to 62 in the 2022 SCF. The wealth measure we focus on, referred to here as "expanded wealth" (EW), includes net worth, DB pension assets, and Social Security.

When we analyze the data, we find that the ratio of expanded wealth to lifetime earnings (that is, the EW-to-LE ratio) among the highest average lifetime earnings households is indeed much larger than that of those at the middle or bottom of the lifetime earnings distribution. Among 48- to 62-year-old-headed households in the 2022 SCF, the EW-to-LE ratio is flat over the bottom half of the distribution of average lifetime earnings, fluctuating around 0.25 (from 0.20 to 0.30) for the first through sixth deciles. In the top half of the distribution, the EW-to-LE ratio climbs to 0.39 in the eighth decile, 0.45 in the ninth, and 0.82 in the 10th. Within the top decile, the ratio is 0.75 for the first 8 percent and 1.01 among the top 2 percent.

Recent work by Fagereng et al. (2021/2025) uses high-quality administrative panel data from Norway on income and wealth and ostensibly comes to a different conclusion, namely that the *active* saving rate is not higher for rich families;[4] the authors find that gross saving rates are higher for rich families due only to capital gains, that is, positive changes in the prices of assets held. Like Fagereng et al. (2021/2025) (and others), we also find that capital gains are disproportionately concentrated among affluent households but that, in contrast to Fagereng et al. (2021/2025), the slope of the EW-to-LE ratio only modestly flattens once we adjust the "savings" ratio to remove retained capital gains from the measure of wealth in the numerator.[5] Removing retained capital gains reduces the EW-to-LE ratio by 6 to 8 percentage points between the fifth and ninth deciles, by 21 percentage points in the "next 8" percent, and by 30 percentage points in the top 2 percent. Nevertheless, the EW-to-LE ratio in the top 2 percent (0.71) remains twice as large as it is in the ninth decile (0.36) and more than three times as large as it is in the bottom six deciles (approximately 0.20).[6]

There are some notable data and methodological differences between our analysis and that of Fagereng et al. (2021/2025), which we discuss in greater detail later, but one crucial difference is that Fagereng et al. (2021/2025) rank households by wealth for their baseline findings, whereas we rank households by lifetime earnings. When Fagereng et al. (2021/2025) sort families jointly

[4] Bach, Calvet, and Sodini (2018) also rank households by wealth and examine saving across the wealth distribution, but their primary metric of saving uses wealth as the denominator. They find that richer households have a lower saving rate, albeit with metrics using the flow of savings divided by the stock of wealth.
[5] We find that across wealth deciles, the steep slope remains even after retained capital gains are removed.
[6] Mian, Straub, and Sufi (2020/2025) note that a considerable portion of household saving occurs through corporate channels. Their back-of-the envelope adjustments to main results from Fagereng et al. (2021/2025) suggest that median saving rates do increase among the top few percentiles of the wealth distribution.

by age group *and* wealth—a joint ranking that correlates more with lifetime earnings than with wealth alone—they also find that families with heads aged 30 to 59 and the highest wealth engage in *active* saving out of income at a higher rate than those with lower wealth (see Figure 6, Panel A in Fagereng et al. 2020/2025). Among older families (with heads aged 60 to 75), active saving rates are flat until the top few percentiles, where the active saving rate dips. Among younger families (heads aged 20 to 29), active saving rises with the wealth distribution until the top few percentiles, before declining sharply. These age-related patterns of saving activity across the distribution point to affluent retirees and young beneficiaries of inheritances engaging in lower rates of active saving, which is not the same as rejecting the finding that the rich save more, and the patterns indicate that the Fagereng et al. (2021/2025) results for "middle ages" are generally consistent with our findings.

While wealth can be more precisely measured than lifetime earnings, it is not optimal for classifying households by lifetime resources that are available for saving. Indeed, according to Modigliani's life-cycle model (Ando and Modigliani 1954; Modigliani and Brumberg 1963), households with the highest wealth, at the peak of their wealth, cease saving entirely. Following a lifetime of positive saving, households hit peak wealth and transition into retirement. From this perspective, ranking households by wealth reflects the behavior of households after they have *become* rich, while the question of saving behavior relates more closely to households' process of *becoming* rich. From a measurement perspective, as Halvorsen et al. (2024)—using the same data as Fagereng et al. (2021/2025)—note, there is a concern "that the positive correlation between wealth and saving rates is mechanical, as higher saving rates move households up the wealth distribution." Halvorsen et al. (2024) address this concern by ranking households by start-of-period wealth in their panel data; we resolve it here by ranking households based on their lifetime earnings.

Overall, our analysis offers a clear answer to the titular question: Yes, the rich do save more. This finding stands even after we expand the wealth concept to reflect "non-market" assets that accrue primarily outside the most affluent households and develop a direct measure of lifetime earnings. It continues to stand after we remove the influence of accumulated capital gains that accrue overwhelmingly to the richest households. In addition, the finding does not appear to be driven by inheritances, as we demonstrate in the robustness analysis.

In the remainder of the paper, we summarize relevant literature in Section 2, describe the data and methods in Section 3, including our measures of both lifetime earnings and wealth as well as the key "savings" variable employed in our analysis, namely the ratio of expanded wealth to total household lifetime earnings. In Section 4, we discuss our key findings, drawing attention to wealth-to-earnings ratios across the lifetime earnings distribution, using net worth along with additional wealth concepts that include asset values for defined benefit pensions and net Social Security wealth (SSW). We also consider how the inclusion of accrued capital gains influences our findings and how sorting households by wealth instead of lifetime earnings shapes perceptions of whether the "rich save more."

2. Literature Review

The literature on this question is substantial and dates back to Friedman's (1957a, 1957b) original research on lifetime income as well as Modigliani's life-cycle hypothesis (Ando and Modigliani 1954; Modigliani and Brumberg 1963). In this brief review of the literature, we focus on the data and measurement issues that relate most closely to the distinct contributions of this paper, namely (1) the wealth/savings concept, (2) the parameterization of the savings variable, (3) measuring lifetime resources, and (4) the role of capital gains.

As earlier research indicates, measuring the relationship between saving behavior and lifetime resources is complicated by the fact that reliable measurements of saving and lifetime income are each difficult to come by. In addition, there are concerns about whether certain data used for analysis include truly rich households and about the merits of the measure of lifetime resources relied on to rank households.

Some papers exploring the topic do not have measures of lifetime resources and instead rely on proxies of varying quality; the choice of proxy could influence the key findings. Dynan et al. (2004) "find a strong positive relationship between saving rates and lifetime income" but do not have lifetime measures from any of the three data sources they use (that is, CEX, SCF, and PSID). The PSID is a household panel data set that can be used for longitudinal analysis, but Dynan et al. (2004) focus on a cross-section. Similarly, Dynan et al. (2004) do not use the work-history details in the SCF that we exploit here; instead, they rely on four different instruments to predict lifetime earnings: consumption, lagged labor income, future labor income, and

education.[7] Alan et al. (2015) use a consumption survey that supports multiple measures of active saving but not lifetime earnings. They explore two proxies for lifetime earnings, one based on education and another on nondurable consumption, finding that the estimated relationship between saving and long-run income is sensitive to which proxy is used. They consider the instrument based on education to be unreliable, as it likely correlates with saving behavior through other mechanisms outside of earnings, and instead prefer the instrument based on nondurable consumption. Using the latter proxy, they conclude that "savings rates do not differ substantially across predicted long-run income groups," but the PSID does not adequately capture the richest households.

Other researchers use data with more direct measures of lifetime earnings (LE), exploiting either linkages between household surveys with administrative earnings records (HRS, ELSA) or panel data on both income and wealth (PSID). A series of retirement-focused papers in the 1990s (for example, Venti and Wise 1998; Gustman and Steinmeier 1999), which include assets from both DB pensions and Social Security, tend to conclude that there is no upward trend across the LE distribution in saving rate. They show declining rates over the bottom deciles of the distribution and flat rates over the remainder. Venti and Wise (1998) suggest that the pattern across the LE distribution depends to some extent on whether the within-decile means or medians are used. In contrast to Gustman and Steinmeier (1999), they show that comparing decile-specific medians of wealth and LE results in an upward tick in retirement savings for the top two deciles. This is mostly consistent with Hendricks (2007), who compares stocks of wealth to LE in the PSID, albeit without DB wealth or SSW. He finds that the relationship is generally flat across the distribution when using within-decile means but rises steadily when using the ratio of medians.

Even in these cases, the LE data are not without problems. The PSID (Hendricks 2007) has a range of years over which earnings are not observed and must be imputed. The HRS–SSA link is not available for some respondents (and the match rate has worsened over time),[8] with missing data and missing years of data needing to be imputed by researchers (Venti and Wise 1998; Gustman and Steinmeier 1999), and may face some measurement issues.[9] In addition, neither the

[7] The PSID can be used to directly estimate measures of lifetime earnings, as in Hendricks (2007), but this is not possible for the PSID sample used in Dynan et al. (2004).
[8] Abramowitz, Fang, and Hyde (2024).
[9] Hendricks (2007) finds that the lowest- and highest-earnings deciles in the matched HRS–SSA are at much lower levels than those from the PSID.

PSID nor the HRS are designed to successfully sample high-wealth households (Pfeffer et al. 2016; Insolera, Simmert, and Johnson 2021).

As mentioned, many of the papers in this literature fail to include one or both forms of wealth. None of the data sources used in Dynan et al. (2004), for example, include either DB pensions or Social Security wealth. The same is true of Hendricks (2007), who relies exclusively on the PSID. Alan et al. (2015) calculate active saving using Canadian consumption data, which reflect neither the employer-match to account-type pensions nor the value of that country's public pension system. Both Venti and Wise (1998) and Gustman and Steinmeier (1998) include DB pensions and SSW, but their samples are now more than 30 years old. Fagereng et al. (2021/2025) extend their results to include public pensions, but these results, from Norway, with its strong welfare state and substantial differences in income and wealth inequality, may not extrapolate well to the saving behavior of American households (Schechtl and Waitkus 2024; Mogstad, Salvanes, and Torsvik 2025).

Measures of saving often face challenges related not to the wealth concept but to how the saving metric is parameterized. Household expenditure surveys can be used to calculate annual savings by subtracting consumption from income (S = Y - C), but both income and consumption themselves often face measurement challenges. Alan et al. (2015) and Dynan et al. (2004) both use annual saving rates with flow measures in the numerator (active saving measured from either income minus consumption or wealth change) and the denominator (predicted annual lifetime earnings). Some research calculates active saving by instead differencing observed wealth at different points in panel data (Dynan et al. 2004) or in cross sections of wealth, an approach also plagued by measurement error (Browning and Lusardi 1996; Bosworth et al. 1991). Other papers in this literature focus not on annual or "active" saving but on use levels of wealth in the numerator and lifetime earnings in the denominator. Summed across the life cycle, these annual flows result in a stock of wealth compared with the cumulative level, or stock, of lifetime earnings. Venti and Wise (1998) and Gustman and Steinmeier (1999) adopt this approach to measuring saving, using the HRS to explore questions focused primarily on the adequacy of resources for households entering retirement. Hendricks (2007) also looks to the ratio of stocks in his PSID-based analysis of wealth inequality.

At the household level, a ratio of stocks has many redeeming properties. The sum of wealth accumulated relative to the sum of earnings received over a working life can be interpreted as the accumulated saving rate, and the rates of return, over that period. Cumulating the earning and saving outcomes across the working life resolves measurement issues resulting from volatility in both saving and earnings, though it introduces complications regarding the treatment of capital gains in the saving dimension. Due to the lack of annual saving measures in the SCF, we follow these latter papers by using the wealth-to-income-ratio approach to document the cumulative stock of savings over time.[10] We explore the impact of accumulated, unrealized capital gains by removing them from the wealth measure through two different approaches to better reflect accumulated active saving.

Overall, the most recent paper closest to our approach is Bozio et al.'s (2017). Their wealth concept incorporates both private and public pension wealth, and they calculate a ratio of wealth among near-retirement-age Britons against a direct measure of total net lifetime earnings.[11] With this broad measure of wealth, Bozio et al. (2017) find a U-shaped pattern, in which low- and high-earning households save at the highest rates, while middle-earning households save at the lowest. Two key differences with our analysis are the age group analyzed and the timing: Bozio et al. (2017) analyze cohorts that have typically already retired, and their data cover 2002 through 2003. Their results are affected by the truncation of both the bottom and the top of the linked payroll records, and the baseline survey used in the analysis is not designed to ensure sufficient representation of rich households.

Fagereng et al. (2021/2025) use administrative panel data from Norway on income and wealth to examine annual saving rates across the wealth distribution. Data quality alone makes this paper among the most important recent contributions to the literature. That the paper finds that the richest families save less than most other households and have negative active rates of saving in some years invites further examination. Yet, despite their high quality, the Norwegian data have some important limitations, particularly with respect to their ability to distinguish gross from net (active) saving—which underlies the key finding. The active saving metric used by Fagereng et

[10] The SCF does include several qualitative metrics that describe current saving activity, but it does not include a dollar value of current savings.

[11] Bozio et al. (2017) divide their earnings measure by years worked, seeing the measure as a proxy for earnings potential. This creates a small difference on the calculated saving metric and in how we would rank similar individuals.

al. (2021/2025) is the residual once annual estimated capital gains are removed from the change in wealth between two periods. It is not clear whether their estimates of capital gains are an upper- or lower-bound (or unbiased) measure of a household's capital gains or whether there are heterogeneous effects across the earnings or wealth distributions. Two important aspects of Fagereng et al. (2021/2025), which we discuss later, are the attention the authors draw to the importance of capital gains for rich households' saving and their decision to rank families by wealth.

3. Data and Methods

Our primary data come from the Federal Reserve Board's triennial Survey of Consumer Finances (SCF), which has been conducted since 1989. Several features of the SCF make it appropriate for exploring the distribution of wealth and related concepts such as saving. The survey collects detailed information about households' financial assets and liabilities. The SCF gathers information on the value of all financial and nonfinancial assets, including residential and nonresidential real estate and privately held businesses, reported by the respondent at the time of the interview. Questions on household debt cover all types of debt, including credit cards, mortgage debt, student loans, business debt, and other miscellaneous forms of debt.[12] Due to the SCF's unique design, which includes oversampling households with predicted high net worth using tax information from the Internal Revenue Service, data it collects are commonly used to explore wealth concentration at the top of the distribution (Wolff 1995, 2021; Keister and Moller 2000; Kennickell 2006; Bricker et al. 2016, 2017, 2020; Fisher et al. 2021).

Lifetime Earnings

The focus on a ratio based on a lifetime metric of earnings reflects the desire to compare a stock of assets with the "stock" of earnings. This is also the ideal way to rank households because it reflects the lifetime resources that have flowed to a household balance sheet due to a household's

[12] The unit of analysis in the SCF is the "primary economic unit" (PEU), which refers to a financially dependent related (by blood, marriage, or unmarried partners) group living together. This concept is distinct from either the household or family unit employed by the Census Bureau, but it is conceptually closer to the latter, and throughout this paper, we refer to PEUs as "families." Single individuals living alone are included and considered a family of one. In the SCF, the respondent is the adult in the primary family who is most knowledgeable about the family's finances.

labor market participation and are not a mechanical result of past saving and investment decisions. We estimate lifetime labor earnings—including self-employment—rather than lifetime income for several reasons related to data, methods, and conceptual preference. The work-history module in the SCF provides a connection to important features of the earnings histories of each respondent and spouse/partner, including number of years on the job and terminal salary. While labor earnings are not the only non-investment income flowing into a household, there is no equivalent retrospective information on household income in the SCF that would allow us to construct individual income histories in the same way that we are able to do for earnings. Even if they were available, non-earnings income sources tend to be much more volatile, complicating efforts to model and predict them. We acknowledge that these income sources are possible sources of savings and return to their absence later in our discussion of the results.

Equally important, flows from capital (for example, interest, rents, dividends, and realized gains) represent huge shares of non-earnings income, and including these flows in our measure of saving complicates our ability to tell a story about household behavior. The link between capital income flows and wealth is mechanical, with "causation" clearly moving in the opposite direction of what research into this question tries to explore. Whether the "rich save more" is a behavioral question, probing if affluent households save a greater portion of their resources than those less well-off. Mechanically, households with high wealth have high capital incomes because their assets generate a flow of capital income. For the same reasons that we may want to exclude accumulated capital gains—to the extent possible—from the numerator of our lifetime saving rate measure, we also do not want capital incomes in the denominator, as they are returns on savings from an earlier period.

Surveys in general, and cross-sectional surveys in particular, are not well suited to measuring lifetime earnings or income. To circumvent this challenge, we leverage the detailed information contained in the labor force section of the SCF on both current job and longest past job for each respondent and spouse/partner. More specifically, to estimate a full earnings history and projections to age 62, we apply the growth in earnings over one's working life, estimated by the shape of CPS earnings estimates for individuals most similar to the SCF respondent based on birth year, occupation, education level, and sex.

We focus on respondents aged 48 to 62 at the time of the interview (with spouses aged 30 to 65) in the 2022 SCF and use the information reported in the SCF on (1) current occupation, earnings, and tenure; (2) any retrospective occupation, earnings, and tenure information; and (3) future work expectations. For each respondent and spouse, we estimate a full history of past and future earnings using regression estimates that rely on CPS data from 1962 to 2023.

Individuals are categorized into types by three-year birth cohorts, three education levels (less than high school, high school or equivalent, some college/degree), and five broad occupation categories: (1) management, professional, and related; (2) service; (3) sales and office; (4) construction, maintenance, production, and transportation; and (5) self-employed, within all occupations.

A significant difference between our earnings estimates and those from Jacobs et al. (2021), besides the inclusion of more recent years of CPS data and younger cohorts, is our addition of business incomes from both the SCF and the CPS.[13] In our CPS models, we add business incomes to wage incomes for all individuals, regardless of their self-employed status. In the SCF, business incomes are captured in multiple locations. Our baseline approach relies on the "nonsalary" earnings reported in the labor force section, as this information is collected immediately after reported wage earnings, for those that report a work status that is not "employee." We also include wages from second jobs reported in both the CPS and the SCF.

To acknowledge that business incomes or profits may reflect more than returns to human capital, we include three-quarters of nonsalary income for partnerships and consultants and owners of firms with fewer than 500 employees, following Smith et al. (2019). Reflecting Saez and Zucman's (2020) observation that large firms typically have a higher capital share of profits, we include one-half of nonsalary earnings for owners of large firms.[14]

This addition is critical when we consider heterogeneity of savings across the lifetime earnings

[13] This is also an improvement over studies that rely on a payroll tax earnings base (for example, Social Security earnings records) for lifetime earnings, as business incomes reported on Schedule E are not contained in that administrative data and Schedule C earnings are significantly underreported to tax authorities.
[14] There are many estimates of the capital-labor split for business incomes. A Canberra Group (2001) report, for example, suggests allocating 70 to 100 percent of self-employment and business income to wages from labor, depending on the importance of business income in the total composition of household resources. As a robustness check, we estimate our main findings using a 10–90 capital–labor split, which would bias us toward not finding a savings gradient. We find slightly muted results, but a steep savings gradient remains at the top.

distribution. To accurately estimate the dispersion of savings across the LE distribution, we need well-measured earnings *and* wealth, and the business incomes in the SCF notably improve the former for the richest households. Most business income is concentrated at the top of the distribution (Smith et al. 2019; Bricker et al. 2021). Without accurately measured business incomes, the denominator would be biased downward, inflating the EW–LE ratio, particularly for high-LE households.

For each of type g, we estimate the following regression on log income in the CPS:

$$\ln(y^g) = \beta_0^g + \beta_1^g age + \beta_2^g age^2 + \beta_3^g age^3 + \beta_4^g age^4 + \beta_{PT}^g PartTime\ ,$$

and we back out an individual's personal effect, β_{0i}, at the time of the SCF survey:

$$\beta_{0i} = \ln(y_i) - \beta_1^g age_i + \beta_2^g age_i^2 + \beta_3^g age_i^3 + \beta_4^g age_i^4 + \beta_{PT}^g PartTime_i\ .$$

The individual effect in any year is a weighted average of the individual and group constants, β_{0i} and β_0^g, respectively, where we place more weight on the group average constant as we estimate periods further out from the reported income in the SCF. Specifically, the constant at time *t* is $\beta_i^{W,t} = \rho^t \beta_{0i} + (1-\rho^t)\beta_0^g$, where we set $\rho = .85$.[15] Thus, our estimates, which are anchored by current wage and final wage on an individual's current and longest past job, will reflect an individual fixed effect whose persistence declines over time.

Earnings and work-history data in the SCF reflect individual-specific factors that will be maintained under these earnings projections, as the historical growth rates and future trajectories are anchored to the data reported by each survey respondent. While our model does not incorporate transitory earnings shocks, because estimated earnings are anchored to two reports of actual earnings per person, for the most part, they will reflect past permanent shocks. Since we focus on lifetime metrics, transitory shocks are less critical to our results. Our approach, for example, does not allow us to explore within-group heterogeneity related to how families that are more likely to experience transitory shocks may have different saving choices due to stronger

[15] We estimate alternate earnings profiles, varying ρ, for all, and also allowing ρ to vary across employees and the self-employed. Unsurprisingly, increasing (decreasing) ρ reduces (increases) the denominator, but changes are similar across the LE distribution and do not meaningfully alter our primary conclusions.

precautionary motives.

Appendix Figure A1 displays a comparison of lifetime earnings trajectories measured in the CPS and modeled in the SCF for two different birth cohorts. Figure A1a contrasts the measured pseudo-panel earnings path for male and female workers born during the 1961–1963 period with the estimated results for the same birth cohort in the SCF. Figure A1b does the same for a slightly more recent cohort, those born during the 1969–1971 period. Figures A1a and A1b demonstrate that the SCF model tracks the CPS earnings trajectories for both birth cohorts, capturing the overall level and shape of the lifetime earnings profiles, with a tighter fit for males. Overall, the SCF model provides a reliable approximation of lifetime earnings, supporting its use in our analysis.

The distribution of the resulting estimates for LE in the SCF is depicted in **Table 1**, which shows household LE (for each respondent and spouse, if present, combined) by decile of the distribution of average household LE in 2022. Throughout this paper, we present LE, wealth, and wealth-to-earnings ratios for households with respondents aged 48 to 62. We selected this group in part because it is a pre-retirement age group that has had sufficient time to accumulate meaningful levels of wealth and has not begun spending down their resources. In addition, the group is relatively compact, which diminishes the influence of life-cycle effects on the average LE deciles that we calculate for most of our analysis. Acknowledging that older families have more years in the labor force, we rank households by average lifetime earnings to remove the mechanical effect of years worked.

The mean of LE is $428,000 in the first decile, $2.8 million in the sixth, $4.7 million in the ninth, and $10.0 million in the top 2 percent. Average LE—measured over potential years of work since age 18—for these four groups has means of $11,500, $76,700, $128,000, and $278,000, respectively. In **Figure 1**, we show the distribution of LE by decile of current earnings. Over the bottom four-fifths of the distribution of current earnings, the profile of LE slopes modestly upward, with the median, p25 and p75, each rising with most steps from the first through the eighth deciles. The slope shifts steeper in the top two deciles, with modestly larger jumps in LE in the step to the ninth decile and substantially larger ones within the top decile.

There are two other noteworthy caveats related to our metrics. First, income for low-earning households often includes some form of transfers, which are not included in our metrics. Since

these households have little wealth outside of Social Security, we will estimate an upper bound for our saving metrics (EW-to-LE ratio). Additionally, we use gross earnings, since that is what is reported in the SCF. While this may be less than ideal, our estimates will be an overall lower bound of the gradient of savings across the lifetime earnings distribution due to the progressive income tax system.

DB Pensions

The SCF includes several detailed questions about DB pensions but does not capture the asset value of plan benefits. The survey asks DB plan participants about expected future benefits, but many workers, particularly those further from retirement age, are not intimately familiar with all plan details or expected future benefits. It has long been acknowledged that the information collected from these future-benefits questions does not necessarily accurately reflect what respondents will receive (Starr-McCluer and Sunden 1999). Estimates of pension wealth based on responses to questions about expected future DB benefits are not included in the typical survey-based concept of net worth.

Instead of relying on the expected future-benefits responses from DB plan participants,[16] we follow Jacobs et al. (2021) by using the household-level estimates of DB pension wealth developed by Devlin-Foltz et al. (2016) and updated by Sabelhaus and Volz (2019, 2022). This approach distributes aggregate household-sector DB assets from the Financial Accounts of the United States (FA) to both current and future beneficiaries using survey information on benefits currently received for those receiving payments, on reported future payments for those with coverage from a past job, and on wages and years in the plan for those not yet receiving benefits.

The estimates combine the survey information with real discount rates that fluctuate over time, sex-specific cohort life tables, and differential mortality based on income percentiles, and the assumption that current beneficiaries have first claim to DB plan assets.

Table 2 depicts the distribution of these DB pension asset values imputed into the SCF using this methodology. The overall mean value of DB pension assets is $276,000—nearly identical to the average DC pension wealth (**Table 2A**)—while the median value of DB pensions is zero (**Table**

[16] Both Wolff (2007, 2014, 2021) and Karamcheva and Perez-Zetune (2023) rely on respondents' reports of expected future benefits.

2B), as far fewer than half of families have DB pensions. Average DB pensions are $787,000 among the top-earning group (that is, the top 2 percent) and $310,000 among the sixth decile—a ratio of 2.5 between averages at the top 2 percent and the sixth decile. The comparable ratio for average DC assets between the top 2 percent and the sixth decile is 14.0.

Social Security

Estimating future Social Security benefits requires information about a person's full earnings history up to the time of retirement. With an earnings profile for each individual from ages 20 through 61, derived using the methods described earlier, one can apply Social Security benefits calculations for each household.[17] All individuals are assumed to start receiving benefits at age 62, which provides a lower bound for total household net SSW so that estimated differences in SSW across households are not driven by differential claiming behavior.[18] Future benefits are discounted to the survey year using a 3 percent real discount factor and survival rates that vary by cohort, marital status, and income percentiles (relying on cohort life tables from the Social Security Administration and differential mortality estimates from Chetty et al. 2016).[19, 20] The measure of SSW used is net of expected future employee contributions. Thus, for every year following the survey, we calculate expected tax payments of 6.2 percent and subtract the present value of all future contributions from the gross SSW measure calculated.[21]

[17] We are unable to identify federal employees in the SCF and thus apply current OASDI program rules, assuming they are paying into and eligible for benefits from Social Security over their entire work history. Given the cohorts and year of our analysis, this is a minor concern. For state and local government employees, identified in the SCF through a combination of occupation (for example, "teachers") and industry ("public administration") and their coverage by a DB pension, we do not allocate SSW to those living in states where public workers are not covered by Social Security. As a result of this decision, we do not attribute SSW to federal employees living in those states, as we cannot separately identify them in the SCF. Since only 9 percent of federal workers reside in states that do not extend Social Security coverage to public workers, and only 3 percent of workers aged 48 to 62 are employed by the federal government, relatively few SCF families are affected by this misclassification (based on the authors' analysis of the 2022 American Community Survey).

[18] See Henriques (2018) for a discussion on the impact of the Social Security claiming age on household SSW.

[19] Secondary earners, typically wives, are entitled to their own benefits calculated from their past earnings but also from spousal and survivor benefits. Jacobs et al. (2021) assign spousal benefits to the household if the expected spousal benefits are larger than the wife's worker benefits at age 62. If the duration of the current marriage is less than 10 years at age 62, the wife is not eligible for spousal or survivor benefits. The SCF does not collect information about the durations of all previous marriages; thus, some individuals who have been married more than once may not be accurately assigned dependent benefits from a former spouse.

[20] The methodology used to combine the Chetty et al. (2016) results with cohort life tables is described in the appendix to Sabelhaus and Volz (2022).

[21] Sabelhaus and Volz (2022) also estimate SSW for all SCF respondents to study the accumulation of SSW over the life cycle. Previous research estimates SSW to form broader wealth concepts, including work by Kennickell and Sunden (1997), Wolff (2007, 2014, 2021), and Munnell et al. (2018). This literature is discussed at greater length in Sabelhaus and Volz (2021) and Jacobs et al. (2020, 2022). Their estimation approach for SSW and a wealth concept

Table 2 shows the distribution of these predicted values of net social security wealth. As seen in **Table 2B**, the overall median of SSW in 2022 was $255,000 for ages 48 through 62. For the lowest decile of average LE, median SSW was $61,000, compared with $280,000 for the sixth decile, and $394,000 for the top 2 percent. SSW is the most equally distributed type of wealth.

Expanded Wealth by Lifetime Earnings Decile

The remaining columns in **Table 2** contain median values of components of net worth—the usual SCF wealth concept—as well as "expanded wealth" by deciles of average lifetime earnings for 48- to 62-year-old households in 2022. In contrast to SSW, net worth exhibits a high level of inequality across the LE distribution. Median net worth for the top 2 percent of average LE is $9.1 million, more than 620 times that for the lowest decile of LE. This differential is only a factor of five for SSW.

Expanded wealth combines net worth with the asset value of DB pensions and the asset value of Social Security net wealth. The top 2 percent of the average LE distribution had median expanded wealth of $10.2 million in 2022 compared with $791,000 for the sixth decile and $121,000 for the bottom decile. The ratio of expanded wealth between the top 2 percent and the bottom deciles of LE was 84. By including an expanded set of wealth categories that are less concentrated at the top of the distribution, particularly SSW, expanded wealth is considerably less unequal in its distribution than net worth.

3. Results: Wealth-to-Income/Earnings Ratios across the Distribution

In this section, we present wealth-to-LE ratios for households aged 48 to 62 using a variety of wealth measures in the numerator.[22] In each case, the ratio's denominator (lifetime earnings) contains the sum of earnings received by the respondent and spouse/partner (if present) from age 18 until the time of the survey (as collected by the SCF and modeled, described earlier). As discussed in Section 1, the rationale for using lifetime earnings in the denominator is that it reflects all periods in a household's past, just as the numerator, wealth, does.

differ slightly from that of Jacobs et al. (2020, 2022), but they reach similar conclusions about the levels and trends of overall wealth inequality.

[22] The age bins we use refer to the age of the respondent. Spouses/partners (if any) can be of any age, so long as they are at least 30 and no older than 65.

To motivate the importance of two of our main contributions—the inclusion of the full range of assets available to households and the development of a measure of lifetime earnings—we first present comparable ratios that use alternate metrics in the denominator: (a) current income, reflecting the full calendar year prior to the SCF interview, and (b) a proxy for average lifetime income based on cross-sectional predictions of income using educational attainment and age, following the approach used in Dynan et al. (2004).

3a. Current Income

Figure 2 shows the median ratio of household-level wealth to current income by decile of current income in 2022.[23] Starting with the usual SCF wealth concept ("net worth"), the ratio of net worth to current income (NW–CI), depicted in dark green, rises more or less steadily along the deciles of current income. The ratio is approximately one in the first decile, meaning that the median family in that decile has saved the equivalent of one year of income as they reach "peak" life cycle, rising to 6.8 by the lower portion of the 10th decile (the "next 8 percent"), before dipping down to 5.6 in the top 2 percent. For context, median annual income for 2022 for the 48–62 age population was $15,500 for the first decile, $98,900 for the sixth, and $1,197,700 for the top 2 percent. Broadening the wealth concept to reflect the importance of defined benefit pensions for some groups of workers, the ratio of private wealth to current income (PW–CI), depicted in light and dark green, rises across the current income distribution before declining sharply for the highest earning group. The PW–CI ratio again starts at 1.3 in the bottom decile, reflecting little in the way of private DB plans for the lowest deciles, rising to 4.4 for the sixth decile and 8.2 for the "next 8 percent." DB pension assets affect the PW–CI ratio most for the seventh through ninth deciles, boosting the ratio by 3.5 in the seventh and just over 2.0 in the ninth.

When we include the asset value of Social Security in our wealth measure, resulting in expanded wealth to current income (EW–CI) ratios, there is no longer a clear pattern of savings rising with current income. The progressive design of the Social Security system produces a powerful

[23] We report the median of each families' wealth–LE ratio, as the ratios are meant to be a proxy for saving behavior. Taking the ratio of median wealth to median LE by decile would not necessarily summarize a representative household. The ratio of medians is used by other papers (for example, Gustman and Steinmeier, 1998; Venti and Wise, 1999). That said, our results using the ratio of medians show a similar pattern across deciles compared with our primary approach.

flattening of the wealth-to-income ratio, with the ratio in the first decile of income (11.0) the highest of all the deciles. Indeed, the EW–CI ratio for the "next 8 percent" of income (9.1) is on par with the ratios in the seventh through ninth deciles, and the EW–CI ratio of the top 2 percent, a step lower at 6.4, is on par with the ratios in the third through fifth deciles.

3b. Proxying for a Lifetime Measure with Predicted Income

As described previously, in their landmark 2004 paper, Dynan et al. explore the question "Do the rich save more?" using multiple data sets. The only survey that successfully samples households in the extreme upper tail of the wealth and income distribution is the SCF, which Dynan et al. (2004) utilize. Since the survey does not include a ready-made measure of lifetime income, Dynan et al. (2004), in their analysis of the SCF, develop an instrument for lifetime income.[24] This instrument is better seen as a proxy for lifetime income and is the (respondent) age-specific mean value for household income by education group. Employing the Dynan et al. (2004) predicted income proxy as a guide, we use a moving average of income over five-year age bins by education groups for the household head to predict lifetime income.

The median ratios of wealth to predicted income by deciles of the predicted income distribution are shown in **Figure 3**. Starting with net worth, the wealth-to-predicted-income profile is flat overall—with some variation—across the top six deciles; the net-worth-to-predicted-income (NW–PrI) ratio rises from 1.0 in the first decile to 2.5 in the fifth and remains at that level up through the top 2 percent of the current income distribution. Moving to private wealth results similarly in an upward slope in the PW–PrI ratio across the bottom half of the distribution but a reasonably flat profile in the top half. The PW–PrI is 4.0 in the fifth decile and 3.7 in the "next 8 percent" but jumps to 4.7 for the top 2 percent. DB assets boost the PW–PrI ratio across the distribution but relatively more so toward the top, adding nearly 1.5 to the ratio in the second decile and 2.3 in the top 2 percent.

Using expanded wealth in the numerator substantially boosts—and to a great degree flattens—wealth to predicted income ratios across the distribution. The contribution of Social Security wealth raises the EW–PrI ratios from the second to the fifth deciles above levels seen in the sixth through ninth deciles. Within the top third of the distribution, The EW–PrI still rises with

[24] As mentioned, Dynan et al. (2004) do not avail themselves of the retrospective earnings data in the SCF's work-history module, which we exploit in this paper.

income, but these higher income households are not found to save at higher rates than those in the bottom half of the distribution. While our results using predicted income are consistent with the findings of Dynan et al. (2004)—that the rich save more—when private wealth is in the numerator and are weakly consistent when net worth is in the numerator, the inclusion of SSW leads to a very different conclusion.

There are good reasons, however, to be skeptical of using predicted income in the savings ratio. As Alan et al. (2015) argue, predicted income is likely endogenous to decisions about saving, and different proxies for lifetime earnings can produce very different profiles of the saving rate across the distribution. Another shortcoming with the net-worth-to-predicted-income metric is that it is a mixture of a stock variable, one whose value has accumulated over time, and a flow variable. Net worth reflects cumulative income received minus cumulative consumption and rates of return over time. Predicted income is simply one year of the average flow into households of a similar age and education level.

3c. Saving Measures with Lifetime Earnings

Shifting to our preferred denominator and rankings, **Figure 4** shows ratios of expanded wealth to total LE (EW–LE) in 2022 by deciles of average LE. The box-and-whisker plot includes p25, p50, and p75 in the box, with p10 and p90 whiskers. The goal of these figures is to document and update the dispersion of savings rates across households with similar levels of lifetime earnings (see Venti and Wise, 1998). The primary impression from looking at the bottom half of the LE distribution is that the wealth-to-earnings ratio is flat in that part of the earnings distribution, with comparable distributions as well. The median ratio is 0.26 for the first decile of earnings and 0.24 for the fifth. The ratios are an order of magnitude lower than those in Figure 2 due to accumulated lifetime earnings, rather than annual income, being in the denominator, making this ratio more akin to a lifetime saving rate, albeit one that includes both public and private pension accumulations and capital gains. Other within-decile statistics, particularly the p75 and p90 of the wealth-to-earnings ratio, further reinforce the flatness and the heterogeneity of the saving trends across the bottom half of LE.

In the top half of the LE distribution, an upward trend in the wealth-to-earnings ratio emerges as we move from the sixth decile to the top, including a pronounced jump for the top 2 percent. The median EW–LE ratio rises steadily from 0.27 in the sixth decile to 0.45 in the ninth before

jumping to 0.75 in the "next 8" percent and 1.01 for the top 2 percent. The paths of the p25, p75, and p90 are largely flat from the sixth through ninth deciles, but all exhibit a large jump within the top decile. This reinforces that, regarding lifetime earnings, there is a wide range of saving behavior across "similar" households, and while we focus primarily on measures of the "middle," much remains to be explored around the dispersion of saving rates across comparable households.[25]

The contribution of the different components of EW to wealth accumulation is illustrated in **Figure 5,** which focuses on the median ratios of wealth to total LE for net worth, DB pensions, and Social Security wealth (NW–LE) in 2022 by deciles of average lifetime earnings, where the sum of the bars reflects the middle of the box from Figure 4.[26] The high-level impressions conveyed by Figure 5 are that DB assets accrue primarily to the top half of the distribution and that including SSW significantly boosts saving at the bottom of the distribution.

In the bottom half of the distribution, the median NW–LE ratio ranges from 0.05 to 0.10, suggesting that households saved, through direct or indirect channels, the equivalent of 5 to 10 percent of their lifetime earnings. This aligns with results from Fagereng et al. (2021/2025) and Mian, Straub, and Sufi (2020/2025); the former finds a median saving rate of 7 percent across households with low but positive wealth, and the latter finds a mean saving rate of 7 percent for the bottom 99 percent of the household-wealth distribution.[27] Even though we include capital gains in our saving measures, capital gains are a less important avenue for wealth accumulation among lifetime lower-earning households, thus producing saving metrics comparable to measures that explicitly exclude capital gains. Once DB and SSW are included, the value ranges from 20 to 25 percent. The inclusion of these retirement-saving paths shifts the conclusions about how prepared the typical family is for retirement well-being and how much saving they have done over their lifetime.

[25] This was Venti and Wise's (1998) original motivation. Many papers focus on specific choices that drive variation in saving or consumption such as preferences, risk aversion, access to financial services, etc.
[26] For comparison, Appendix Figure A2 plots the mean wealth-to-LE ratios instead of the median. These results are remarkably similar to those in Figure 5. Similar levels and patterns are present using the mean ratio—a flat profile in the bottom half of the distribution and a pronounced uptick for only the very top decile—with the spike at the very top being even more pronounced, unsurprisingly.
[27] By comparison, the aggregate NIPA saving rate from 2010 through 2022, putting aside the pandemic spike, is slightly above 5 percent on a flow basis. This is an active measure, that is, one without the accumulation of capital gains.

Comparing our results to the most similar metrics from Bozio et al. (2017)—that is, their total-wealth-to- gross-total-earnings metric—we find that the gradient begins earlier in the LE distribution. They find a flat profile except in the top decile.[28] Our ratio levels are similar, with Bozio et al. (2017) finding values of 0.3 to 0.4, only slightly higher than ours for the bottom six deciles. Our sample is a bit younger than theirs (48 to 62 versus 60 to 75, respectively), which may lead to the lower ratio levels, and their time period is 20 years earlier.

Previous research shows that since DB assets accrue primarily to households with above-median wealth (Sabelhaus and Volz 2019), they exacerbate some measures of inequality. Other research highlights that DB pensions are held by households below the very top of the distribution (Thompson and Volz 2021) and thus result in systematically lower "top share" measures of wealth inequality. Both of these observations are entirely consistent with how DB pension assets impact the wealth-to-LE ratio across the distribution of lifetime earnings. In the bottom half of the LE distribution, the ratios using private wealth (inclusive of DB assets) are only slightly different from the ratios relying on net worth. In the bottom six deciles, the difference in the median ratio using private wealth and that using net worth varies from 0 to 6 percentage points depending on the particular decile. Since most DB assets accrue to the top half of the LE distribution, the private-wealth-to-lifetime-earnings ratio is 8 to 15 percentage points higher than the ratio using net worth for the sixth decile up through the "next 8" percent but only 3.5 percent higher for the "top 2" percent.

The inclusion of Social Security wealth has a very different impact on the slope of the wealth-to-earnings ratio across the distribution. In contrast to net worth or DB pension assets, SSW has a strongly progressive tilt, disproportionately raising wealth-to-earnings ratios—in absolute and relative terms—at the bottom of the earnings distribution. The ratio of median expanded wealth (inclusive of SSW) to LE in the lowest decile of earnings is 26 percent, compared with just 7 percent for the ratio using private wealth, an increase of 19 percentage points or 270 percent. By contrast, the inclusion of SSW results in an increase of 4 percentage points or 4.4 percent to the ratio for the top 2 percent. The result is a flat trend in the wealth-to-earnings ratio across the bottom half of the LE distribution and a pronounced upward slope in the top half. The EW–LE

[28] The switch from average per year worked, which Bozio et al. (2017)use to proxy for permanent income, to total earnings, which we focus on to consider the pool of lifetime income flows that could have been saved, unwinds the lefthand part of the "U" from their main results.

ratio is 0.27 in the sixth decile, 0.47 in the ninth, and 1.01 in the top 2 percent.[29] These lifetime saving rates are higher than annual saving rates, which are typically studied (for example, MSS25 and Fagereng et al. (2021/2025)), but it should be recalled that the numerator includes retained capital gains and the denominator excludes capital income.

3d. Exploring the Role of Capital Gains

Recent research draws attention to the importance of capital gains in understanding the accumulation of wealth among high-net-worth households. Fagereng et al. (2021/2025), using Norwegian administrative panel data on income and wealth, conclude that active, or "net," saving—that is, the amount of one's income not consumed in that period—does not rise with the distribution. They conclude that active saving actually falls among the wealthiest families. Gross saving is only higher among rich households because they hold substantial amounts of unrealized capital gains. Up to this point, the measure of saving used in this paper—the ratio of wealth to lifetime earnings—has been fully inclusive of households' past history of active saving: deposits to savings accounts, paying off mortgages, contributions by employees and employers to retirement accounts, and the direct purchase of any store of value, *as well as* the passive saving that results from the accretion in value of all those assets.

We agree that a measure of saving that is free of the influence of capital gains can be a superior measure of household decision making. The accumulation of wealth is a combination of households' saving choices and their investment choices that generate a rate of return for that saving, and the availability of asset appreciation may impact one's decision to actively save.[30] However, the fundamentals guiding each of these dimensions may differ, and it may be crucial to separate them to better understand household choices. Using existing survey details in the SCF, we develop an upper bound on wealth after retained (or unrealized) capital gains are removed.[31]

[29] Since lifetime earnings and wealth both rise with age, we present a robustness check to reduce the impact of age effects. Appendix Figure A3 plots the median wealth-to-LE ratios for families with 55- to 62-year-old heads, which are remarkably similar to the main results from Figure 5. Even among a more restrictively defined, pre-retirement age group, we observe the same levels and patterns: a flat profile in the bottom half of the distribution and a pronounced uptick for only the very top decile.

[30] Furthermore, the presence of past accrued capital gains will also affect the need to actively save in the current period.

[31] We recognize the potential concern due to the absence of realized gains in our measure. However, a comparison of aggregate realized gains from the IRS with total annual unrealized capital gains (that is, revaluations) from the Financial Accounts shows that typically realized gains are less than 1 percent of the total of unrealized gains, thus mitigating concerns about the absence.

The SCF measures capital gains directly for several major asset classes: primary residences, other residential and nonresidential real estate, privately held businesses (including farms), publicly traded stocks, and mutual funds. For each of these assets, the survey asks respondents about either the current value and the original purchase price (real estate, businesses) or the assets' gains or losses since date of purchase (stocks, mutual funds). For real estate, the calculated capital gain is simply the current value less the purchase price; for businesses, capital gains are the current value less reported cost basis, while the cumulative gain is directly reported for stocks and mutual funds. This way of calculating capital gains can be somewhat crude and likely an upper bound for housing and lower bound for stocks and mutual funds. For example, the gain on real estate does not adjust for the cost of maintenance, upkeep, and other forms of property-enhancing investments undertaken after the initial purchase. However, it is possibly challenging for individuals to report the cumulative appreciation on public equities and mutual funds, likely leading this measure to be a lower bound. [32] While this does not cover all assets, these five asset classes accounted for approximately 60 percent of total SCF net worth in 2022 and more than 80 percent of the capital gains for the household sector's asset holdings since 2000.[33]

One notable equity appreciation is not captured in the SCF: tax-preferred retirement accounts. Nearly 60 percent of families hold such accounts, and they are present across the distribution. They are held by about one-third of the families in the second and third deciles and nearly all of the families in the top two deciles. Fox and Liscow (2025) estimate unrealized capital gains using overall capital gains within wealth decile. Using their research as a starting point, we instead estimate unrealized capital gains from retirement accounts for each household primarily on their reported returns from mutual funds and stocks ("equities"), if available, and from families in their average lifetime earnings decile, if not.

The prevalence and conditional values of retained capital gains measured in the SCF for our target population—families with heads aged 48 to 62 in 2022—are displayed in **Figure 6**. While known to be heavily concentrated at the top of the wealth and income distribution, capital gains

[32] Mian, Straub, and Sufi (2020/2025) make the critical point that some increase in the values of equity, both public and private, results from retained earnings. In the spirit of that observation, our estimates of capital gains may be an *upper bound* for equity owners.
[33] Authors' calculations of Financial Accounts of the United States.

on housing are common across the bottom half of the lifetime earnings distribution (**Panel A**). In the fifth decile, eight in 10 families have some unrealized capital gains, including 73 percent with some housing-linked capital gains and 44 percent with some retirement-plan-related capital gains. Other forms of capital gains are very rare in the bottom half of the distribution, however, with at most one in five families in each of the lower five deciles holding the other three capital-gains-generating asset types. Unrealized equity gains are held by 40 percent of families in the ninth decile and are nearly universal (87 percent) for the top 2 percent. More than half of the families in the top 2 percent hold capital gains in directly held businesses.

The average values of those unrealized gains, conditional on having any capital gains, reveal the extent of the extremely skewed distribution (**Panel B**). Mean total unrealized gains for the top 2 percent are $6.7 million, with the bulk of that in directly held business assets ($4.4 million). Business assets are the single-largest capital gains category for the top three deciles, while housing overwhelmingly dominates capital gains values for the bottom two-thirds. Total unrealized gains are $79,000 for the first decile, $234,000 for the fifth, and $675,000 for the ninth.

Figure 7 illustrates the impact of capital gains on the measurement of wealth-to-LE ratios across the distribution. Here, we compare, by LE decile, the median wealth-to-earnings ratio using, alternately, expanded wealth and expanded wealth less retained capital gains in the numerator. Removing capital gains from the measure of wealth reduces the ratio for all deciles, but, unsurprisingly, the impact is greatest for the top. The wealth-to-LE ratio in the top 2 percent falls from 1.01 for expanded wealth to 0.70 after stripping out capital gains. The profile of the wealth-to-earnings ratio across the distribution remains qualitatively the same, however, though it does flatten slightly. The slope remains quite flat over the bottom half of the distribution and still jumps sharply at the top, particularly within the top decile.

Thus, after creating concepts more comparable to those of Fagereng et al. (2021/2025), we arrive at a different conclusion than they do. While there is some role for sample definitions in explaining the differences, the role of government support is also important. There are stark differences between Norway and the United States, even for the wealthiest households. Thus, the impact of government policies on the need to save is likely present across the distribution.

Another important aspect of the Fagereng et al. (2021/2025) findings is that the authors—similarly to Bach, Calvet, and Sodini (2018)—choose to rank households by wealth when evaluating the capital gains of rich households. Ranking households by wealth, however, mechanically produces a dramatically steeper slope of the wealth-to-LE ratio at the top of the distribution. This can be seen in **Figure 8**, in which we rank our measure of expanded wealth to LE (which is ranked by lifetime earnings in Figure 5) instead by deciles of net worth. When ranked by net worth, the median wealth-to-earnings ratio in the top 2 percent is 2.4, compared with 1.01 when ranked by average LE. The ratio in the top 2 percent is 8.5 times as large as that in the fifth decile when ranking by wealth but is only 4.3 times as large when ranking by LE.

Both Fagereng et al. (2021/2025) and Bach, Calvet, and Sodini (2018) find the inverse of our results, that the active saving rate falls as wealth rises. This finding, though, is not true across age groups. Fagereng et al. (2021/2025) find, for example, that active saving among families headed by someone aged 30 to 49 or 50 to 59 continues to rise across the wealth distribution, dipping only slightly among the top 2 percent of the age-specific wealth distribution. The families for whom active saving falls markedly at the top of the wealth distribution are headed by someone aged 20 to 29 or 60 to 75. The richest among these family groups are consistent with young inheritors of substantial wealth and older, very affluent retirees. Both these groups can be expected to "live off of" the passive gains to their inherited or accumulated wealth without any need for active saving and may not work as a result. Neither of these cases, however, should be seen as a rejection or the preferred test of the hypothesis that the rich save more. In the case of older households, it is precisely this age group—having worked across a lifetime—that is expected to retire and pivot to negative saving. This is anticipated in Modigliani's (Modigliani and Sterling, 1983) life-cycle model. In their exploration of the question "Why are the wealthiest so wealthy?" Halvorsen et al. (2024)—using the same data as Fagereng et al. (2021/2025)—focus considerably on a group they refer to as "old wealth." This group is a subset of the end-of-period wealthy who are also in the top quarter of wealth at the beginning-of-period. This group holds 70 times the population average wealth levels already in their mid-20s, and the decomposition exercise shows that inheritances are the single-largest factor in explaining their outsized wealth across their lifetime. Halvorsen et al.'s (2024) "new money" group is the subset of end-of-period wealthy who are in the bottom quartile of wealth at the beginning-of-period, and high rates of saving are the single-largest factor accounting for their outsized wealth.

Whether to rank families by lifetime earnings or by wealth are both legitimate choices for researchers. With respect to the question at hand, however, each choice suggests a different interpretation of "Do the rich save more?" The decision to rank by wealth interprets this question as "Once a family becomes rich, what is their saving behavior?" Framed this way, the findings of Fagereng et al. (2021/2025) are entirely unsurprising. Having achieved substantial fortune, rich families can meet their financial goals with relatively less (or even no) active saving and can depend overwhelmingly on capital gains. When ranking families by lifetime earnings (or income), the question reads subtly differently as "What was the saving behavior of ultimately rich families when they were on their way to becoming wealthy?" We approach the question "Do the rich save more?" in this latter spirit, which we believe also aligns with Modigliani's life-cycle approach and is consistent with some of the policy attention given to the question.

In **Table 4**, we provide a direct comparison of the impact of capital gains on the wealth-to-LE ratio when ranking households by wealth as opposed to lifetime earnings. The table shows ratios of net worth to lifetime earnings both including and excluding unrealized capital gains by deciles of average lifetime earnings (shown on the left) as well as by deciles of net worth (shown on the right). Subtracting unrealized gains from net worth sharply reduces the saving ratio for high-end families in both rankings. The NW–LE ratio falls from 2.3 to 1.3 for the top 2 percent of net worth after we subtract the capital gains that are directly measured in the survey, and for the top 2 percent of lifetime earnings, it drops from 0.93 to 0.70. When we further remove the additional capital gains that we estimate for employment-related retirement accounts, the NW–LE ratio falls further to 1.1 for top wealth families and falls to 0.63 for top lifetime earnings families. In both cases, however, we continue to see the saving rate rise along the distribution.

These profiles are displayed in **Figure 9**, which shows the results from Table 4. For the bottom half of the distribution, whether ranked by average lifetime earnings (Panel A) or net worth (Panel B), the slope is completely flat, but a modestly positive slope remains from the sixth through ninth deciles, followed by a sharp jump for the "next 8" and top 2 percent.

In **Figure 10**, we show the composition of the EW–LE ratio across the average lifetime earnings for our preferred concept, including the full range of assets after all capital gains are removed. The saving-rate profile is essentially flat across the bottom six deciles. Social Security wealth dominates the expanded wealth composition for the bottom half. DB assets contribute a

substantial portion of expanded wealth from the sixth decile up through the "next 8" percent. The EW–LE ratio rises in the top half of the distribution, particularly in the top decile, and within that decile, namely among the top 2 percent of lifetime earnings, supporting the conclusion that the "rich" do indeed "save more."

How Important Are Inheritances?

In principle, the elevated wealth-to-earnings ratios we measure among high-LE households—which are interpreted here as a measure of "saving"—could result in part from inherited wealth. Wealthier households are more likely to have received sizable inheritances (Feiveson and Sabelhaus 2018). We find that families with the highest levels of LE are somewhat more likely than most other groups to receive an inheritance. As shown in **Table 5**, 23 percent of families aged 48 to 62 in the "next 8" percent of average LE and 21 percent of those in the top 2 percent report having ever received any inheritance, relative to an overall average of 19 percent. Looking across the full distribution, however, we see no clear pattern with respect to inheritance incidence, which is 26 percent for the sixth decile and 11 percent for the eighth. However, there is a somewhat clearer association between the size of inheritances received and the distribution of LE. Average inheritances tend to be smaller for families with low LE and larger for those with high LE.

To gauge the impact of inheritances on our primary conclusions, we assume that 90 percent of the value of inheritances is invested and receives a 3 percent real annual rate of return from the year it is received to the survey year.[34] Based on these calculations, we find that the mean "invested" value of inheritances in 2022 among all families aged 48 to 62 is $110,000 and $432,000 among the top 2 percent of average LE. Although higher-earning households receive larger inheritances, the value of these inheritances is quite small relative to overall wealth. Expressed as a share of *net worth*, the invested value of inheritances is only 2.6 percent for the top 2 percent of average LE compared with 8.3 percent overall, 31 percent for the second decile,

[34] Arguably, 10 percent is a lower bound for a reasonable estimate of the share of inherited wealth that is consumed in some fashion rather than successfully reinvested or otherwise leads to future wealth accumulation. Using the National Longitudinal Survey of Youth 1997, Zagorsky (2013), for example, estimates that half of inherited wealth is consumed or otherwise lost. Sabelhaus and Thompson (2023) review the related literature, which finds considerable leakages between inheritances and continued wealth accumulation.

and 112 percent for the lowest decile. Thus, inheritances do not appear to play a measurable role in the elevated wealth-to-earnings ratios observed for high-lifetime-earning families.

4. Discussion

In this paper, we revisit the question "Do the rich save more?" using a superior measure of wealth, a data source that successfully samples high-wealth households, and an estimated measure of total family lifetime earnings. Including defined benefit (DB) assets, which are excluded from most past research, pushes wealth-to-earnings ratios even higher in the top half of the distribution. Adding the asset value of Social Security benefits, however, pulls these ratios up disproportionately across the bottom half. Nevertheless, a clear finding from our analysis is that the rich do indeed save more than households further down the lifetime earnings (LE) distribution, even in the context of a broad wealth concept.

In general, however, elevated wealth-to-LE ratios are consistently observed only in the top one or two earnings deciles. Indeed, in our preferred measure, which excludes accumulated capital gains from the measure of wealth, we continue to see a higher wealth-to-earnings ratio but can confidently identify this only within the top decile; the ratios are flat over most of the distribution. The expanded wealth-to-LE ratio in the top 2 percent of earnings is twice as high as what we see in the ninth decile after excluding capital gains. Our results further suggest that recent studies' conclusions that higher rates of saving among rich households are exclusively due to accumulated capital gains may be overstated. By ranking households by wealth, those papers mechanically increase the contribution of capital gains among "rich" households.

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Table 1: Total and Average Annual Lifetime Earnings by Decile of Average Annual Household Earnings Since Age 18, 2022

	Total HH Earnings		Average Annual HH Earnings	
Deciles	Mean	Median	Mean	Median
1	$428,173	$460,836	$11,499	$12,529
2	$1,092,350	$1,055,509	$29,947	$30,564
3	$1,491,530	$1,473,703	$40,135	$39,932
4	$1,874,001	$1,831,694	$50,953	$50,882
5	$2,260,915	$2,236,244	$62,858	$62,657
6	$2,783,800	$2,759,205	$75,948	$76,006
7	$3,174,340	$3,160,957	$89,048	$88,335
8	$3,840,002	$3,900,272	$106,102	$104,528
9	$4,650,374	$4,645,776	$128,106	$127,974
Next 8	$5,842,932	$5,879,827	$159,767	$154,975
Top 2	$9,962,084	$8,599,302	$277,827	$230,315
Total	$2,823,587	$2,442,498	$77,718	$68,795

Note: HH = Household.
Source: Authors' analysis of SCF data.

Table 2: Components of Total Wealth by Decile of Average Annual Household Earnings Since Age 18, Ages 48–62, 2022

2A. Mean Wealth

Deciles	Expanded Wealth	Net Worth	DC+DB	DC	DB	Net SSW	Housing Wealth
1	$178,270	$106,469	$12,969	$2,363	$10,606	$61,194	$91,044
2	$336,856	$160,330	$65,318	$21,161	$44,157	$131,828	$117,994
3	$530,239	$282,906	$129,183	$54,565	$74,618	$172,715	$160,611
4	$656,654	$318,587	$197,912	$71,873	$126,038	$212,029	$188,360
5	$874,947	$505,041	$233,943	$103,537	$130,406	$239,500	$278,683
6	$1,209,156	$619,448	$438,568	$128,833	$309,736	$279,973	$290,087
7	$1,525,444	$945,488	$513,338	$245,528	$267,810	$312,147	$394,616
8	$2,308,869	$1,537,533	$710,803	$299,853	$410,950	$360,386	$485,483
9	$3,033,243	$2,029,375	$1,140,000	$507,425	$632,575	$371,293	$625,764
Next 8	$5,573,207	$4,411,752	$1,944,691	$1,195,548	$749,142	$412,313	$1,117,279
Top 2	$17,501,269	$16,319,726	$2,551,648	$1,764,572	$787,076	$394,467	$2,028,089
Total	$1,859,335	$1,327,844	$550,222	$273,971	$276,251	$254,817	$392,739

2B. Median Wealth

Deciles	Expanded Wealth	Net Worth	DC+DB	DC	DB	Net SSW	Housing Wealth
1	$121,173	$14,600	$0	$0	$0	$76,915	$0
2	$253,142	$69,300	$0	$0	$0	$132,026	$60,000
3	$320,370	$76,499	$6,288	$0	$0	$181,567	$60,000
4	$443,961	$146,625	$30,000	$2,300	$0	$207,993	$150,000
5	$558,524	$193,017	$19,558	$4,000	$0	$230,047	$230,000
6	$790,602	$293,488	$160,000	$31,002	$0	$281,108	$270,000
7	$1,080,003	$501,084	$200,000	$75,001	$0	$304,082	$350,000
8	$1,558,995	$694,711	$354,572	$110,000	$0	$348,538	$350,000
9	$1,964,127	$982,883	$779,209	$300,000	$82,187	$382,521	$470,000
Next 8	$4,551,991	$3,101,756	$1,480,375	$800,000	$0	$405,529	$900,000
Top 2	$10,204,277	$9,102,610	$1,341,000	$1,212,265	$0	$377,365	$1,673,978
Total	$721,170	$298,779	$84,878	$19,500	$0	$237,904	$250,000

Source: Authors' analysis of SCF data.

Table 3: Median Wealth by Decile of Average Annual Household Earnings Since Age 18, 2022

Deciles	Net Worth/Total Earnings	NW+DB/Total Earnings	Total Wealth/Total Earnings	DB/Total Earnings	Other Wealth/Total Earnings	NW-KG/Tot Earn	NW-NonBus KG/Tot Earn	NW-TotInh/Tot Earn
1	6.9%	6.9%	25.6%	0.0%	18.7%	4.3%	4.3%	3.4%
2	6.2%	8.1%	19.8%	1.9%	11.7%	3.1%	3.1%	4.8%
3	5.2%	8.0%	19.7%	2.8%	11.7%	3.0%	3.1%	4.4%
4	7.8%	13.9%	25.1%	6.1%	11.2%	4.0%	4.0%	6.1%
5	9.8%	11.8%	23.6%	2.0%	11.8%	3.4%	3.4%	8.9%
6	11.1%	17.3%	27.3%	6.2%	10.0%	5.4%	5.6%	10.0%
7	16.0%	25.8%	36.1%	9.9%	10.2%	11.0%	11.7%	13.5%
8	19.5%	27.7%	38.9%	8.2%	11.2%	13.2%	13.6%	19.4%
9	23.1%	37.8%	44.7%	14.7%	6.9%	17.8%	18.5%	21.8%
Next 8	56.3%	67.7%	74.8%	11.4%	7.1%	40.4%	44.8%	55.2%
Top 2	92.9%	96.5%	100.7%	3.5%	4.2%	69.6%	79.7%	92.9%
Total	23.2%	29.2%	39.7%	6.1%	10.4%	15.9%	17.4%	21.8%

Source: Authors' analysis of SCF data.

Table 4. Net-Worth-to-Lifetime-Earnings Ratios, by Inclusion of Capital Gains, Ranked by Deciles of Net Worth and Average Lifetime Earnings, Ages 48–62, 2022

	Ranked by Average LE			Ranked by Net Worth		
	NW to LE Ratio	NW Less Survey KG to LE Ratio	NW less ALL KG to LE Ratio	NW to LE Ratio	NW Less Survey KG to LE Ratio	NW less ALL KG to LE Ratio
1	0.07	0.04	0.04	0.00	0.00	0.00
2	0.06	0.03	0.03	0.01	0.01	0.01
3	0.05	0.03	0.03	0.05	0.03	0.03
4	0.08	0.04	0.04	0.09	0.04	0.04
5	0.10	0.03	0.03	0.15	0.09	0.09
6	0.11	0.05	0.05	0.15	0.09	0.08
7	0.16	0.11	0.08	0.23	0.17	0.15
8	0.19	0.13	0.13	0.33	0.25	0.23
9	0.23	0.18	0.15	0.42	0.30	0.27
Next 8	0.56	0.40	0.36	0.79	0.58	0.50
Top 2	0.93	0.70	0.63	2.3	1.28	1.12

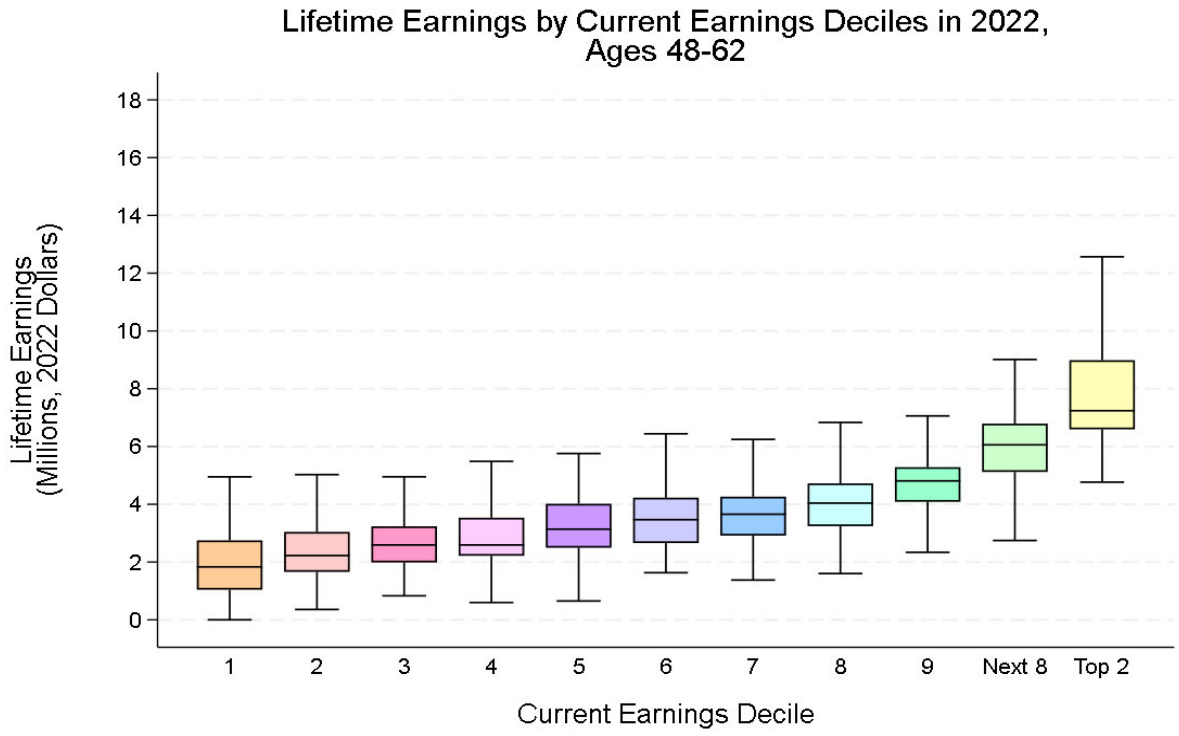
Source: Authors' analysis of SCF data.

Table 5: Inheritance (Incidence, Size, and Contribution to Net Worth) by Decile of Average Lifetime Earnings, Ages 48–62, 2022

Deciles	Share Receiving Any Inheritance	Average Inheritance (3% Real Rate of Return)	Inheritance "Share" of Net Worth
1	16.2%	119,616	112.3%
2	22.5%	50,168	31.3%
3	17.1%	57,385	20.3%
4	23.5%	80,144	25.2%
5	7.6%	58,226	11.5%
6	26.4%	75,724	12.2%
7	17.1%	142,874	15.1%
8	11.1%	105,037	6.8%
9	21.5%	150,023	7.4%
Next 8	23.2%	219,400	5.0%
Top 2	21.0%	432,183	2.6%
Total	18.6%	109,918	8.3%

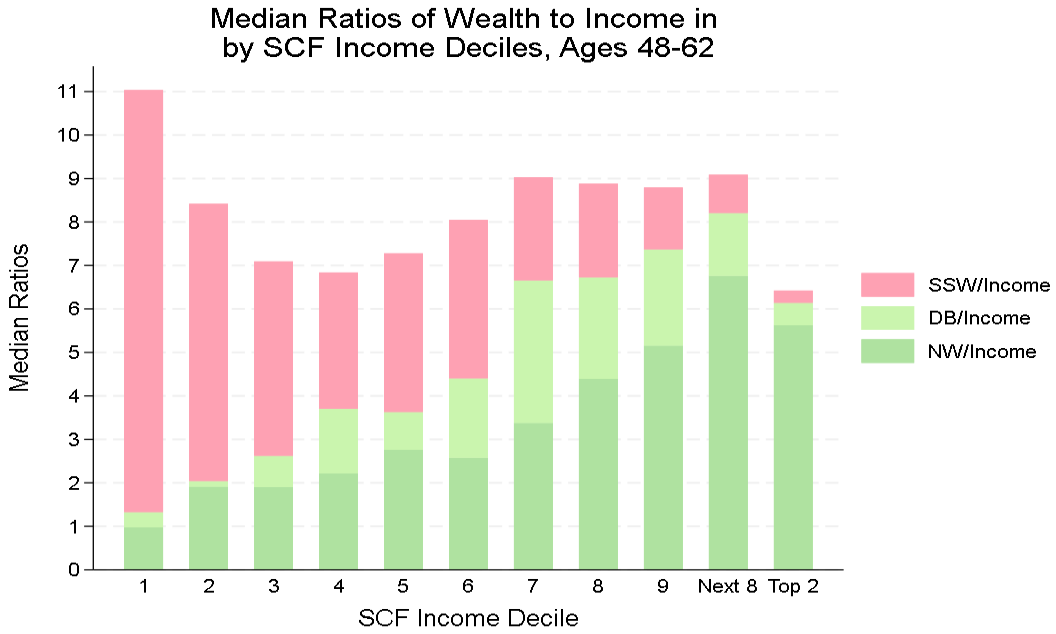
Notes: Total value of inheritances is grown by 3 percent real annual rate of return from the year of inheritance to the survey year. Inflation is adjusted using the PCE price deflator. We assume that 10 percent of an inheritance is consumed or otherwise not invested.
Source: Authors' analysis of SCF data.

Figure 1. Total Lifetime Earnings by Current Earnings Decile, Box and Whisker Plot, Ages 48–62, 2022



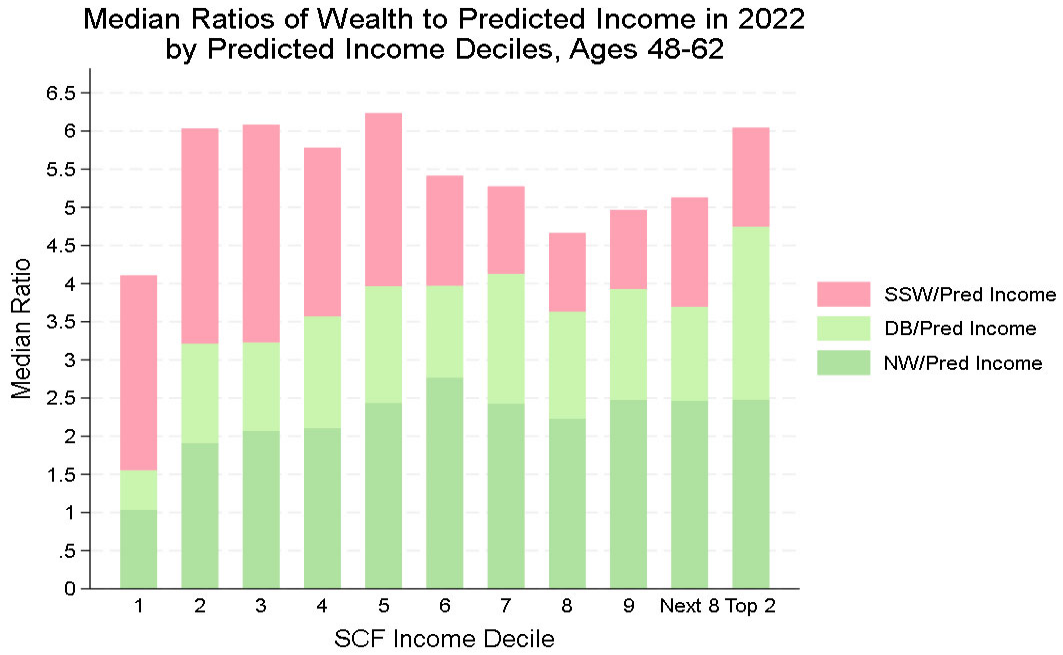
Source: Authors' analysis of SCF data.

Figure 2. Ratios of Median Wealth to Income, by Type of Wealth, Sorted by SCF Income Deciles, Ages 48–62, 2022



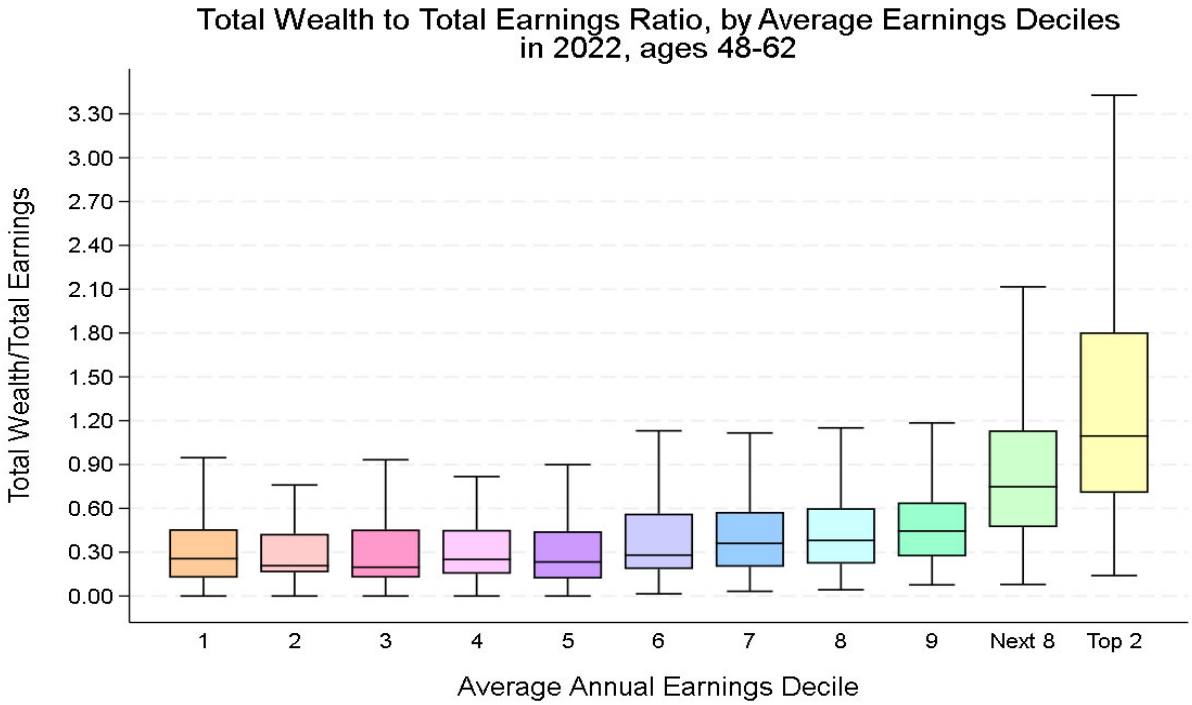
Source: Authors' analysis of SCF data.

Figure 3. Ratios of Median Wealth to Predicted Income, by Type of Wealth, Sorted by Predicted Income Deciles, Ages 48–62, 2019–2022



Source: Authors' analysis of SCF data.

Figure 4. Ratios of Total Wealth to Total Lifetime Earnings, by Average LE Decile, Box and Whisker Plot, Ages 48–62, 2022



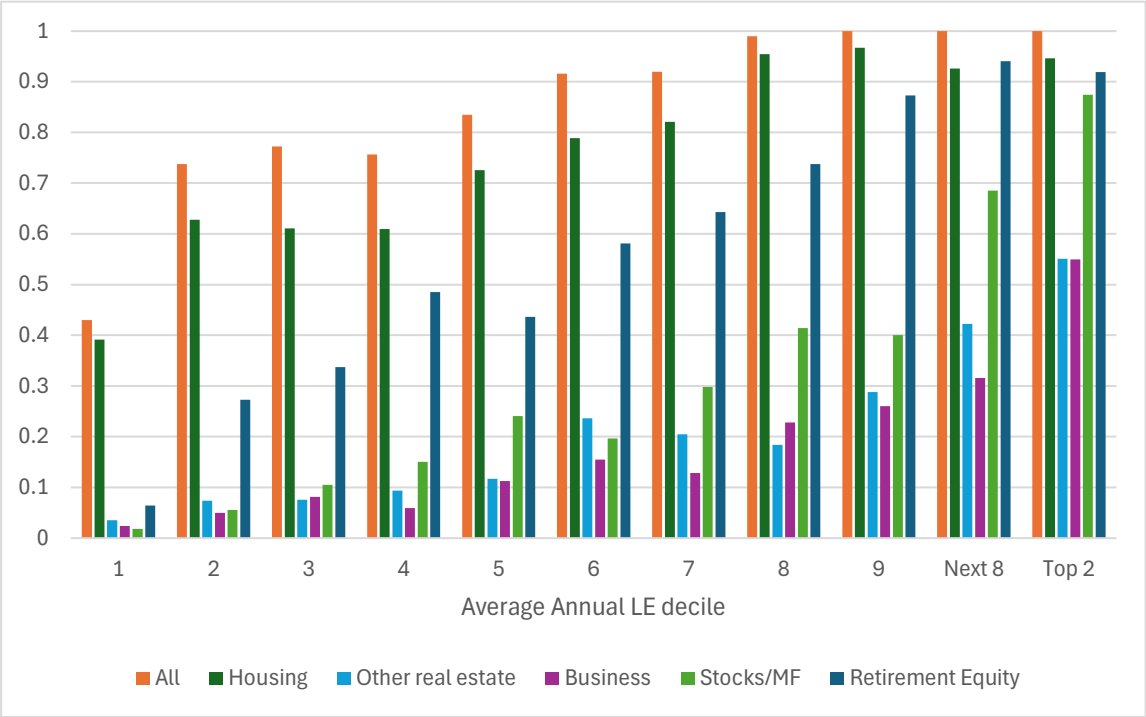
Source: Authors' analysis of SCF data.

Figure 5. Ratios of Median Wealth to Total Household Lifetime Earnings, by Type of Wealth, Sorted by Average Lifetime Earnings Deciles, Ages 48–62, 2022

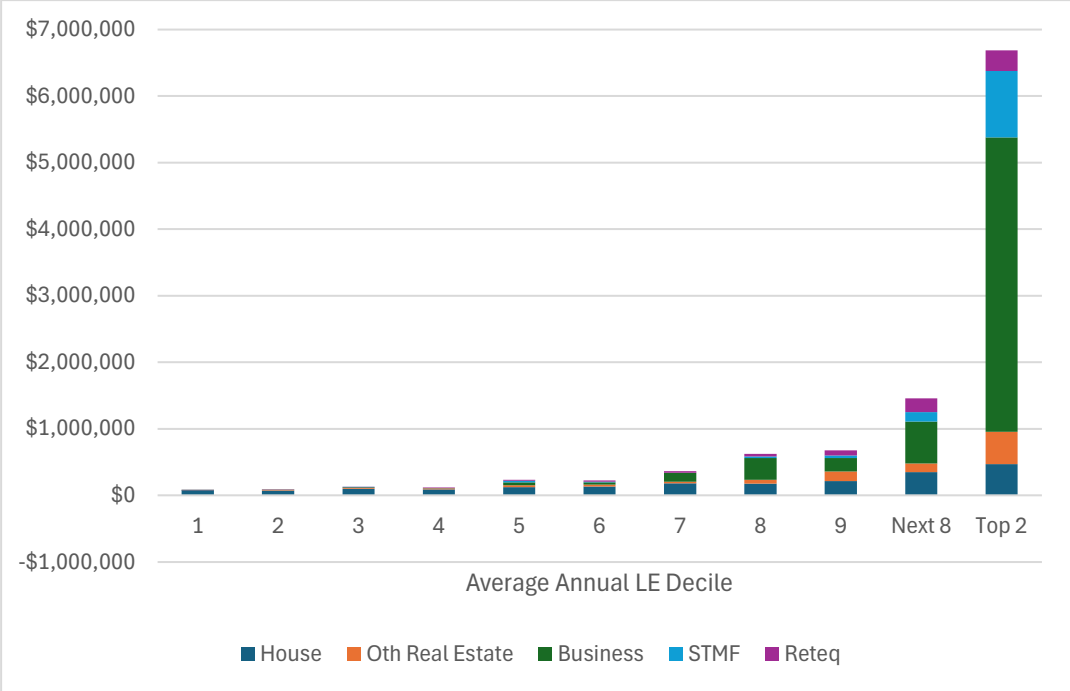
Source: Authors' analysis of SCF data.

Figure 6. Unrealized Capital Gains by Deciles of Average Household Lifetime Earnings, Ages 48–62, 2022

Panel A. Prevalence by Type of Asset

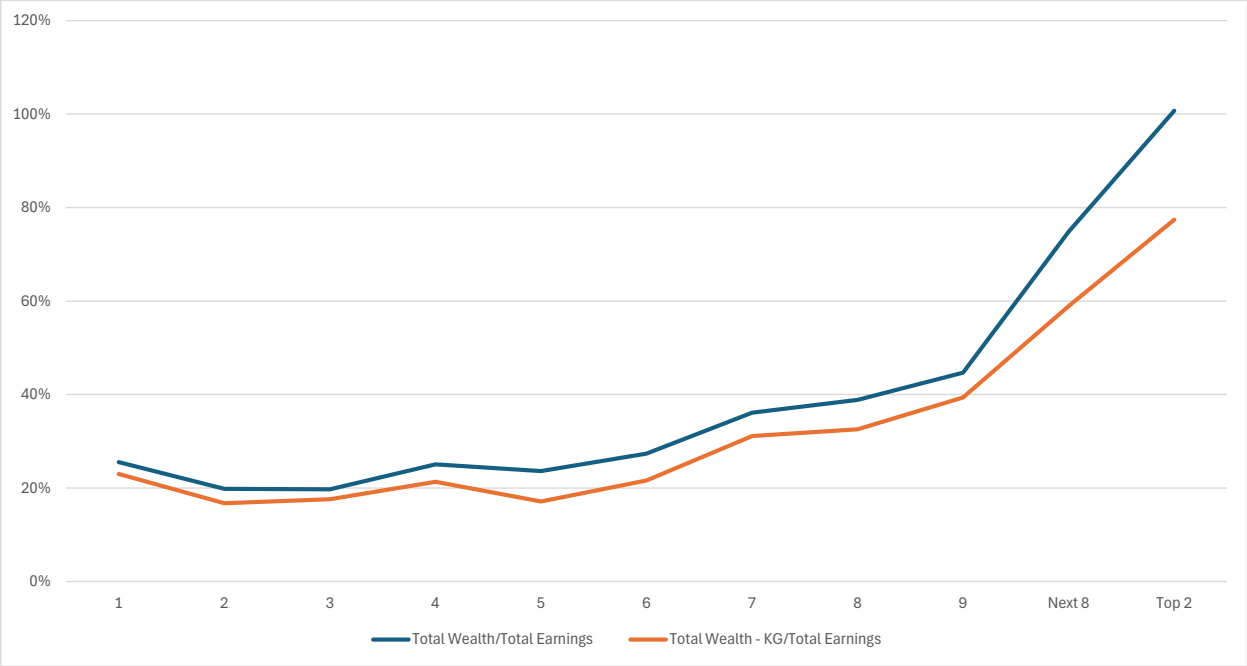


Panel B. Conditional Mean Value by Asset Type



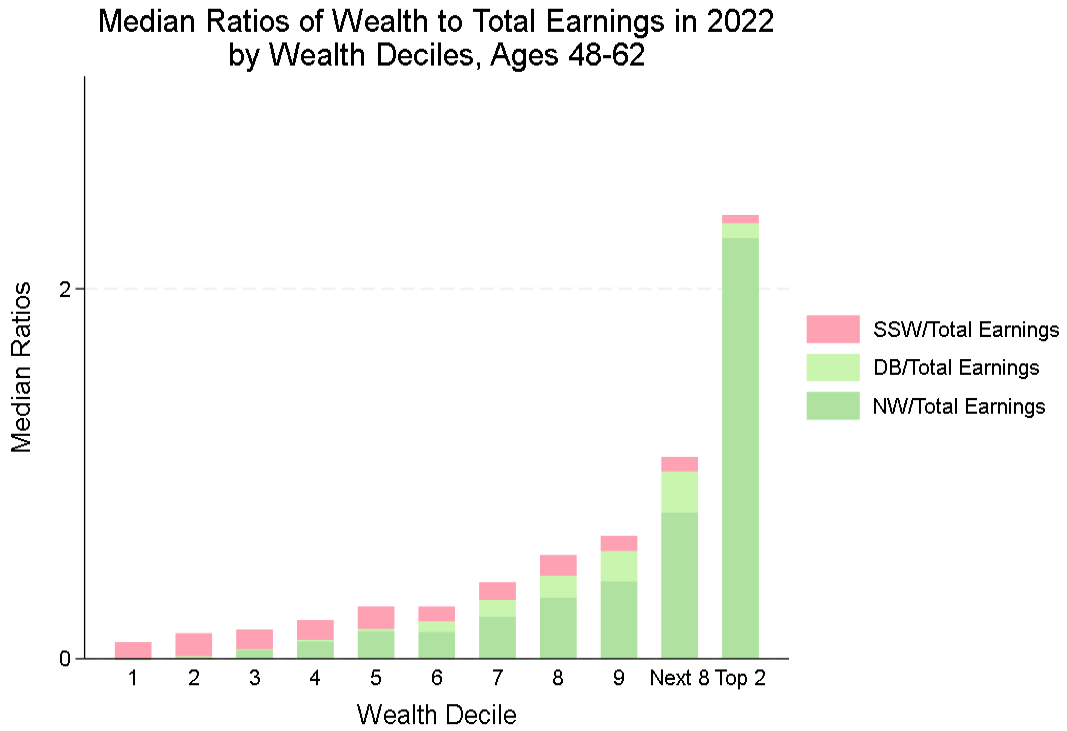
Source: Authors' analysis of SCF data.

Figure 7. Expanded Wealth, by Inclusion of Accrued Capital Gains, as Share of Total Household Lifetime Earnings by Deciles of Average Household Lifetime Earnings, Ages 48–62, 2022



Source: Authors' analysis of SCF data.

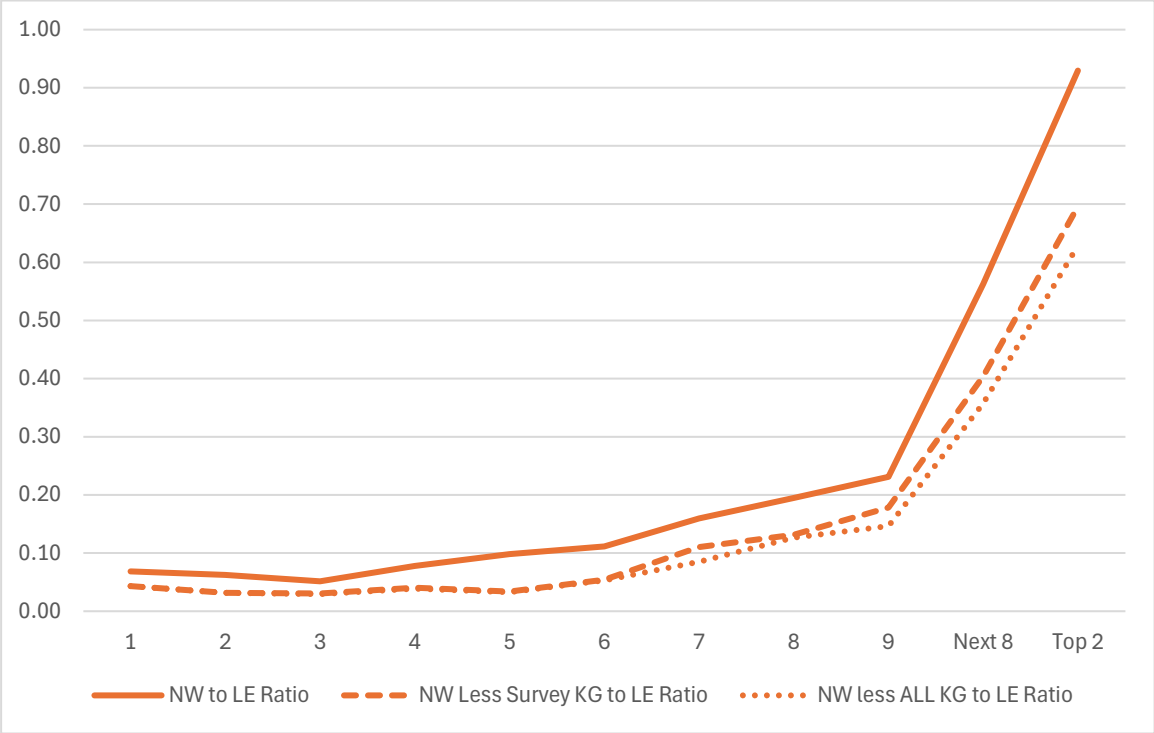
Figure 8. Combined Wealth Components, as Share of Total Household Lifetime Earnings, by Deciles of Private Wealth, Ages 48–62, 2022



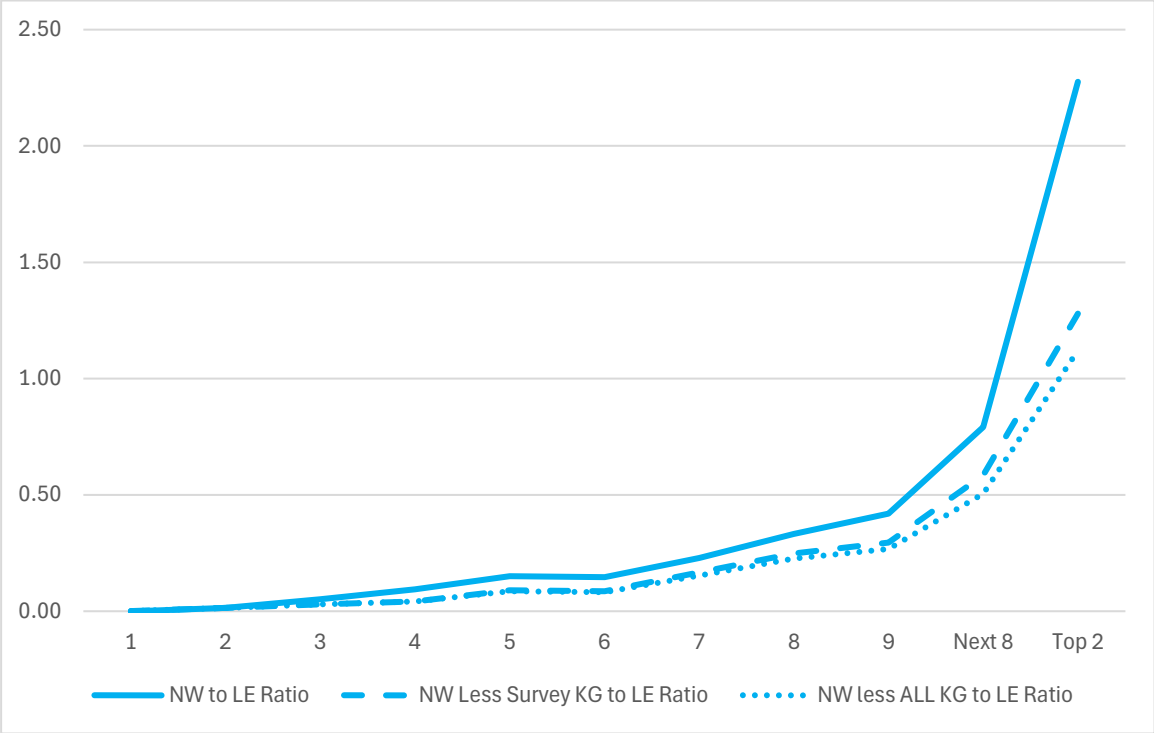
Source: Authors' analysis of SCF data.

Figure 9. Ratios of Net Worth to Lifetime Earnings by Inclusion of Capital Gains and Ranking Variable, Ages 48–62, 2022

Panel A. Ranked by Average Lifetime Earnings

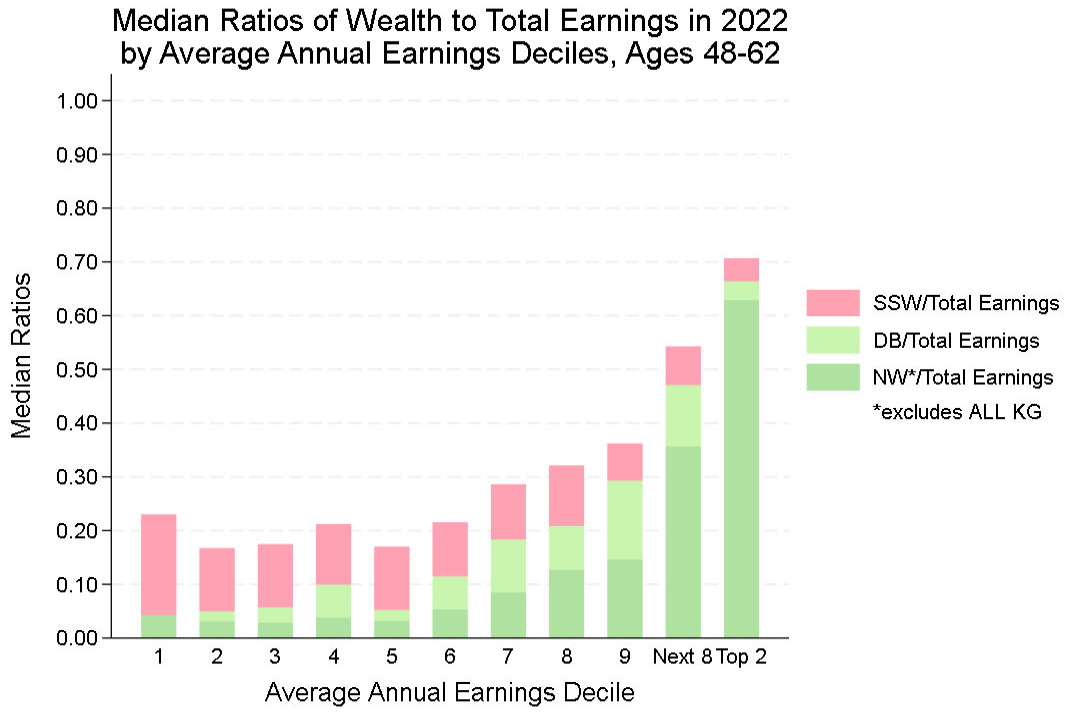


Panel B. Ranked by Net Worth



Source: Authors' analysis of SCF data.

Figure 10. Expanded Wealth Components Less Capital Gains, as Share of Total Household Lifetime Earnings by Deciles of Average Lifetime Earnings, Ages 48–62, 2022



Source: Authors' analysis of SCF data.

Appendix Figures

Figure A1a. CPS Earnings Path and SCF Model Estimates for 1961–1963 Birth Cohort

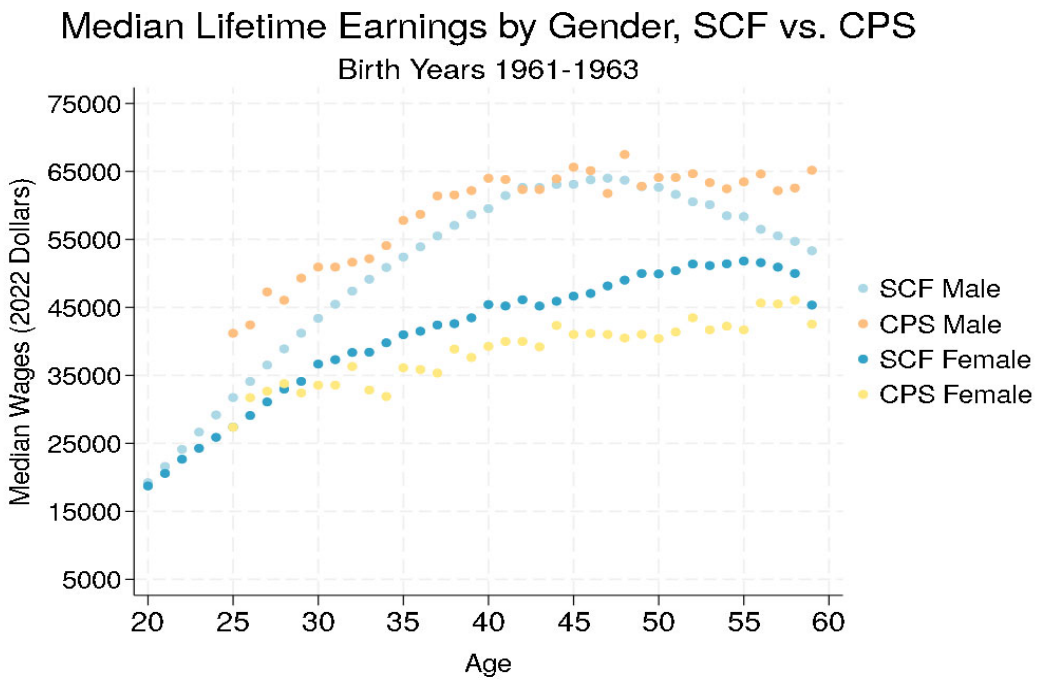
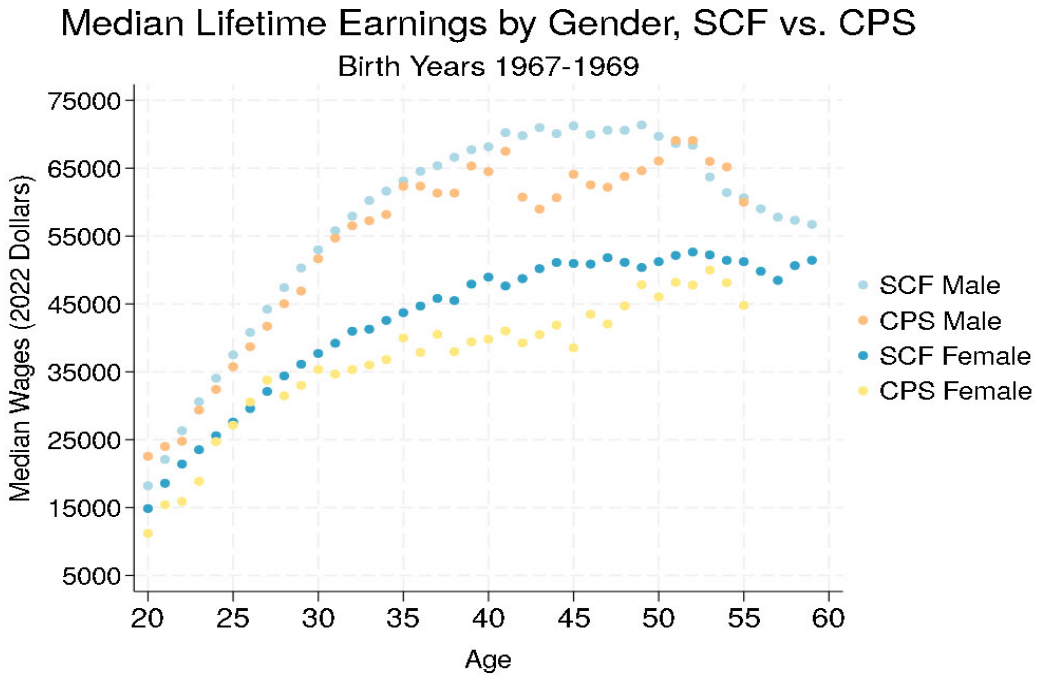


Figure A1b. CPS Earnings Path and SCF Model Estimates for 1967–1969 Birth Cohort



Source: Authors' analysis of IPUMS CPS, University of Minnesota, www.ipums.org, U.S. Census Bureau, Bureau of Labor Statistics and SCF data.

Figure A2. Mean Ratios of Expanded Wealth Components Less Capital Gains, as Share of Total Household Lifetime Earnings by Deciles of Average Lifetime Earnings, Ages 48–62, 2022

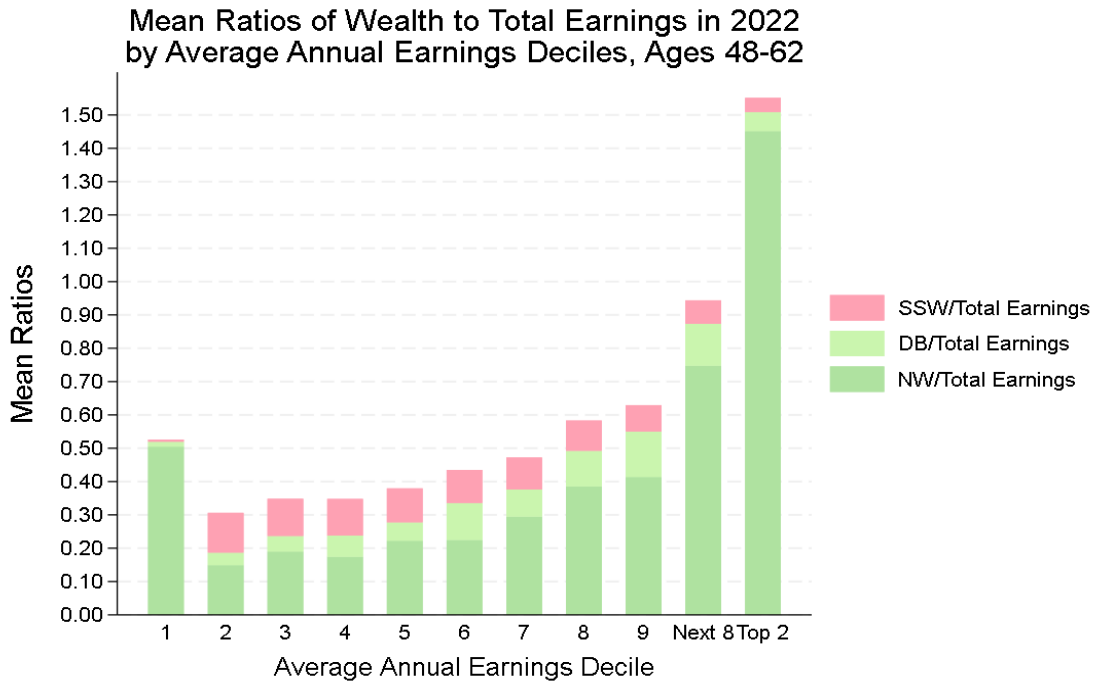


Figure A3. Expanded Wealth Components Less Capital Gains, as Share of Total Household Lifetime Earnings by Deciles of Average Lifetime Earnings, Ages 55–62, 2022