Racial Wealth Disparities:

Re-considering the Roles of Human Capital and Inheritance

by

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Abstract

In this paper we present updated measures of racial disparities in wealth using the most recent data from the Survey of Consumer Finances (SCF), augmented by household-level estimates of defined benefit (DB) pension wealth developed by Sabelhaus and Volz (2020). Including this important asset, we find that racial wealth disparities are smaller than the numbers typically discussed in other research or in the media, but the disparities remain substantial. The paper proceeds by exploring two specific factors that have long been identified as playing potentially important roles in generating disparities in wealth by race, namely differences in earnings (education/human capital) and intergenerational transfers in the form of inheritances and inter vivos gifts. We contribute to the existing literature by introducing several data innovations in the exploration of these factors using the SCF. We augment the SCF data with individual-level lifetime earnings histories (developed by Jacobs et al. 2020, 2021) and enhanced measures of intergenerational transfers (developed by Feiveson and Sabelhaus 2018, 2019). We also create an expanded set of variables that reflect the range of pension coverage and generosity across workers. With all three of these new data components, we use non-parametric decomposition techniques to estimate their contributions to racial wealth gaps between white and non-white families. Differences in lifetime earnings, pension generosity, and a handful of other human capital and work-related variables explain three-quarters of white/Black wealth gaps and 80 to 90 percent of white/Hispanic gaps. Reweighting white family wealth to match the distribution of human capital traits of "other" race families (including Asian, Native American and other groups) raises counterfactual white wealth to the level of "other" family wealth, nearly closing the white/"other" gap. Differences in intergenerational transfers are found to account for 1 3 to 16 percent of white/non-white private wealth gaps, although much of the influence of these transfers likely works through the human capital channel. Policies that successfully increase skills, employment, earnings, and pension coverage among low-wealth Black and Hispanic will make important contributions to closing wealth gaps.

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INTRODUCTION

Researchers and policymakers want to understand wealth inequality. Wealth is known to be distributed unequally, both in terms of concentration at the top of the distribution and by race, leading to concerns about fairness, opportunity, and the legacy of racism in the United States. Among the reasons researchers look beyond income or consumption to wealth as a measure of economic well-being is that it is a store of value with attributes not shared by those other flow measures. Wealth can support families facing economic shocks that disrupt income; it can be used as collateral to obtain financing that creates additional opportunities; it can be left as a bequest to support family members in the future; and it is vital to financing future consumption in retirement.

Wealth is important to understand, but it is also complicated. Household wealth accrues over decades, and it derives from saving linked to earnings and employment as well as entrepreneurial effort, investment, and intergenerational transfers in the form of inheritances and inter vivos gifts. The wealth that any family succeeds in accumulating by the end of their working life is a joint result of decisions made much earlier. Accumulation of wealth is influenced by effort devoted to education (completing high school, choice of college, field of study, and pursuit of advanced degrees), decisions made about work (occupations to pursue, whether to start a business, how many hours and years to work), investment (how much to save, how much risk to take) and family formation (marriage and partnership, number of children), and the assistance of family in the forms of gifts, inheritances, and other types of support.

The junctures at which events or institutions beyond the control of any individual might disrupt the accumulation of wealth among non-white household relative to their white peers are also numerous. To the extent that schools and educational resources available to non-white families are, in general, of lower quality—whether due to funding disparities, neighborhood safety, or housing-related access—the development of skills vital to success in higher education and the workplace will be hampered for those children. To the extent that employers discriminate against non-white workers in hiring, pay, and promotion, white workers will systematically achieve greater savings and pension wealth than their non-white peers. To the extent that housing wealth for non-whites is diminished—whether due to discriminatory practices on the part of lenders, realtors, or appraisers; high-crime neighborhoods; or destructive economic development efforts—white families will accrue relatively greater resources. To the extent that older generations of white families accrued substantial wealth in the past and pass it on to their offspring, the inherited wealth of current generations of white families will be greater than their non-white neighbors.

The existence of past racial discrimination and its remaining vestiges, however, does not necessarily mean that it plays a primary role in determining current disparities in wealth. The extent to which discrimination has and continues to influence the factors that determine wealth accumulation is important to understand, but it is one influence among many, each of which requires critical assessment to understand the magnitude of its impact on current disparities.[1] As research on the history of racial disparities in earnings shows, wages of white and Black workers converged considerably during earlier periods—from the 1940s to the 1970s—when racial discrimination was dramatically more prevalent (Bayer and Charles 2018; Hurst et al. 2021). It is not that past or continuing discrimination has not played a role in the stalling of Black wages relative to those of whites since 1980, but the influence of discrimination per se on continued disparities may be more limited and is certainly more complex than simplistic accounts might suggest.

There are also limits on the extent to which the household resources of previous generations, with much closer ties to America's ugly history of slavery and Jim Crow, determine the wealth of their descendants. Historic events directly influence consumption in the past, but less so the wealth of today. Most of what is held as wealth at any given point in time is ultimately consumed, either by the older generations themselves or their direct heirs. Less than one-third of households ever receive inheritances or inter vivos transfers, most of which are small. And just 4 in 10 of those receiving any intergenerational transfer plan to leave a substantial estate to their heirs. If these relationships holds over time, we can expect that across four generations we would see only 5 percent of households receiving substantial inheritances that are linked through time to wealth originally held by their great-grandparents.[2]

The rising share of interracial relationships also means that the wealth being passed between

[1] This paper does not attempt to determine the extent of discrimination that persists today or how great its impact is on earnings and other current market outcomes. There is good evidence to suggest that racial discrimination has declined and plays less of a role than in the past, but there is also good evidence indicating its continued presence. We can point to the enactment and enforcement of landmark legislation in the wake of the civil rights movement—including but not limited to the Civil Rights Act of 1964—which has made racial discrimination in hiring, pay, and promotion illegal for nearly 60 years. We can look to dramatic shifts in public sentiment, where racist attitudes held by whites—from objecting to interracial marriage to supporting anti-Black discrimination in home sales among countless others—went from being the widely-held norm to a relatively small fringe over the course of decades (Bobo et al, 2012). And we can learn from the work of scholars who have concluded "labor market discrimination is no longer a first-order quantitative problem in America" (Heckman, 1998) and "relative to the 20th century, the significance of discrimination as an explanation for racial inequality across economic and social indicators has declined" (Fryer, 2011). But we must also acknowledge scholarship which points to continued discrimination by race (Kline et al, 2021, among others), and raises questions about whether it has in fact declined since the late 1980s (Quillian et al, 2017).

[2] Among households with heads 65 and older, 32 percent have received an inheritance (Table 19). Among recipients of inheritance in the same age group, only 39 percent plan to leave a sizeable estate. (.32 * .39 *.39 = .05)

generations is increasingly between families of different racial composition. In 1960, less than 0.5 percent of marriages in the United States were interracial, but by 2019 they accounted for 11 percent of all marriages.[3] One out of every five unmarried partnerships in 2019 was between members of different racial groups. Researchers from Pew (Lopez et al. 2021) show that inter-ethnic/racial marriage rates are particularly high among newlyweds, with 30 percent of Hispanics, 29 percent of Asians, 20 percent of Blacks, and 12 percent of whites marrying someone of a difference race or ethnicity in 2019. And the rising immigrant share of the population means that racial ties across generations are playing less of a role in transmitting America's racial history into its future. At its modern trough in 1970, immigrants accounted for less than 5 percent of the American population. Since that time, the immigrant share of the population has climbed steadily, reaching almost 14 percent in 2019.[4]

Furthermore, our attempts to understand racial differences in economic outcomes need to extend beyond comparisons between Blacks and whites. Convincing explanations for continued wealth gaps, for example, should be able to account for the fact that Asians are the highest-wealth racial group in the United States. Asians have historically been—and, to some extent, are still—subject to extreme forms of racial discrimination in the United States. There are also multiple other dimensions along which Asian families, on average, differ from white, Black, and Hispanic families, from academic achievement and educational attainment to occupations, family structure and geographic location.

Understanding how important any of these factors are—the magnitude of their contribution—in explaining the racial disparities that we observe today is complicated. In this paper we hope to make several contributions to our understanding of racial wealth disparities using the Survey of Consumer Finances (SCF). First, we augment the standard market wealth concept in the SCF with defined benefit (DB) pension assets and analyze what we call "private wealth" throughout our analysis. Second, we introduce new predicted earnings histories (developed in Jacobs et al. 2020, 2021) into the SCF and use the full range of pension generosity measures available in the survey to develop a better understanding of how human capital formation leads—through higher earnings and non-wage compensation over the working life—to the accumulation of wealth. Third, using the approach developed in Feiveson and Sabelhaus (2018, 2019), we enhance the existing intergenerational transfer data in the survey—recovering inheritances that are reported outside of the "inheritance" module and reclassifying some as inter vivos transfers—to better understand their role in sustaining racial disparities in wealth.

[3] Authors' analysis of Census and American Community Survey data.
[4] US Census Bureau data, accessed through usafacts.org on September 2021.

Private Wealth: The market wealth concept in the SCF ("bulletin net worth") excludes defined benefit pension assets. Although DB plans have become less common over time, these plans continue to hold substantial assets—accounting for 15 percent of total household wealth in 2019 (Sabelhaus and Volz 2020). DB assets are also particularly important for the families of Black workers, in part due to their strong representation in the public sector work force. Thompson and Volz (2021) show that including DB assets results in substantially lower measures of the average white/Black wealth gap. Including DB pensions also results in a wealth concept that is more suitable for exploring how higher skills and earnings build wealth for families over their working lives.

Human Capital: Labor economists have long studied how human capital (skills, ability) helps explain earnings differences across types of workers, as more skilled workers are more productive and receive higher wages. And it is through higher earnings, primarily, that human capital should in turn lead to increased wealth. Since the SCF is a cross section without a measure of lifetime earnings, most analysts using the survey instead consider the relationship between educational attainment—as a proxy for human capital—and wealth. We argue that educational attainment is an inadequate proxy. To better reflect the ways that skills translate into wealth accumulation across a working life, we augment data in the SCF with lifetime earnings histories developed by Jacobs et al. (2020, 2021). We also exploit a variety of measures in the survey that reflect the availability and generosity of employer-provided pension benefits, which disproportionately boost the wealth of highly skilled workers.

Inheritance: Inheritances are clearly related to wealth accumulation for their beneficiaries, but their importance in understanding racial wealth disparities—or even wealth concentration—is less clear. Past research often concludes that inheritances actually reduce inequality, as they are distributed less unequally than other forms of wealth (Wolff 2002; Wolff and Gittleman 2014; Elinder et al. 2018; Boserup et al. 2016). In this paper, we extend the work of Feiveson and Sabelhaus (2019) allocating the value of inheritances and gifts that can be identified in the survey but are not reflected in the inheritance module. Using these augmented measures of intergenerational transfers, which capture a larger flow of transfers than the default SCF measures, we describe the racial distribution of inheritance and inter vivos transfers and assess their importance in understanding disparities in wealth by race.

In addition to describing and interpreting the data innovations, we introduce into the SCF—lifetime earnings histories, expanded pension generosity measures, and augmented measures of intergenerational transfers—we also perform non-parametric decomposition analysis of the contributions these factors make to white/non-white wealth gaps.

A preview of our main findings:

- Racial disparities in wealth are substantial, but they are smaller when we include assets from defined benefit pensions: The mean white/Black gap (the ratio of white wealth to Black wealth) in market wealth, for example, was 6.8 in 2019, but it is 4.4 when we use private wealth (**Figure 5, Table 2**).
- Across much of the last 30 years, racial disparities in mean and median private wealth have remained largely constant but jumped up following the 2008–09 financial crisis (**Figure 1**). Median wealth gaps have since fallen back to pre–Great Recession levels, while mean gaps remain slightly elevated.
- The highest-wealth racial group in the country is Asian. Thompson and Volz (2021) analyze households in the SCF (with heads aged 30 to 62) and find that average private wealth of Asian families (projected to age 62 and discounted back to age at time of survey) was $1.5 million in 2016–19, compared with $1.2 million for white families, $394,000 for Hispanic families, and $326,000 for Black families (**Table 1**).
- Basic household demographics by themselves can account for a substantial portion of the disparities that we observe between races. The "typical" white family had private wealth of $246,000 in 2019, compared with $35,000 for the "typical" black family, for example (**Table 3**). The typical white family, though, includes a married/partnered couple where one of the members holds a bachelor's degree and there is a combined history of 41 years of full-time work. The typical Black family, on the other hand, is headed by a single adult with either a high school diploma, some college or an associate degree, and 28 years of full-time work. Adjusting only for differences in the age of the respondent and the married/partnered status between Black and white families (via non-parametric re-weighting) reduces the mean gap in private wealth in 2019 from 4.4 to 2.9 (**Figure 5**).
- Substantial years of full-time employment are crucial for wealth accumulation, particularly for the college-educated. For households with heads aged 50 to 65 and at least one adult with a college degree, private wealth is just $154,000 among those with only 10 to 19 years of combined full-time employment, compared with $1.3 million for those with 50 to 59 years (**Figure 8**).
- Pension plan wealth (defined contribution [DC] and DB combined) becomes increasingly important as working households age. It is the single-largest asset class for families in their fifties (29 percent) and their sixties (34 percent) (**Figure 10**). Pension assets also dominate the portfolios of the set of families who can be viewed as having achieved a sort of reasonably "attainable" level of economic prosperity—sitting in the top half of the age-adjusted wealth distribution, but outside the top 5 percent. For these families, aged 45 to 65, pension wealth accounts for 47 percent of total assets (**Figure 11**).
- Highly educated workers are not only more likely to be covered by a work-related pension, but the pensions they have are considerably more generous, and their families receive a greater number of pensions overall, from current and past work (**Table 9**).

- When we reweight the white sample to match the distribution of human capital and work-related traits among the non-white samples, we can account for substantial portions of the observed disparities in private wealth. Differences in historic and current job earnings and years of work alone account for 56 percent of the white/Black wealth gap at the mean and 60 percent at the median (**Table 14**). Further accounting for differences in pension coverage and generosity between white and Black families pushes the total explained portion of the wealth gap at the mean and the median up to two-thirds. With the inclusion of an additional set of human capital and work-related variables (indicators for retirement and disability status, occupation and industry indicators, and educational attainment) to the reweighting estimator, the share of total white/Black wealth disparities that can be explained rises to three-quarters.
- Differences in earnings and years of employment account for modestly smaller amounts of the disparities in wealth between white and Hispanic families. Once differences in pensions and the remaining human capital and work-related variables are also accounted for, however, we see that the full suite of human capital variables account for 76 percent of the mean gap between white and Hispanic families, and 91 percent of the median gap.
- White families have lower private wealth (both mean and median) than "other" race families (including Asians, Pacific Islanders, Native Americans, and others) among the age groups for which we have earnings histories. Reweighting the white sample to match the distribution of the full set of human capital variables of the "other" race sample nearly closes the mean wealth gap and substantially reduces the median gap.
- Inheritances overwhelming go to white and "other" race families, which receive $280 billion annually (9 percent of their total household income), compared with just $11 billion for Black families (4 percent), and $5 billion for Hispanic families (2 percent) (**Table 17**).
- Most families, regardless of race, receive no inheritance; just one-third of white families (aged 55 and older), 17 percent of "other" families, 14 percent of Black families, and 8 percent of Hispanic families ever receive any inheritance (**Table 21**).
- Using the same non-parametric reweighting estimator, we find that total inheritances and inter vivos transfers ever received (without any additional controls) account for 13 percent to 16 percent of the mean and median private wealth gaps between white families and Black and Hispanic families (**Table 22**).
- Much of the influence of intergenerational transfers on wealth disparities also works through human capital or earnings, that is, paying for education. When we consider the impact of inheritances simultaneously with human capital variables, the additional amount of the white/non-white wealth gaps explained by intergenerational transfers falls sharply, adding just a few percentage points to the share of the white/Black and white/Hispanic gaps explained (**Table 23**).

The paper proceeds with 1) a discussion of the data used in our analysis and our basic analytical methods; 2) a review of the data for wealth by race, including levels and trends in racial wealth

disparities; 3) a brief discussion of the range of factors discussed in theory and literature determining racial disparities in wealth; 4) an extended analysis of the relationship between human capital formation and wealth accumulation; 5) an analysis of intergenerational transfers and wealth accumulation; and 6) a concluding discussion of our findings, areas for future work, and the implications for public policies to address racial disparities in wealth.

2. DATA & METHODS

2A. The Survey of Consumer Finances

The primary data used come from the 11 waves of the Federal Reserve Board's triennial Survey of Consumer Finances (SCF) conducted from 1989 through 2019. Several features of the SCF make it appropriate for exploring the distribution of wealth. The survey collects detailed information about households' financial assets and liabilities and has employed a consistent design and sample frame since 1989. The SCF includes information on the value of all financial and nonfinancial assets, including residential and non-residential 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 debts, and other miscellaneous forms of debt.[5]

In addition to collecting data about a family's finances, the SCF collects basic demographic information pertaining primarily to the respondent (that is, the family head). The survey records the respondent's self-identified race, chosen from among seven options. The exact wording of the telephone version of the survey is as follows: "Which of these categories do you feel best describe you: white, Black or African American, Hispanic or Latino, Asian, American Indian or Alaska Native, Hawaiian Native or other Pacific Islander, or another race?" Before 1998, respondents could choose only one category. Since 1998, they have been allowed to select multiple categories, but first they are asked to indicate the category with which they identify most strongly (Kennickell 1999).[6]

In the following analysis, we use the race variable reflecting the first option that the respondent chose, starting with the 1998 SCF and for all of the following surveys, in order to avoid any

[5] 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, PEUs are referred to as "families." Single individuals living alone are included and simply 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.

[6] The race variable in the public version of the SCF is based on the first answer provided. Very few people give more than one response. As of 2004, respondents, regardless of race, are also asked a question to determine whether their cultural origins are Hispanic or Latino.

potential complications related to the changes in the race variable in 1998 (allowing for the selection of multiple races) and in 2004 (allowing for the separate identification of Hispanic ethnicity).[7]

Because of the unique design of the SCF, which includes oversampling households with predicted high net worth using tax information from the Internal Revenue Service, its data 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). Since the survey also collects basic household demographic information, its data also have been used frequently to explore racial disparities in wealth (Dettling et al. 2017; Thompson and Weller 2018; Wolff 2018; Thompson and Suarez 2019; Kakar et al. 2019; Bhutta et al. 2020).

2B. DB Pensions

The SCF includes several detailed questions about DB pensions but does not capture the asset value of plan benefits. The survey does ask DB plan participants about expected future benefits, but many workers, particularly those further from retirement age, know little about their plans or future benefits. It has long been acknowledged that the information collected from these future-benefit questions is not necessarily a good reflection of what respondents will actually receive (Starr-McCluer and Sunden 1999). Measures based on answers to questions about expected future DB benefits are not included in Bulletin net worth.

Instead of relying on the expected-future-benefit responses provided by DB plan participants,[8] we follow Jacobs et al. (2021) and use household-level estimates of DB pension wealth developed by Devlin-Foltz et al. (2016) and updated by Sabelhaus and Volz (2019, 2020). 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, reported future payments for those with coverage from a past job, and 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, cohort life tables and differential mortality, and the assumption that current beneficiaries have first claim to DB plan assets. Devlin-Foltz et al. (2016) and Sabelhaus and Volz (2019, 2020) find that including the implied assets from future pension benefits modestly reduces inequality in the

[7] The wealth numbers here will differ somewhat from those in Dettling et al. (2017) and Bhutta et al. (2020), which identify "white" families as those headed by respondents self-identifying as white, non-Hispanic only; "Black" as those whose head identifies as Black or African American, non-Hispanic only; and "Hispanic" as those whose head identifies as Hispanic only.

[8] This is the approach taken in Wolff (2007, 2014, 2018).

distribution of wealth, but the authors do not explore disparities in wealth by race.[9]

2C. Inheritances and Gifts

The SCF collects information from respondents on receipt of inheritances and inter vivos transfers, as well as the giving of inter vivos transfers. Feiveson and Sabelhaus (2019) show that inheritances received are well captured in the SCF, based on benchmarking those reported inheritances against estimated bequests.[10] One key to getting SCF inheritances and gifts received closer to aggregate benchmarks is recognizing that some inheritances and gifts are captured outside of the SCF inheritance module, particularly in the sections on real estate and business assets. Some respondents report having received property or businesses through an inheritance or gift, but do not include those transfers later when the inheritance questions are asked (see Appendix A for further details). Adding those unreported inheritances and gifts raises the totals noticeably (Feiveson and Sabelhaus 2019). Inter vivos transfers pose an additional challenge, because the wording of questions about transfers made is quite different from the wording of questions about transfers received, such that transfers received are systematically lower (Feiveson and Sabelhaus 2019).

To develop their augmented measure of intergenerational transfers, Feiveson and Sabelhaus (2019) build on the fact that the SCF asks respondents about lifetime inheritances and substantial gifts received. The inheritance module has retrospective questions on lifetime transfers received, with as many as three occurrences for which details are collected, and a "mop-up" question to capture all other transfers received. Respondents are asked to report any inheritances or "substantial assets in a trust or other form" that they "ever received" starting with the "largest" and working down. The data collected on the first three inheritances include type of transfer, value of transfer, year received, and from whom. Note that there is no inquiry about what specific asset(s) were transferred, meaning there are distinctions such as real estate versus stocks and bonds or cash.

There is also (in some cases) supplemental information in the SCF survey modules on real estate and owned business holdings. In the real estate and business modules, respondents are asked how they obtained ownership of the asset, as part of the standard question battery, with "received as a gift or inheritance" as one of the options. In some cases, those transfers are not captured again

[9] Using a public-use version of Sabelhaus and Volz's (2020) DB wealth estimates, Madowitz et al. (2020) note that the inclusion of DB pensions reduces the median racial wealth gap.

[10] The only published data on bequests made is from estate tax filings and thus limited to only the very largest bequests. Feiveson and Sabelhaus (2018, 2019) generate benchmarks for bequests of all sizes by applying a model of differential mortality to observed wealth holdings. The predicted bequests match estate tax filings at the top of the bequest distribution (see Gale, Pulliam, Sabelhaus, and Sawhill 2020) and thus can reliably be used to fill out the rest of the predicted bequest distribution.

(as they should be) in the inheritance section. Finally, the question about "other" income in the SCF income module allows respondents to report an inheritance (cash or other financial assets only) received in the year preceding the survey year (to coincide with the timing of all other forms of income in the income module). The comprehensive estimates of inheritances and substantial gifts received rely on information from all three parts of the survey.[11]

To validate their augmented inheritance and inter vivos transfers concept (as well as contribute to other research on lifetime savings behavior), Feiveson and Sabelhaus (2019) compare annualized flow of the gift and receipt of intergenerational transfers. An updated version of this validation exercise, specifically to confirm that the method retains its accuracy in matching within-race intergenerational transfers, beyond the original application to high-wealth concentration, is discussed briefly in **Appendix A**.

Feiveson and Sabelhaus (2018) use those augmented measures to evaluate the importance of intergenerational transfers for wealth concentration (2018). They do not, however, evaluate the role these transfers play in generating racial disparities in wealth. In this paper, we use the augmented inheritance and inter vivos transfer concepts to do just that. For additional details, see Feiveson and Sabelhaus (2019). Below, we will discuss both the annualized flow of inheritances and inter vivos transfers received as well as the cumulative value of total inheritances and inter vivos transfers ever received by households in the SCF.

2D. Earnings Histories

The primary mechanism through which human capital accumulation is expected to result in greater wealth accumulation is by placing workers on higher lifetime earnings paths than they would be without having increased their skills. The SCF, however, is a cross-sectional survey that does not include the lifetime history of earnings of respondents. The survey does include a series of questions asking about the longest past job held, final-year earnings at that job, and the number of years worked, in addition to those same questions for the current job. In their work, Jacobs et al. (2020, 2021) apply earnings trajectories estimated (across pseudo-panel cohorts based on birth-year, education, occupation, and gender) in the Current Population Survey (CPS) to the current job and work history variables in the SCF to develop full earnings histories for respondents and spouses.

Jacobs et al. (2020, 2021) use the earnings histories, as well as earning forecast up to age 62, for the purposes of estimating future Social Security benefits (and the implied asset value of those

[11] Note that we are not using the SCF income module values for "regular support" received during the year preceding the survey, in large part because it is not clear how to convert that to the three-year lookback framework we use for transfers reported in the inheritance and gift module.

benefits for households). Here, we use only the earnings histories (not the future forecast earnings) based on the application of their models and CPS earnings trajectories to the public SCF data and published as an online data Appendix to Jacobs et al. (forthcoming).[12]

For respondents aged 40 to 59 at the time of the interview (and including spouses aged 30 to 65) Jacobs et al. (2020, 2021) use the information reported in the SCF on (1) current occupation, earnings, and tenure and (2) retrospective occupation, earnings, and tenure. For each respondent and spouse, they estimate a full history of past earnings using regression estimates relying on CPS data from 1964 through 2019.[13] Individuals are categorized into earnings-trajectory types by twenty-two possible birth-year cohorts (three-year cohorts beginning with 1924 through 1926 and ending with 1987 through 1989), three education levels (less than high school, high school or equivalent, some college/degree), and four broad occupation categories ([1] management, professional, and related; [2] technical, sales, and services; [3] construction, maintenance, production, transportation, farm, and others; and [4] the self-employed from all occupations).[14]

When an individual's birth-year cohort is not observed in the CPS at a given age, they broaden the categories, defining by education-occupation types instead (for men and women separately). For instance, the youngest person whose earnings profile we want to estimate was born in 1989 and was 30 years old at the time of the 2019 SCF interview. The estimates are based on earnings for those born in the 1987–89 period who were as old as 32 in the 2019 CPS. To forecast earnings growth after age 32, we use coefficient estimates from the education-occupation model. Similarly, for the oldest birth year in the earliest SCF (1989), 1924, we use the education-occupation model

[12] A public-use data file with the lifetime earnings histories (and the related projections of future earnings up to age 62) will be available at the *Oxford Economic Papers* website along with the published version of Jacobs et al. (forthcoming).

[13] For each type of birth-year, education, occupation, and sex cohort, called g, they estimate the following regression on log income in the CPS:

$$\ln y^g = \beta_0^g + \boldsymbol{\beta_{age}^g age} + \beta_{PT}^g PT$$

where $\boldsymbol{\beta_{age}^g age} = \sum_{j=1}^{4} \beta_j^g age^j$, and PT is an indicator for part-time work. We then back out a respondent's individual effect, β_{0i}, at the time of the SCF survey, so that

$$\beta_{0i}^g = \ln y_i - (\boldsymbol{\beta_{age}^g age_i} + \beta_{PT}^g PT_i)$$

The individual effect in any year is a weighted average of the individual and group constants, and, 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 $\rho = 0.85$ to capture persistence in earnings. To predict income, we then apply $\beta_i^{W,t}$, $\boldsymbol{\beta_{age}^g}$, and β_{PT}^g for all ages for each individual. Anyone who reports a longest prior occupation type that is different from their current occupation will have different coefficients applied to the relevant years.

[14] There are 822 possible types: 660 of the more specific cohort-occupation-education-sex combinations, -0zx132 cohort-education-sex combinations (applied when occupation is unclear), and 30 occupation-education-sex combinations (applied when estimating earnings that are outside the ages that the birth-year cohort is observed in the CPS or when some information is missing).

coefficients to fill in earnings at ages that are prior to 1964.

The estimated earnings for a person's type will account for relatively short periods of unemployment, as they include total earnings for those who were not employed for the entire year prior. However, with these measures, we are not able to capture losses due to long-term unemployment, unanticipated early or partial retirement, or permanent labor force exit through disability. Nonetheless, Jacobs et al. (2020, 2021) report that their estimated earnings profiles of these SCF respondents match the CPS profiles quite well.

Jacobs et al. (2020, 2021) use the lifetime earnings estimates to develop a measure of Social Security wealth, which they combined with market wealth and DB pension wealth to form an expanded wealth concept. They then explore the implications of their expanded wealth concept for understanding wealth concentration and its trend over the past 30 years. Jacobs et al. (2020, 2021) do not explore wealth disparity by race, but Thompson and Volz (2021) use the expanded wealth concept, which they call "combined wealth" to explore disparities by race. Thompson and Volz (2021) present new estimates for racial disparities in wealth, but do not analyze the relative contributions of any factors that contribute to those disparities.

Here, we do not use the expanded "combined" wealth concept, but we do use the earnings histories developed by Jacobs et al. (2020, 2021) to understand the role of earnings in explaining observed racial disparities in wealth.

2E. The Wealth Concept: Private Wealth

Large and persistent disparities in wealth by race are well documented, but most of the widely cited statistics measuring these disparities exclude assets that are disproportionately important for racial minorities. Defined benefit (DB) pensions remain a vital resource, particularly for Black families due partially to their relatively strong representation in public sector employment (Thompson and Volz, 2021). However, DB pensions are not reflected in most household wealth measures, including both the SCF and the Panel Study of Income Dynamics (PSID).

Market wealth understates the financial well-being of families with DB pensions. Beyond overlooking valuable resources that can be added to families' balance sheets to arrive at an arguably preferable wealth concept, using market wealth as a measure of well-being *and* to compare well-being across households is further complicated by the fact that families can substitute between different retirement saving vehicles. To the extent that the presence of DB plans causes families to save less in defined contribution (DC) accounts or other savings plans, market wealth is not just incomplete but also skewed (see Feldstein and Pellechio 1979, Gustman and Steinmeier 1999, and Poterba et al. 2011). The presence of DB pensions will cause some

households, particularly low-income households, to save less for retirement than they otherwise would.

Relying on market wealth will skew our understanding of wealth and inequality at any point in time and how they have evolved over time. The evolution of the employment-based retirement system in recent decades means that a substantial portion of the savings in account-type plans represents resources transferred out of DB plans and into DC plans.

The exclusion of DB assets from the wealth concept also hampers our ability to understand the factors generating existing disparities in wealth by race. In particular, the exclusion of DB assets leads us to systematically understate the importance of employment and the earnings derived from work as a source of wealth, and potentially as a source of racial disparities in wealth. For all of these reasons, in this paper we will be primarily discussing a wealth concept we call "private wealth," which is just market wealth plus DB pension assets. This concept specifically excludes household wealth implicitly embodied in the US public pension program, Social Security.

2F. Methods – DFL Non-parametric Reweighting Estimator

The primary contributions of this paper come in the form of improvements in data measurement. The bulk of the analysis presented in the paper is descriptive in nature and focused on augmentations to the existing data with the goal of improving our understanding of wealth disparities in the SCF. Incorporating the defined benefit wealth measures developed by Devlin-Foltz et al. (2016) and Sabelhaus and Volz (2020) allows us to work with an improved wealth concept that is preferred for discussion of racial disparities in wealth. Incorporating the inheritance and inter vivos variables developed by Feiveson and Sabelhaus (2018, 2019) allows us to compare the receipt of these intergenerational transfers by race and develop some sense of their importance for racial disparities in wealth. Including the lifetime earnings data from Jacobs et al. (2020, 2021) and more thoroughly evaluating the work history and pension data in the SCF are intended to bring the earnings and employment compensation concepts into closer alignment with how wealth generated by employment is accumulated over a working life.

Beyond descriptive analysis of improved data, we also use the non-parametric reweighting estimator, developed by DiNardio, Fortin, and Lemieux (1996) and applied to the study of racial wealth disparities by Barsky et al. (2002) and others, referred to here as the DFL estimator, to assess the relative contributions of the factors explored in this paper—demographic, human capital, and intergenerational transfer variables—to the existing disparities in wealth by race.

The DFL estimator is an alternative to the somewhat more well-known Oaxaca-Blinder (OB) decomposition technique.[15] The OB decomposition assumes that a linear relationship exists between the dependent and independent variables, and the method is based on separately identifying the contribution of differences in observed traits among groups (such as educational attainment) and the differences in the returns to those traits (such as returns to education). Separate regressions are run for two groups, and the regression coefficients for one group are applied to the covariates of the other group to obtain the counterfactual analysis (for example, what would Black family wealth look like if the traits of Black families experienced the same "return" as that of white families.)

The basic OB decomposition is limited by its underlying assumption that the wealth function is linear. As Barsky et al. (2002) argue, there are good reasons to think the wealth function is not linear in terms of income (or in terms of any number of additional explanatory factors), and there is little reason to think that we know the actual functional form. The standard OB decomposition can also be sensitive to the choice of the excluded group, potentially giving different answers for the "unexplained portion" in a decomposition analysis. This sensitivity is partly related to a lack of common support in the distributions of the groups being compared. In the case of the wealth and income distributions, there are portions where the white, Black, and Hispanic distributions do not overlap. In these cases, the OB predictions extrapolate beyond the observed income and wealth range for Black families.

An alternative decomposition approach that addresses these concerns about the OB method is the DiNardo, Fortin, and Lemieux (DFL) (1996) reweighting estimator. The DFL uses a nonparametric approach, does not assume a linear wealth function, and also assigns a zero (or near zero) weight to observations that lack common support. The DFL estimator also can be used easily to decompose differences across the distribution, not simply at the mean, as is the case in the standard OB decomposition.

Conceptually, the DFL estimator is simple: It reweights data from one group to give it the same composition of traits as observed in another group.[16] When the skills, income, and other traits of the various groups in the SCF samples are compared, the estimated counterfactual becomes, "What would the density of wealth have been among white families if they had the skills, income, and other traits of Black families (but retained their own wealth function)?" The outcome of interest (here, wealth) and the regressors (here, skills, earnings, and other traits) are assumed to have a joint distribution, so that as the regressors are observed more frequently, so

[15] This basic approach was developed by Oaxaca (1973) and Blinder (1973).
[16] Originally the DFL estimator was used to reweight over time. Here, and in Barsky et al. (2002), the DFL estimator is used to reweight different groups in the same period.

will the outcomes be observed more frequently. Importantly, no parametric assumptions are placed on the formation of these outcomes, and the estimator allows inferences to be drawn along all points of the distribution of outcomes. The reweighting estimator also forces estimates to be drawn from common supporting evidence across the two samples.[17]

Once the traits of white families have been reweighted so that their distribution of observables (z) matches that of Black families, the difference between levels of wealth for white families in the original sample and in the reweighted sample then becomes our measure of the impact that being white has on accumulating wealth, information which helps to explain the racial wealth gap. The reweighting function used is a ratio of propensity scores estimated from probit regressions:

$$\Psi(z) = \frac{\Pr(b|z)}{\Pr(w|z)} \frac{\Pr(w)}{\Pr(b)} \ .$$

As noted by DiNardo (2002) and Fortin, Lemieux, and Firpo (2011), this reweighting by (a ratio of) propensity scores confers the same benefits as those obtained from propensity-score matching using the method in Rosenbaum and Rubin (1983). The weight ($\psi(z)$) allows us to collapse a multidimensional integration problem (that is, integration over each component of z) into a one-dimensional integration problem.

3. WEALTH LEVELS AND GAPS BY RACE

Wealth is distributed highly unequally, with the mean several times greater than the median. It also varies substantially by race. Most discussions of racial disparities in wealth focus on differences between Black and white households, but it is Asian families who have the highest wealth in America. Combining data from the 2016 and 2019 surveys, Thompson and Volz (2021) show that inflation-adjusted mean market wealth among families with heads aged 30 to 62 (projected forward to age 62 and discounted back to the age at survey) was $1.2 million for Asians, $927,000 for whites, $226,000 for Hispanics, and $145,000 for Blacks (**Table 1**)[18]. Median family market wealth was $355,000 for Asians, $189,000 for whites, $44,000 for Hispanics, and $22,000 for Blacks.

[17] Both observable and unobservable variables determine the outcome. The method assumes that the density of an outcome, conditional on the inputs and the density of the inputs, are independent. The inputs are reweighted, while the conditional density remains unchanged, so the estimates rely only on changes in the observables, while the distribution of unobservable variables remains unchanged. Unobservables may possibly play a large role in determining wealth outcomes. It is assumed here that the effect of unobserved variables is the same across groups.

[18] Thompson and Volz (2021) use SCF wealth data that have been projected forward to age 62 by modeling techniques discussed in Jacobs et al. (2021). The purpose for this forecasting is to bring all wealth components onto equivalent footing in order to augment the wealth concept with the implied asset value of future Social Security benefits, assumed to start at age 62.

Looking to private wealth, which also includes the value of DB pensions, projected family wealth is substantially higher for all groups. Mean Black family wealth more than doubles, climbing to $326,000 for private wealth. Mean private family wealth was $394,000 for Hispanic families, $1.2 million for white families—more than $300,000 greater than the average with market wealth—and $1.5 million for Asian families.

For the remainder of our analysis, we will not present data on wealth for Asian families, as we do not have access to the internal SCF data. Instead, we will show wealth for families of "other races," which include Asian, Pacific Islanders, Native Americans, and those self-identifying as "other." It is important to keep in mind that the highest-wealth portion of the "other" category is largely made up of Asians, and the wealth levels (and incomes and education) of Asian workers and families are important in assessing the links between human capital formation and wealth accumulation. Throughout the remainder of the paper, we will also primarily analyze private wealth, although we will exclusively use wealth that is reported at the time of the survey and is not projected.

Private wealth by the four race groups that are available in the public version of the SCF (white, Black, Hispanic, and "other") for each survey year are displayed in **Table 2**. Private wealth here includes market wealth in inflation-adjusted 2019 dollars reported at the time of survey in the SCF and DB pension assets estimated by Sabelhaus and Volz (2020) to match the survey year. Mean private wealth for "other" was $1.15 million in 2019, slightly higher than that of white families, for which mean private wealth was $1.12 million. Median private family wealth was $249,000 for white families, $217,000 for other, $49,000 for Hispanic families, and $38,000 for Black families.

The gaps in wealth between white and "other" families on the one hand and Black and Hispanic families on the other are substantial and are present in every survey year from 1989 through 2019. Trends in these wealth gaps, calculated as the ratio of white family wealth to non-white family wealth, are shown in **Figure 1**. Gaps in mean private wealth between white families and non-white families (**Panel A**) have been largely constant over the last 30 years. The white/Black gap has fluctuated around 4.0, starting at 3.9 in 1989 and ending at 4.4 in 2019. The white/Hispanic gap in mean private wealth has followed a similar path but exhibited somewhat greater volatility.[19] The white/other mean private wealth gap is also mostly constant, hovering at just over 1.0 for most of the period, starting at 1.5 in 1989 and ending at 1.0 in 2019.

[19] In the earliest survey years, the SCF sample was considerably smaller. In 1989, there were 3,143 total families surveyed, 2,558 of which were white, 308 Black, 161 Hispanic, and 116 of other races. In the 1992 and 1995 surveys, the total sample was increased, first to 3,900 and then to 4,300 families. From 1998 to 2007, the overall sample size remained at approximately 4,400, with the Black sample fluctuating from 410 to 480, and the Hispanic

Both the white/Black and the white/Hispanic mean private wealth gaps did ticked up following the 2008–09 financial crisis (the white/Black gap, for example, went from 3.6 in 2007 to 4.2 in 2010) and have remained elevated since.

At the median of the distribution, the white/Black and white/Hispanic gaps in private wealth also climbed following the 2008–09 financial crisis, but have fallen substantially since (**Panel B**.) After hovering at or below 6.0 from the early 1990s to the mid-2000s, the median white/Black private wealth gap jumped from 4.9 in 2004 to 7.1 in 2007, then dipped to 6.1 in 2010 and shot up to 10.2 in 2013. These fluctuations from 2004 through 2013 are consistent with trends discussed by other researchers where the typical Black family did not benefit to the same extent as the typical white family from the run-up in stock and housing prices in the mid-2000s, was somewhat less exposed to the collapse in housing prices in the initial stages of the financial crisis, but continued to suffer the consequences of the drawn-out "jobless recovery" in the early 2010s while white families were rebuilding their wealth. The median white/Black private wealth gap declined to 6.6 in 2019.

By contrast, the median private wealth gap between white and "other" families was much more stable over this period. It fluctuated around 2.0 over the entire period, starting at 2.1 in 1989 and ending at 1.1 in 2019.

The composition of the assets held by the race groups also differs markedly. Including all ages of households, and combining the 2016 and 2019 surveys, **Figure 2** shows the composition of private assets (market assets in the SCF plus DB pensions) for white, Black, Hispanic, and other families broken into six broad groupings of financial, nonfinancial, and other assets.[20] White and other families have very similar portfolios and appear to be the most "balanced" of the four groups. For white families, real estate (nonfinancial, residences) accounts for 28 percent of assets, pensions (financial, retirement) 27 percent, businesses (nonfinancial) 18 percent, and stock, bonds and other directly held financial assets (financial, market) 15 percent. The

sample fluctuating from 251 to 358. Starting in 2010 the sample was expanded again and has fluctuated between 5,800 and 6,500 depending on the year. Since 2010, the Black sample has fluctuated between 790 and 835, the Hispanic sample between 556 and 639, and the "other" sample between 288 and 327.

[20] Financial (transaction) is the sum of all types of transactions accounts and certificates of deposit. Financial (market) is the sum of total directly held mutual funds (excluding MMMFs), stocks, and total bonds (not including bond funds or savings bonds). Financial (retirement) is the sum of defined-benefit pension wealth and total quasi-liquid (sum of IRAs, thrift accounts, and future pensions, including currently received benefits). Nonfinancial (business) is businesses in which the household has an active interest (value is net equity if business were sold today, plus loans from HH to business, minus loans from business to HH not previously reported, plus value of personal assets used as collateral for business loans that were reported earlier) or nonactive interest (market value of the interest). Nonfinancial (residences) is the sum of the value of primary residence, other residential real estate, and net equity in nonresidential real estate. Other assets are the sum of savings bonds, cash value of whole life insurance, other managed assets, other financial assets, value of all vehicles, and other nonfinancial assets.

remainder of the average white family balance sheet comprises "other" assets (7 percent), which include vehicles, art, collections and other assets, and savings accounts (financial, transaction; the final 5 percent).

Black and Hispanic families, by contrast, hold far less in business and financial market assets. Instead, the average Black family is much more reliant on retirement assets (46 percent), and Hispanic families on real estate (44 percent.) Hispanic families have modestly larger shares of their portfolio comprised of business assets (9 percent) and financial market assets (5 percent) compared with Black families (6 percent and 2 percent, respectively).

The disparities identified in the preceding tables and figures are large and persistent. To most observers the existence of these disparities is troubling, and to many they are suggestive of unfairness, lack of opportunity, and even racism. These traits were certainly present in America's past, and they may, to some extent, apply to current-day realities. The mere existence of these disparities, however, is far from evidence that racism and unfairness are prime determinants, or even major factors, in explaining current differences in wealth by race.

In addition to the amounts of wealth, families of different races also vary markedly along multiple other dimensions that are associated with the accumulation of wealth. The "typical" white family, for example, had private wealth of $246,000 in 2019, compared with $35,000 for the "typical" Black family (**Table 3**). The typical white family, though, includes a married couple where one of the members holds a bachelor's degree and there is a combined history of 41 years of full-time work. The typical Black family, on the other hand, is headed by a single adult with either a high school diploma, some college or an associate degree, and 28 years of full-time work.

To understand the racial wealth gaps we observe, to make sense of the factors that account for their persistence, we need to take into account the various dimension along which families of various races differ. We need to give particular attention to those factors that—independent of race—we know to be associated with the accumulation of wealth.

4. EXPLAINING WEALTH DISPARITIES

One way to think about explaining disparities in wealth by race is to consider wealth itself, and how any individual or family unit might accumulate it. In equation (1) we write down a basic definition of current wealth, and how it comprises of a range of factors in the preceding period, with time subscripts suppressed.

$$W = \left[(1-T) * \{(w*h) + \sum_{j=1}^{J}(rj * Aj)\} + G + IG\right] - C + \sum_{j=1}^{J}(Aj) \qquad (1)$$

Here, we define current wealth (W) in terms of after-tax incomes (T=tax rate, w = hourly earnings, h = hours worked, A = asset of type "j", r = rate of return on asset type "j") plus transfer income from the government (G) and from extended family (IG) less consumption (C) plus the existing stock of wealth in the preceding period (the sum of all assets (A) of type "j"), all in the preceding period. This characterization is general (assuming the debts are simply a negative asset and that transfers to extended family can be positive or negative) and excludes some important detail (implies a single, simple tax rate), but it nevertheless evokes the range of factors that contribute to wealth and how it changes over time.[21] Higher wages (w) and more work (h) —and the factors that are associated with higher wages and more work—will add to wealth so long as they exceed the level of consumption (C). Transfers from the government (G) and from extended family (IG), including both inter vivos gifts and inheritances, also have a positive impact on wealth. Higher rates of return on (rj) and stock of assets (Aj) in the preceding period also raise current-period wealth.

Every element of the wealth formula jointly determines a family's current wealth, and the repetition of this process over time shapes the accumulation (and loss) of wealth. Differences across these factors account for wealth disparities between individuals, and aggregated to the group level, they can explain differences across groups. Individuals, families, and groups that have higher average skill levels, higher wages, more workers, and longer careers (greater "w" and greater "h") will accumulate more wealth. Any systematic difference in those elements by race will shape the differential accumulation of wealth. And, to the extent that racial bias or discrimination influences these differences, the racial disparities that we observe will, to some degree, be influenced by those ills. If racially discriminatory employers pay lower wages to non-whites, for example, the impact will be in w; if they are less likely to employ non-white workers, it will be in h. Racial bias in the housing market will impact wealth through the housing asset (A, j=housing) and possibly the return (r, j=net return on housing).

Much of the attention to wealth disparities involves concerns of fairness, in this context the belief that the current disparities owe to current or past racist acts or racial discrimination across any of the dimensions underlying the accumulation of wealth. But the existence of racial bias in those elements, no matter how odious we find it, is not the same thing as its magnitude. Rigorously identifying the role of racist practices or racial bias in accounting for disparities in any economic outcome is complicated. This is particularly difficult in the case of wealth, as wealth is the joint function of human capital investment, work effort, health, marriage, successful investment, and inheritance, among other factors, and how they evolve over a person's lifetime. The search for

[21] We also ignore the influence of theft.

the role that racism plays in sustaining disparities in wealth by races—as opposed to simply factors that are observably different by race, but not actually "racism"—has to be carried out in the examination of those factors.

In this paper we will be able rule in the importance (or unimportance) of a few factors in understanding differences in wealth across race. We will be able to present estimates of the portion of the racial wealth gap that lifetime earnings, work histories, pension coverage and generosity, and intergenerational transfers account for, thus identifying these factors as a potentially important area for the focus of policy targeting wealth creation in general. We will not be able to determine whether the differences in these factors (say, earnings) that we observe between races are themselves due in part to racial discrimination. For the answer to those questions, one must look to other (perhaps future) research.

There is a substantial literature exploring wealth and racial differences in wealth. We will not attempt a thorough review of that literature and will instead draw lessons from and make brief comment—in the sections that follow—on work that focuses on the roles of education/earnings/human capital and intergenerational transfers on creating and sustaining racial wealth disparities. This emphasis in our research should not imply, of course, that these other dimensions are unimportant. There is a rich literature documenting racial disparities in housing, with particular focus on the impact of racial discrimination—past and present—in explaining lower rates of homeownership and home equity accumulation among Black and Hispanic families, including Charles and Hurst (2002), Sharp and Hall (2014), and Bayer et al. (2018), among many others. Increasingly, research is exploring racial disparities in other dimensions of wealth, including business formation (see, for example Fairlie et al. 2020) and student loans (see, for example Kakar et al. 2019), among others.

4A. **Demography**

The role of basic demographic factors in shaping wealth accumulation is profound, yet often underappreciated. And even though demographics are in some sense separate from the two other factors we explore—human capital formation and inheritance—they are also thoroughly intertwined.

Consider the basic demographic element of aging. Aging is strongly associated with accumulation of wealth (**Figure 3**). Mean private wealth (all races using the 2016, 2019 surveys) does not rise above $100,000 until respondents hit age 29, after which point it rises, more or less steadily, peaking at just under $1.7 million at age 57, before declining steadily through retirement and into old age. The median wealth-age profile is considerably shallower than what is observed for the mean but is still driven by aging. In the late-twenties, median wealth starts to

climb, bit by bit, but does not crest at $200,000 until age 46. Median private wealth flattens out as families enter retirement age, peaking at $530,000 at age 69, and declines from that point on.

The reasons behind this relationship between age and wealth are numerous. Wealth accumulates over time, as interest compounds, careers mature, and assets rise in value. Earnings tend to rise—up to a point—across a worker's career, building up savings and retirement account balances. With a greater number of years for paying down mortgages and for markets to push up housing prices, families build housing wealth as their tenure grows. The probability of receiving an inheritance also rises steadily as people age (**Figure 4**). In 2016–19, less than 15 percent of families with respondents under the age 40 had ever received an inheritance. Among those with respondents aged 70 to 74, 36 percent had received an inheritance.

Marital status (married or partnered) is another basic demographic element that is fundamental to our understanding of wealth. Being married or otherwise having a partner acts as a sort of force multiplier for building wealth. All else being equal, households with multiple earners, multiple pensions, multiple family networks from which to potentially receive gifts, and who can share costs of living are going to be wealthier. Families who can rely on the earnings of one partner when the other experiences illness or unemployment will be better able to preserve their wealth during economic hard times.

To the extent that families of some races tend to be older, or more likely to be married/partnered, they will tend to have greater wealth. **Appendix Table 1** includes summary statistics (using 2007–2019 data) for a broad range of demographic and economic variables, many of which reveal a variety of difference between families by race.

White families are the oldest, with the mean respondent age of 53, followed by Black families at 49, "other" families at 46, and Hispanic families at 44. Fully 65 percent of other families were headed by married/partnered couples, followed by 62 percent of Hispanic families, 60 percent of white families, and 37 percent of Black families.

So, among the reasons for greater white family wealth as compared with Black families, for example, is that white families are older and more likely to include a married/partnered couple, while Black families are younger and more likely to be headed by a single, unpartnered adult. Simply reweighting the white sample to make it directly comparable to the age and marital status characteristics of the Black sample—while keeping the relationship of those traits to wealth by race unchanged—results in a substantial decline in the white/Black mean wealth gap (**Figure**

5).[22] Accounting for the presence of DB pensions in the wealth concept reduces the white/Black gap from 6.8 (in market wealth) to 4.4 in 2019. Reweighing the samples to have the same age and marital status distribution further reduces the white/Black gap to 2.9.

5. HUMAN CAPITAL, EDUCATION, EARNINGS, AND WEALTH

"Human capital" is a term that economists developed to describe the way that skills and knowledge, by boosting the capacity to achieve higher earnings, function similarly to "capital" and provide a return to skilled workers. It is primarily through higher earnings, over time, that human capital also has the potential to increase wealth. As long as more highly skilled workers receive greater earnings than less skilled ones and increase their consumption by only a fraction of the increase in earnings, then human capital will lead to more savings over a working life. As long as the difference in savings between more skilled and less skilled workers exceeds the cost of acquiring skill (tuition and years of study), then greater human capital will produce greater wealth.

Considerable research has found that education generates a return for workers through higher earnings, and greater ability or skills—demonstrated by aptitude tests—are also associated with greater earnings (Card 1999; Blau and Kahn 2005; Ingram and Neumann 2006; Carnevale et al. 2011; Abel and Deitz 2014; Tamborini et al. 2015; and Hampf et al. 2017). There is also substantial variation in returns to education by college major, with science, technology, and business-related fields leading to higher paying jobs (Rumberger and Thomas 1993; Thomas 2000; Abel and Deitz 2014; Carnevale et al. 2015). Applied to the study of racial disparities in wages, multiple studies find very little or no gap between the wages of white, Black, and Hispanic workers once education *and* test scores or college major are accounted for (O'Neill 1990; Neal and Johnson 1996; Blackburn 2004; Black et al. 2006; O'Neill and O'Neill 2006; Fryer 2011).[23]

Although there are more "links in the chain" between human capital and wealth than between human capital and earnings, in principle, similar analysis on the wealth outcomes should be possible. **Figure 6** presents a succession of statistics suggesting the stages through which human

[22] The samples are reweighted using the DiNardo, Fortin, and Lemieux (1996) non-parametric reweighting estimator, as used in Barsky et al. (2002). The mean of private wealth of the reweighted white sample, after being adjusted to match the age and marital status distribution of the Black sample, is used in the numerator of the wealth gap ratio.

[23] Other research contends that the standard Mincer wage equation approach used in much of this past work may miss some of the ways that racial bias might impact earnings. Charles and Guryan (2008) include direct measures of (time and regionally varying) racist sentiment in their analysis and find that racial prejudice may explain one-quarter of the Black/white wage gap; Fryer et al. (2013) rely on data with past and offered wages of unemployed workers seeking employment, and use the gaps between past and offered wages, by race, as a measure of discrimination which could explain one-third of wage gaps.

capital development is ultimately linked to wealth accumulation. These stages progress from school performance and academic achievement (**Panel A**) to educational attainment and choice of high-paying fields of study (**Panel B**), securing competitive employment that produces high earnings sustained over a career (**Panel C**), and finally to wealth (**Panel D**). As the figures show, the average performance of Asian students is higher than the average performance of all other groups on nearly every one of these measures of the process of human capital development, from hours studying to attendance, to test scores at the K-12, college, and graduate school level, and finally to degrees earned, both BA and advanced degrees. Asian students also overwhelmingly pursue highly remunerative fields of study, and when they move into the workforce, they receive earnings that far outpace all other race groups over their entire careers. And, finally, private wealth among Asian families with heads aged 30 to 62 is higher than each other group. White students and workers run a distant second in academic achievement, educational attainment, earnings, and ultimately family wealth. Black and Hispanic students, workers, and families, on average, lag at each stage.

Certainly, other factors also influence group-average levels of wealth accumulation, including demographics and intergenerational transfers, among others, but the elements in Figure 6 make a prima facie case for an important role for human capital. In practice, however, much of the research on the relationship between human capital and wealth accumulation starts with measures of lifetime earnings. With factors that explain earnings, and racial disparities in earnings, already largely understood, this work seeks to identify the portion of wealth disparities that can be explained by differences in earnings (Altonji and Doraszelski 2005; Barsky et al. 2002; Aliprantis et al. 2019; Ashman and Neumuller 2020). To the extent that disparities in lifetime earnings explain an important portion of wealth disparities, the same set of policies thought to be successful in addressing earnings disparities (education policy, enforcement of civil rights laws, etc.) should also help to address wealth disparities.

Using data from the PSID and the same non-parametric reweighting estimator that we adopt here, Barsky et al. (2002) find that earnings differences between white and Black households account for two-thirds of wealth disparities. Aliprantis et al. (2019) develop a general equilibrium heterogenous agent model, calibrated using data from the SCF, and conclude that "the income gap is the primary driver behind the wealth gap and that it is large enough to explain the persistent difference in wealth accumulation." Ashman and Neumuller (2020) develop a quantitative, overlapping-generations, incomplete-markets, life-cycle model, calibrated using panel data from the PSID. They present simulations from their model showing that "income differences, on their own, can explain 43 percent of the racial wealth gap." When they allow income differences to dynamically interact with bequest motives and intergenerational transfers,

Ashman and Neumuller's model simulations account for the entire racial wealth gap, indicating that "if the income gap in [their] model were eliminated, racial disparities in wealth would eventually disappear."

Using general-equilibrium and overlapping-generations macro models, Aliprantis et al. (2019) and Ashman and Neumuller (2020) find that income differences fully explain white/Black wealth disparities, but the micro-focused research using non-parametric decomposition methods suggests smaller shares of the wealth gap are attributable to earnings. Barsky et al. (2002) attribute two-thirds of the white/Black wealth gap in the PSID to lifetime earnings difference. Thompson and Suarez (2019) use data from the SCF, with the same DFL reweighting estimator, and find that a broader range of proposed human capital indicators— "normal income" (the annual income that a family "usually receives"), educational attainment, savings and investment attitudes, and years of full-time work—jointly account for approximately 40 percent of wealth gaps at the mean and the median of the wealth distribution.

As a brief aside that we will return to later, other analysts using the SCF and other wealth data—which have sometimes achieved broader reach in the media than the more detailed analysis in these academic research papers—focus on bivariate data tabulations (means of wealth by educational attainment and race) and conclude more pessimistically that education plays a minimal role in generating (or potentially closing) the racial wealth gap. They draw this conclusion based on the fact that the wealth gaps between Black and white households are greater at higher levels of education (Darity et al. 2018; Traub et al. 2017). There are obvious limitations to this perspective, which we will return to shortly.

While each of these papers (Barsky et al. 2002; Aliprantis et al. 2019; Thompson and Suarez 2019; Ashman and Neumuller 2020) make contributions to our understanding of the role that differences in earnings/human capital formation play in sustaining racial wealth disparities, each has shortcomings. Thompson and Suarez (2019) do not include a measure of lifetime earnings in their analysis. The "normal income" variable they use is intended to reflect smoothed income over an undefined period, but it certainly falls short of measuring the duration over a "lifetime" and has the additional flaw of including non-wage income. Barsky et al. (2002) aspire to examine the links between "lifetime" earnings and wealth disparities, but the number of years of earnings data available in their data ranges from 5 to 27. The limited range of lifetime earnings in previous analysis is pointed out by Altonji and Doraszelski (2005).

In addition, none of these papers includes DB pensions in the wealth concept they study. DB pension wealth accounts for 15 percent of household wealth, and those plans are disproportionately held by highly educated Black workers. Inclusion of DB pension wealth

results in substantially lower measures of racial wealth disparities (Thompson and Volz 2021). To the extent that workers with DB pensions opt out of other savings vehicles, the wealth of those workers will be systematically undercounted when market wealth is analyzed.

As a corollary, each of these earlier papers—to the extent that they are intended to explore the link between human capital and wealth—systematically excludes an important dimension along which workers build wealth through their employment. It is not simply the savings out of earnings that accrue to wealth, but also the availability and the generosity of tax-advantaged employer-provided pension plans. Highly skilled, in-demand workers not only receive higher earnings, but their employment also provides them with generously funded pensions, including DB pensions and DC plans with high match rates. Highly skilled and successful self-employed workers and business owners also compensate themselves through IRA and Keogh plans.

In this analysis, we seek to contribute to the existing literature by using a wealth concept that includes DB pension wealth (private wealth). We also include a series of variables that measure pension availability and generosity as a means through which human capital facilitates the formation of wealth. Compared with past micro-econometric analysis of the SCF, we also contribute to the literature by including individual, household-level earnings histories developed by Jacobs et al. (2020, 2021).

Before turning to estimates of the relationship between lifetime earnings histories and wealth accumulation, and the extent to which they can explain racial disparities in wealth, we first discuss the human capital variables in the SCF, their limitations, and the shortcomings of some widely available assessments of the role of educational attainment in explaining racial wealth gaps in the SCF and other data.

5A. Limitations of the SCF: Absence of Academic Performance and Education Heterogeneity

One specific limitation of using the SCF to explore the link between human capital formation and wealth accumulation concerns the absence of variables in the data to adequately measure human capital. There are no test scores that characterize intelligence or aptitude, no variables identifying the field of study pursued, or indicators for the selectivity of the institution attended. The survey does contain a set of questions that explore attitudes toward saving and investing—the preferred time horizon of investment decisions, suitability of borrowing for luxuries, etc.—that are positively correlated with wealth, but it is difficult to rule out that these responses simply reflect exposure to wealth rather than indicators for a set of skills that result in the generation of wealth.

The SCF includes variables for educational attainment, but they are limited, and researchers also frequently fail to take advantage of the full range of information that is available. The main shortcoming of the educational attainment variable is that it simply captures highest degree earned, but none of the other dimensions of the educational attainment that help us understand variation in earnings: field of study, prestige and selectivity of institution, and performance of the student on measures of aptitude. The researcher can observe that the respondent holds a bachelor's degree but does not know if they majored in mechanical engineering or art history, whether they attended a highly selective institution or an open-admission regional school, whether they barely graduated or were at the top of their class.

Field of study on its own exhibits a strong impact on future earnings of college graduates (**Figure 7**). STEM-degree holders receive substantially higher average earnings than graduates in other fields, and workers' earnings continue to rise into their fifties. Arts and humanities degrees, on the other hand, plateau much earlier at substantially lower levels of earnings.[24] When we look at BA holders by race, we see that young white and Asian workers are more likely to have pursued higher-paying fields of study than their Black and Hispanic counterparts (**Table 4**). Nearly 40 percent of young Asian BA holders (aged 25 to 40) have degrees in the highest-paying quarter of majors, compared with 17.5 percent of young Black BA holders. This is consistent with the findings of Carnevale et al. (2016), who report that "African Americans…are underrepresented in the number of degree holders in college majors associated with the fastest-growing, highest-paying occupations—STEM, health, and business."

Combining the sizable variation in earnings by field of study with differences in fields of study pursued by race, we cannot expect the SCF variable for educational attainment to adequately capture the extent to which the relationship between human capital and wealth accumulation explains racial disparities in wealth.

[24] The ACS field of degree designations were categorized into fields of study as follows: **STEM:** Environment and Natural Resources; Communication Technologies; Computer and Information Sciences; Engineering; Engineering Technologies; Family and Consumer Sciences; Library Science; Biology and Life Sciences; Mathematics and Statistics; Military Technologies; Physical Sciences; Nuclear, Industrial Radiology, and Biological Technologies; Psychology; Electrical and Mechanic Repairs and Technologies; Transportation Sciences and Technologies; Medical and Health Sciences and Services; **Social sciences:** Area, Ethnic, and Civilization Studies; Social Sciences; Public Affairs, Policy, and Social Work; **Business and Economics:** Economics; Business; **Arts:** Cosmetology Services and Culinary Arts; Fine Arts; **Humanities:** Agriculture; Architecture; Communications; Education Administration and Teaching; Linguistics and Foreign Languages; Law; English Language, Literature, and Composition; Liberal Arts and Humanities; Interdisciplinary and Multi-Disciplinary Studies (General); Physical Fitness, Parks, Recreation, and Leisure; Philosophy and Religious Studies; Theology and Religious Vocations; Criminal Justice and Fire Protection; Construction Services; Precision Production and Industrial Arts; History.

5B. Limitations of Analysis: Failure to Exploit Household Structure

Notwithstanding these limitations of the educational attainment variable, some analysis using the SCF—and other wealth surveys—fails to fully exploit available information that can help shed light of the relationship between education and wealth. **Table 5, Panel A** displays mean family market wealth by the race and educational attainment of the respondent. Clemens (2020) and Dettling et al. (2017) present similar tables and figure using the SCF. Presented in this way, the racial wealth gaps between white and Black families and white and Hispanic families are large for every educational attainment level. In fact, the white/Black gap is larger at the highest levels of education—among respondents with a bachelor's degree the white/Black gap is 5.8, compared with "only" 4.6 for the those with a high school diploma. Using a similar presentation of SCF data, Traub et al. (2017) conclude, "Attending college does not close the racial wealth gap." Presenting a similar table based on wealth data from the Survey of Income and Program Participation, Darity et al. (2018) declare that it is a "myth" that education can help close the racial wealth gap.

The educational attainment of the respondent's spouse or partner, however, will also influence the wealth accumulation of the family unit, but this is not reflected in the simple tables such as the one that appears in Panel A. Simply by constraining our cross-race market wealth comparisons to family units with similar educational attainment for the respondent and spouse/partner (if present), we see that the white/Black racial disparities, while still present, are diminished, particularly among those with bachelor's degrees (**Panel B**). The white/Black gap among respondents with at least a bachelor's degree is 6.4 (Panel A), but it is 3.4 among single respondents with a BA as their highest degree and 3.9 among married/partnered couples where both have BAs as their highest degree (Panel B).

And, market wealth excludes the value of defined benefit pensions, which are an important part of wealth, particularly for Black families (Thompson and Volz 2021). When we include DB pension wealth, we see that the white/Black gap in private wealth is 2.7 for single respondents with a BA as their highest degree and 3.1 for married/partnered couples where both have a BA as their highest degree (**Panel C**). Interestingly, neither the inclusion of the educational attainment of the spouse/partner nor the inclusion of DB pension wealth significantly alters the wealth gaps what we measured between white families and Hispanic families or those of "other" race.

While more nuanced than what is shown in Panels A and B, the wealth gap by education comparisons in Panel C also have numerous limitations. Not only do they not control for the various dimensions of human capital (test scores and field of study) described above, or details about the occupation or job tenure, but they also fail to control for age and do not account for the

range of possible degree-household composition combinations present in the data (for example, families with one BA and one community college degree, etc.). In **Panel D,** we push the race gaps by educational attainment comparison one step further and present means of market wealth with the white families reweighted to match the distributions of the age and educational attainment of the respondent and the educational attainment of the spouse or partner, if present. Reweighting the data to make them directly comparable on just these three variables accounts for more than half of the observed disparity in private wealth between white, Black, and Hispanic households. The white/Black gap in mean family private wealth falls from 4.4 in the unadjusted data to 2.4 in the reweighted data; the white/Hispanic gap falls from 4.4 to 1.8.

These same three variables account for an even larger share of the private wealth gap at the median of the distribution. The wealth gaps displayed in **Table 6, Panel B** show that the white/Hispanic gap in median private wealth declines from 6.9 in the unadjusted data to 2.1 in the reweighted data; the median white/Black gap drops from 6.8 to 3.1. Based on the findings of research on racial disparities in wages, we would expect that further controlling for human capital measures such as college major and aptitude tests would lead that gap to fall further.

Even still, these education skeptics tend to downplay the dramatic effects on the wealth of Black and Hispanic families that are already implied by the numbers in Panel C, which potentially could result from education policy interventions boosting college attendance and completion among these populations. Conditioned on nothing other than marital/partnered status and educational attainment, we see that the average wealth of single-person-headed Black families climbs from $123,000 to $278,000 with the transition from high school diploma to bachelor's degree. Among married/partnered Back families, such a transition (for both partners) brings average wealth up from $213,000 to $801,000. It is true that these jumps are considerably less than what is seen in similar transitions for white and "other" families, but there is little reason to think that education policy focused on wealth-building among Black and Hispanic families would leave these wealth-by-education means unchanged. Efforts to prepare Black and Hispanic students to succeed in the STEM fields, for example, and draw them to those fields in greater numbers, would be expected to shift (over time) the mean wealth of college graduates, drawing them even closer to what is observed for white and "other" families.

In any event, the analysis needed to assess the magnitudes of the contribution of various factors to the racial disparities in wealth that we observe in the data is decidedly multivariate. Simply controlling for one or two factors at a time and presenting them in tables similar to Table 5 Panels A through C is insufficient to the task and will conceal as much as it reveals. Moving forward, we will describe the data innovations that we will use in our analysis and apply non-

parametric decomposition regressions techniques to assess the portion of racial wealth disparities that can be explained by various factors.

5C. Developing Better Measures of Human Capital in the SCF: Pensions and Lifetime Earnings

Absent variables for aptitude test scores and field of study, the SCF is bound to fall short of a thorough evaluation of the direct links between human capital and wealth accumulation. We attempt to overcome these limitations by introducing lifetime earnings data into the SCF and developing measures of pension generosity. We explore the role that differences in lifetime earnings and pension generosity play in sustaining racial wealth disparities.

First, we review the importance of career duration for wealth accumulation, highlighting the limitations of education alone or single-year income in explaining racial disparities in wealth. Then we develop the pension coverage and generosity measures, showing that they are crucial for building wealth through work and systematically vary by skill level and by race. Finally, we introduce the lifetime earnings measures, and use them—along with the pension variables and other human capital and work-related indicators—to decompose the racial wealth gap.

5Ci. Career Duration

Two of the most important links in the causal chain that connects human capital and wealth accumulation are 1) that development of human capital results in increased earnings relative to the less developed state, and 2) that those earnings differences are sustained over time. Both links are necessary. Highly educated people who work at lower-paying jobs, for whatever reason, cannot expect to accumulate wealth to any great extent. Even highly paid employees need to work for a significant period before they can accumulate any substantial wealth.

Long careers are necessary to accumulate wealth, and human capital facilitates access to occupations and professions that are more amenable to long, uninterrupted spells of employment and enable to the continuation of work later into life. Unemployment rates are substantially lower among more highly educated workers at every stage of the business cycle. Indeed, among those with advanced degrees, the unemployment rate remains in the very low single digits even during deep recessions. The average unemployment rate for workers (25 and older) with advanced degrees (which is inclusive of all types of master's degrees in addition to MBA, MD, JD, and PhD degrees) in 2020 was 3.8 percent, compared with 5.5 percent for those with just bachelor's degrees, 7.0 percent for associate degrees, and 9.0 percent for those with just high school degrees.[25] The professional, technical, and managerial positions that many highly

[25] Data from Bureau of Labor Statistics Current Population Survey, accessed online September 2, 2021.

educated and highly paid professionals hold have numerous other features that facilitate employment longevity, including scheduling flexibility and predictability, as well as limited—if any—exposure to dangerous or physically taxing environments. The office-environment jobs held by these workers have very low rates of workplace injury and can be performed—in general—until relatively advanced ages

Figure 8 shows the importance of the number of years of full-time work. The figure includes only families with respondents aged 50 to 65 to minimize the impact of aging, as distinct from years of work. Median private wealth is just $17,000 for those with 10 to 19 years of full-time work, but it rises to $580,000 for those with 50 to 59 years of full-time work. The wedge in wealth between families with a college-degree holder and those without expands dramatically as full-time years increase. Mean private wealth among families with 50 to 59 years of full-time work but no college degree is just $213,000, while for those with a college degree it is $1.3 million.

Years of full-time work also influence racial disparities in family wealth, as there is considerable variation in years of full-time work by race (**Table 7**). The typical Black family—with the household head aged 45 to 65—reports 33 years of combined full-time employment, compared with 35 among Hispanic families, 40 among families of "other" races, and 44 among white families (**Panel A**). While the difference in years worked across race is substantial, most of the difference is ultimately due to age and family composition. When we look at the share of potential years of work that are worked full-time, we see only very small differences across race. Potential years of work is defined here as age less 18 less the number of years typically associated with the level of educational attainment reported.[26] For all education levels, the typical white family reports being fully employed for nearly 89 percent of potential working years, compared with nearly 85 percent for the typical Black family. Across a 40-year potential working life, this small gap translates to only 1.7 years.

When we look to households with at least one primary adult with a college degree or greater educational attainment (**Panel B**), we continue to see white families with more years of full-time work (median 48), but no variation among non-white families (median 40 for all non-white

[26] For single households, the share of potential years of work worked full-time is calculated as respondent years of full-time work divided by respondent potential years of full-time work. For married/partnered households, the share of potential years of work worked full-time is calculated as the sum of respondent years of full-time work and spouse/partner years of full-time work divided by the sum of respondent potential years of full-time work and spouse/partner potential years of full-time work. Potential years of full-time work is defined as age less the number of years of education (the number of years of education is assumed to be 16 for individuals with less than a high school diploma, 18 for individuals with a high school diploma, 20 for individuals with some college or an associate degree, 22 for individuals with a bachelor's degree, 24 for individuals with a master's degree, and 28 for individuals with a doctorate or professional school degree).

groups). Among college-educated households, though, it is Blacks who report slightly higher shares of potential years of work that are worked full-time. Among white, Black, and Hispanic families, we see greater numbers of full-time years for those with a college degree.

Older workers with higher educational attainment tend to have greater numbers of full-time years, but we also see substantial variation in full-time work even among narrowly defined types of workers. In **Figure 9**, we show kernel densities of full-time work for respondents only, who are white, male, have a BA or higher education, and are aged 56 to 64. To further minimize the influence of age, we have calculated separate densities by three-year age bins. Even among this fairly homogenous group, we see considerable variation in full-time work. The interquartile range is six years for the two youngest and oldest age groups, and it is five years for the 59- to 61-year-olds group.

5Cii. Access to Employer-funded Pensions

Highly skilled workers not only have greater earnings, but their jobs also provide them with retirement benefits that directly add to their wealth to a much greater degree than less skilled workers. Access to *and* employer matching contributions (or employer funding in the case of DB pensions) to retirement benefits are standard parts of the employment package for highly educated workers in competitive fields. Eight in ten respondents (aged 45 to 65) with advanced degrees and working in managerial and professional occupations live in a family with some type of employer-funded pensions (84 percent), compared with just half (54 percent) of those with high school degrees working in technical, sales, and service jobs (**Table 8**).[27]

Retirement benefits are crucial to wealth accumulation for most families. Retirement plan assets, including DC (401(k), IRA, etc.) and DB pensions, account for 28 percent of total household assets, and they become increasingly important as workers age. For households in their twenties and thirties, housing is the predominant asset, but at these young ages, families have low wealth overall (**Figure 10**). Average wealth rises sharply as families enter their forties and fifties, and retirement wealth quickly displaces housing as the most important asset. Retirement plans quickly become the largest asset class, accounting for 29 percent of all assets for families in their fifties and 34 percent of assets for families in their sixties.

[27] A household is considered to have an employer-funded pension if (1) either respondent (R) or spouse/partner (SP) has a defined benefit plan on a current job or some type of pension from a past job to be received in the future; (2) either R or SP has a pension to which their employer contributes; (3) the household is currently receiving a number of retirement, pension, or disability payments or making withdrawals from a pension or retirement account (total number of such accounts is greater than 0), the respondent is age 60 or older, and either R or SP is retired; or (4) either R or SP is self-employed with an IRA or Keogh.

Retirement plans are particularly crucial for the part of the distribution that could be considered "attainable" financial success—families in the top half of the wealth distribution, but outside the top 5 percent. **Figure 11** shows the composition of assets (among families whose head is aged 45 to 65) by different segments of the wealth distribution.[28] For families in the 50th to 95th percentiles of the wealth distribution, retirement plan assets account for 47 percent of total assets, compared with 20 percent for families in the bottom half, and 16 percent for families in the top 5 percent of the wealth distribution.

The combination of the presence of employer-funded pensions and career longevity is highly conducive to wealth accumulation. Looking only at families where at least one family member holds a BA or higher educational attainment, **Figure 12** displays the different wealth paths followed by families with employer-funded pensions and high full-time work shares against those with neither of these traits.[29] Among BA-holding families where at least one adult member has an employer-funded pension and where the primary adults have worked a high portion (at least 90 percent) of potential years of work full-time, we see that median private wealth rises steadily. This cohort of families sees typical private wealth rise from about $250,000 in their early thirties to $1.5 million in their late fifties. BA-holding families without both of these traits experience a much flatter growth path in wealth, which rises to only about $500,000 by their late fifties.

While three-quarters of BA holders aged 45 to 65 have an employer-funded pension, the share with both an employer-funded pension and a long history of full-time work (with share of potential years worked at least 90 percent) falls to two-thirds.

Pension coverage is not the only dimension of difference between workers with different levels of education. The most highly educated workers also have more generously funded pensions and a greater number pensions in the family—from current jobs, future pensions from past jobs, and IRA and Keogh plans among the self-employed. There is also important, relevant variation across races in pension generosity to take into account when exploring racial disparities in wealth.

[28] The wealth percentiles represented in Figure 11 are calculated separately for each five-year age bin from 45 to 64.
[29] To meet the criteria for the share of potential years of work worked full-time, either the R or SP must (1) have worked full-time for at least 90 percent of their potential years of work or (2) be retired, be age 60 or older, and have worked at least 80 percent of their potential years of work. A household is considered to have an employer-funded pension if (1) either R or SP has a defined benefit plan on a current job or some type of pension from a past job to be received in the future; (2) either R or SP has a pension to which their employer contributes; (3) the household is currently receiving a number of retirement, pension, or disability payments or making withdrawals from a pension or retirement account (total number of such accounts is greater than 0), the respondent is age 60 or older, and either R or SP is retired; or (4) either R or SP is self-employed with an IRA or Keogh.

At their current jobs, fewer than half of respondents (aged 45 to 65) with a high school degree are covered by any type of pension, while 16 percent have a DB pension, and 7 percent have a DC plan where their employer matches contributions at or above 5.25 percent of annual salary (**Table 9, Panel A**).[30] By contrast, more than two-thirds of those with advanced degrees are covered by a pension at their current job, including 26 percent with DB pensions, and 13 percent in DC plans with contributions at or above 5.25 percent of salary matched by their employer. The differences across educational attainment are striking, but the variation within educational attainment is quite interesting as well. Among those with advanced degrees even, there are nontrivial numbers with no current job pension or who have a plan with either no employer contribution or a very low contribution matching rate.[31]

The pension advantage of highly educated workers extends beyond current employment and reaches back to pensions from past jobs. A nontrivial number of respondents with advanced degrees (13 percent) will receive a pension from a past job (**Panel B**).[32] Less than 8 percent of workers with some college/associate degree or lower level of educational attainment will get a pension from a past job.

The pension advantage also carries over to the self-employed. Most workers are not self-employed, but the probability of self-employments rises with educational attainment (**Panel C**). Twenty-two percent of advanced degree holders are self-employed, compared with only 13.5 percent of high school diploma holders. Among the self-employed, those with higher education are also much more likely to have an IRA or Keogh account. More than one-half of advanced degree holders who are self-employed have an IRA or Keogh, compared with less than one-third of the self-employed with lower levels of education.

The final dimension of the pension advantage for the highly educated is the number of plans. Families of the highest-education respondents have greater average numbers of plans of all types compared with the families of less-educated respondents (**Panel E**).[33] Conditional on having a

[30] Married/partnered households were assigned the generosity level of the most generous pension held by either R or SP (least generous to most generous: no pension, unfunded pension, low-match, middle-match, high-match, and DB pension).
[31] For ease of interpretation, the current job pension generosity variable discussed in the descriptive statistics (Table 9, Panel A) is shown for the respondent. The version used in the decomposition analysis (Tables 14, 15, 23) instead reflects the most generous pension for either the respondent or the spouse/partner (if present).
[32] The future pension from past job source was required to be a past job pension of R or SP, military, union pension, non-account-type pension moved from the mopup for current-job pensions of R or SP, or pension from a current second job. Households may have pensions of more than one type; each household was assigned a single pension category in the following order: account, mixture, regular income for life (that is, a household with both account and regular income for life pensions is categorized as having the regular income for life type).
[33] Number of current job pensions, future pensions, and current pensions are not restricted by source or type of pension.

pension type (current, past job, self-employed, or currently being received), families of advanced degree holders have an average of 1.6 current job pensions, 1.6 future pensions from past jobs, and 1.7 IRA or Keogh plans for self-employment. High school diploma holders have, conditional on having any plans of these types, 1.4, 1.2, and 1.3 plans on average, respectively.

Differences in pension coverage and generosity by race vary by educational attainment. At lower education levels, white families are more likely to have current job pension coverage than non-white families (**Table 10**). For respondents with a bachelor's degree or an advanced degree, however, coverage and generosity at current job pensions are broadly similar for white, Black, and Hispanic respondents. If anything, Black workers (aged 45 to 65) with higher levels of education have more generous pensions. Black and white workers with bachelor's degrees or higher educational attainment are just as likely to have DC plans with high match rates, but Black workers are much more likely to be covered by a DB pension. Forty-five percent of Black workers with an advanced degree are covered by a DB pension, compared with 31 percent of whites, 34 percent of Hispanics, and 18 percent of "others."

There are also interesting differences across race in pension coverage for the self-employed. Black workers are the least likely to be self-employed, at just 8 percent, compared with nearly twice that rate for all other race groups (**Table 11**). Among respondents with a BA, we see that Black and Hispanic families have similar rates of self-employment (10 to 14 percent), with about one-third having IRAs or Keoghs. Among white and "other" highly educated workers, we see self-employment rates at about one-fifth; most self-employed advanced-degree holders have IRAs and Keogh accounts, and just below half ("other") or just above half (white) of self-employed BA holders have these types of accounts.

Conditional on having a pension—of a given type—Black families have a slightly lower average number of pensions compared with white families and "other" families, but a similar number as Hispanic families (**Table 12**).

5Ciii. Earnings Histories

The earnings workers receive over their careers are crucial to how much they are able to save independently as well as to the amounts they are able to accrue in their employer-funded pensions. Mean and median lifetime earnings histories (developed by Jacobs et al. 2020, 2021), by race and educational attainment of the respondent, are shown in **Table 13**. Earnings histories exist for both the respondent and spouse, but here we show the combined household-level earnings, in inflation-adjusted 2019 dollars summed over all of their years of work. Earnings histories exist for respondents aged 40 to 59 and their spouses/partners (if present) aged 30 to 65.

Earnings histories are estimated from the age at first employment, based on work history information provided by the respondent, up to the age at the time of survey.[34]

Mean lifetime earnings are $2.3 million for "other" race families, $2.1 million for white families, and $1.3 million for Black and Hispanic families (**Panel A**.) Among white families, historic earnings range from $1.7 million among high school graduates to $3.0 million for those with advanced degrees. Mean lifetime earnings are similar for "other" race families at and above some college/associate level of educational attainment, but somewhat lower than for white families at the lowest levels of education. Black and Hispanic families have substantially lower lifetime earnings at all education levels, for mean as well as median (**Panel B**) earnings. For Black families, mean lifetime earnings are $1.1 million for high school graduates and $1.9 for those with advanced degrees.

As dramatic as the differences by race in lifetime earnings are, much of the gap is determined by the same factors as discussed above: household composition and years of full-time employment. Reweighting the white sample to match just a few characteristics of the non-white sample (respondents' and spouses' educational attainment and years of full-time employment), the mean gap in lifetime earnings between white and Black and Hispanic families drops from 1.7 to 1.1 (**Panel C**.)

5D. Estimating the Contribution of Earnings and Pension Generosity Disparities on Wealth Gaps

Among the families for which we have lifetime earnings histories (those with respondents aged 40 to 59 and spouse/partners (if present) aged 30 to 65), we see that mean private wealth in 2016–19 is $1.5 million for "other" families, $1.3 million for white families, $327,000 for Hispanic families, and $290,000 for Black families (**Table 14, Panel A**). White family wealth is 4.4 times larger than that of Black families, 3.9 times larger than Hispanic wealth, and 20 percent smaller than "other" family wealth.

When we reweight the white sample to match the distribution of lifetime earnings and current job earnings (separately for respondent and spouse), the number of years on the current job and the total number of full-time years worked for the household for non-white families, we see sharp reductions in mean private wealth gaps, particularly between white and Black families. The white/Black gap falls to 2.5, with reweighting for these earnings and work tenure variables accounting for 56 percent of the disparity in wealth. At the median of the distribution, the

[34] Spouses up to age 65 are included, but earnings are predicted (for spouses of any age) only up to age 62.

reweighting reduces the white/Black wealth gap from 5.2 to 2.7, accounting for 60 percent of the private wealth disparity (**Panel B**).

Further reweighting the white sample to also match the distribution of pension coverage and generosity variables (displayed in Table 9) results in further declines in white/Black wealth gaps. At the mean, the white/Black private wealth gap drops to 2.1, and at the median it falls to 2.4, with the suite of human capital factors being controlled for at this point accounting for two-thirds of wealth disparities. The inclusion of several additional human capital/work-related controls—indicators for retirement and disability status, occupation, and industry indicators—pushes that share of white/Black wealth gap accounted for at the mean and the median up to three-quarters. When the white sample matches the earnings, pension, and work-related distribution of the Black sample, it has mean wealth of $531,000, just 1.8 times the Black mean of $290,000. Further controlling for savings and investing attitudes yields a very small additional increase in the share of the wealth gap that can be explained. However, given the concerns about how to interpret this variable, as a measure of skill at investing or simply a reflection of exposure to wealth, we do not include savings and investing attitudes in our preferred specifications.

Looking to white/Hispanic disparities, we see that adjusting for earnings and years of work alone results in a somewhat smaller reduction in wealth gaps (both mean and median) than what we see for the white/Black gaps. The more limited reweighting accounts for only one-third of the mean wealth gap, and less than half of the median wealth gap between white and Hispanic families. Once we include the full range of earnings, job tenure, pension coverage, and generosity, and the remaining human capital and work indicators (excluding investment and saving attitudes), however, the share of the total gap explained is actually somewhat larger for Hispanics. Jointly, the reweighting accounts for more than 76 percent of the white/Hispanic private wealth gap at the mean and more than 91 percent at the median.

Our findings are similar to previous research on the white/Hispanic wealth gap. Using data from nine waves of the Survey of Income and Program Participation through 2001, Cobb-Clark and Hildebrand (2006) find that their observable factors explain essentially all of the wealth gap between non-Hispanic white households and those of Mexican origin (separately for native and foreign-born) households. They also show that education is the most important contributing factor to this portion of the wealth gap, and that the effect from education, which contributes to human capital, is larger at the top of the wealth distribution.

Because "other" family wealth is greater than white family wealth (at the mean and the median), reweighting the white sample to match the distribution of characteristics of "other" families looks somewhat different. Since white and "other" families already have very similar earnings

histories, work tenures, and pension coverage, reweighting white families to look like "other" race families leaves white wealth almost unchanged. When we reweight the white sample to match the other family distribution of the remaining human capital and work-related variables, though, we see that white family wealth rises. At the mean, the entirety of the small private wealth gap between white and other families nearly disappears; at the median, white wealth climbs from 60 percent of other family wealth to 70 percent.

The lifetime earnings histories developed by Jacobs et al. (2020, 2021) build off the current and past job information provided in the survey, including (for both respondent and spouse/partner if present) number of years on current job and current earnings at that job, as well as years worked and final earnings at longest past job, plus total number of years worked full-time. The model uses the earnings paths calculated for comparable pseudo-panel cohorts in the SCF to estimate the earnings path over all of the years on the current job and longest past job, as well as intervening or preceding periods that the respondent and spouse would also have been working. Race, however, is not used to define the group cohorts. It is possible that this exclusion could influence the lifetime earnings histories in ways that bias our estimates of the relationship between earnings and wealth disparities.

To explore that concern, we re-estimate each of the non-parametric equations with results shown in Table 14 using only the survey-provided components—not the predicted earnings histories. We interact earnings at both current and past jobs with the number of years at those jobs (for both respondent and spouse/partner if present) and also include total years of full-time work. The results of this exercise are shown in **Table 15**. The explained portion of the white/Black wealth gap in this robustness check is almost identical to the results from the decomposition using the earnings histories in Table 14 when estimated using the same age sample restrictions (**Panel B**), and it falls only slightly when estimated using respondents and spouses of any age (**Panel A**).

6. INHERITANCE AND INTER VIVOS TRANSFERS

The role that inherited wealth plays in generating high levels of wealth concentration or disparities in wealth by race is an important question to consider. The fact that we can see heirs to great fortunes become quite rich themselves suggests it must play some role in sustaining wealth concentration. And the fact that most recipients of large inheritances are white further suggests that it plays some role in racial disparities.

The research literature on the importance of inheritance, however, is more circumspect. Numerous analysts of the distribution of wealth conclude, in fact, that inheritances equalize the distribution of wealth (Wolff 2002; Elinder et al. 2018; Boserup et al. 2016). Some past research

on the white/Black wealth gap also concludes that inheritance has only a modest impact on racial disparities (Altonji and Doraszelski 2005). Menchik and Jianakoplos (1997) estimate that inheritance disparities can explain 10 to 20 percent of the wealth gap. Thompson and Suarez (2019) find that inheritance receipt accounts for less than 10 percent of the white/Hispanic or white/Black wealth gaps, but that broader indicators of general family financial account for an additional 13 percent to 16 percent, respectively.

In this section, we explore how much of racial disparities in wealth can be accounted for by the augmented inheritance and inter vivos transfer variables developed by Feiveson and Sabelhaus (2018, 2019). First, we describe how the annualized flow of inheritance and inter vivos transfer receipt varies by race. Second, we calculate the share of wealth reported at the time of the survey that might, according to a range of assumptions on returns to and consumption of bequests, be accounted for by inheritance. Third, we present some statistics exploring the ubiquity of "broken links" in the chain of intergenerational wealth transfers—the share of heirs who do not leave bequests for their offspring, and the share of families leaving substantial estates who never received any inheritance. Finally, we use the DFL non-parametric reweighting estimator to estimate, for the mean and median, the portion of white/non-white disparities in private wealth that can be accounted for by differences in the distribution of inheritances, inter vivos transfers, and expectations of receiving $3,000 from friends or family in the case of financial emergency.

6A. How Do Inheritances and Gifts Received Vary by Race?

Using SCF data from 1995 through 2019, we calculate the annual receipt of inheritance and inter vivos transfers over eight three-year subperiods (transfers received in 2016 through 18 for the 2019 SCF, etc.) Then, we compute the average annual number and dollars (inflation-adjusted 2019 dollars) of inheritances and gifts received by race. Here we combine "other" with white, as that group's intergenerational transfer receipt is similar to what we see among white families.

Annual flows of both inheritances and inter vivos transfers are both overwhelmingly concentrated among white and "other" families (**Table 16**). Over this period, white and "other" families received $280 billion in inheritances and $39 billion in inter vivos transfers each year. Black families received just $11 billion in inheritances and less than $1 billion in inter vivos transfers. Hispanic families received approximately $5 billion in each type of intergenerational transfer annually. The probability of receiving an inheritance in any year was 5 percent for white and "other" families, 2 percent for Black families, and 1 percent for Hispanic families. Inheritance flows amounted to nearly 9 percent of the total income of white and "other" families, but less than 4 percent for Black families and just 2 percent for Hispanic families.

Most families, regardless of race, do not receive any inheritance or major gift in a typical year or at any point. Conditional on receiving a transfer, most inheritances and major gifts are also modest in size. Half of all individual inheritances and 65 percent of all inter vivos transfers received by white or "other" families are less than $50,000 (**Table 17**). Moderately higher shares of the number of transfers received by Black and Hispanic families are also under $50,000.

One striking distinction about the size distribution of intergenerational tranfers is the absence of major transfers among Black families compared with white and "other" families or Hispanic families. One-third of the total dollar value of inheritances received by Hispanic families was in the "large gift" class of inheritances exceeding $1 million. Nearly 40 pecent of total ineheritances received by white and "other" families came in the form major gifts over $1 million. By contrast, only 16 percent of the value of inheritances received by Black families came in the form of such large gifts.

The dollar amounts transferred in these large gifts, though, was very similar across Black and Hispanic families, at just under $2 billion per year for each group. White and "other" families, by contrast, received $108 billion annually in inheritances over $1 million. Similarly large inter vivos transfers brought $17 billion annually to white and "other" families, $4 billion to Hispanic families, and an estimated zero to Black families.

6B. How Important Are Intergenerational Transfers to the Wealth of Families, by Race

Making simple assumptions about the rate of return on inherited wealth over time, and about the share of inherited wealth that is consumed (or lost) by its recipients, we can provide back-of-the-envelope estimates of the share of current wealth that is constituted by inheritances. Following Feiveson and Sabelhaus (2018), we consider scenarios where real inheritances grow annually at rates of 3 percent and 5 percent from year of receipt to survey year. We further modify the scenarios by first assuming that all inherited wealth is successfully invested (following Feiveson and Sabelhaus 2018), and then changing the assumption to allow for the consumption/loss of some portion of the initial inheritance. Using these conditions, we calculate, by race, the share of current wealth that inherited wealth contributes. With no consumption of wealth and 3 percent real annual growth, inheritances account for 19 percent of the wealth of white and "other" families, 14 percent of Black family wealth, and just 6 percent of Hispanic family wealth (**Table 18, Panel A**). Allowed to grow at a real annual rate of 5 percent, inheritances would account for one-third of white and "other" family wealth, one-quarter of Black family wealth, and 9 percent of Hispanic family wealth.

Altering the scenario by assuming that all small inheritances (less than $25,000) are consumed, with 3 percent real annual growth, inheritances would account for 18 percent of white and "other" family wealth, 12 percent of Black family wealth, and 5 percent of Hispanic family wealth. Allowing for higher consumption/waste of transfer systematically reduces the share of current wealth that is accounted for by transfers. If half of intergenerational transfers are consumed/wasted, the share of current wealth they account for (at 3 percent assumed growth) falls to 8 percent for white and "other" families, 6 percent for Black families, and 3 percent for Hispanic families.

The actual rates at which inherited wealth grows and the amounts of inherited wealth that are lost or consumed are uncertain. The existing literature finds that nontrivial portions of inherited wealth do not end up fueling the future wealth of heirs because it is consumed or lost (bad investments, business failures, gifts to friends and family). Gale and Scholz (1994) use the SCF and estimate that inheritance and inter vivos transfers account for half of current household wealth. Zagorsky (2013) uses wealth and inheritance data in the longitudinal data in the National Longitidual Survey of Youth (NLSY79) and estimates that roughly half of total inherited wealth is consumed or lost, including all smaller inheritances. Holtz-Eakin et al. (1993) finds that recipients of large inheritances are more likely to leave the labor force. Using administrative estate tax data, Joulfaian (2006) finds that heirs increase their wealth by only 79 percent of the inherited amount within a few years of receipt. He also finds evidence of reduced labor supply following inheritance. Brown et al. (2010) use the Health and Retirement Survey and find that receipt of an anticipated inheritance is associated with a significant increase in the probability of retirement. Bo et al. (2019) study Norwegian administrative data and find large reductions in labor supply among recipients of large inheritance. Recipients of inheritances clearly benefit, but a considerable portion of the value of inherited wealth flows into consumption as opposed to wealth inequality.

These basic lessons from studies of inheritances—which draw attention to limits in the extent to which intergenerational transfers augment family wealth—are reinforced by other research on the impacts of lottery wins and other major shocks to household resources. Bulman et al. (2021) study major lottery winners and the college attendance of their children using administrative records in the United States. They find that prizes of about $50,000 have very little impact on college attendance, and substantial increases can be found only for much larger prizes, with attendance rates increasing at 0.6 percentage points per $100,000 in after-tax winnings. In their study of financially distressed lottery winners in Florida, Hankins et al. (2011) show that, compared with small prizes, larger prizes ($50,000 to $150,000) postponed but did not prevent bankrupcty filings. Small- and large-prize winners filing for bankruptcy also had similar assets

and debt. Imbens et al. (2001) find that lottery winners in Massachusetts worked less, and increased their savings by only a small fraction of the prize they had won.

6Cc. Broken Links in the Intergenerational Transmission of Wealth

Some nontrivial portion of intergenerational transfers is consumed, but most families neither receive nor leave any inheritance. Only 29 percent of families with heads aged 65 and older plan to leave substantial estates (**Table 19, Panel A**). One-third (32 percent) of similarly aged families report ever having received an inheritance or substantial inter vivos transfer.[35] The inheritances that we can measure show clear and powerful evidence of an important minority of families helping their children and extended families through intergenerational transfers, even if much of that assistance fuels consumption rather than wealth. We do not observe, however, the linkages across more than two generations due to limitations in the data. We do know from the limited data that we have, that many of these links are broken and that the wealth of the past may succeed at "staying in the family" even less—or at least across fewer successive generations—than the inheritance and estate statistics suggest.

Only 39 percent of those having received an inheritance or inter vivos transfer plan to leave a substantial estate themselves (Table 19). Less than half (44 percent) of those planning to leave a sizeable estate have themselves received an inheritance (**Table 20**). If only 4 in 10 of the 32 percent who receive an inheritance end up leaving an estate, then we will see just 13 percent of the third generation inherit some portion of the wealth that was held during their grandparents' generation. By the next generation, just 5 percent of households will inherit some of the wealth originally held by their great-grandparents.

Because wealth is consumed and lost, the influence of the past on today's wealth for most families is smaller than might be imagined. The majority of families of all races receive no inheritance, and hence none of the wealth they hold is directly due to transfers from previous generations. Even among those receiving bequests, the source of that inherited wealth is overwhelmingly from the two most recent generations, with few of today's inheritances bearing any mark from the distant past.

For those receiving particularly large gifts, however, the lasting intergenerational legacy of bequests looks somewhat different. Among recipients of inheritances or inter vivos transfers (ever received, 3 percent growth) in excess of $300,000, the share planning to leave a sizeable estate rises to 50 percent, compared with just 22 percent among those receiving transfers of less

[35] Note that "ever received inheritance" and size of inheritance are based on the augmented inheritance data from Feiveson and Sabelhaus (2018).

than $25,000 (**Table 19, Panel A**). Recipients of small intergenerational transfers are equally likely to plan to leave an estate as those who have received nothing in the way of inheritance or inter vivos. The median private wealth of those recipients (aged 65 and older) of large transfers who plan on leaving a sizeable estate is $1.9 million, compared with just $413,000 for the recipients of large transfers that don't plan to leave an estate (**Panel B**).

Overall, white families (aged 55 and older) are the most likely to have received an inheritance/major gift (33 percent), but "other" race families are the most likely to plan to leave a sizeable estate (32 percent) (**Table 21**). Among those who received a transfer at some point in the past, 49 percent of Hispanic and "other" families plan to leave a sizeable estate, compared with 41 percent of white and 34 percent of Black families. Among those who have not received an inheritance or an inter vivos transfer, nearly one-third of "other" race families, one-quarter of white and Hispanic, and one-fifth of Black families plan to leave a sizeable estate.

6D. Non-parametric Reweighting Estimates for Contributions of Disparity in Intergenerational Transfers to Wealth Disparities

Using the same sample selections as for the human capital-focused decompositions above (respondents aged 40 to 59; spouses/partners [if present] aged 30 to 62), in **Table 22** we estimate the private wealth of white families after reweighting the white sample to have the same distribution of traits (in this case intergenerational transfers and an indicator for family financial support) as non-white families. Reweighting for the distribution of cumulative inheritances ever received, we see that the gap in mean private wealth closes slightly more than 10 percent for both the white/Black and the white/Hispanic gaps (**Panel A**). Further reweighting to match the distribution of inter vivos transfers ever received among non-white households has little additional impact on the estimated white wealth or either of these wealth gaps. At the median of the distribution (**Panel B**), reweighting for inter vivos transfers adds a few percentage points to the share of the wealth gaps that is explained, but it leaves the explained share at just 14 percent for the white/Black gap and 16 percent for the white/Hispanic gap. These estimates are similar to what is found in previous literature.

As noted in Feiveson and Sabelhaus (2018, 2019), even with the augmented measures of inter vivos transfers, we are still not capturing the full range of ways in which families financially support their offspring, many of which could ultimately facilitate the accumulation of wealth. When we further reweight the white sample to match the distribution of non-white households indicating they can expect to get $3,000 from friends or family in case of a financial emergency, the explained portion of the wealth gap rises substantially. With the additional control for this variable, the portion of the white/Black private wealth gap explained is 40 percent at the mean

and 50 percent at the median; the portion of the white/Hispanic gap explained rises to 30 percent and 39 percent, respectively.

It is not obvious, however, that it is appropriate to include the indicator for expecting financial assistance of $3,000 in an exercise aimed at accounting for the factors that are responsible for racial disparities in wealth. Thompson and Suarez (2019) treat this measure as an indicator for likely past receipt of financial assistance from family that is not already reflected in the inheritance or inter vivos transfers. The actual question, though, asks not just about family support, but about that from friends, and in fact, references friends before mentioning relatives.[36] In principle, this question could be capturing past-receipt of family support, or it could be a measure of the economic status of the friends that the respondent and spouse socialize with, which would be highly correlated with their own economic status, however achieved. Even if the hypothetical financial assistance imagined by the respondent is from family ("relatives who do not live with you"), it is not necessarily the case that meaningful assistance has been received in the past. For instance, the respondent could simply be thinking about a sibling or even a younger cousin, whose access to resources could be entirely orthogonal to the respondent's wealth.

In fact, when we jointly control for the full range of human capital variables from Table 14 in addition to the intergenerational transfers from Table 22, the indicator for "can get $3k" adds only a negligible amount to the explained portion of the private wealth gap. Reweighting the white sample to match the distribution of human capital traits (lifetime earnings, pensions, and other human capital and work-related variables) as well as total inheritances and inter vivos transfers ever received of the non-white sample, the share of the white/Black wealth gap explained approaches 80 percent, at the mean and the median (**Table 23**). Controlling for these factors accounts for 85 percent of the mean white/Hispanic wealth gap and 93 percent at the median. The additional contribution of the "can get $3k" is marginal, suggesting it is highly correlated with the human capital variables.

Our preferred specifications, not including either savings and investment attitudes or "can get $3k," are included in **Table 24**, with the range of years in the analysis expanded to include the survey years from 2007 through 2019. The effects on wealth disparities from the two factors we examine in this research are unchanged; jointly human capital and intergenerational transfers account for three-quarters of white/Black wealth disparities, 80 to 90 percent of white/Hispanic disparities, and also nearly close the white/"other" gap. As a final exercise, we consider the influence of additional demographic detail that is available in the SCF. When we also reweight

[36] The exact text of the question reads: "In an emergency could you (or your {husband/wife/partner}) get financial assistance of $3,000 or more from any friends or relatives who do not live with you?"

to match the distribution of the numbers of children, indicators for the presence of extended families, and age, we push the total share of the white/Black gap explained up to 80 percent, and close most of the remaining gap between white and other families.

7. CONCLUSION AND REFLECTIONS ON POLICY

In this paper, we seek to improve upon existing research using the Survey of Consumer Finances to understand the factors contributing to racial disparities in wealth. By studying private wealth, which includes DB pension assets, we are acknowledging a missing asset that is vital for those who hold it, particularly Black working families, and influences their decision to save (or not save) in assets that are reflected in market wealth. Measured disparities in private wealth are somewhat smaller, and relatively flat over time, when compared with market wealth, but they remain substantial, nonetheless. By studying private wealth, we also bring the wealth concept into better alignment with the accumulation of assets through work.

By introducing lifetime earnings histories and expanded measures of pension coverage and generosity into our analysis, we also are better able to reflect the ways that human capital formation—by facilitating access to high-paying jobs with generous pension benefits—drives the accumulation of wealth. The combined set of human capital variables we explore can account for three-quarters of the wealth gap between white and Black families, a somewhat larger share than past research using microeconometric estimation strategies, but slightly less than what is implied by recent studies using general equilibrium, overlapping-generations models (Aliprantis et al. 2019; Ashman and Neumuller 2020). Differences in human capital can also account for nearly all the wealth gaps between white and Hispanic families, consistent with other previous research, also nearly closes the average wealth gap between white and "other" families, raising the counterfactual estimate of white wealth up to the average wealth of "other" families.

Our inability to fully account for the white/Black wealth gap from our microeconometric approach could be a result of not controlling for several additional factors that we think are related to wealth accumulation. Three that we will discuss briefly are 1) housing, 2) better information on human capital and family financial support, and 3) geography.

Housing is one of the most important assets, and there is a voluminous literature exploring the importance of housing for wealth building and the role that race, and discrimination by race, play in accessing housing and building home equity. Housing surely accounts for some of what we cannot account for in this analysis, but it also should be pointed out that much of the housing literature points back to the areas we are assessing here (earnings and demographics in particular) to help explain differences in housing wealth. Charles and Hurst (2002), for example, document large differences between races in the likelihood that a mortgage application is

rejected, but they conclude that those differences explain only a small portion of the observed differences across race in transitioning into homeownership. The most important factors, they find, are difference in household income and family stability. To the extent that housing disparities are downstream from earnings disparities, intergenerational transfers, and demographics, our work will have already accounted for some of the influence of housing on disparities in overall wealth.

Another limitation is that whatever the strengths of the data, we are unable to control for many of the aspects of human capital and intergenerational transfers that we would ideally like to take into account. For instance, in addition to the inheritance and inter vivos transfers that are already in the data, it would be ideal to have more detailed information on other forms of financial assistance from family that the respondents might have benefitted from in building their assets (assistance with down payment, college tuition, etc.). In addition to educational attainment, knowing college majors and aptitude test scores would be a huge benefit. These additional measures of family support and heterogeneity in skills could likely help us explain some of the currently unexplained portion of the wealth gap.

Another factor that would be important to have, but is not available in the public data, is geographic location. To a great degree, different races in the United States do not live together. The geographic difference is not just in neighborhoods and towns; it can be seen across regions of the country. America's different race groups are not distributed evenly across the country, but instead concentrated in different regions. In 2010, Black Americans accounted for 12.6 percent of the total population. The set of counties where the Black population was at least that share of the total local population is depicted in the map in **Appendix Figure 1, Panel A**. The 716 counties where the Black population share was 12.6 or higher are heavily concentrated in the Southeastern states. These counties are home to three-quarters of all Black Americans and one-third of the total US population. The 507 counties that have at least 16.3 percent (the national average) of the local population that is Hispanic are depicted in the map in **Panel B**. These counties are overwhelmingly located in the Southwest and are home to three-quarters of Hispanic Americans and just under one-third of the total population.[37] Regional factors could play an important role in the overall wealth accumulated by the different race groups, but we are unable to account for them.

Despite these limitations, the findings are suggestive of the types of policies that should help Black and Hispanic families build wealth. The substantial roles for differences for earnings, pensions, and other human capital and work-related variables in explaining racial disparities in

[37] Similar maps for the white and Asian populations are shown in Panels C and D of Appendix Figure 1.

wealth have implications for the set of policies that will be most effective in reducing wealth gaps. Policies focused on boosting educational attainment, employment, and earnings should play a key role in any agenda to build wealth among low-wealth Black and Hispanic households. These policies should not just focus on college attendance or completion, but also seek to prepare students from low-income backgrounds to succeed in (and draw them to) the most challenging courses of study, broadly the STEM fields, that lead to higher earnings and ultimately wealth. Since the skills gaps that ultimately show up in the SAT, LSAT, MCAS, and GRE emerge much earlier in the education process, policy efforts aimed at building skills need to start much earlier than college.

Policies to increase human capital formation should not only target the top-end of the skill distribution but should include approaches to boost basic skills and facilitate employment and labor market attachment for less skilled workers. In their work on racial disparities in earnings, both Bayer and Charles (2018) and Thompson (2021) conclude that one of the most important factors driving modern white/Black gaps is on the participation dimension, with low skills increasingly associated with non-participation. The relevant set of policies addressing low skills and non-participation would encompass basic skills training, high school completion, and apprenticeships, but would also dovetail with criminal justice reform efforts. It is not just the prevalence of low skills that needs to be diminished; the links between low skills and incarceration and criminal records also must be addressed.

The important role that pension coverage and generosity play in sustaining racial disparities in wealth also carries some unique implications for policy. Longer spells of employment at higher earnings will result in greater pension wealth for covered workers, but many workers are not covered by any pension or have low-quality plans. Reforms that both work with employers to improve the stability and quality of their pension benefits and extend publicly supported, low-fee pension plans to uncovered workers hold promise for helping low-income workers accumulate pension wealth.

Appendix A. Comparing Giving and Receipt of Intergenerational Transfers

Every SCF is a representative cross-section, and thus the retrospective inheritance questions overlap across survey waves. For example, the 2013 survey has lifetime inheritances received through 2012, the 2016 survey has inheritances received through 2015, and the 2019 survey has inheritances received through 2019. If we use the 2013, 2016, and 2019 surveys, we have three overlapping samples with inheritances covering the period before 2013. For example, in the year 2012, the 2013 respondents are remembering the previous year, while in the 2016 survey 2012 was four years earlier, and in 2019 the year 2012 was seven years earlier. This provides multiple observations on the timing of inheritances and substantial gifts received, and although the values in overlap years are generally consistent, the values for years closer to the survey are generally higher (Feiveson and Sabelhaus, 2019). Thus, our primary focus is on inheritances and substantial gifts received in the three years preceding each survey.

The SCF public-use data adds an additional challenge when distributing inheritances and substantial gifts. The year in which the inheritance is received (and consequently the derived age at which the respondent received the inheritance) is rounded to the nearest year ending in a "0" or "5" for disclosure reasons. The timing of inheritances is thus measured with some error—up to a five-year span—but years closer to the survey are generally more precise because of the "0" or "5" year rounding rule. Thus, the three-year retrospective approach will generally capture inheritances received within a year or two of when they occurred.

Gifts Given

Towards the end of the SCF survey—after respondents have reported their incomes for the year preceding the survey—there are questions about *inter vivos* transfers made. The specific question refers to "financial support for relatives or friends who do not live here." The financial support question comes immediately after a question about alimony and child support, and the interviewer instructions make it clear to exclude those payments. In addition, the instructions make it clear the respondent should include "substantial gifts" when answering the question.

The SCF *inter vivos* transfers made question almost certainly captures flows that are not captured in the gifts received module. Feiveson and Sabelhaus (2019) show that reported *inter vivos* transfers made are typically twice as high as reported gifts received. The most likely examples are situations where the giver sees themselves as "supporting" a relative—say paying

for college tuition—while the receiver does not see that as a "substantial gift received" or a form of income.

Bequests Made

Our approach to simulating the distribution of bequests at death also begins with household-level wealth data from the SCF. The SCF sample frame does not include the estates of deceased respondents, so there is no actual survey data on bequests made at death. In addition, the only available administrative data on bequests made is derived from administering the federal estate tax, which covers a very small and rapidly declining share of total bequests made in any year. Furthermore, the administrative data does not have any detail by race, ethnicity, and age.

The solution to the lack of hard data is to estimate the distribution of bequests made by multiplying individual wealth holdings in the SCF by that individual's mortality rate and adjusting the predicted amounts by expected estate settlement costs and for allocation across multiple heirs. The approach here is based on a method developed in an earlier project on household saving (Feiveson and Sabelhaus, 2019), and refined/extended for a project to study alternative estate tax regimes (Gale, Pulliam, Sabelhaus, and Sawhill, 2020).

A bequest occurs when a respondent (and/or their spouse, if married) dies. Every SCF observation is weighted, so the number of bequests generated for a given sample household is the sample weight multiplied by the mortality probability. However, simply applying average cohort-age-sex specific mortality rates will bias the distribution of simulated deaths, because of the well-documented phenomenon generally referred to as "differential mortality." The gist of differential mortality is that life expectancy and socio-economic variables are positively related, meaning life expectancy rises with lifetime income and/or wealth. The effect of moving from unadjusted mortality by age-sex-cohort (from the Social Security Administration) to differential mortality is first order. In particular, the predicted dollar value of bequests falls by about 30 percent when we move from average to differential mortality.

Our approach to adjusting for differential mortality begins with the work of Chetty, et al. (2016). In addition to estimating and reporting on mortality differentials, the authors make available summary statistics from their data set that we use to assign mortality differentials by wealth for men and women at each age 40 and older. The approach captures the fact that differential mortality is observed at all ages but tends to converge as cohorts get older, and the differentials asymptotically disappear at the oldest ages. Basically, we are solving for mortality

relative to median mortality for a given age/sex group across percentiles of lifetime income. The data are smoothed using a cubic polynomial in lifetime income, as we estimate 72 separate relative mortality equations (for men and women, at each age 40 to 75) using the Chetty et al. data.[38]

The smoothed differential mortality ratios capture the multi-dimensional phenomenon we want to introduce in the bequest simulation model. For example, the differential mortality adjustment for females at age 50 at the 20th percentile of lifetime income is 1.5, meaning someone at the 20th percentile is 1.5 times more likely to die this year than someone at the median. The ratios are generally below 1 above the median: at the 80th percentile it is .7, and at the 99th percentile .25. Thus, at age 50, a female at the 99th percentile of lifetime income has only one-fourth the chance of death as a female at the median.

At age 75, the corresponding differential mortality ratios have already substantially converged towards 1, with values for the 20th, 80th, and 99th percentiles of 1.2, .8, and .6. That convergence towards 1 is to be expected—and in fact—the differentials completely disappear at the very oldest ages when everyone who has survived to that point is equally likely to die. We assume that the estimated differentials at every wealth percentile move linearly towards one between ages 76 and 100, which gives us a pattern that lines up well with the Chetty et al., (2016) preferred extrapolation to older ages.

The data set used by Chetty et al., (2016) to estimate mortality differentials is constructed by matching income tax and mortality records, and income tax data does not have race/ethnicity identifiers, so it is not possible to construct mortality rates by race/ethnicity and income. The fundamental assumption for our purposes is that the well-documented differences in mortality by race and ethnicity are (at least on average) controlled for using permanent income within every age and gender group. Chetty et al., (2016) provide evidence supporting this assumption by showing that—except at low-income levels that are less relevant for predicting bequests—predicted mortality does not vary across geographic areas within an income group.

[38] It is important to note that we do not use the time dimension of the Chetty et al. data set, as the smoothing regressions are fit by pooling across all available years (2000 through 2014). To the extent differential mortality is getting worse over time, we will (in 2020, for example) overstate the amount of high wealth transfers. That is likely a very second order problem relative to (say) the differences between the 50th and 99th percentiles in any given year.

In addition to adjusting for differential mortality, we also implement adjustments to estates to capture real-world features of transfers at death (Gale, Pulliam, Sabelhaus, and Sawhill, 2020). First, when one member of a married couple dies, we assume the estate is transferred to the spouse, so no intergenerational transfer is recorded. Second, we apply valuation adjustments (based on data provided by IRS) for real estate (six percent) and closely held businesses (20 percent). Third, we set a "minimum" estate of $20,000 (2019 dollars) to adjust for the legal and other costs of transferring wealth at death.

Table 4. Inheritances and *Intervivos* Transfers Received by Three Year Subperiod

	1995 to 1997	1998 to 2000	2001 to 2003	2004 to 2006	2007 to 2009	2010 to 2012	2013 to 2015	2016 to 2018
Inheritances Received								
All	$ 574.3	$ 675.6	$ 755.6	$ 880.3	$ 810.1	$ 1,191.0	$ 1,064.6	$ 1,161.2
White and Other	$ 533.1	$ 656.1	$ 707.0	$ 823.3	$ 759.7	$ 1,141.2	$ 1,032.4	$ 1,068.4
Share	*93.0%*	*97.3%*	*93.7%*	*93.6%*	*93.9%*	*95.9%*	*97.1%*	*92.1%*
Black	$ 37.6	$ 17.2	$ 43.4	$ 29.6	$ 41.6	$ 18.6	$ 22.1	$ 50.1
Share	*6.6%*	*2.5%*	*5.8%*	*3.4%*	*5.1%*	*1.6%*	*2.1%*	*4.3%*
Hispanic	$ 2.5	$ 1.3	$ 4.1	$ 26.4	$ 7.9	$ 30.2	$ 9.1	$ 41.6
Share	*0.4%*	*0.2%*	*0.5%*	*3.0%*	*1.0%*	*2.5%*	*0.9%*	*3.6%*
Intervivos Received								
All	$ 132.0	$ 58.2	$ 114.4	$ 178.1	$ 136.7	$ 133.0	$ 151.8	$ 169.6
White and Other	$ 125.1	$ 53.2	$ 112.8	$ 141.8	$ 131.9	$ 125.7	$ 83.5	$ 164.7
Share	*95.5%*	*92.8%*	*99.5%*	*80.0%*	*97.2%*	*95.2%*	*55.2%*	*97.7%*
Black	$ 1.5	$ 0.9	$ 0.5	$ 3.4	$ 0.4	$ 3.8	$ 1.0	$ 2.8
Share	*1.2%*	*1.5%*	*0.5%*	*1.9%*	*0.3%*	*2.9%*	*0.6%*	*1.7%*
Hispanic	$ 4.4	$ 3.2	$ -	$ 32.1	$ 3.4	$ 2.6	$ 66.8	$ 1.0
Share	*3.3%*	*5.6%*	*0.0%*	*18.1%*	*2.5%*	*2.0%*	*44.1%*	*0.6%*

Table 6. Predicted Bequests Made and *Intervivos* Gifts Given by Three Year Subperiod

	1995 to 1997	1998 to 2000	2001 to 2003	2004 to 2006	2007 to 2009	2010 to 2012	2013 to 2015	2016 to 2018
Predicted Bequests Made								
All	$ 565.3	$ 679.2	$ 695.7	$ 1,119.4	$ 1,140.2	$ 1,060.1	$ 920.1	$ 1,337.5
White and Other	$ 550.4	$ 642.6	$ 668.6	$ 1,054.8	$ 1,086.6	$ 1,011.3	$ 865.7	$ 1,258.5
Share	*97.5%*	*94.7%*	*96.3%*	*94.3%*	*95.4%*	*95.5%*	*94.2%*	*94.2%*
Black	$ 12.2	$ 16.9	$ 23.6	$ 53.3	$ 35.5	$ 42.2	$ 46.0	$ 56.8
Share	*2.2%*	*2.5%*	*3.4%*	*4.8%*	*3.1%*	*4.0%*	*5.0%*	*4.2%*
Hispanic	$ 1.6	$ 18.8	$ 2.4	$ 10.3	$ 17.2	$ 5.6	$ 7.4	$ 21.3
Share	*0.3%*	*2.8%*	*0.3%*	*0.9%*	*1.5%*	*0.5%*	*0.8%*	*1.6%*
Intervivos Gifts Given								
All	$ 186.0	$ 297.7	$ 355.0	$ 605.6	$ 431.6	$ 505.8	$ 459.9	$ 517.9
White and Other	$ 169.6	$ 262.8	$ 305.5	$ 514.8	$ 386.8	$ 439.1	$ 385.4	$ 455.3
Share	*91.7%*	*88.6%*	*86.3%*	*85.1%*	*89.8%*	*87.0%*	*84.0%*	*88.1%*
Black	$ 9.8	$ 21.2	$ 30.0	$ 68.6	$ 22.0	$ 46.0	$ 52.4	$ 41.3
Share	*5.3%*	*7.1%*	*8.5%*	*11.4%*	*5.1%*	*9.1%*	*11.4%*	*8.0%*
Hispanic	$ 5.6	$ 12.7	$ 18.5	$ 21.2	$ 21.8	$ 19.8	$ 21.2	$ 20.3
Share	*3.0%*	*4.3%*	*5.2%*	*3.5%*	*5.1%*	*3.9%*	*4.6%*	*3.9%*

Appendix B. Data Anomalies

For five observations (one household), the variable "educ" was missing, but some schooling information for the respondent was available from other variables. The individual had 14 years of school, but was not flagged as having a college degree, so was assigned "some college but no degree."

For seven observations (two households), the variable replicating "educ" for the spouse/partner was missing, but some schooling information for the spouse/partner was available for other variables. These individuals had 14 and 15 years of school, respectively, and earned a degree of type "other." They were assigned "some college but no degree" because they earned a degree other than an associate, bachelor's, or advanced degree.

For 1,365 observations, the variable replicating "educ" for the spouse/partner was 0=inap. (no spouse/partner), but the observations were married households with spouse/partner age reported. In these cases, the share of potential working years worked full-time was set to 0 if the number of years worked full-time was equal to 0 for the spouse/partner.

For five observations (one household), the value for the year that the respondent stopped working at the past job was 4. Based on the other units that time stopped working at the past job can be reported in, 1995 was the correct year, and 1995 was substituted as the year that the respondent stopped working at the past job.

For 10 observations (two households), the value for the year that the respondent stopped working at the past job was –1 (a value that does not have meaning in the survey code frame). The other units that time stopped working at the past job can be reported in were equal to zero, so the value for the year that the respondent stopped working at the past job was set to 0 for these cases.

There were 10 observations (two households) with negative annual earnings on the past job, which were assumed to be reported business losses for a self-employed person rather than earnings, and the annual earnings were set to 0 for these cases.

A check to ensure the number of observations for the not-inflation-adjusted annual earnings equaled the number of observations for the inflation-adjusted annual earnings identified 10 observations (two households) for which the respondent inflation-adjusted annual earnings variable was missing but the not-inflation-adjusted annual earnings variable was present. The year that the individuals stopped working on their jobs was equal to zero (inap.) for all response options. However, the individuals had responses for the annual earnings on the past job and the starting year for the past job, and the starting year for the past job exactly matched the starting year for the current job. The not-inflation-adjusted annual earnings for the past job and the current job were also exactly the same. By comparing household "wageinc," past job annual earnings, current job annual earnings, and spouse/partner (if present) annual earnings, it was determined that these individuals likely reported current full-time job information for the past full-time job. The annual earnings information for the past full-time job for these cases was kept as missing.

Years on past job were calculated as the year that the individual stopped working in the job minus the year the individual started working for that employer. For instances in which this

calculation resulted in a negative or improbably high value (greater than 1,000), we calculated a ratio of the sum of years on past full-time job for all observations divided by the sum of the total career years full-time for all observations, excluding the observations with extreme values. Separate ratios were calculated for each survey year, for R and SP, and for each current working status (full-time, part-time, and not working). Then, for each individual with an extreme value for the original calculation of years on the past job, years on the past job were calculated as the total career years full-time multiplied by the appropriate ratio of years on past full-time job to total career years full-time. If an individual's current job was full-time, we checked that the new calculation for years on the past job did not exceed the total career years full-time minus the years on the current full-time job. If it did, the years on the past job were calculated as the total career years full-time minus the years on the current full-time job.

For single households, share of potential years of work worked full-time was calculated as respondent years of full-time work divided by respondent potential years of full-time work. For married/partnered households, share of potential years of work worked full-time was calculated as the sum of respondent years of full-time work and spouse/partner years of full-time work divided by the sum of respondent potential years of full-time work and spouse/partner potential years of full-time work. For single households, extreme values for the share of potential years of work worked full-time were handled with three cases. Case 1: If the share of potential years of work worked full-time was calculated to be less than zero and the individual reported zero years of full-time work, the share of potential years of work worked full-time was set to zero. Case 2: If the share of potential years of work worked full-time was calculated to be less than zero and the individual reported positive years of full-time work, then the share of potential years of work worked full-time was set to one. Case 3: If the share of potential years of work worked full-time was calculated to be greater than one, then it was assumed the individual worked during their education, and the share of potential years of work worked full-time was set to one. For married/partnered households, extreme values for the share of potential years of work worked full-time were handled with four cases involving substitutions to the terms used in the calculation of share of potential years of work worked full-time for R and/or SP. Case 1: If the share of potential years of work worked full-time for the respondent or spouse/partner was calculated to be greater than one, the average of the number of years worked full-time and the number of potential years of work was substituted for both the number of years of full-time work and the number of potential years of full-time work for that household member. Case 2: If the share of potential years of work worked full-time for the respondent or spouse/partner was calculated to be less than zero and the number of years of full-time work for that individual was equal to zero, then zero was substituted for the number of potential years of full-time work for that household member. Case 3: If the share of potential years of work worked full-time for the respondent or spouse/partner was calculated to be less than zero and the number of years of full-time work for that individual was positive, then the number of years of full-time work was substituted for the number of potential years of full-time work for that household member. Case 4: If the number of potential years of full-time work was equal to zero (age was equal to the years of education) and the number of years of full-time work was positive, then the number of years of full-time work was substituted for the number of potential years of full-time work for that household member.

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Tables and Figures

Table 1. Wealth, by type, 2016–19, including results for Asian families, real 2019$

		Mean	Median
Market Wealth Projected	Asian	1,230,644	354,585
	Black	145,412	22,320
	Hispanic	225,653	44,462
	white	927,194	188,706
Private Wealth Projected	Asian	1,487,960	585,720
	Black	326,374	39,129
	Hispanic	393,723	91,919
	white	1,241,526	278,737

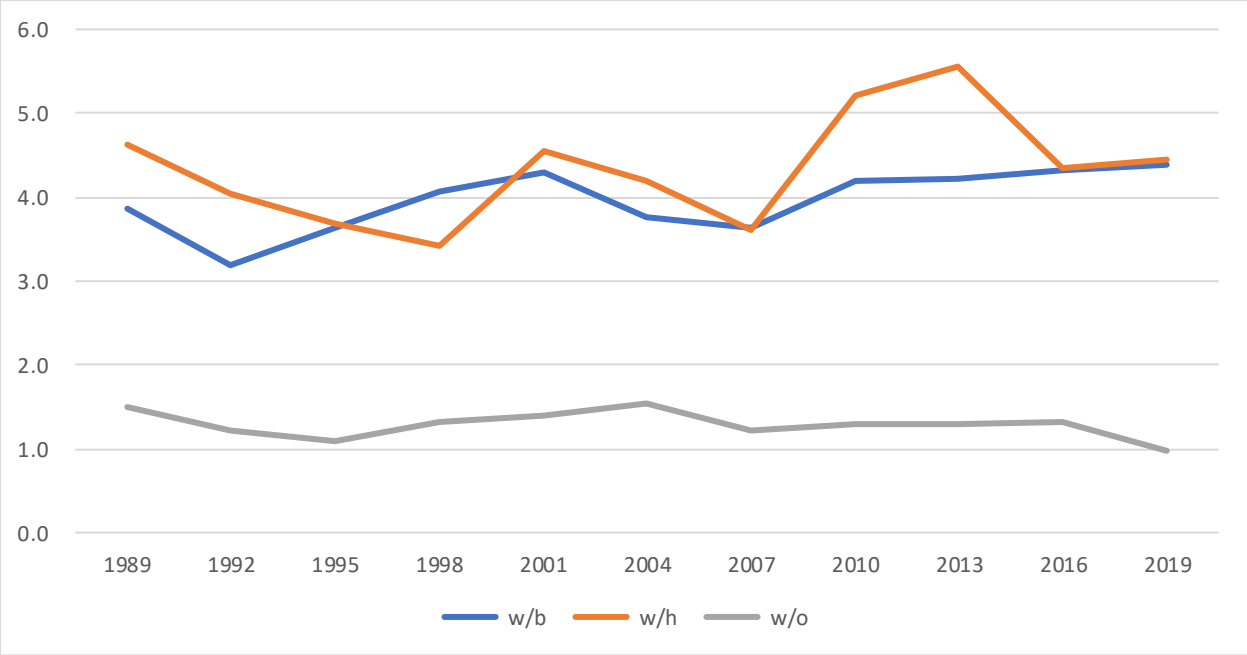
Note: Private wealth adds DB pension assets to market wealth. Includes families with heads between ages 30 and 62. Market and DB wealth projected to age 62, and discounted back to age at survey. For details see Thompson and Volz (2021) and Jacobs et al (2021).

Table 2. Private Wealth by Race

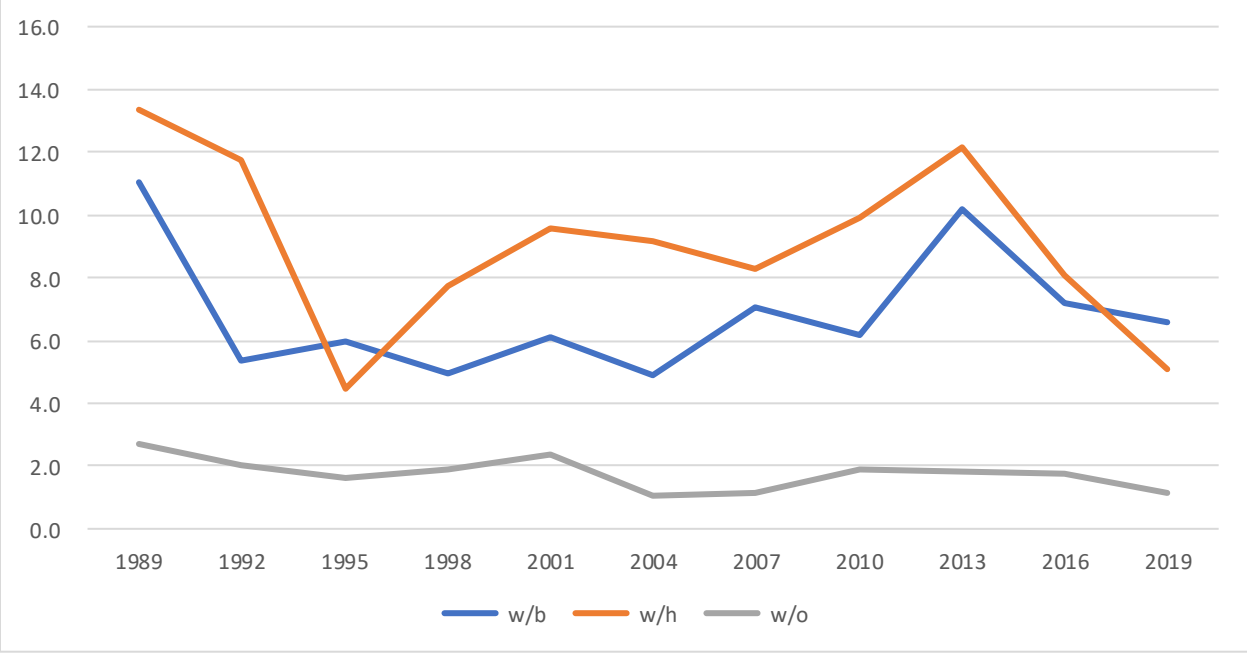
	Mean				Median			
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
	White	Black	Hispanic	Other	White	Black	Hispanic	Other
1989	555,788	143,770	120,123	374,149	196,986	17,841	14,753	72,855
1992	503,389	157,907	124,692	414,775	178,236	33,285	15,196	86,807
1995	529,236	146,082	143,715	481,650	169,102	28,462	37,893	102,496
1998	650,014	159,458	190,134	496,712	202,419	41,090	26,266	108,523
2001	829,772	193,107	182,431	596,835	248,206	40,727	25,924	105,068
2004	892,642	237,771	212,745	579,924	249,988	51,088	27,249	237,041
2007	976,665	269,551	271,380	795,937	270,357	38,143	32,712	238,982
2010	899,441	214,864	172,411	702,331	210,706	34,311	21,326	112,535
2013	913,848	215,975	164,456	712,496	229,957	22,589	18,889	126,784
2016	1,132,661	262,110	260,787	861,480	240,261	33,518	29,780	138,583
2019	1,124,872	256,451	253,192	1,153,818	249,035	37,910	49,030	216,600

Figure 1. Racial Gaps in Private Wealth over Time, All Ages, 1989–2019, real 2019$

Panel A. Mean Family Private Wealth

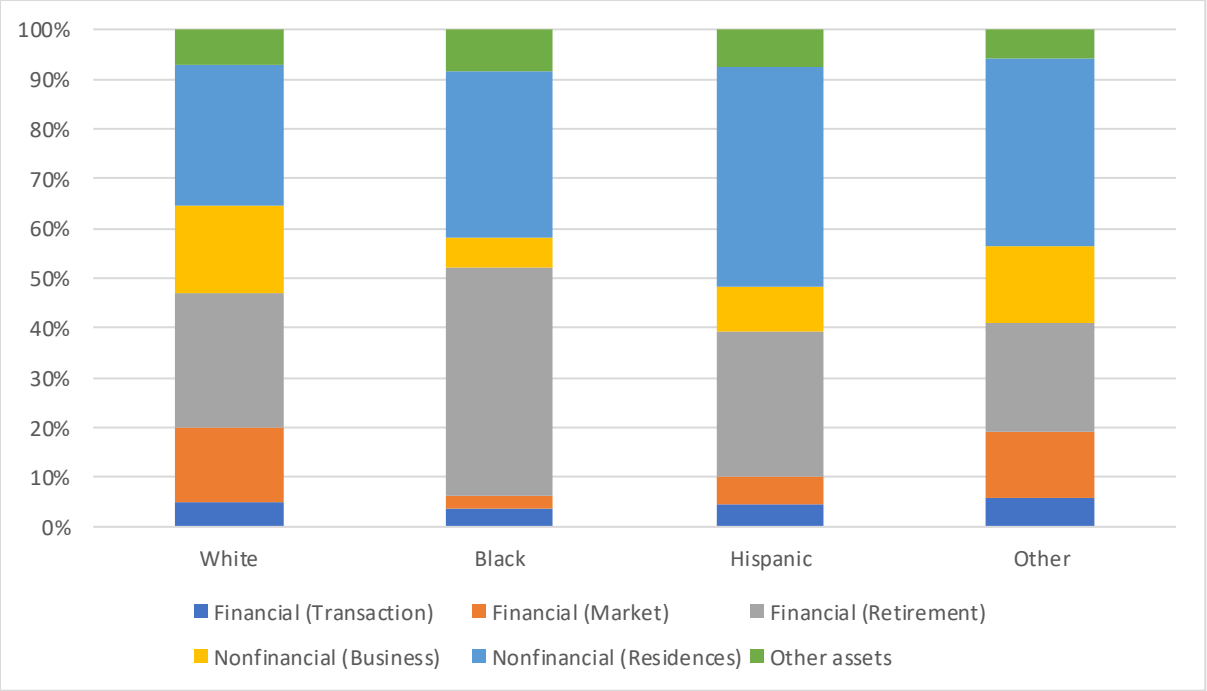


Panel B. Median Family Private Wealth



Note: W/B is the ratio of white family wealth to Black family wealth, W/H is the ratio of white family wealth to Hispanic family wealth, and W/O is the ratio of white family wealth to other race family wealth.

Figure 2. Composition of Assets by Race



Note: SCF 2016/19 data.

Financial (transaction) is the sum of all types of transactions accounts and certificates of deposit. Financial (market) is the sum of total directly held mutual funds (excluding MMMFs), stocks, and total bonds (not including bond funds or savings bonds). Financial (retirement) is the sum of defined benefit pension wealth and total quasi-liquid (sum of IRAs, thrift accounts, and future pensions, including currently received benefits). Nonfinancial (business) is businesses in which the household has an active interest (value is net equity if business were sold today, plus loans from HH to business, minus loans from business to HH not previously reported, plus value of personal assets used as collateral for business loans that were reported earlier) or nonactive interest (market value of the interest). Nonfinancial (residences) is the sum of the value of primary residence, other residential real estate, and net equity in nonresidential real estate. Other assets are the sum of savings bonds, cash value of whole life insurance, other managed assets, other financial assets, value of all vehicles, and other nonfinancial assets.

Table 3. Wealth and Basic Characteristics of "Typical" Families by Race (2019)

					Highest Educational Attainment in Household		
	Mean private wealth	Share who are married	Mean age of respondent	Mean years worked full-time (combined R and SP)	BA or higher	associate degree or some college	high school or GED
White	246,263	62%	55	40.5	48%	34%	15%
Black	35,024	24%	50	27.6	22%	31%	29%
Hispanic	44,299	70%	40	23.5	27%	37%	18%
"Other"	214,929	84%	46	31.6	55%	28%	16%

Note: "Typical" indicates the mean among households in the 45-55th percentiles of the race-specific distribution of private wealth.

Figure 3. Age-Private Wealth Profiles, by Age of Respondent (2016–2019) (3-Year Moving Average)

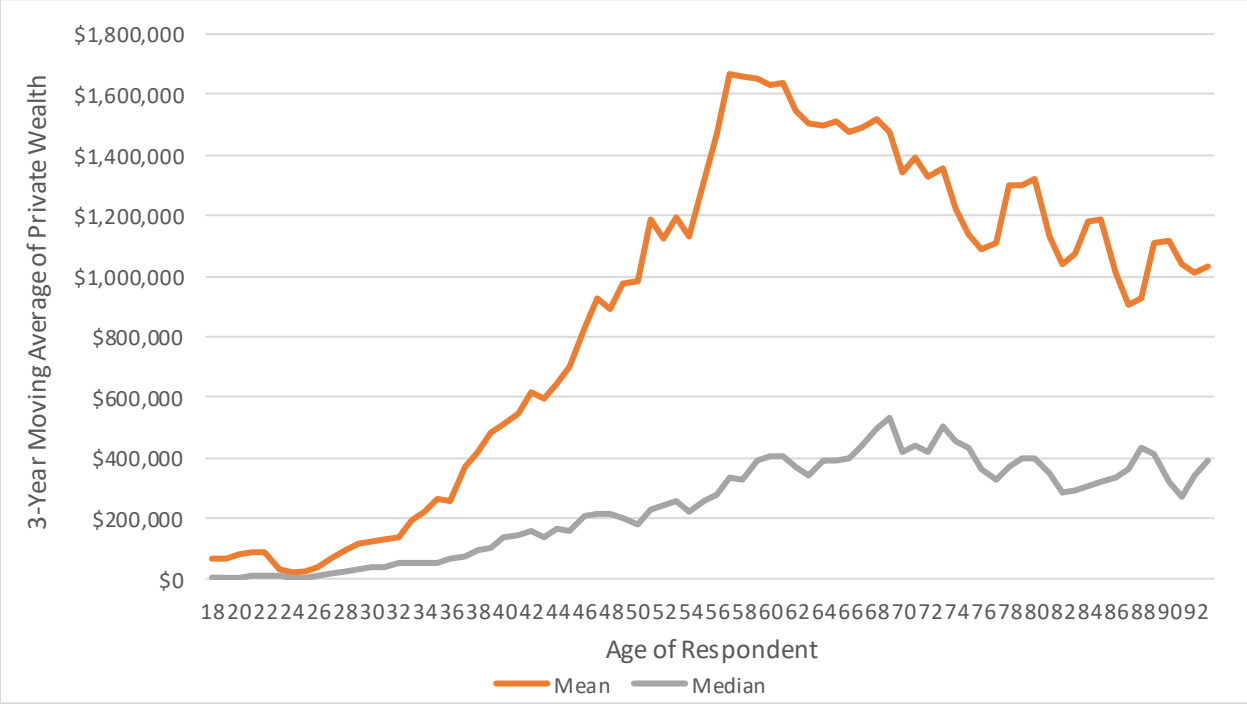


Figure 4. Age Inheritance Profile, 2016–19 Share Ever Received an Inheritance by 5-Year Age Bin

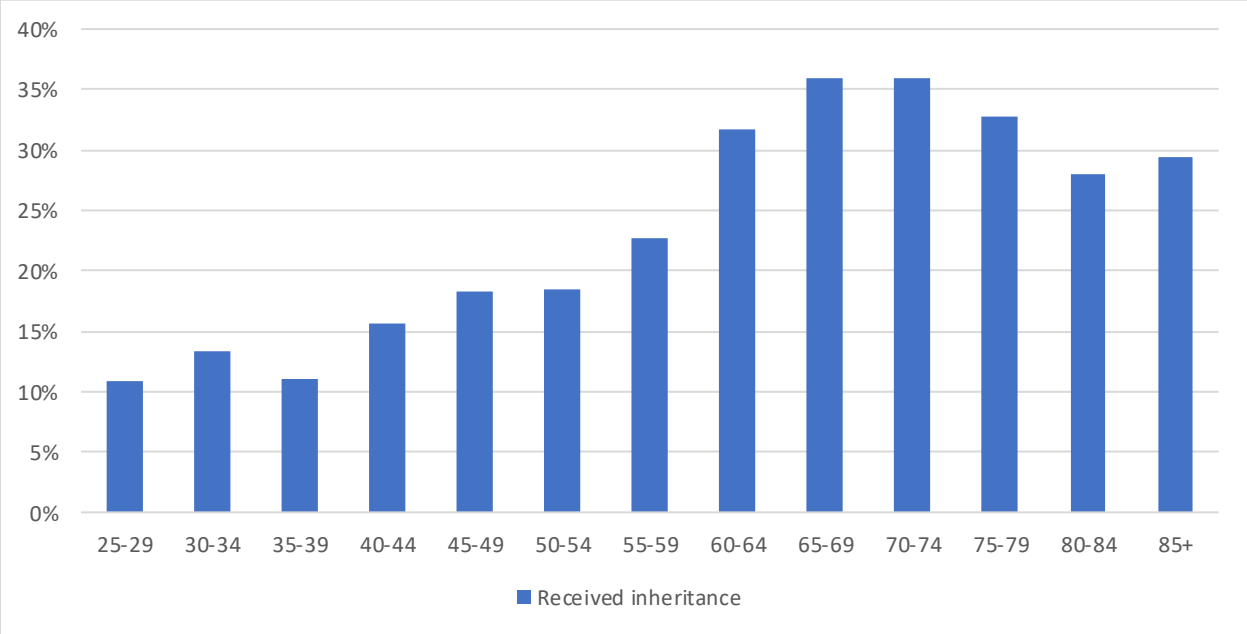
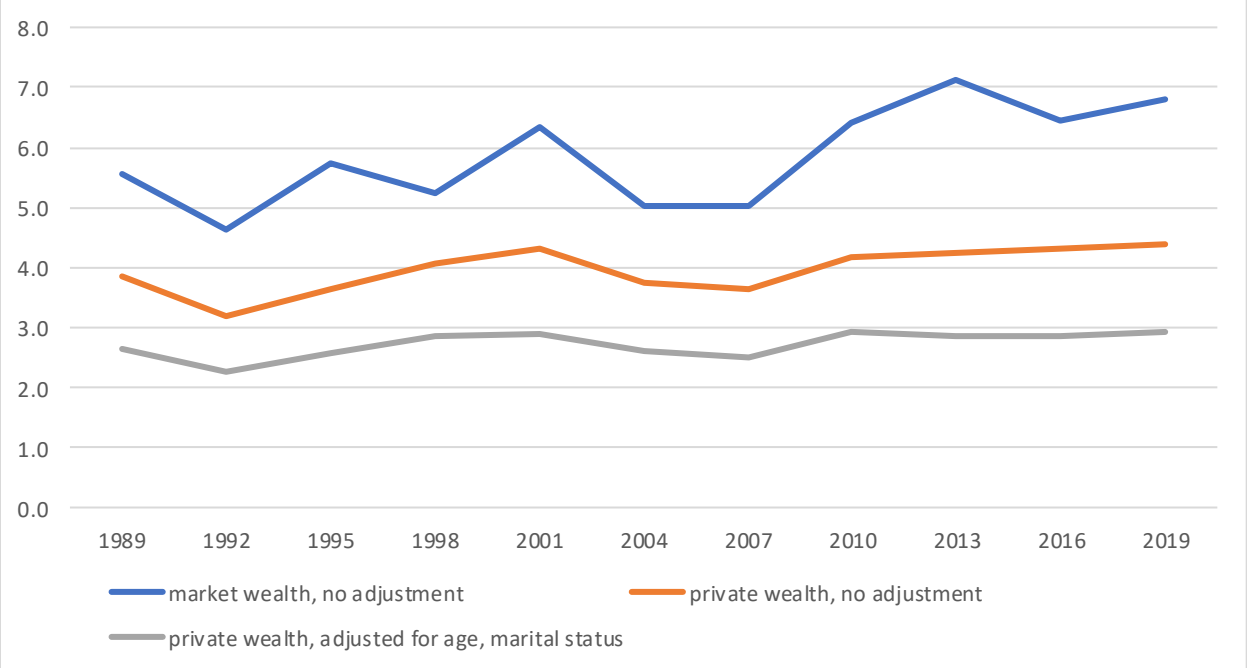


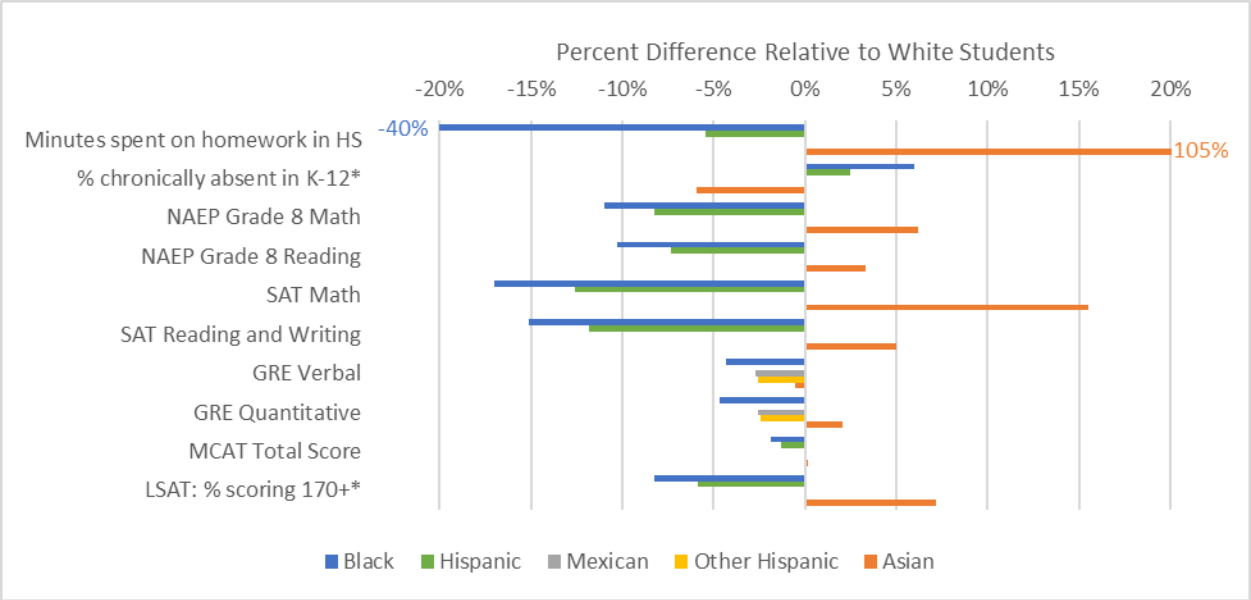
Figure 5. W/B Mean Wealth Ratios, by Wealth Concept and Adjustments for Age, Marital Status



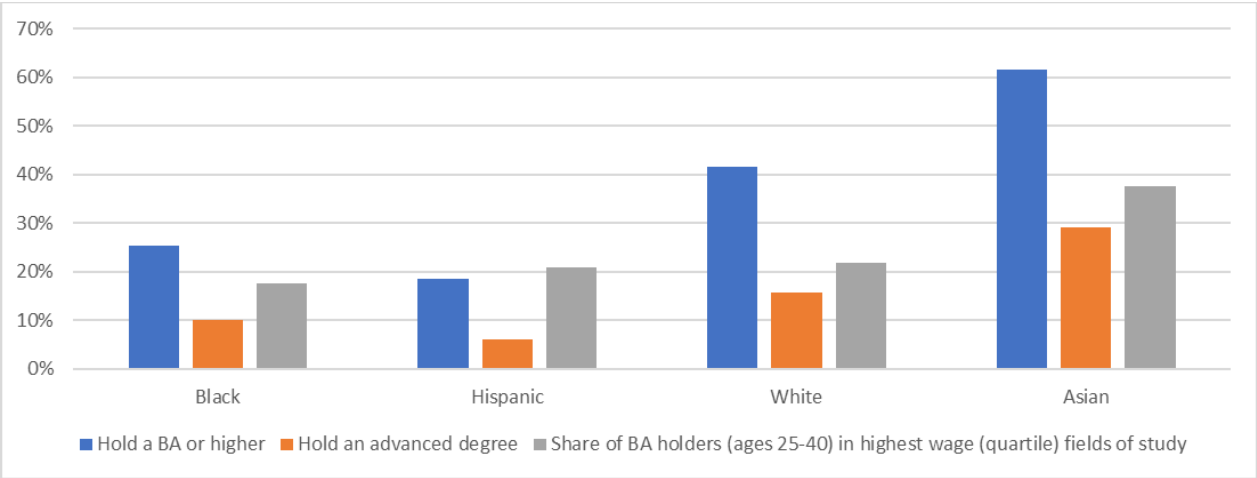
Note: W/B is the ratio of white family wealth to Black family wealth.

Figure 6. Human Capital Formation and Wealth Accumulation by Race

Panel A. Racial Minority Student Academic Performance Relative to White Students



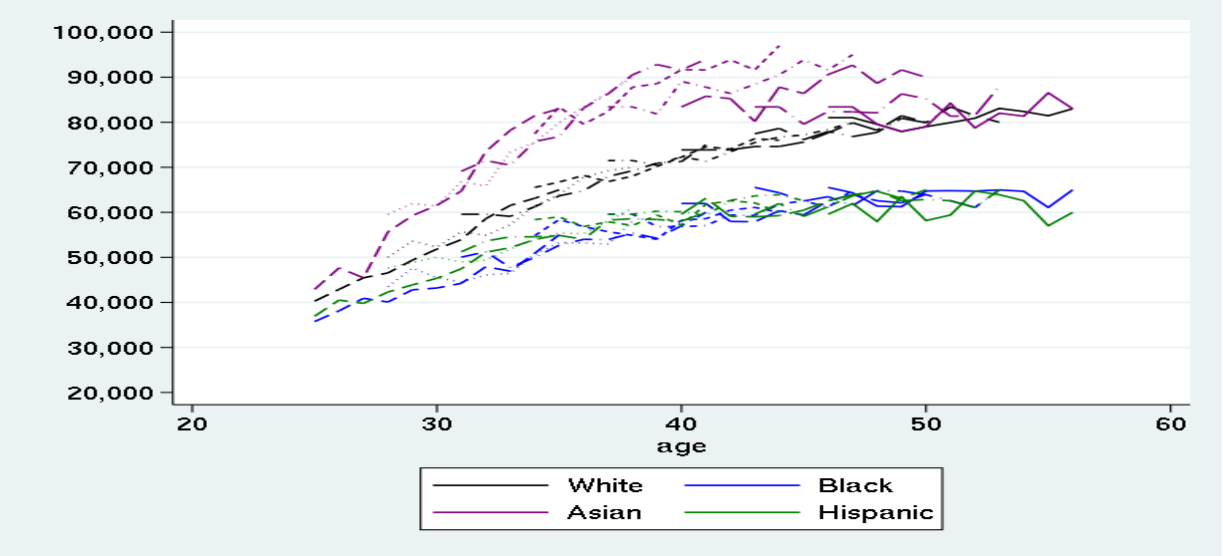
Panel B. Educational Attainment by Race



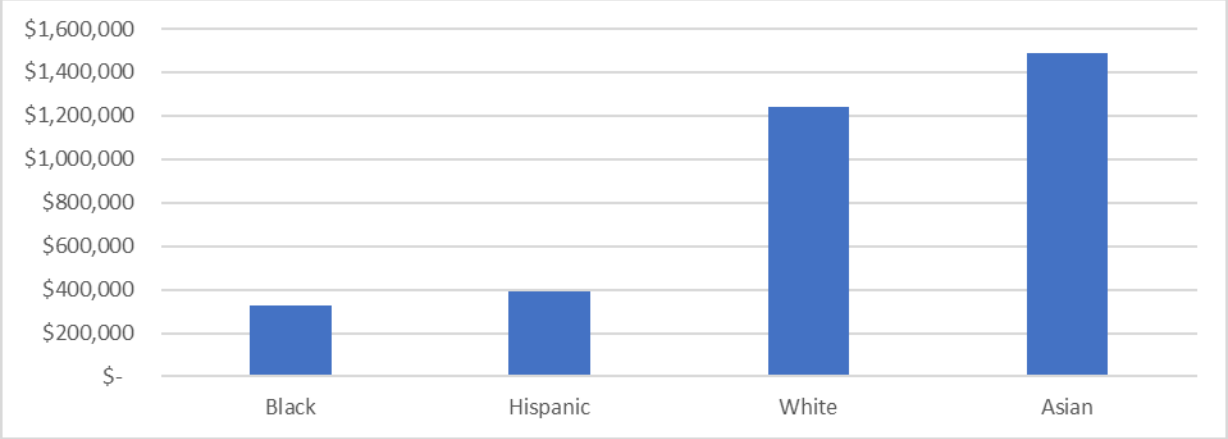
Note: Sources for Panels A and B are available in footnote.[39]

[39] ***Sources for Panel A:*** **Note: percent chronically absent in K–12 and LSAT: percent who scored 170+ are calculated as difference of percentages;* ***Average minutes spent on homework among full-time high school students aged 15–18 (2003–2013)****: Michael Hansen and Diana Quintero, "Analyzing 'the Homework Gap' among High School Students"; scale of figure could not contain percent difference relative to white students for Asian students (105%), or percent difference relative to white students for Black students (–40%);* ***Percent chronically absent among public school students in K-12 and comparable ungraded levels (2015-16)****: U.S. Department of Education, "Chronic Absenteeism in the Nation's Schools";* ***NAEP Mathematics Grade 8 Average Score (2019)****: The Nation's Report Card, "NAEP Report Card: 2019 NAEP Mathematics Assessment"; Asian category includes Pacific Islanders;* ***NAEP Reading Grade 8 Average Score (2019)****: The Nation's Report Card, "NAEP Report Card: 2019 NAEP Reading Assessment"; Asian category includes Pacific Islanders;* ***SAT Math Mean Score and SAT***

Panel C. Average Earnings Trajectory by Race – Synthetic Panel of Workers in ACS



Panel D. Average Private Wealth by Race, 2016-19 (Household Heads 30 to 62)



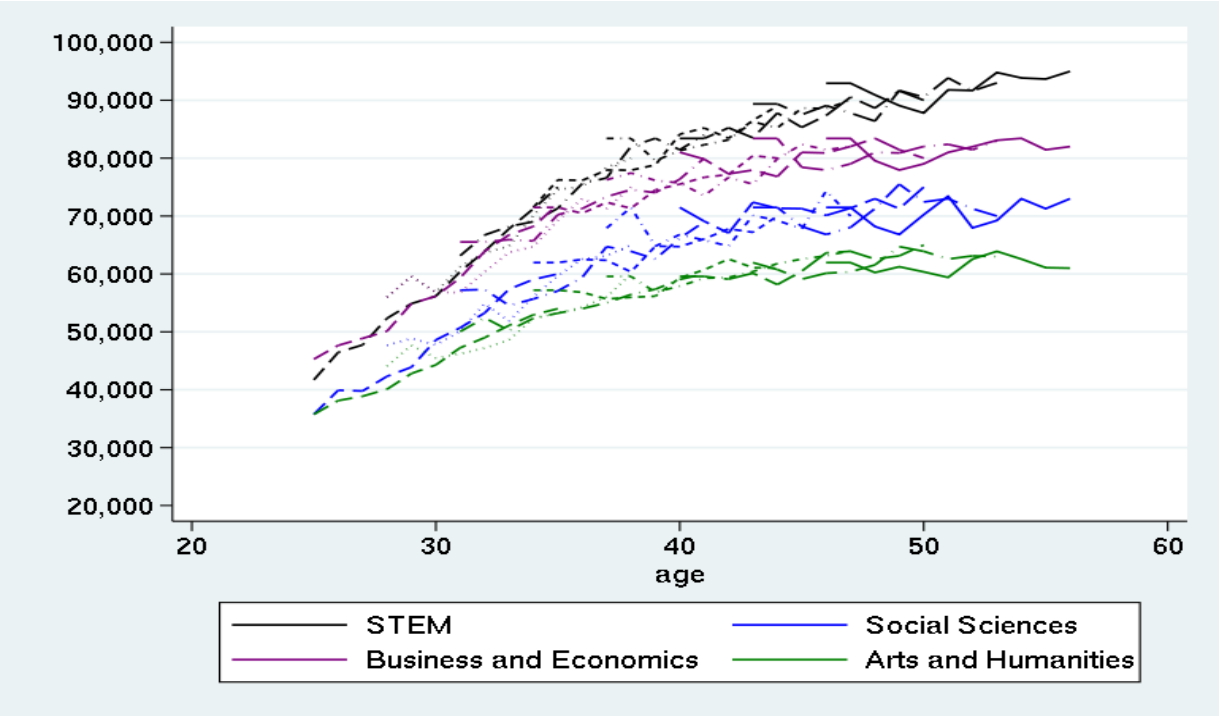
Note: Sources for Panels C and D are available in footnote.[40]

Evidence-Based Reading and Writing Mean Score (2019–20)*: College Board, "SAT Suite of Assessments Annual Report," 2020 Total Group;* ***GRE Verbal Reasoning Mean Score and GRE Quantitative Reasoning Mean Score (2018–19)****: ETS, "A Snapshot of the Individuals Who Took the GRE General Test -- July 2014–June 2019," Table 1.3;* ***Mean MCAT Total Score (2020–21)****: Association of American Medical Colleges, "Table A-18: MCAT Scores and GPAs for Applicants and Matriculants to U.S. Medical Schools by Race/Ethnicity," 2020–2021;* ***LSAT: Percent who scored 170+ (2020–21)****: Law School Admission Council, "YTD US Applicants from Region/State of Permanent Residence"*

Source for Panel B: Hold a BA or higher, hold an advanced degree: *Authors' analysis of ACS 2019 data from IPUMS USA. Includes individuals aged 30–55 only. Black, white, and Asian categories do not include Hispanic individuals of those races. Asian category includes Pacific Islanders.* ***Share of BA holders in highest wage quartile****: Authors' analysis of ACS 2017-2019 data from IPUMS USA. Wage quartiles are based on earnings of workers aged 41–55. Results reported are for individuals aged 25–40. Black, white, and Asian categories do not include Hispanic individuals of those races. Asian category includes Pacific Islanders.*

[40] ***Source for Panel C:*** *Authors' analysis of ACS 2009–2019 data from IPUMS USA. Includes individuals aged 24–56 in 3-year cohorts. Restricted to employed individuals with a bachelor's degree or higher who have positive wage*

Figure 7. ACS Synthetic Panel Showing Annual Earnings Growth by Major Field of Study among Employed BA Holders



Note: Authors' analysis of ACS 2009–2019 data from IPUMS USA. Includes individuals aged 24–56 in 3-year cohorts. Restricted to employed individuals with a bachelor's degree or higher and positive wage and salary income. Annual earnings are measured as median total pre-tax wage and salary income for the previous year in 2019 dollars. Field of study categories were created using the field of degree variable.

and salary income. Wage and salary income is total pre-tax wage and salary income for the previous year in 2019 dollars. Asian category includes Pacific Islanders.

Source for Panel D: *Jeffrey Thompson and Alice Henriques Volz, "A New Look at Racial Disparities Using a More Comprehensive Wealth Measure." Sum of Table 7 mean market wealth projected and mean DB wealth projected by race for 2016/19. Household head aged 30–62.*

Table 4. Distribution of BA Holders (25–40) by Race and Wage Quartile of Field of Study

Wage Quartile of Field of Study	White	Black	Asian	Hispanic	Other
Lowest	29.2	31.5	19.8	30.0	29.1
2nd	26.9	28.5	20.1	26.9	26.7
3rd	22.1	22.6	22.6	22.1	21.4
Highest	21.8	17.5	37.5	20.9	22.8

Authors' analysis of 2017–2019 ACS data from IPUMS USA. Restricted to employed individuals with a bachelor's degree and positive wage and salary income. Wage quartiles are based on earnings of workers aged 41–55. Results reported are for individuals aged 25–40. Black, white, and Asian categories do not include Hispanic individuals of those races. Asian category includes Pacific Islanders.

Table 5. Education and Wealth by Race and Household Composition, 2016–19

Panel A. Mean Market Wealth by Race, Education

					White Wealth divided by….		
	White	Black	Hispanic	Other	Black	Hispanic	Other
Less than HS	254,694	53,253	76,813	94,256	4.8	3.3	2.7
HS	372,840	80,190	114,246	172,543	4.6	3.3	2.2
Some college	451,989	141,243	156,787	484,785	3.2	2.9	0.9
Bachelor's degree	1,501,663	260,156	367,035	903,652	5.8	4.1	1.7
Advanced degree	2,302,466	319,574	1,121,325	1,847,314	7.2	2.1	1.2

Panel B. Mean Market Wealth by Race, Household Structure and Highest Degree Earned (for selected education levels)

High School							
….Single	227,402	53,100	88,805	137,249	4.3	2.6	1.7
….Married (2 HS)	427,485	99,604	132,636	156,038	4.3	3.2	2.7
Bachelors							
….Single	618,762	184,608	214,259	755,644	3.4	2.9	0.8
….Married (2 BA)	2,226,842	570,094	514,313	1,015,407	3.9	4.3	2.2

Panel C. Mean Private Wealth by Race, Household Structure and Highest Degree Earned (for selected education levels)

High School							
….Single	274,498	122,611	103,284	137,249	2.2	2.7	2.0
….Married (2 HS)	545,036	212,878	147,929	192,954	2.6	3.7	2.8
Bachelors							
….Single	744,499	277,731	428,952	825,635	2.7	1.7	0.9
….Married (2 BA)	2,445,142	800,910	541,020	1,146,417	3.1	4.5	2.1

Panel D. Mean Private Wealth by Race, Including White Wealth After Reweighting White Sample to Match Characteristics of Non-white Sample

Observed Private Wealth	1,128,727	259,269	257,019	1,018,455	4.4	4.4	1.1
Private wealth of white families reweighted to match distribution of respondent education and age, spouse/partner education of non-white sample	*	617,085	470,223	1,141,289	2.4	1.8	1.1

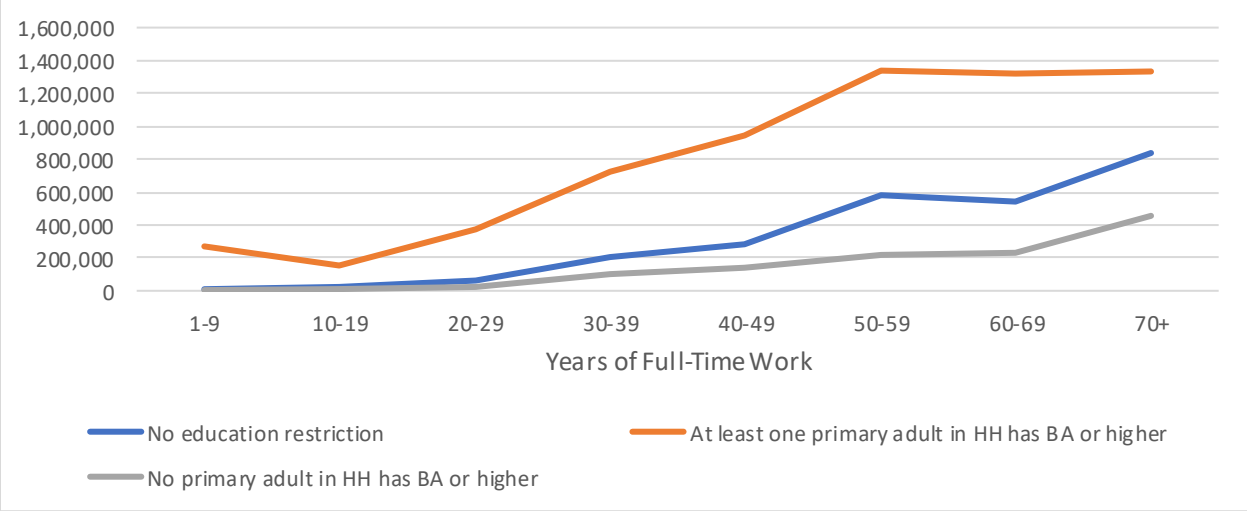
Note: Panels B and C exclude households in which the respondent or spouse/partner has an advanced degree. In Panel D, respondent and spouse/partner education levels included are less than high school, high school, bachelor's degree only, and advanced degree.

Table 6. Private Wealth Gaps with Reweighting for Education – 2016/19 Data for All Ages

	W/B	W/H	W/O
Panel A. Mean Private Wealth Gap			
Unadjusted Gap	4.4	4.4	1.1
Adjusting for Respondent's education	3.4	2.8	1.4
Adjusted for Respondent AND Spouse Education	2.8	2.6	1.5
Adjusted for Respondent and Spouse Education, Respondent Age	2.4	1.8	1.1
Panel B. Median Private Wealth Gap			
Unadjusted Gap	6.8	6.9	1.4
Adjusting for Respondent's education	5.2	4.3	1.8
Adjusted for Respondent AND Spouse Education	4.4	4.2	1.9
Adjusted for Respondent and Spouse Education, Respondent Age	3.1	2.1	1.1

Note: Respondent and spouse/partner education levels included are less than high school, high school, bachelor's degree only, and advanced degree.

Figure 8. Median Private Wealth by Years of Full-Time Work and Presence of College Degree (50- to 65-year-olds), 2016–2019



Note: For married/partnered households, years of full-time work are combined for the respondent and spouse/partner.

Table 7. Years of Full-Time Work (for Respondent and Spouse/Partner) by Race; Heads aged 45–65; 2016/19

Panel A. All Education Levels

	Years of Full-time Work		Share of Potential Years of Work Worked Full-time	
	Mean	Median	Mean	Median
White	46.5	44	81.3%	88.9%
Black	35.0	33	74.3%	84.6%
Hispanic	36.9	35	69.1%	72.7%
Other	41.1	40	73.2%	75.6%

Panel B. Households with at least one primary adult with a bachelor's degree or higher

White	49.4	48	84.4%	91.4%
Black	42.4	40	85.6%	94.0%
Hispanic	40.0	40	81.8%	90.9%
Other	41.9	40	77.2%	78.8%

Note: For married/partnered households, respondent and spouse/partner years of full-time work are combined.

For single households, share of potential years of work worked full-time is calculated as respondent years of full-time work divided by respondent potential years of full-time work. For married/partnered households, share of potential years of work worked full-time is calculated as the sum of respondent years of full-time work and spouse/partner years of full-time work divided by the sum of respondent potential years of full-time work and spouse/partner potential years of full-time work. Potential years of full-time work is defined as age less the number of years of education (the number of years of education is assumed to be 16 for individuals with less than a high school diploma, 18 for individuals with a high school diploma, 20 for individuals with some college or an associate degree, 22 for individuals with a bachelor's degree, 24 for individuals with a master's degree, and 28 for individuals with a doctorate or professional school degree).

Figure 9. Kernel Density: Respondent Years of Full-Time Work (2001–2019); White, Male Respondents with a BA or Higher

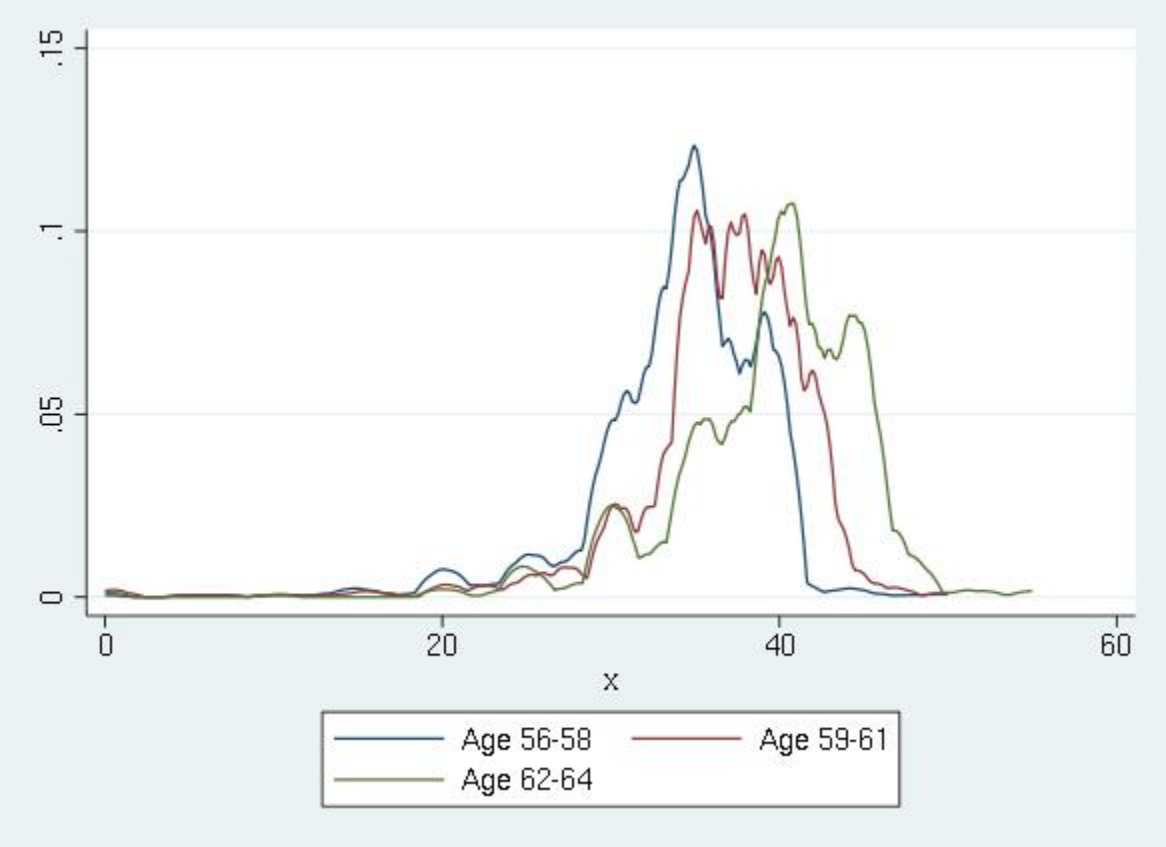


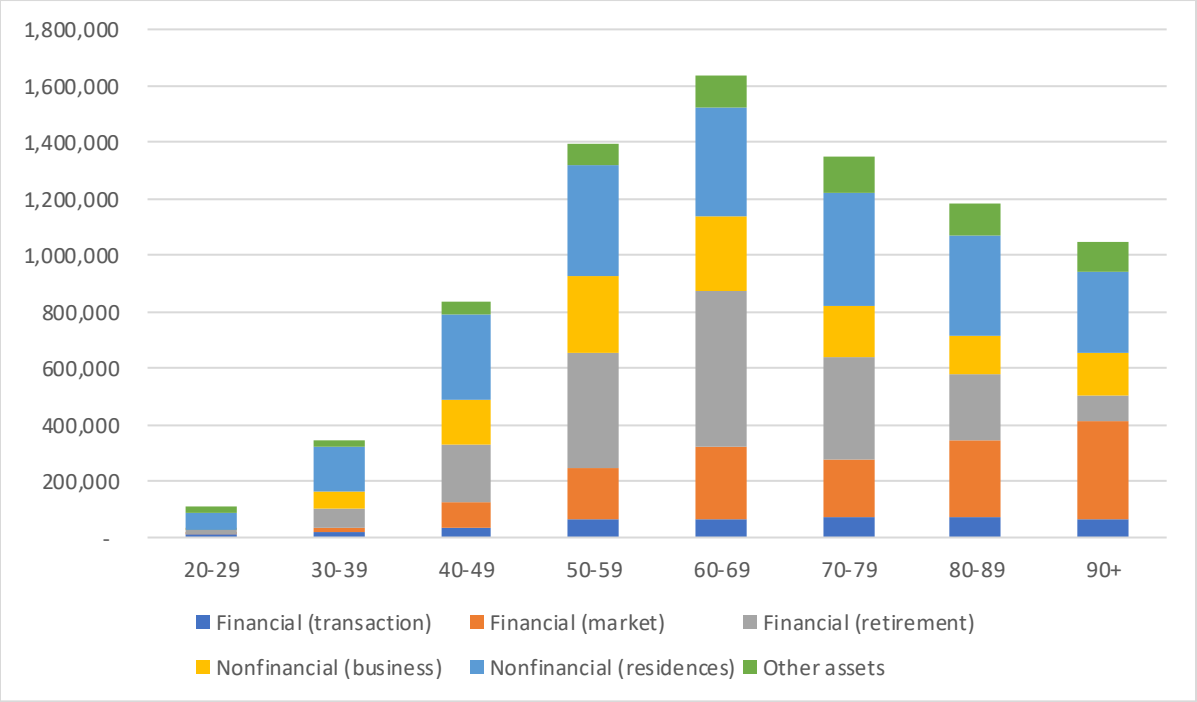
Table 8. Employer-Funded Pension by Education and Occupation (2016/19; Respondents Aged 45–65)

		Respondent education					
		Less than high school	High school	Some college or associate degree	Bachelor's degree	Advanced degree	Total
Respondent occupation	Managerial/professional	23.5%	63.9%	65.6%	76.1%	83.7%	73.9%
	Technical/sales/services	32.5%	53.8%	59.5%	78.8%	76.4%	59.6%
	Other	37.3%	62.6%	62.9%	63.9%	66.1%	58.2%
	Total	34.3%	59.7%	62.5%	75.4%	82.3%	

Note: Share of households in which R or SP has an employer matched pension

Note: Table excludes individuals who are not working. Household is considered to have an employer-funded pension if (1) either R or SP has a defined benefit plan on a current job or some type of pension from a past job to be received in the future; (2) either R or SP has a pension to which their employer contributes; (3) the household is currently receiving retirement, pension, or disability payments or making withdrawals from a pension or retirement account (total number of such accounts is greater than zero), the respondent is age 60 or older, and either R or SP is retired; or (4) either R or SP is self-employed with an IRA or Keogh.

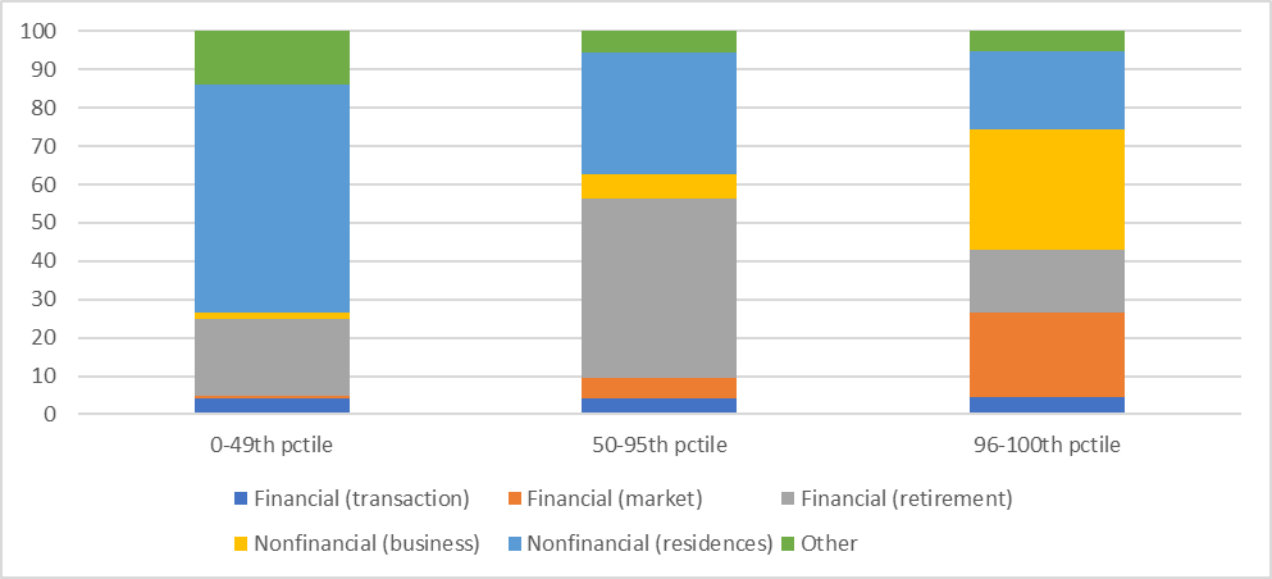
Figure 10. Mean Value of Asset Category by Respondent Age



Note: SCF 2016/19 data.

Financial (transaction) is the sum of all types of transactions accounts and certificates of deposit. Financial (market) is the sum of total directly held mutual funds (excluding MMMFs), stocks, and total bonds (not including bond funds or savings bonds). Financial (retirement) is the sum of defined benefit pension wealth and total quasi-liquid (sum of IRAs, thrift accounts, and future pensions, including currently received benefits). Nonfinancial (business) is businesses in which the household has an active interest (value is net equity if business were sold today, plus loans from HH to business, minus loans from business to HH not previously reported, plus value of personal assets used as collateral for business loans that were reported earlier) or nonactive interest (market value of the interest). Nonfinancial (residences) is the sum of the value of primary residence, other residential real estate, and net equity in nonresidential real estate. Other assets are the sum of savings bonds, cash value of whole life insurance, other managed assets, other financial assets, value of all vehicles, and other nonfinancial assets.

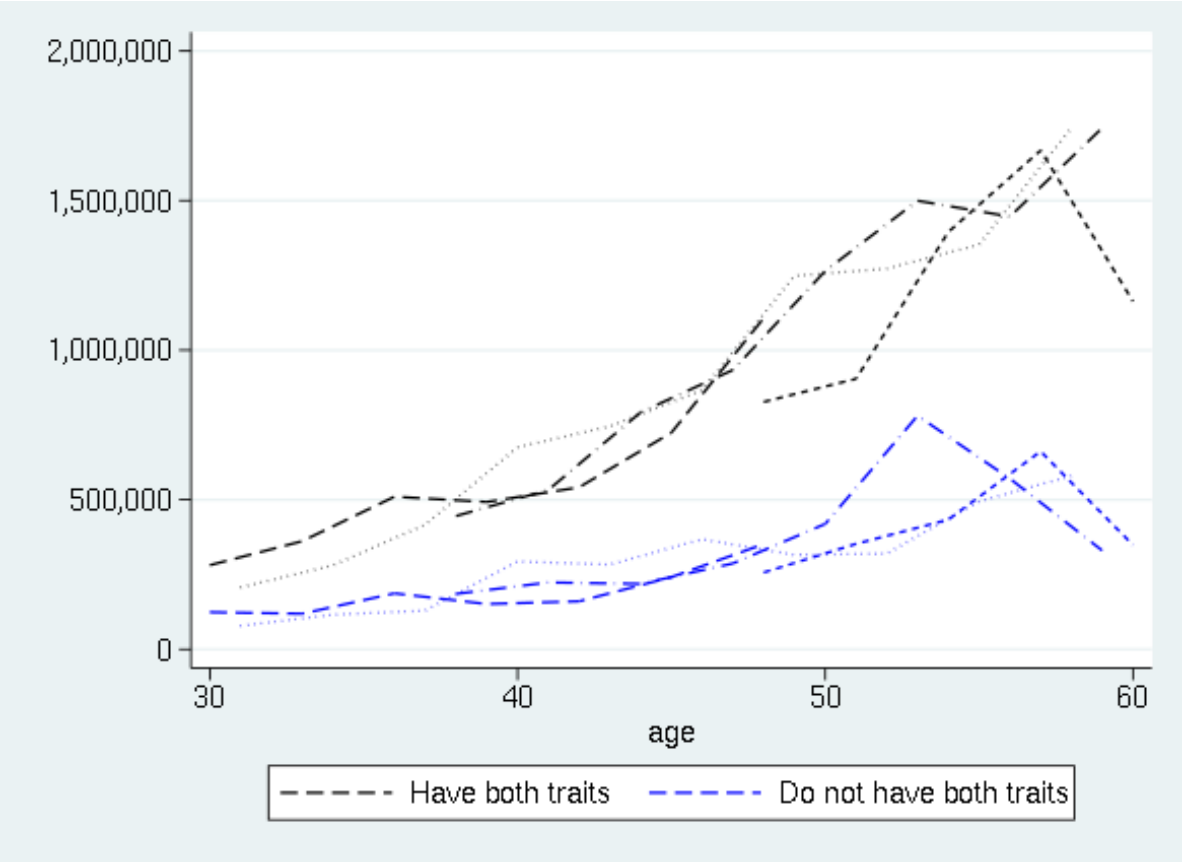
Figure 11. Asset Composition by Wealth Percentile Group, 2016-19, Ages 45 to 65



Note: SCF 2016/19 data. Restricted to households with respondents aged 45–65. Wealth percentiles are based on 5-year age bins.

Financial (transaction) is the sum of all types of transactions accounts and certificates of deposit. Financial (market) is the sum of total directly held mutual funds (excluding MMMFs), stocks, and total bonds (not including bond funds or savings bonds). Financial (retirement) is the sum of defined benefit pension wealth and total quasi-liquid (sum of IRAs, thrift accounts, and future pensions, including currently received benefits). Nonfinancial (business) is businesses in which the household has an active interest (value is net equity if business were sold today, plus loans from HH to business, minus loans from business to HH not previously reported, plus value of personal assets used as collateral for business loans that were reported earlier) or nonactive interest (market value of the interest). Nonfinancial (residences) is the sum of the value of primary residence, other residential real estate, and net equity in nonresidential real estate. Other assets are the sum of savings bonds, cash value of whole life insurance, other managed assets, other financial assets, value of all vehicles, and other nonfinancial assets.

Figure 12. Synthetic Panel Growth in Median Private Wealth for College Degree Holders by other "Career Track" Traits (Funded Pension and >=90% Full-Time Work); Only Households with at Least One Primary Adult with a BA or Higher



Note: Synthetic panel uses 10-year cohorts based on birth year. Restricted to households with at least one primary adult with a bachelor's degree or higher.

"Have both traits" indicates that the household meets the Career Track criteria for share of potential years of work worked full-time and employer-funded pension. "Do not have both traits" indicates that the household meets only one or neither of the Career Track criteria for share of potential years of work worked full-time and employer-funded pension.

To meet the criteria for the share of potential years of work worked full-time, either the R or SP must (1) have worked full-time for at least 90% of their potential years of work or (2) be retired, be age 60 or older, and have worked at least 80% of their potential years of work. A household is considered to have an employer-funded pension if (1) either R or SP has a defined benefit plan on a current job or some type of pension from a past job to be received in the future; (2) either R or SP has a pension to which their employer contributes; (3) the household is currently receiving retirement, pension, or disability payments or making withdrawals from a pension or retirement account (total number of such accounts is greater than zero), the respondent is age 60 or older, and either R or SP is retired; or (4) either R or SP is self-employed with an IRA or Keogh.

Table 9. Job-Based Pension Status/Generosity by Educational Attainment and Type of Pension (2016/19 for Respondents Aged 45–65)

	Less than HS	High school	Some college/ associate degree	Bachelor's degree	Advanced degree	Total
Panel A. Pension at Current Job for Respondent						
Not currently working	41.4%	28.6%	25.4%	16.0%	13.5%	24.5%
Currently working						
……No pension	76.8%	53.4%	46.2%	35.2%	30.6%	45.8%
……Unfunded pension	0.8%	4.4%	5.1%	7.6%	7.7%	5.5%
……Low Match: <= 3.25%	5.0%	11.5%	12.8%	13.9%	11.2%	11.8%
……Middle Match: 3.26-5.24%	3.6%	7.7%	7.3%	9.7%	11.1%	8.2%
……High Match: 5.25+%	4.4%	6.8%	8.3%	13.3%	13.3%	9.5%
……DB pension	9.4%	16.2%	20.3%	20.3%	26.1%	19.2%
Panel B. Future Pensions from Past Jobs for Respondent						
No future pension from past job	96.9%	93.8%	92.8%	87.5%	87.0%	91.7%
Account	0.8%	2.7%	2.1%	5.6%	4.2%	3.1%
Mixture	0.7%	0.6%	1.2%	2.1%	1.4%	1.2%
Regular income for life	1.6%	2.9%	3.9%	4.8%	7.4%	4.0%
Panel C. Self-Employed & IRA/Keogh for Respondent						
R is not self-employed	89.3%	86.5%	88.6%	82.9%	77.7%	85.4%
R is self-employed without an IRA/Keogh	9.3%	9.9%	8.3%	9.9%	9.6%	9.3%
R is self-employed with an IRA/Keogh	1.4%	3.6%	3.1%	7.3%	12.7%	5.2%
Panel D. Currently Receiving Job-based Pension for Respondent						
No current pension benefits from past job	99.8%	98.9%	97.2%	97.6%	96.7%	98.0%
Account-type pension	0.0%	0.0%	0.1%	0.3%	0.0%	0.1%
Not account-type pension	0.2%	1.1%	2.7%	2.1%	3.3%	1.9%
Panel E. Mean Number of Pensions in Household (Conditional on Having any Pensions of this Type)						
Pension at current job	1.3	1.4	1.5	1.5	1.6	1.5
Future pension from past job	1.0	1.2	1.2	1.3	1.6	1.3
IRA/Keogh pensions owned by self-employed individual	1.3	1.3	1.4	1.8	1.7	1.6
Currently Receiving Job-based Pension	1.1	1.3	1.2	1.3	1.3	1.3

Note: **Pension at current job:** Respondents were assigned the generosity level of the most generous pension they hold (least generous to most generous: no pension, unfunded pension, low-match, middle-match, high-match, and DB pension). **Future pension from past job:** The pension source was required to be a respondent's past job pension, military, union pension, non-account-type pension moved from the mop-up for current-job pensions of R, or pension from a current second job. Respondents may have pensions of more than one type; each respondent was assigned a single pension category in the following order: account, mixture, regular income for life (that is, a respondent with both account and regular income for life pensions is categorized as having the regular income for life type). **Current pension:** In the public SCF data set, the current pension sources best suited for inclusion in this variable (past job pension of R, military, union pension, and foreign government pension) are included in the category of current job pension of R. Respondents who reported receiving a current pension from a current job were excluded to differentiate between current pensions from current jobs and past jobs. Respondents may have pensions of more than one type; each respondent was assigned a single pension category in the following order: account-type, non-account-type (that is, a respondent with both account-type and non-account-type pensions is categorized as having the non-account-type). **Number** of current job pensions, future pensions, and current pensions are not restricted by source or type of pension.

Table 10. Current Job Pension Generosity by Race, Educational Attainment (2001–2019 for Respondents Aged 45–65)

Panel A. White Respondents

	Less than HS	High school	Some college/ associate degree	Bachelor's degree	Advanced degree	Total
Not currently working	43%	27%	23%	17%	12%	23%
Currently working						
……No pension	65%	47%	44%	34%	28%	41%
……Unfunded pension	4%	5%	6%	7%	7%	6%
……Low Match: <= 3.25%	8%	12%	11%	14%	11%	12%
……Middle Match: 3.26-5.24%	3%	7%	6%	9%	9%	7%
……High Match: 5.25+%	4%	7%	9%	12%	13%	10%
……DB pension	16%	22%	24%	24%	31%	24%

Panel B. Black Respondents

Not currently working	54%	34%	27%	21%	17%	32%
Currently working						
……No pension	71%	54%	38%	31%	22%	44%
……Unfunded pension	3%	3%	4%	5%	9%	4%
……Low Match: <= 3.25%	7%	9%	13%	10%	7%	10%
……Middle Match: 3.26-5.24%	2%	5%	10%	6%	6%	6%
……High Match: 5.25+%	2%	8%	9%	11%	12%	8%
……DB pension	15%	21%	25%	37%	45%	26%

Panel C. Hispanic Respondents

Not currently working	27%	19%	21%	17%	7%	22%
Currently working						
……No pension	81%	65%	55%	46%	35%	65%
……Unfunded pension	3%	4%	3%	8%	2%	4%
……Low Match: <= 3.25%	5%	8%	11%	14%	10%	8%
……Middle Match: 3.26-5.24%	3%	5%	6%	6%	4%	4%
……High Match: 5.25+%	4%	4%	6%	10%	16%	6%
……DB pension	6%	14%	19%	17%	34%	13%

Panel D. Other Respondents

Not currently working	55%	26%	25%	15%	10%	22%
Currently working						
……No pension	76%	47%	48%	49%	28%	43%
……Unfunded pension	0%	8%	5%	6%	11%	7%
……Low Match: <= 3.25%	7%	15%	16%	17%	15%	15%
……Middle Match: 3.26-5.24%	0%	5%	4%	4%	11%	6%
……High Match: 5.25+%	10%	6%	5%	13%	18%	11%
……DB pension	8%	18%	22%	11%	18%	17%

Note: **Pension at current job:** Respondents were assigned the generosity level of the most generous pension they hold (least generous to most generous: no pension, unfunded pension, low-match, middle-match, high-match, and DB pension). **Future pension from past job:** The pension source was required to be a respondent's past job pension, military, union pension, non-account-type pension moved from the mop-up for current-job pensions of R, or pension from a current second job. Respondents may have pensions of more than one type; each respondent was assigned a single pension category in the following order: account, mixture, regular income for life (that is, a respondent with both account and regular income for life pensions is categorized as having the regular income for life type). **Current pension:** In the public SCF data set, the current pension sources best suited for inclusion in this variable (past job pension of R, military, union pension, and foreign government pension) are included in the category of current job pension of R. Respondents who reported receiving a current pension from a current job were excluded to differentiate between current pensions from current jobs and past jobs. Respondents may have pensions of more than one type; each respondent was assigned a single pension category in the following order: account-type, non-account-type

(that is, a respondent with both account-type and non-account-type pensions is categorized as having the non-account-type). **Number** of current job pensions, future pensions, and current pensions are not restricted by source or type of pension.

Table 11. Retirement Plans for Self-Employed by Race, Educational Attainment and Type of Plan (2001–2019 for Respondents Aged 45–65)

	Less than HS	High school	Some college/ associate degree	Bachelor's degree	Advanced degree	Total
Panel A. White Respondents						
R is not self-employed	87%	86%	86%	81%	77%	84%
R is self-employed without an IRA/Keogh	10%	9%	9%	7%	8%	9%
R is self-employed with an IRA/Keogh	3%	5%	5%	11%	15%	8%
Panel B. Black Respondents						
R is not self-employed	94%	93%	94%	90%	85%	92%
R is self-employed without an IRA/Keogh	6%	7%	6%	7%	7%	6%
R is self-employed with an IRA/Keogh	0%	1%	0%	3%	9%	1%
Panel C. Hispanic Respondents						
R is not self-employed	90%	86%	85%	86%	82%	87%
R is self-employed without an IRA/Keogh	10%	12%	12%	10%	10%	11%
R is self-employed with an IRA/Keogh	0%	2%	3%	4%	8%	2%
Panel D. Other Respondents						
R is not self-employed	91%	93%	90%	80%	82%	86%
R is self-employed without an IRA/Keogh	8%	6%	6%	12%	5%	7%
R is self-employed with an IRA/Keogh	0%	1%	4%	8%	13%	7%

Table 12. Mean Number of Pensions in Household by Race (Conditional on Having Any Pensions of this Type) (2001–2019 for Respondents Aged 45–65)

	Less than HS	High school	Some college/ associate degree	Bachelor's degree	Advanced degree	Total
Panel A. White Households						
Pension at current job	1.3	1.4	1.5	1.6	1.7	1.5
Future pension from past job	1.1	1.2	1.3	1.3	1.4	1.3
IRA/Keogh pensions owned by self-employed individual	1.8	1.6	1.6	1.8	1.9	1.7
Currently Receiving Job-Based Pension	1.1	1.2	1.2	1.3	1.3	1.2
Panel B. Black Households						
Pension at current job	1.1	1.4	1.4	1.4	1.5	1.4
Future pension from past job	1.0	1.0	1.3	1.1	1.4	1.2
IRA/Keogh pensions owned by self-employed individual	*	1.3	1.1	1.5	1.7	1.5
Currently Receiving Job-Based Pension	1.2	1.1	1.2	1.2	1.2	1.2
Panel C. Hispanic Households						
Pension at current job	1.2	1.4	1.4	1.5	1.7	1.4
Future pension from past job	1.0	1.1	1.1	1.1	1.3	1.1
IRA/Keogh pensions owned by self-employed individual	1.0	1.5	1.4	2.2	1.4	1.6
Currently Receiving Job-Based Pension	1.0	1.1	1.2	1.2	1.4	1.1
Panel D. Other Households						
Pension at current job	1.2	1.4	1.5	1.5	1.5	1.5
Future pension from past job	1.0	1.5	1.0	1.3	1.7	1.4
IRA/Keogh pensions owned by self-employed individual	2.0	1.9	1.7	1.6	1.9	1.8
Currently Receiving Job-Based Pension	1.0	1.7	1.3	1.3	1.5	1.4

*Note: No Black households with respondent education less than high school with positive number of IRA/Keogh pensions owned by self-employed individual.

Notes: All missing values for predicted earnings data are set to 0. Predicted earnings data are available for R and SP for ages 18–62. Lifetime earnings is calculated as the sum of predicted earnings from age 18 through the age at time of survey. Individuals ages 63 and older with predicted earnings data are included in the data, but their lifetime earnings are truncated at age 62. Lifetime earnings are 0 for individuals younger than 18 years old.

R and SP educational attainment categories included in DFLs are less than high school, high school, bachelor's degree, and advanced degree.

Number of current job pensions, future pensions, and current pensions are not restricted by source or type of pension.

Table 13. Lifetime Earnings by Race and Education, Respondents Aged 40–59; Spouse/Partners (If Present) Aged 30–65, 2016–19

Panel A. Mean lifetime earnings (R and SP combined) by Race and Education of Respondent

						White lifetime earnings relative to:		
	White	Black	Hispanic	Other race	Total	Black	Hispanic	Other race
Less than HS	1,274,481	640,438	805,486	971,035	963,066	2.0	1.6	1.3
HS diploma	1,665,991	1,147,900	1,290,233	1,211,133	1,500,929	1.5	1.3	1.4
Some college/associate degree	1,680,506	1,246,933	1,349,345	1,684,842	1,562,048	1.3	1.2	1.0
Bachelor's degree	2,729,234	1,767,662	1,725,299	2,558,605	2,540,668	1.5	1.6	1.1
Advanced degree	2,990,453	1,891,735	2,317,653	3,081,719	2,845,689	1.6	1.3	1.0
Total	2,115,067	1,272,618	1,254,225	2,287,934		1.7	1.7	0.9

Panel B. Median lifetime earnings (R and SP combined) by Race and Education of Respondent

Less than HS	1,022,254	455,635	775,412	876,991	812,502	2.2	1.3	1.2
HS diploma	1,551,910	1,024,098	1,238,330	1,152,041	1,389,831	1.5	1.3	1.3
Some college/associate degree	1,510,887	1,004,140	1,281,670	1,604,855	1,392,502	1.5	1.2	0.9
Bachelor's degree	2,436,221	1,485,467	1,490,095	2,073,214	2,212,420	1.6	1.6	1.2
Advanced degree	2,634,040	1,889,526	2,021,442	2,938,545	2,551,941	1.4	1.3	0.9
Total	1,848,965	1,060,389	1,084,251	1,985,111		1.7	1.7	0.9

Panel C. Lifetime earnings (R and SP combined) by Race, Including White Lifetime Earnings After Reweighting White Sample to Match

Mean								
Mean observed lifetime earnings	2,115,067	1,272,618	1,254,225	2,287,934		1.7	1.7	0.9
Mean lifetime earnings of white families reweighted to match distribution of respondent and spouse educational attainment and combined household years of full-time work	*	1,434,362	1,387,461	2,245,590		1.1	1.1	1.0
Median								
Median observed lifetime earnings	1,848,965	1,060,389	1,084,251	1,985,111		1.7	1.7	0.9
Median lifetime earnings of white families reweighted to match distribution of respondent and spouse educational attainment and combined household years of full-time work	*	1,229,491	1,168,633	1,960,104		1.2	1.1	1.0

Note: Earnings are calculated for repondents ages 40 to 59, with spouse/partners (if present) between 30 and 65. Earnings are predicted across entire work history up to the age at the time of survey.

Table 14. Non-Parametric Decomposition of White/Non-White Private Wealth Disparities – Controlling for Lifetime Earnings, Pension, and Other Human Capital Controls, (2016–19 SCF, Respondents Aged 40–59, Spouse/Partners Aged 30– 65); Reweighting White Sample to Match Human Capital Trait Distribution of Non-White Sample

Panel A. Mean Private Wealth					Gaps			Share of Gaps Explained		
	White	Black	Hispanic	Other	W/B	W/H	W/O	W/B	W/H	W/O
Observed	1,266,592	289,694	327,326	1,535,166	4.4	3.9	0.8			
Reweighted White Sample to Match Distribution of Non-White Sample Characteristics, including:										
Earnings History (R,SP), Current Earnings (R,SP), Years on Current Job (R,SP), Total Years FT Employment (R,SP), Year FE	-	723,895	948,570	1,241,172	2.5	2.9	0.8	56%	34%	*
+ Current Job Pension Generosity (R,SP), Pension Type and Generosity (HH), Number of Pensions (HH)	-	614,237	776,834	1,254,338	2.1	2.4	0.8	67%	52%	*
+ retirement and disability indicators (R,SP), occupation and industry indicators (R), educational attainment (R,SP)	-	530,847	549,318	1,404,367	1.8	1.7	0.9	75%	76%	*
+ savings and investment attitudinal controls	-	517,190	505,114	1,409,561	1.8	1.5	0.9	77%	81%	*
Panel B. Median Private Wealth										
Observed	296,000	56,625	75,930	510,940	5.2	3.9	0.6			
Reweighted White Sample to Match Distribution of Non-White Sample Characteristics, including:										
Earnings History (R,SP), Current Earnings (R,SP), Years on Current Job (R,SP), Total Years FT Employment (R,SP), Year FE	-	151,983	194,730	290,000	2.7	2.6	0.6	60%	46%	*
+ Current Job Pension Generosity (R,SP), Pension Type and Generosity (HH), Number of Pensions (HH)	-	134,117	143,620	288,335	2.4	1.9	0.6	68%	69%	*
+ retirement and disability indicators (R,SP), occupation and industry indicators (R), educational attainment (R,SP)	-	116,150	96,700	350,870	2.1	1.3	0.7	75%	91%	*
+ savings and investment attitudinal controls	-	116,150	92,250	360,540	2.1	1.2	0.7	75%	93%	*

Years on past/current job: Years on past job were calculated as the year that the individual stopped working in the job minus the year the individual started working for that employer. The 1989 and 1992 SCF surveys do not differentiate one year and less than one year on the job, while surveys 1995 and onward do; for consistency, one year or less than one year on the job are both coded as 1. The 1989 and 1992 SCF surveys include a code indicating the individual is still working in their past job; in these instances, the year the individual stopped working on the past job was set to the survey year.

Annual earnings past/current job: Earnings were converted to annual earnings using the amount of earnings and the frequency of earnings reported in the SCF. Lump sum/one payment only frequencies are assumed to be annual. Annual earnings for individuals who reported earnings frequencies of by the piece/job, varies , and other were set to missing as these frequencies are not specific enough to be accurately converted to annual earnings. For the current job, information on the number of hours in a week and number of weeks in

a year usually worked was used to improve the accuracy of the conversion to annual earnings. For the past job, information on the number of hours and numbers of weeks usually worked is not available; the individual is asked to report information for a past full-time job, so 40 hours a week and 52 weeks a year is assumed. Annual earnings on the current job were inflation-adjusted to 2019 dollars using the survey year and the annual CPI for all urban consumers: all items in US city average. Annual earnings on the past job were inflation-adjusted to 2019 dollars using the year that the individual stopped working at the past job and the GDP price deflator.

Pension at current job: Married/partnered households were assigned the generosity level of the most generous pension held by either R or SP (least generous to most generous: no pension, unfunded pension, low match, middle match, high match, and DB pension); 0 = no pension, 1 = unfunded pension, 2 = low match (<=3.25%), 3 = middle match (3.26-5.24%), 4 = high match (5.25+%), 5 = DB pension (includes DB pension benefits from a current job that are currently being received). **Future pension from past job:** The pension source was required to be a past job pension of R or SP, military, union pension, non-account-type pension moved from the mop-up for current-job pensions of R or SP, or pension from a current second job. Households may have pensions of more than one type. Each household was assigned a single pension category in the following order: account, mixture, regular income for life (that is, a household with both account and regular income for life pensions is categorized as having the regular income for life type); 0 = no future pension from past job, 1 = account, 2 = mixture, 3 = regular income for life. **Current pension:** In the public SCF data set, the current pension sources best suited for inclusion in this variable (past job pension of R or spouse/partner, military, union pension, and foreign government pension) are included in the category of current job pension of R or spouse/partner. Those who reported receiving a current pension from a current job were excluded to differentiate between current pensions from current jobs and past jobs. Households may have pensions of more than one type. Each household was assigned a single pension category in the following order: account-type, non-account-type (that is, a household with both account-type and non-account-type pensions is categorized as having the non-account-type); 0 = no current pension benefits from past job, 1 = account-type pension, 2 = non-account-type pension. **Self-employed and IRA/Keogh:** 0 = neither R or SP is self-employed, 1 = R and/or SP is self-employed without an IRA/Keogh, 2 = R and/or SP is self-employed with an IRA/Keogh. **Number** of current job pensions, future pensions, and current pensions are not restricted by source or type of pension.

R and SP educational attainment categories included in DFLs are less than high school, high school, bachelor's degree, and advanced degree.

Table 15. Non-Parametric Decomposition of White/Non-White Private Wealth Disparities – Controlling for SCF Work History Variables, Pension, and Other Human Capital Controls, (2016–19 SCF, by Age-Restriction Criterion); Reweighting White Sample to Match Human Capital Trait Distribution of Non-White Sample

					Gaps			Share of Gaps Explained		
Panel A1. Mean Private Wealth for All Ages	White	Black	Hispanic	Other	W/B	W/H	W/O	W/B	W/H	W/O
Observed	1,128,727	259,269	257,019	1,018,455	4.4	4.4	1.1			
Reweighted White Sample to Match Distribution of Work History, Pension Variables of Non-white sample*	-	606,000	539,694	833,475	2.3	2.1	0.8	60%	68%	*
+ retirement and disability indicators (R,SP), occupation and industry indicators (R), educational attainment (R,SP)	-	490,640	385,229	976,427	1.9	1.5	1.0	73%	85%	*
+ savings and investment attitudinal controls	-	482,886	374,290	960,756	1.9	1.5	0.9	74%	87%	*
Panel A2. Median Private Wealth for All Ages										
Observed	244,951	36,284	35,535	177,851	6.8	6.9	1.4			
Reweighted White Sample to Match Distribution of Work History, Pension Variables of Non-white sample*	-	115,346	84,700	130,066	3.2	2.4	0.7	62%	77%	*
+ retirement and disability indicators (R,SP), occupation and industry indicators (R), educational attainment (R,SP)	-	93,967	64,220	154,324	2.6	1.8	0.9	72%	86%	*
+ savings and investment attitudinal controls	-	92,803	62,632	151,782	2.6	1.8	0.9	73%	87%	*
Panel B1. Mean Private Wealth for Respondents Ages 40 to 59; Spouse/Partners (if present) Ages 30 to 65										
Observed	1,266,592	289,694	327,326	1,535,166	4.4	3.9	0.8			
Reweighted White Sample to Match Distribution of Work History, Pension Variables of Non-white sample*	-	654,104	707,214	1,152,578	2.3	2.2	0.8	63%	60%	*
+ retirement and disability indicators (R,SP), occupation and industry indicators (R), educational attainment (R,SP)	-	537,496	541,866	1,328,377	1.9	1.7	0.9	75%	77%	*
+ savings and investment attitudinal controls	-	527,940	502,343	1,336,354	1.8	1.5	0.9	76%	81%	*
Panel B2. Median Private Wealth for Respondents Ages 40 to 59; Spouse/Partners (if present) Ages 30 to 65										
Observed	296,000	56,625	75,930	510,940	5.2	3.9	0.6			
Reweighted White Sample to Match Distribution of Work History, Pension Variables of Non-white sample*	-	148,305	139,300	274,001	2.6	1.8	0.5	62%	71%	*
+ retirement and disability indicators (R,SP), occupation and industry indicators (R), educational attainment (R,SP)	-	121,900	97,157	342,258	2.2	1.3	0.7	73%	90%	*
+ savings and investment attitudinal controls	-	121,992	92,250	349,885	2.2	1.2	0.7	73%	93%	*

Note: * variables included in reweight are current and past job final earnings and length of employment tenure for respondent and spouse, total years FT employment (HH), household pension type, generosity and number of plans (current job pension generosity is added separately for R and SP), and year fixed effect

Table 16. Inheritances and Inter Vivos Transfers Received, 1995–2018

	All	White and Other	Black	Hispanic
Average Annual Transfers Received (Billions, 2019$s)				
Inheritances	$ 296.0	$ 280.1	$ 10.8	$ 5.1
Inter vivos	$ 44.4	$ 39.1	$ 0.6	$ 4.7
Transfers Received Relative to Income				
Inheritances	8.1%	8.9%	3.7%	2.3%
Inter vivos	1.2%	1.2%	0.2%	2.2%
Average Annual Number of Transfers				
Inheritances	1,638,669	1,487,943	104,622	46,104
Inter vivos	352,855	319,625	20,080	13,151
Annual Probability of Transfer Receipt				
Inheritances	4.2%	5.0%	1.9%	1.2%
Inter vivos	0.9%	1.1%	0.4%	0.3%

Table 17. Inheritances and Inter Vivos Transfers Received by Size, 1995–2018

	All					
	Total	**Less Than $50,000**	**$50,000 to $299,000**	**$300,000 to $599,000**	**$600,000 to $199,000**	**$1,000,000 or More**
Average Annual Transfers Received (Billions, 2019$s)						
Inheritances	$ 296.0	$ 14.8	$ 75.1	$ 54.7	$ 39.9	$ 111.5
Inter vivos	$ 44.4	$ 3.7	$ 11.9	$ 5.8	$ 2.0	$ 21.1
Average Annual Number of Transfers						
Inheritances	1,638,669	834,850	576,657	133,111	53,155	40,898
Inter vivos	352,855	232,155	96,105	14,954	2,539	7,102
Percent Distributions						
Inheritance $s	100%	5%	25%	18%	13%	38%
Inter vivos $s	100%	8%	27%	13%	4%	47%
Inheritance Number	100%	51%	35%	8%	3%	2%
Inter vivos Number	100%	66%	27%	4%	1%	2%
	White and Other					
	Total	**Less Than $50,000**	**$50,000 to $299,000**	**$300,000 to $599,000**	**$600,000 to $199,000**	**$1,000,000 or More**
Average Annual Transfers Received (Billions, 2019$s)						
Inheritances	$ 280.1	$ 13.1	$ 69.4	$ 50.8	$ 38.8	$ 108.0
Inter vivos	$ 39.1	$ 3.5	$ 11.0	$ 5.5	$ 1.9	$ 17.3
Average Annual Number of Transfers						
Inheritances	1,487,943	745,040	529,200	122,986	51,649	39,068
Inter vivos	319,625	208,900	87,866	14,176	2,496	6,187
Percent Distributions						
Inheritance $s	100%	5%	25%	18%	14%	39%
Inter vivos $s	100%	9%	28%	14%	5%	44%
Inheritance Number	100%	50%	36%	8%	3%	3%
Inter vivos Number	100%	65%	27%	4%	1%	2%
	Black					
	Total	**Less Than $50,000**	**$50,000 to $299,000**	**$300,000 to $599,000**	**$600,000 to $199,000**	**$1,000,000 or More**
Average Annual Transfers Received (Billions, 2019$s)						
Inheritances	$ 10.8	$ 1.1	$ 4.5	$ 3.0	$ 0.4	$ 1.7
Inter vivos	$ 0.6	$ 0.2	$ 0.4	$ -	$ -	$ -
Average Annual Number of Transfers						
Inheritances	104,622	59,676	36,078	7,869	636	363
Inter vivos	20,080	15,602	4,478	0	0	0
Percent Distributions						
Inheritance $s	100%	11%	42%	28%	4%	16%
Inter vivos $s	100%	27%	73%	0%	0%	0%
Inheritance Number	100%	57%	34%	8%	1%	0%
Inter vivos Number	100%	78%	22%	0%	0%	0%
	Hispanic					
	Total	**Less Than $50,000**	**$50,000 to $299,000**	**$300,000 to $599,000**	**$600,000 to $199,000**	**$1,000,000 or More**
Average Annual Transfers Received (Billions, 2019$s)						
Inheritances	$ 5.1	$ 0.6	$ 1.2	$ 0.9	$ 0.7	$ 1.8
Inter vivos	$ 4.7	$ 0.1	$ 0.5	$ 0.3	$ 0.0	$ 3.8
Average Annual Number of Transfers						
Inheritances	46,104	30,133	11,379	2,256	870	1,467
Inter vivos	13,151	7,653	3,761	779	43	915
Percent Distributions						
Inheritance $s	100%	11%	24%	18%	13%	35%
Inter vivos $s	100%	2%	11%	6%	1%	80%
Inheritance Number	100%	65%	25%	5%	2%	3%
Inter vivos Number	100%	58%	29%	6%	0%	7%

Table 18. Share of Wealth Accounted for by Inheritances and Inter Vivos Transfers Received

	All	White and Other	Black	Hispanic
Share of Wealth	100.0%	93.0%	4.2%	2.8%
Panel A. Share of wealth accounted for by transfers (no consumption)				
Real Interest Rate=3%	18.5%	19.1%	14.1%	6.1%
Real Interest Rate=5%	32.5%	33.5%	26.0%	8.5%
Panel B. Share of wealth accounted for by transfers (inheritances and inter vivos less than $25,000 consumed)				
Real Interest Rate=3%	17.3%	17.9%	11.9%	5.1%
Real Interest Rate=5%	30.6%	31.7%	22.5%	7.1%
Panel C. Share of wealth accounted for by transfers (assumes 25% of all inheritances and inter vivos transfers are consumed)				
Real Interest Rate=3%	12.2%	12.6%	9.1%	4.0%
Real Interest Rate=5%	21.3%	22.0%	16.8%	5.6%
Panel D. Share of wealth accounted for by transfers (assumes 50% of all inheritances and inter vivos transfers are consumed)				
Real Interest Rate=3%	8.1%	8.4%	6.0%	2.7%
Real Interest Rate=5%	14.2%	14.6%	11.2%	3.8%
Panel E. Share of wealth accounted for by transfers (assumes 75% of all inheritances and inter vivos transfers are consumed)				
Real Interest Rate=3%	4.1%	4.2%	3.0%	1.3%
Real Interest Rate=5%	7.1%	7.3%	5.6%	1.9%

Table 19. Plans to Leave Sizeable Estate by Inheritance/Inter Vivos Status and Size, 2013–2019, Aged 65+

Panel A. Distribution Households by Intended Bequest and inheritance/inter vivos status and size

		Will you leave a sizeable inheritance?		
	Total	Yes	Possibly	No
Total		28.7%	20.0%	51.3%
Received inheritance and/or inter vivos?				
……Yes	32.3%	39.4%	22.8%	37.8%
……No	67.7%	23.6%	18.7%	57.8%
Size of inheritance and inter vivos				
……<$25,000	3.3%	22.3%	15.6%	62.1%
……$25,000-49,999	3.2%	30.3%	24.4%	45.3%
……$50,000-299,999	13.3%	35.9%	23.4%	40.6%
……$300,000+	12.6%	49.6%	23.6%	26.8%

Panel B. Median Private Wealth by Intended Bequest and Inheritance/Inter Vivos Receipt

	Total	Yes	Possibly	No
Total	$373,314	$914,323	$483,869	$192,977
Received inheritance and/or inter vivos?				
……Yes	$628,280	$1,264,641	$702,064	$313,810
……No	$284,293	$721,470	$394,598	$169,173
Size of inheritance and inter vivos				
……<$25,000	$281,305	$776,408	$527,339	$132,988
……$25,000-49,999	$439,255	$776,406	$439,255	$234,000
……$50,000-299,999	$544,978	$990,704	$583,791	$313,810
……$300,000+	$1,016,576	$1,908,620	$1,016,466	$412,689

Table 20. Inheritance/Inter Vivos Status and Size by Plans to Leave Estate, 2013–2019, Aged 65+

	Inheritance/Inter Vivos Status					
	Received Inheritance and/or Inter Vivos		Size of Inheritance and Inter Vivos Received			
	Yes	No	<$25,000	$25k to $49k	$50k to $299k	>$300k
Plans to Leave Sizeable Estate						
Yes	44%	56%	3%	3%	17%	22%
Possibly	37%	63%	3%	4%	16%	15%
No	24%	76%	4%	**3%**	11%	7%
Total	32%	68%	3%	3%	13%	13%

Table 21. Inheritance Status, Conditional Mean and Median Inheritance, and Plans to Leave Sizeable Estate by Race, 2001–2019, Aged 55+

		Will you leave a sizeable inheritance?		
	Total	Yes	Possibly	No
Panel A. White Households				
Total		29.7%	20.0%	50.2%
Received inheritance and/or inter vivos?				
……Yes	33.4%	40.9%	21.8%	37.3%
……No	66.6%	24.2%	19.2%	56.7%
Panel B. Black Households				
Total		22.0%	20.6%	57.5%
Received inheritance and/or inter vivos?				
……Yes	13.6%	33.8%	21.3%	44.9%
……No	86.4%	20.1%	20.4%	59.4%
Panel C. Hispanic Households				
Total		26.7%	18.0%	55.3%
Received inheritance and/or inter vivos?				
……Yes	8.1%	49.2%	22.1%	28.7%
……No	91.9%	24.8%	17.6%	57.6%
Panel D. Other Race Households				
Total		32.3%	21.7%	46.0%
Received inheritance and/or inter vivos?				
……Yes	16.9%	49.2%	18.1%	32.7%
……No	83.1%	28.9%	22.5%	48.7%

Table 22. Reweighted Private Wealth for Inheritance and Inter Vivos Transfers, by Race (2016–19; Respondents Aged 40– 59, Spouse/Partners (If Present) Aged 30– 65); Reweighting White Sample to Match Inheritance and Inter Vivos Transfers Receipt Distribution of Non-White Sample

Panel A. Mean Private Wealth					Gaps			Share of Gaps Explained		
	White	Black	Hispanic	Other	W/B	W/H	W/O	W/B	W/H	W/O
Observed	1,266,592	289,694	327,326	1,535,166	4.4	3.9	0.8			
Private Wealth of White Sample Reweighted to Match Distribution of Characteristics of Non-white Sample, including:										
Inheritances Ever Received (3% growth)	-	1,140,336	1,138,515	1,149,742	3.9	3.5	0.7	13%	14%	*
+ Inter vivos Transfers Ever Received (3% growth)	-	1,136,060	1,132,910	1,148,122	3.9	3.5	0.7	13%	14%	*
+ Can get $3,000 from family & friends in case of financial emergency	-	878,729	983,889	1,189,085	3.0	3.0	0.8	40%	30%	*
Panel B. Median Private Wealth										
Observed	296,000	56,625	75,930	510,940	5.2	3.9	0.6			
Private Wealth of White Sample Reweighted to Match Distribution of Characteristics of Non-white Sample, including:										
Inheritances Ever Received (3% growth)	-	269,297	268,500	273,313	4.8	3.5	0.5	11%	12%	*
+ Inter vivos Transfers Ever Received (3% growth)	-	263,000	261,000	272,115	4.6	3.4	0.5	14%	16%	*
+ Can get $3,000 from family & friends in case of financial emergency	-	177,500	210,269	288,228	3.1	2.8	0.6	50%	39%	*

Table 23. Non-Parametric Decomposition of White/Non-White Private Wealth Disparities – Controlling for Human Capital and Intergenerational Transfer Controls, (2016–19 SCF, Respondents Aged 40–59, Spouse/Partners Aged 30–65); Reweighting White Sample to Match Human Capital Trait Distribution of Non-White Sample

Panel A. Mean Private Wealth					Gaps			Share of Gaps Explained		
	White	Black	Hispanic	Other	W/B	W/H	W/O	W/B	W/H	W/O
Observed	1,266,592	289,694	327,326	1,535,166	4.4	3.9	0.8			
Reweighted White Sample to Match Distribution of Non-White Sample Characteristics, including:										
IHS predicted lifetime earnings (R and SP), years FT (R and SP), IHS current job earnings (R and SP), years on current job (R and SP), years on past job (R and SP), current job pension generosity (R and SP), pension type and generosity (HH), number of pensions (HH), retired indicator (R and SP), disabled indicator (R and SP), occat1 R, occat2 R, indcat R, educational attainment (R and SP), year fixed effect	*	530,847	549,318	1,404,367	1.8	1.7	0.9	75%	76%	*
+ IHS inheritances ever received (3%), IHS inter vivos ever received (3%)	*	505,468	517,236	1,312,251	1.7	1.6	0.9	78%	80%	*
+ Can get $3,000 from family & friends in case of financial emergency	*	476,401	513,560	1,309,854	1.6	1.6	0.9	81%	80%	*
Panel B. Median Private Wealth										
Observed	296,000	56,625	75,930	510,940	5.2	3.9	0.6			
Reweighted White Sample to Match Distribution of Non-White Sample Characteristics, including:										
IHS predicted lifetime earnings (R and SP), years FT (R and SP), IHS current job earnings (R and SP), years on current job (R and SP), years on past job (R and SP), current job pension generosity (R and SP), pension type and generosity (HH), number of pensions (HH), retired indicator (R and SP), disabled indicator (R and SP), occat1 R, occat2 R, indcat R, educational attainment (R and SP), year fixed effect	*	116,150	96,700	350,870	2.1	1.3	0.7	75%	91%	*
+ IHS inheritances ever received (3%), IHS inter vivos ever received (3%)	*	106,251	94,440	340,450	1.9	1.2	0.7	79%	92%	*
+ Can get $3,000 from family & friends in case of financial emergency	*	94,413	92,424	339,918	1.7	1.2	0.7	84%	93%	*

Table 24. Non-Parametric Decomposition of White/Non-White Private Wealth Disparities – Controlling for Human Capital and Intergenerational Transfer Controls, (2007–19 SCF, Respondents Aged 40–59, Spouse/Partners Aged 30–65); Reweighting White Sample to Match Human Capital Trait Distribution of Non-White Sample

Panel A. Mean Private Wealth					Gaps			Share of Gaps Explained		
	White	Black	Hispanic	Other	W/B	W/H	W/O	W/B	W/H	W/O
Observed	1,127,804	294,716	309,989	1,146,894	3.8	3.6	1.0			
Reweighted White Sample to Match Distribution of Non-White Sample Characteristics, including:										
IHS predicted lifetime earnings (R and SP), years FT (R and SP), IHS current job earnings (R and SP), years on current job (R and SP), years on past job (R and SP), current job pension generosity (R and SP), pension type and generosity (HH), number of pensions (HH), retired indicator (R and SP), disabled indicator (R and SP), occat1 R, occat2 R, indcat R, educational attainment (R and SP), year fixed effect	*	509,090	486,575	1,363,861	1.7	1.6	1.2	74%	78%	*
+ IHS inheritances ever received (3%), IHS inter vivos ever received (3%)	*	484,893	465,726	1,287,668	1.6	1.5	1.1	77%	81%	*
+ age (R and SP), age squared (R and SP), additional demographic controls*	*	470,870	486,706	1,350,405	1.6	1.6	1.2	79%	78%	*
Panel B. Median Private Wealth										
Observed	303,437	52,738	66,547	368,225	5.8	4.6	0.8			
Reweighted White Sample to Match Distribution of Non-White Sample Characteristics, including:										
IHS predicted lifetime earnings (R and SP), years FT (R and SP), IHS current job earnings (R and SP), years on current job (R and SP), years on past job (R and SP), current job pension generosity (R and SP), pension type and generosity (HH), number of pensions (HH), retired indicator (R and SP), disabled indicator (R and SP), occat1 R, occat2 R, indcat R, educational attainment (R and SP), year fixed effect	*	126,619	87,306	312,200	2.4	1.3	0.8	71%	91%	*
+ IHS inheritances ever received (3%), IHS inter vivos ever received (3%)	*	119,886	82,065	294,184	2.3	1.2	0.8	73%	93%	*
+ age (R and SP), age squared (R and SP), additional demographic controls*	*	101,495	94,977	308,696	1.9	1.4	0.8	81%	88%	*

*Additional demographic controls: number of children living in household, number of children living elsewhere, "nonprimary" family member living in household, family structure, divorced, number of siblings (R and SP), parents are living (R and SP), age of parents (R and SP)

Appendix Table 1. Summary Statistics, by Race, SCF 2007–2019

	(1) Total	(2) White	(3) Black	(4) Hispanic	(5) Other race
Percentage Share of Households		70%	15%	11%	5%
Net Worth (including DB pensions) (Mean)	808,402	1,010,554	244,112	224,376	861,979
Assets (including DB pensions) (Mean)	917,014	1,129,676	307,496	302,364	1,022,885
Debt (Mean)	108,612	119,123	63,383	77,987	160,906
Respondent Age (Mean)	51	53	49	44	46
Number of Children Living in Household (Mean)	0.79	0.69	0.88	1.29	0.86
Number of Children Living Elsewhere (Mean)	1.42	1.43	1.59	1.32	0.96
Share with "Nonprimary" Family Member Living in Household	12%	11%	14%	20%	15%
Family Structure (Percentage Shares by Family Type)					
Unmarried (Nonpartnered) with Children	12%	9%	26%	16%	7%
Unmarried (Nonpartnered), No Children, Head Less than 55 Years	14%	13%	19%	14%	21%
Unmarried (Nonpartnered), No Children, Head 55 Years or Older	16%	18%	19%	8%	8%
Married (Partnered) with Children	30%	29%	21%	45%	41%
Married (Partnered) , No Children	27%	31%	16%	17%	24%
Divorced	17%	17%	18%	15%	10%
Education of Respondent (Percentage Shares by Attainment)					
Less than High School Diploma	13%	10%	16%	36%	9%
High School Diploma Only	28%	28%	31%	27%	16%
Some College or Associate Degree	26%	26%	31%	22%	22%
Bachelor's Degree	20%	22%	14%	11%	26%
Advanced Degree	13%	14%	8%	5%	27%
Education of Spouse (Percentage Shares by Attainment)					
Less than High School Diploma	10%	7%	10%	35%	7%
High School Diploma Only	27%	27%	29%	27%	13%
Some College or Associate Degree	27%	27%	33%	23%	19%
Bachelor's Degree	22%	24%	17%	11%	36%
Advanced Degree	14%	15%	11%	5%	25%

Appendix Table 1 (Continued).

	(1) Total	(2) White	(3) Black	(4) Hispanic	(5) Other race
Occupation 1 (Percentage Shares by Category)					
Employed by Someone Else	58%	55%	59%	69%	63%
Self-employed/Partnership	11%	12%	6%	10%	11%
Retired, Disabled, Student, Homemaker	26%	29%	27%	15%	17%
Not in Labor Force, Other Not Working	5%	4%	8%	6%	9%
Occupation 2 (Percentage Shares by Category)					
Managerial, Professional	28%	30%	22%	18%	44%
Technical, Sales, Services	21%	19%	25%	28%	18%
Other (Incl. Production/Craft/Repair workers, Operators, Laborers, Farmers, Foresters, Fishers)	19%	17%	17%	33%	11%
Not Working	32%	33%	35%	21%	26%
Industry (Percentage Shares by Category)					
Mining, Construction, Manufacturing	16%	16%	10%	24%	13%
Transportation, Communication, Utilities, Wholesale Trade, Finance, Insurance, Real Estate	52%	50%	55%	55%	61%
Agriculture, Retail, Services, Public Administration	32%	33%	35%	21%	26%
Total Full-Time Work Years of Respondent (Mean)	25	27	22	20	20
Total Full-Time Work Years of Spouse (Mean)	10	11	6	7	9
Household Share of Potential Working Years Worked Full-Time (Mean)	74%	75%	73%	68%	71%
"Career Track" traits (Percentage Share)					
Funded Pension	54%	60%	44%	33%	53%
>=90% Full-Time Work	64%	68%	55%	55%	59%
Current job annual earnings for respondent (Mean)	45,213	48,616	29,584	35,056	65,707
Years on current job for respondent (Mean)	7	7	5	6	6
Past job annual earnings for respondent (Mean)	53,558	60,987	35,782	29,928	51,261
Years on past job for respondent (Mean)	10	11	9	6	7
Lifetime earnings for respondent (Mean; restricted to respondents age 40-59, spouse (if present) age 30-65)	1,311,925	1,438,354	972,482	915,960	1,456,599
Retired - Respondent	23%	27%	19%	10%	13%
Disabled - Respondent	30%	32%	33%	19%	22%

Appendix Table 1 (Continued).

	(1) Total	(2) White	(3) Black	(4) Hispanic	(5) Other race
Pension at Current Job for Respondent (Percentage Shares by Category)					
Not currently working	22%	22%	27%	18%	21%
No pension	35%	31%	35%	55%	37%
Unfunded pension	4%	4%	2%	2%	4%
Low Match: <=3.25%	8%	8%	7%	6%	10%
Middle Match: 3.26-5.24%	5%	5%	4%	4%	6%
High Match: 5.25+%	5%	5%	4%	4%	7%
DB Pension	22%	25%	20%	11%	14%
Pension at Current Job for Spouse (Percentage Shares by Category)					
Not currently working	63%	61%	75%	65%	60%
No pension	18%	18%	12%	24%	20%
Unfunded pension	2%	2%	1%	1%	2%
Low Match: <=3.25%	4%	4%	3%	3%	6%
Middle Match: 3.26-5.24%	2%	3%	2%	2%	4%
High Match: 5.25+%	2%	3%	1%	2%	3%
DB Pension	8%	9%	6%	4%	5%
Future Pensions from Past Jobs (HH) (Percentage Shares by Category)					
No future pension from past job	92%	91%	96%	97%	91%
Account	3%	4%	1%	2%	4%
Mixture	1%	1%	1%	1%	2%
Regular income for life	3%	4%	2%	1%	3%
Self-Employed & IRA/Keogh (Percentage Shares by Category)					
Neither R nor SP are self-employed	87%	85%	92%	88%	87%
R and/or SP is self-employed without an IRA/Keogh	8%	8%	7%	11%	8%
R and/or SP is self-employed with an IRA/Keogh	5%	6%	1%	1%	5%
Currently Receiving Job-Based Pension (HH) (Percentage Shares by Category)					
No current pension benefits from past job	99%	99%	99%	100%	99%
Account-type pension	0%	0%	0%	0%	0%
Not account-type pension	1%	1%	1%	0%	1%
Mean Number of Pensions in Household (Conditional on Having any Pensions of this Type)					
Pension at current job	1.4	1.5	1.3	1.3	1.4
Future pension from past job	1.3	1.3	1.2	1.2	1.4
IRA/Keogh pensions owned by self-employed individual	1.6	1.6	1.4	1.5	1.9
Currently receiving job-based pension	1.3	1.3	1.2	1.3	1.4

Appendix Table 1 (Continued).

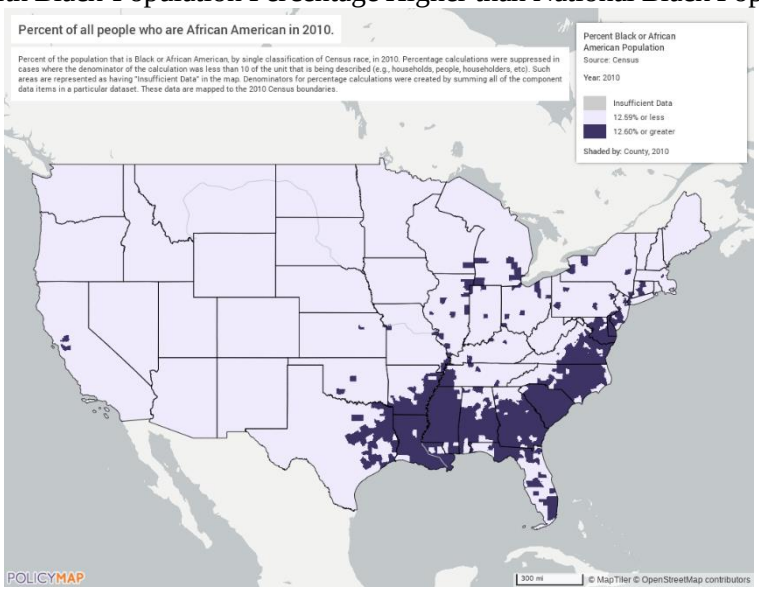
	(1) Total	(2) White	(3) Black	(4) Hispanic	(5) Other race
Percent that can get $3,000 from Family/Friends in Emergency	65%	71%	43%	51%	69%
Inheritances (Mean, Not Conditional)					
Inheritances Ever Received (3%)	139,855	184,305	29,763	12,288	106,655
Inheritances Ever Received (5%)	245,129	323,637	54,398	18,042	179,038
Inheritances Received in Previous 3 Years	8,352	10,918	1,823	1,773	5,217
Inter Vivos (Mean, Not Conditional)					
Inter Vivos Ever Received (3%)	15,542	20,074	2,423	3,470	15,885
Inter Vivos Ever Received (5%)	27,130	35,879	3,269	4,146	22,566
Inter Vivos Received in Previous 3 Years	1,252	1,404	128	1,631	1,611
Financial Attitudes (Percent Share with Trait)					
Risk Tolerant	20%	20%	17%	15%	24%
Long Planning Horizon	61%	65%	51%	49%	67%
Willing to Borrow for Luxury Items and Vacations	13%	12%	16%	14%	15%
Respondent Health (Percentage Shares by Health Category)					
Excellent	24%	25%	21%	22%	25%
Good	49%	50%	48%	47%	48%
Poor	6%	6%	6%	5%	6%
Spouse Health (Percentage Shares by Health Category)					
Excellent	17%	18%	9%	14%	20%
Good	29%	30%	18%	30%	30%
Poor	2%	3%	2%	2%	2%
Respondent's Number of Siblings (Mean)	2.3	2.0	2.8	3.0	2.3
Spouse's Number of Siblings (Mean)	1.3	1.3	1.0	1.8	1.5
Owns Stocks (Percent)	15%	18%	5%	4%	22%

Appendix Table 2. Reweighted Private Wealth for Earnings History, Pension, and Other Human Capital Controls, by Race (2007–19 SCF, Respondents Aged 40–59, Spouse/Partners Aged 30– 65); Reweighting White Sample to Match Human Capital Trait Distribution of Non-White Sample

Panel A. Mean Private Wealth					Gaps			Share of Gaps Explained		
	White	Black	Hispanic	Other	W/B	W/H	W/O	W/B	W/H	W/O
Observed	1,127,804	294,716	309,989	1,146,894	3.8	3.6	1.0			
Reweighted White Sample to Match Distribution of Non-White Sample Characteristics, including:										
Earnings History (R,SP), Current Earnings (R,SP), Years on Current Job (R,SP), Total Years FT Employment (R,SP), Year FE	-	718,513	855,637	1,079,537	2.4	2.8	0.9	49%	33%	*
+ Current Job Pension Generosity (R,SP), Pension Type and Generosity (HH), Number of Pensions (HH)	-	599,800	712,012	1,058,604	2.0	2.3	0.9	63%	51%	*
+ retirement and disability indicators (R,SP), occupation and industry indicators (R), educational attainment (R,SP)	-	508,574	491,732	1,362,651	1.7	1.6	1.2	74%	78%	*
+ savings and investment attitudinal controls	-	486,922	461,793	1,357,549	1.7	1.5	1.2	77%	81%	*
Panel B. Median Private Wealth										
Observed	303,437	52,738	66,547	368,225	5.8	4.6	0.8			
Reweighted White Sample to Match Distribution of Non-White Sample Characteristics, including:										
Earnings History (R,SP), Current Earnings (R,SP), Years on Current Job (R,SP), Total Years FT Employment (R,SP), Year FE	-	158,326	189,347	267,537	3.0	2.8	0.7	58%	48%	*
+ Current Job Pension Generosity (R,SP), Pension Type and Generosity (HH), Number of Pensions (HH)	-	142,912	131,978	238,031	2.7	2.0	0.6	64%	72%	*
+ retirement and disability indicators (R,SP), occupation and industry indicators (R), educational attainment (R,SP)		125,663	86,804	309,849	2.4	1.3	0.8	71%	91%	*
+ savings and investment attitudinal controls	-	120,120	80,851	309,526	2.3	1.2	0.8	73%	94%	*

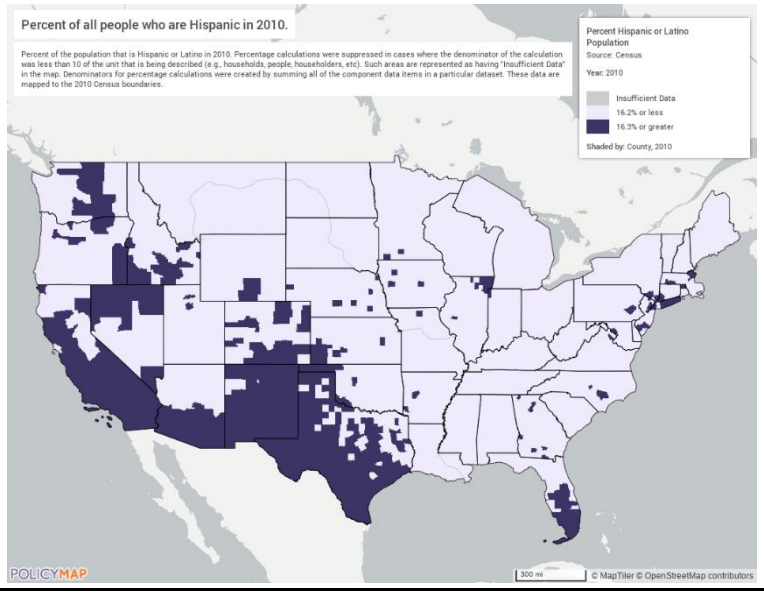
Appendix Figure 1. County-Level Maps of Population by Race and Ethnicity

Panel A. Counties with Black Population Percentage Higher than National Black Population Percentage



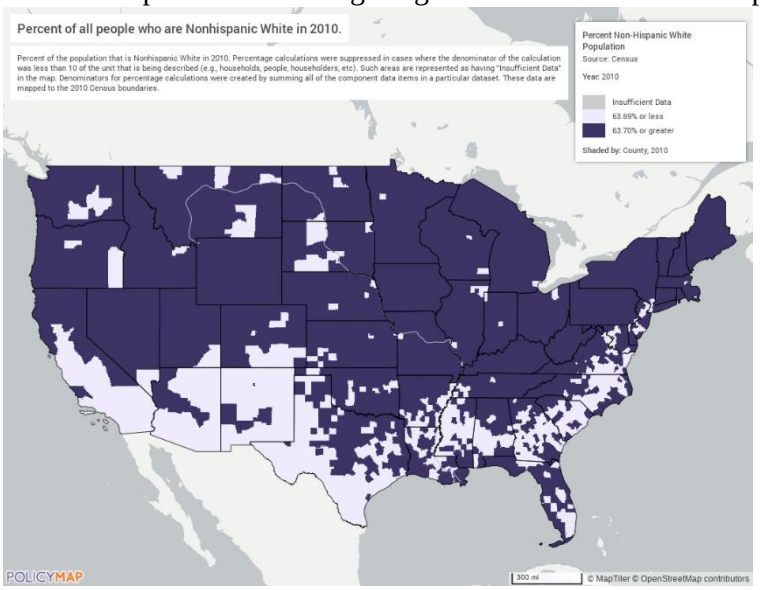
Population of high Black population counties (12.6% or higher) as percentage of the US population:	36.27%
Black population of high Black population counties as percentage of the US Black population:	74.99%
Average of Black median household income (2019 $) in high Black population counties:	$33,983
Average of white median household income (2019 $) in high Black population counties:	$58,763

Panel B. Counties with Hispanic Population Percentage Higher than National Hispanic Population Percentage



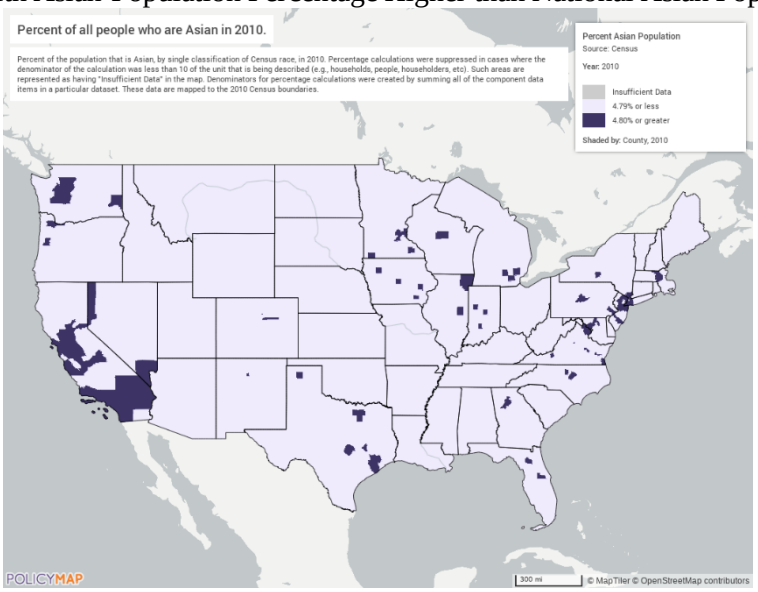
Population of high Hispanic population counties (16.3% or higher) as percentage of the US population:	37.35%
Hispanic population of high Hispanic population counties as percentage of the US Hispanic population:	77.49%
Average of Hispanic median household income (2019 $) in high Hispanic population counties:	$42,685
Average of white median household income (2019 $) in high Hispanic population counties:	$62,047

Panel C. Counties with White Population Percentage Higher than National White Population Percentage



Population of high white population counties (63.7% or higher) as percentage of the US population:	53.96%
White population of high white population counties as percentage of the US white population:	69.19%

Panel D. Counties with Asian Population Percentage Higher than National Asian Population Percentage



Population of high Asian population counties (4.8% or higher) as percentage of the US population:	30.77%
Asian population of high Asian population counties as percentage of the US Asian population:	72.39%
Average of Asian median household income (2019 $) in high Asian population counties:	$88,188
Average of white median household income (2019 $) in high Asian population counties:	$89,759

Notes: Counties with higher ethno-racial population percentage than national population percentage were identified using 2010 Census data from PolicyMap. The population of counties with a high percentage of an ethno-racial group as a percentage of the US population and the ethno-racial group population of counties with a high percentage of individuals of that race/ethnicity as a percentage of US population were calculated using 2010 Census data from

IPUMS NHGIS. Median household income data come from the 2015–2019 ACS from IPUMS NHGIS (median household income in the past 12 months in 2019 inflation-adjusted dollars). Five counties (Shannon County, SD; Wade Hampton Census Area, AK; Bedford City, VA; Kusilvak Census Area, AK; and Ogla la Lakota County, SD) were excluded from the average median household income calculation because they were not present in both the 2010 Census data and the 2015–2019 ACS data.