No. 23-14

# Decomposing Lifetime-earnings Differences between White, Black, and Hispanic Families 

Hope Bodenschatz, Gerald E. Daniels Jr., and Jeffrey P. Thompson


#### Abstract

: This paper explores disparities between White, Black, and Hispanic families using a measure of lifetime earnings developed by Jacobs et al. (2022) for the Survey of Consumer Finances (SCF). Lifetime earnings are a particularly important measure of well-being, with relevance for wealth accumulation among other economic and social outcomes, but they are under-studied in the context of racial disparities. We describe how the different components of lifetime earningsincluding annual earnings of workers, number of working household members, and number of years of employment during the working life - vary by race. We then decompose the differences in lifetime earnings using the recentered influencefunction and show thathuman capital-related variables, including educational attainment and years offull-time employment, account for most of the observed differences in lifetime earnings between White, Black, and Hispanic families. We also explore the contribution of business ownership to explained disparities in lifetime earnings and find that it is significant and that business ownership's explanatory power increases at the top of the lifetime-earnings distribution.


JEL Classifications: D31, I31, J15, J24, J31
Keywords: Lifetime earnings, racial disparities, inequality

[^0]This paper presents preliminary analysis and results intended to stimulate discussion and critical comment.
The views expressed herein are those of the authors and do not indicate concurrence by the Federal Reserve Bank of Boston, the principals of the Board of Governors, or the Federal Reserve System.

This paper, which may be revised, is available on the website of the Federal Reserve Bank of Boston at https://www.bostonfed.org/publications/research-department-working-paper.aspx.

## 1 Introduction

Racial disparities in a wide variety of economic, health, and other outcomes have been explored at length by economists and other social scientists. Research on labor markets consistently shows that Black workers and Hispanic workers face higher rates of unemployment and receive lower wages than their White and Asian peers (Fairlie and Sundstrom (1997); Patten (2016)). Health analysts find that the Black population and Hispanic population have lower birth weights, higher rates of infant mortality, and shorter life expectancy (Osterman et al. (2023); Jang and Lee (2022); Arias et al. (2022)). Scholarship on broader economic outcomes shows that Black and Hispanic families experience higher rates of poverty and have lower levels of homeownership, educational attainment, and wealth accumulation (Creamer (2020); National Association of REALTORS (2023); National Center for Education Statistics (2023); Thompson and Volz (2021)).

One economic outcome that has received relatively little attention by researchers, despite its particular importance as a measure of well-being, is lifetime earnings. Indeed, lifetime earnings are arguably superior to more common measures in reflecting well-being. Hourly wages, for example, are limited in that they facilitate consumption and well-being based on only the number of hours and weeks worked. Annual income is an improvement over hourly wages, but absent considerable savings, it has limited ability to support families during periods of job loss or marital disruption. People with temporarily low or high incomes due to a status that changes markedly (for example, being a student or receiving a large, onetime transfer) will see substantial gaps between their current resources and their lifetime well-being. Earnings-from paid employment and business ownership-measured across a lifetime are arguably a superior gauge of long-term well-being and one that serves as the underlying basis for saving and wealth accumulation. And while some scholars have explored racial disparities in lifetime earnings-we review that research below-most of the existing literature focuses on individuals as opposed to families, is based on data sources that largely exclude high-income earners along with information on business ownership, and sometimes focuses on workers before they reach peak earnings ages. Our analysis seeks to address all these shortcomings of the literature.

Lifetime earnings for a family result from, collectively, the household's number of working members, the number of years of paid employment across the working life for each member, and the level of compensation for employment. Ultimately, the differences we observe by race in lifetime earnings are a joint function of each of these components. We see substantial differences in household composition by race. Six in 10 Black families with respondents aged 40 to 59 are headed by a single adult who is neither married nor living with a partner. Only one-quarter to one-third of White, Hispanic, and "other" race families are headed by single adults (Table 4). ${ }^{1}$ Having more adults per family supports a higher level of potential work effort. Forty-four percent of all "other" race families and 42 percent of all White families are headed by married/partnered couples in which both adults are working compared with 34 percent of all Hispanic families and 24 percent of all Black families.

The data also indicate differences by race in level of employment at a point in time and when measured over longer spans of time. The average unemployment rates calculated in the Survey of Consumer Finances (SCF) for respondents (aged 40 to 59) and spouse/partners (aged 30 to 65, if present) over the 2007-2019 period were 4.8 percent for Hispanic families, 5.1 percent for White families, 7.2 percent for "other" race families, and 8.9 percent for Black families (Table 1). The average number of years of full-time work reported over their working life (combined for both adults when a spouse/partner is present) was 39.5 for White families, 34.5 for "other" race families, 32.9 for Hispanic families, and 31.7 for Black families (Table 2).

For the employed, we also see differences in earnings at current jobs by race. Average annual earnings, conditional on employment, were $\$ 113,000$ for "other" race respondents aged 40 to $59, \$ 99,000$ for White respondents, $\$ 55,000$ for Black respondents, and $\$ 54,000$ for Hispanic respondents (Table 5). ${ }^{2}$ Similar racial gaps are seen for combined family wage income, which ranges from $\$ 139,000$ for "other" race families and $\$ 122,000$ for White families to $\$ 67,000$ for Hispanic families and $\$ 64,000$ for Black families.

Given the consistent differences across the components of lifetime earnings, it is not surprising that we see a similar pattern by race when we look at the actual measure of

[^1]lifetime earnings. The measure of lifetime earnings that we use in this analysis was developed originally by Jacobs et al. (2022) from the earnings history data in the SCF and synthetic panel data derived from the Current Population Survey (CPS) on earnings for 822 different cohorts of worker-types over the 1964-2020 period. Differences in mean and median lifetime earnings by race for a subset of families headed by respondents aged 40 to 59 were substantial. Mean lifetime earnings for White and "other" race families were $\$ 2.0$ million compared with $\$ 1.3$ million for Black families and $\$ 1.2$ million for Hispanic families (Table 5). ${ }^{3}$

When we decompose these differences, h uman c apital characteristics ( such as y ears of full-time work, age, education, and occupation) make the most significant c ontribution to White-Black and White-Hispanic explained lifetime-earnings gaps. The specification with only human capital characteristics explains 54 to 80 percent of the White-Black lifetimeearnings gap and 58 to 103 percent of the White-Hispanic lifetime-earnings gap, depending on the lifetime-earnings percentile. For the White-Black lifetime-earnings gap, years of full-time work is the key factor at the bottom of the lifetime-earnings distribution, while education is most important at the top of the lifetime-earnings distribution. Education contributes the most to the White-Hispanic explained lifetime-earnings gap across the distribution, while years of full-time work is also important, particularly for the lower half of the distribution, and age and occupation are key for the upper half. Adding other covariates hardly changes the overall explanatory power; health insurance and spousal annual earnings are the next most notable covariates, but similarly to most of the rest of the covariates, they account for little of the explained gap. Business ownership increases the total share explained by about 2 to 3 percentage points for both the White-Black and White-Hispanic gaps, and its individual contribution to the share of the explained gap is higher at the top of the lifetime-earnings distribution. This latter finding is particularly notable because the total share explained by our specification is lower at the higher end of t he lifetime-earnings $d$ istribution. It is likely that the business-ownership indicator operates through the same channels as education, occupation, and/or years of full-time work; these other covariates remain notable contributors,

[^2]but the share of the explained gap accounted for by these covariates shrinks slightly for both the White-Black and White-Hispanic decompositions and across the distribution when business ownership is added (however, the total share explained also increases).

In the next section, we briefly review the existing literature on (1) racial disparities in current earnings, (2) overall inequality in lifetime earnings, and (3) racial disparities in lifetime earnings. We then discuss the data used in our analysis and the decomposition method employed. In Sections 5 and 6, we review the core elements that compose lifetime earnings of families (number of earners, years of work, and level of compensation) and how they vary by race, focusing on two important factors that influence compensation: educational attainment and business ownership. We then turn to a formal decomposition of White/non-White differences in lifetime earnings before concluding.

## 2 Literature Review

### 2.1 Racial disparities in current earnings

The literature measuring, documenting, and accounting for racial differences in current earnings and wages is vast, so we will provide only a broad overview of the factors researchers have determined are of primary importance for racial disparities in wages and earnings.

Starting with the literature focused on human capital and earnings: O'Neill (1990) finds that schooling, test scores, and work experience explain almost all the wage gap between young Black men and young White men. Other researchers find that part or all the WhiteBlack wage gap can be explained by test scores (Blackburn (2004); Neal and Johnson (1996)), and Blackburn (2004) further states that controlling for test scores reduces the contribution of education to wage differences. Bayer and Charles (2018) determine that the closing WhiteBlack educational attainment gap ameliorated the earnings gap, but increasing returns to education led to a disadvantage for Black individuals due to the residual education gap. Thompson (2021) notes that human capital explains a larger share of the White-Black earnings gap over time due to increasing returns and that human capital's contribution works more through the work-nonwork decision than through wages.

The role of nonwork is an explicit focus of other research on the White-Black wage gap. Bayer and Charles (2018) show that when nonworkers are included in the sample, the median White-Black earnings gap has increased since 1980, in contrast to no change if nonworkers are excluded. Within-education positional convergence has improved outcomes for Black men at the top of the earnings distribution, while increasing incarceration and nonwork have been detrimental for Black men at the bottom of the distribution.

Discrimination is also a key topic in this literature, and various papers conclude that racial discrimination by employers can account for 25 to 70 percent of the White-Black wage gap (Charles and Guryan (2008); Fryer et al. (2013); Blinder (1973)). Hurst et al. (2021) determine that half of the 1960-2018 decline in the White-Black wage gap is due to decreasing taste-based discrimination, while escalating returns to complex analytical tasks worsened the wage gap because discrimination and differences in skills led to lower Black employment in positions that included these types of tasks.

While most papers focus on White-Black gaps, some authors explore gaps between other race groups. Black et al. (2006) attribute differences in White and non-White wages to age, education, speaking English at home (for Asian and Hispanic men), and having collegeeducated parents not born in the US South (for Black men). The authors note that these final two factors could be "the consequence of cultural or class prejudice" (Black et al. (2006), 312). O'Neill and O'Neill (2006) find that years of school and test scores are key factors in the White-Black and White-Hispanic wage gaps, while years of school and immigrant status matter most for gaps between Asian and White individuals and between individuals from Central or South America and White individuals.

### 2.2 Lifetime-earnings inequality

In contrast to the literature focused on racial disparities in annual earnings, the lifetimeearnings literature focuses heavily on the association between annual and lifetime earnings (for example, Haider and Solon (2006); Björklund (1993); Böhlmark and Lindquist (2006)). Additionally, relatively few data sets contain lifetime-earnings information. Other papers explore trends in lifetime-earnings inequality, while more recent papers advance the literature by determining factors that generate lifetime-earnings disparities, such as education,
personality, and heritability. This literature is the focus of our brief review here.
Guvenen et al. (2017) use data from the Continuous Work History Subsample and underlying data from the Social Security Administration's Master Earnings File to show that men's median lifetime earnings decreased by 10 to 19 percent and that women's median lifetime earnings increased by 22 to 33 percent for cohorts from 1967 through 1983, while lifetime earnings at or below the 75th percentile stayed relatively flat. Lifetime-earnings inequality widened for gender subgroups, while overall lifetime-earnings inequality did not change.

Tamborini et al. (2015) determine that men with a bachelor's degree have 43 percent higher lifetime earnings than their counterparts with a high school diploma, while women with a bachelor's degree have 51 percent higher lifetime earnings than their counterparts with a high school diploma. Kim et al. (2015), Nybom (2017), and Brunello et al. (2017), respectively, show that field of study, cognitive and noncognitive skills, and the presence of books at home during early childhood increase the returns to education in terms of lifetime earnings.

Some authors consider other explanatory variables, such as IQ and personality, genetic factors, and job-related risks. Using the Terman survey (a survey of high-IQ Californians aged 18 to 75 that started in 1922), Gensowski (2018) shows that IQ and the personality traits conscientiousness and extraversion have statistically significant positive associations with lifetime earnings for men, while agreeableness has a negative association. The effects of these traits are not uniform over the lifespan; instead, they are most apparent from ages 40 to 60. Hyytinen et al. (2019) study Finnish twins to explore the effect of genetics on lifetime earnings. Using a DeFries-Fulker variance decomposition, they determine that 40 percent of women's and slightly more than half of men's lifetime-earnings variance is explained by genetics. Using the Social Security Administration Master Earnings File, Karahan et al. (2022) find that different returns to experience and ex ante job-ladder risk (that is, "job loss, job finding, and contact rate heterogeneities") are most important in explaining inequality in the upper half and lower half of the lifetime-earnings distribution, respectively (Karahan et al. (2022), p. 39).

### 2.3 Racial disparities in lifetime earnings

Social scientists are, of course, interested in racial differences in earnings across a lifetime, but research measuring those differences and an understanding of the factors that explain them are hobbled by data limitations. As noted above, relatively few data sources include lifetime earnings, and some of those do not contain information on race. Part of the existing literature on racial differences in lifetime earnings focuses only on measurement and eschews efforts to explain why those differences persist. Common themes in the literature that decomposes racial disparities in lifetime earnings include academic achievement or test-score performance as well as number of years worked. Most of the papers also focus exclusively on White-Black disparities.

Some researchers employ cross-sectional data to develop proxies for lifetime earnings. Emeka (2007) uses a single year of American Community Survey (ACS) data and approximates "lifetime earnings" by summing the annual earnings (by race) of each single-year birth cohort. Employing a linear Oaxaca-Blinder decomposition approach, Emeka estimates the portion of racial-earnings disparities attributable to differences in traits (education, family composition, and place of residence, for example) as opposed to differences in the "returns" to those traits. While most research in this area focuses on White-Black differences, Emeka explores earnings disparities between multiple different racial groups, pointing out that Asian lifetime earnings exceed White lifetime earnings and increase further when Asian individuals are assigned average returns. Only White men are worse off when average returns are applied. Carnevale et al. (2011) use the 2007-2009 ACS to calculate lifetime earnings by summing median earnings by five-year age bin and education/demographic group and explore the lifetime-earnings gap descriptively. They find that Asian and White individuals have higher lifetime earnings than Hispanic and Black individuals at almost every educationalattainment level. The extent of White and non-White earnings gaps varies by educational group.

The most important shortcoming of these papers is that their proxy for lifetime earnings is actually just the point-in-time average of the age-earnings profile. To the extent that the average earnings (absolute or relative) of age cohorts vary over time, the age-earnings profile
will differ from actual lifetime earnings. We cannot expect that the future earnings of a current 20-year-old, say, will be the same as the current earnings of an older person of the same race. In addition, calculating lifetime earnings by summing annual earnings by age group eliminates the ability to use individual-level regressors such as years of full-time work that can shed light on decisions or circumstances (that is, periods of unemployment and ages entering and exiting the labor force) that influence an individual's lifetime earnings.

Karger and Wray (2023) employ a more sophisticated pseudo-panel approach to recover lifetime earnings from repeated cross-sections. They use birth year and race to define cohorts in decennial census and ACS data from 1910 to 2014. This analysis draws attention to the dramatic improvement in life expectancy for Black males relative to White males and the importance of life expectancy in interpreting changes in lifetime earnings over long periods. Karger and Wray (2023) measure shrinking White-Black differences in lifetime earnings (driven mainly by rising life expectancy) in cohorts born in the 1900-1920 period. For later cohorts, individuals born from 1920 to 1970, the lifetime-earnings levels and gap stay relatively stagnant. Karger and Wray's paper focuses primarily on measurement and does not attempt to decompose the factors contributing to racial disparities in lifetime earnings aside from the issue of rising life expectancy and the shrinking White-Black gap. Notably, Karger and Wray's estimates of the White-Black gap in earnings for cohorts born from 1920 to 1970 range from 1.9 to 2.1 (Karger and Wray 2023, Table 4), which is very similar to the White-Black disparities in average lifetime earnings (conditional on nonzero earnings) we measure in the SCF: 1.6 (Table 5).

Some authors use individual-level panel data sources with which earnings histories can be developed over the repeated survey waves. Several recent papers, including Aliprantis et al. (2022), Nielsen (2019), and Gordon et al. (2023), use the National Longitudinal Survey of Youth (NLSY79) to explore White-Black differences in lifetime earnings. Aliprantis et al. (2022) focus primarily on racial disparities in wealth, but their calibration exercises on lifetime earnings suggest that educational achievement (measured by Armed Forces Qualification Test scores) can account for a large portion of earnings differences, whereas attainment (highest grade completed) carries substantially less explanatory power. Nielsen (2019) develops a sophisticated measure of academic achievement that corrects for bias due
to measurement error in test scores. He finds that differential achievement fully accounts for White-Black wage and lifetime-earnings differences. Gordon et al. (2023) focus on the relationship between incarceration and its downstream effect of nonemployment on lifetime earnings among high school graduates. They find that for men with a high school diploma, nonemployment and incarceration contribute 41 percent of the White-Black lifetime-earnings gap.

The panel aspect of the NLSY79 is compelling because it uses individual-level earnings histories to calculate lifetime earnings, and it also contains test scores, which capture more nuance in individual ability than educational attainment can signal and are superior to the education data in the SCF. However, the survey has several important limitations. Like other panel data, the NLSY79 suffers from sample attrition and item non-response, which require imputation methods to recover full lifetime-earnings histories. Aliprantis et al. (2022) calculate that by 2016, sample attrition had reduced the 18-plus sample by one-fourth for Black respondents and 30 percent for White respondents relative to the full 1983 sample (Aliprantis et al. (2022), Figure 22a). Starting in 1994, the NLSY79 switched from annual to biennial surveys, so at least half of all earnings are imputed from that point onward. Nielsen (2019) substitutes an individual's lowest earnings during the survey for missing earnings and extrapolates earnings beyond the survey with "education-specific growth rates from a pseudo-panel of male earnings constructed from the 2005 American Community Survey" (Nielsen (2019), p. 7).

In an earlier paper, King and Knapp (1978) used reconstructed life histories from the Johns Hopkins Retrospective Life History survey of White and Black men aged 30 to 39 in 1968. They rely on recalled earnings back to age 15 and an autoregressive model to estimate post-interview earnings for their measure of lifetime earnings. King and Knapp conclude that socioeconomic factors do not directly affect lifetime earnings, working instead through education, and that equalizing economic opportunity would eliminate the majority of White-Black differences in lifetime earnings. This is a notable but dated finding, and the data used had limitations, including a small sample size ( 744 White individuals and 678 Black individuals), a small age range, and the measurement of earnings before peak earning years. The earnings histories themselves are constructed in a fashion somewhat similar to
the approach used in this analysis, by collecting retrospective beginning and ending wages of past jobs. The within-job earnings paths in King and Knapp (1978) are calculated by linear interpolation. The earnings paths in Jacobs et al. (2022) are based on pseudo-panel analysis of repeated CPS cross sections, with cohorts based on birth year, sex, educational attainment, and occupation.

Another source of lifetime-earnings measures is administrative data. Administrative data sources often do not collect information on race, but in some instances the information can be merged with survey data that do include race and other relevant control variables. Mustredel Río and Pollard (2019) use linked Survey of Income and Program Participation (SIPP), Social Security Administration (SSA), and Internal Revenue Service (IRS) data to construct lifetime earnings by summing individuals' annual earnings. They then take a broader look at how observable characteristics affect lifetime earnings. Estimating a Mincer equation and looking to the adjusted $R^{2}$ to reflect the share of variation in lifetime earnings across individuals, they find that "sex, race, age, education, and labor market experience explain a little more than half of the lifetime earnings differences" (Mustre-del Río and Pollard (2019), p. 36). They compare $R^{2}$ for a series of bivariate regressions to show that years worked alone contribute 40 percent of earnings variation, while educational attainment alone contributes 15 percent, and race alone contributes just 1.3 percent. Glover et al. (2023) use the same data set and an accounting framework that in turn holds annual earnings fixed, holds years worked fixed, and allows both to vary (the residual) to show contributions of each factor to the lifetime-earnings gap. Differences in earnings per year account for three-quarters of the gap, while differences in years worked account for 17 percent. The authors confirm that years of work contribute meaningfully to White-Black differences in lifetime earnings among people of the same gender and educational attainment. For example, college-educated Black women have higher lifetime earnings than White women with the same education level due to more years worked and despite having lower annual earnings. Black men without a high school diploma have fewer years worked than White men with the same education level, which explains the highest share of this group's lifetime-earnings gap; the share of the gap explained by years worked generally declines as education level rises. The authors also find that White-Black lifetime-earnings gaps exceed point-in-time earnings gaps.

While promising, this approach also has limitations. In particular, the SIPP focuses on low-income respondents, with an explicit over-sample of communities with high concentrations of low-income households. Because it takes no special steps to ensure participation by hard-to-reach affluent households, the SIPP almost certainly does not adequately represent very high earners. According to Czajka et al. (2003), "Compared to both the SCF and the Current Population Survey (CPS), the SIPP under-represents families above $\$ 300,000$ (in annual income) by two-thirds, families between $\$ 150,000$ and $\$ 300,000$ by at least one-third, and families between $\$ 90,000$ and $\$ 150,000$ by at least 12 percent" (Czajka et al. (2003), para. 26). In addition, not all respondents to the SIPP can be successfully matched to earnings records. In their assessment of the matched SIPP-SSA data, Huynh et al. (2002) find that 13 percent of SIPP respondents did not provide valid Social Security numbers at the start of the 1993 panel, and this share rose to 16 percent of respondents in the 1996 panel.

Our approach builds on the existing literature by expanding the number of racial groups analyzed, using a more robust lifetime-earnings measure compared with that used by some previous work, and relying on the SCF, which provides us with a sample larger than those used by some past papers and is also more inclusive of the full distribution of income levels. We include four racial groups-White, Black, Hispanic, and "other" race - whereas much of the existing literature focuses primarily or wholly on White-Black comparisons. In many respects, the techniques used to develop full earnings histories in the NLSY79 mirror what we have done with the SCF and its work-history questions supplemented by CPS pseudopanel earnings models. The Jacobs et al. (2022) lifetime-earnings data we use are calculated primarily based on individual-level earnings histories supplemented with pseudo-panel data on birth year, sex, education, and occupation-specific cohorts of earnings in the Current Population Survey (CPS) from 1964 to 2020. With these microdata, we can take advantage of the individual-level correlation between lifetime earnings and the relevant attributes we explore. Additionally, we use data that cover the full working lives of respondents (and their spouses/partners) in their prime working years, an improvement on the younger workers captured in the Johns Hopkins Retrospective Life History survey. The SCF captures the full range of the income distribution, including very-low-income and very-high-income
households, unlike the SIPP. Each of the five cross sections from 2007 through 2019 includes approximately 5,000 households (most with a spouse/partner as well as a respondent) interviewed in each survey. We use all these survey years in our descriptive analysis but focus on 2019 for the decompositions. Most of the existing literature focuses on individuals, ignoring the joint resources provided by spouses and partners. In our work, we identify the separate contributions of respondents and their spouses/partners but focus primarily on the combined lifetime earnings of the "family" unit. Finally, we use the business-ownership information in the SCF to draw attention to an underappreciated source of earnings disparities.

## 3 Data

### 3.1 Survey of Consumer Finances

We employ the Survey of Consumer Finances (SCF) as our primary data source. The SCF is a triennial nationally representative survey of US households sponsored by the Federal Reserve Board of Governors in cooperation with the US Department of the Treasury and collected by the National Opinion Research Center (NORC) at the University of Chicago. ${ }^{4}$ Data in the SCF include detailed information on a household's assets, liabilities, income, and demographic characteristics, making the SCF an effective resource for analyzing earnings variations across racial groups. ${ }^{5}$ We rely on the 2019 survey wave for our decomposition analysis because it is the most recent available wave for which lifetime earnings are estimated for the SCF's primary economic units (PEUs). We limit our decomposition to the most recent survey wave because including multiple waves might yield misleading results, as there is little evidence to suggest that the relationships between covariates in explaining lifetime-earnings gaps are time-invariant.

Because our analysis aims to highlight how various covariates account for the explained

[^3]racial gaps in lifetime earnings, we assign the race of the respondent according to the selfreported race of the "reference person" in the PEU (Kennickell, 1999). ${ }^{6}$ The survey classifies the reference person as the single core individual, the male in a mixed-sex couple, or the older individual in a same-sex couple in a PEU. Since the 1998 survey, the reference person has been able to select multiple responses to the question regarding their race and ethnicity. ${ }^{7}$ From 2004 onward, the survey has also directly asked whether respondents are Hispanic or non-Hispanic, independent of the question about race. In line with the design of earlier waves, the survey uses a respondent's first choice from among the answers to the race and ethnicity question to identify their race; few respondents select multiple options. Based on the discussed criteria and race categories provided in the publicly available survey data, respondents are identified as either White non-Hispanic, Black, Hispanic, or other.

The SCF relies on a dual-frame survey design. It selects one sample of respondents broadly representative of the US population based on a multi-stage area-probability design, and it selects an additional sample of respondents likely to have high net worth based on information derived from tax statistics from the IRS (Kennickell, 2006; Bricker et al., 2017). Due to its design and rich host of demographic questions, the survey is commonly used to study racial disparities (Dettling et al., 2017; Weller and Thompson, 2018; Wolff, 2021b; Thompson and Suarez, 2019; Kakar et al., 2019) and the distribution of US wealth, particularly at the top of the distribution (Wolff, 1995; Bricker and Thompson, 2016; Keister and Moller, 2000; Wolff, 2021a).

We take advantage of the SCF's abundant demographic and work-related variables. Our full specification includes four human capital characteristics (years of full-time work, age, education, and occupation) as well as several demographic and job characteristics that we expect will affect respondents' lifetime earnings: respondent and spouse's annual earnings from the preceding year, the number of children in the household, an indicator for nonprimary family members living in the household, the presence of health insurance, marriage status, and labor union participation. Table A. 11 shows summary statistics for the decomposition

[^4]covariates for the full population and by race. We expect that the human capital variables will be important contributors to the explained lifetime-earnings gap because more years of work add to lifetime earnings; age can be a proxy for experience and job tenure, which generally imply increased compensation as well as time to accrue lifetime earnings; higher education is often a path to higher pay; and jobs in managerial/professional occupations typically are higher paying. Similarly, a respondent's annual earnings directly offer a recent point-in-time indication of their rate of compensation, and their spouse/partner's annual earnings indirectly offer an indication, assuming similar educational attainment and earning potential among partners. Children and nonprimary family members living in the household, as well as divorce, may play a roll in limiting the ability to work and thus limiting an individual's earnings. Health insurance and labor union participation are both indicators of more desirable jobs that may have a better rate of compensation, and they contribute to an individual's health and safety, which enables them to work longer.

### 3.2 Lifetime earnings

The SCF does not collect information on a household's lifetime earnings, but the survey data do provide abundant information about a respondent's or couple's employment history, such as occupation, longest-held past job, final-year earnings at a job, and the number of years worked. This information can be used to estimate the lifetime earnings of the respondent and couple. To analyze the lifetime earnings of a respondent in SCF, we employ lifetime-earnings estimates from Jacobs et al. (2020) and Jacobs et al. (2022). These studies estimate a full history of past and future earnings by applying earnings trajectories based on birth year, education, occupation, and gender across pseudo-panel cohorts from the CPS to the employment history of a respondent and their spouse in the SCF. Unlike the analysis by Jacobs et al. (2020) and Jacobs et al. (2022), ours does not include any projection of future earnings.

Lifetime-earnings estimates are limited to respondents aged 40 to 59 and their spouses aged 30 to 65 at the time of their interview. Estimates are constructed from the CPS from 1964 through 2019 and the SCF's 2019 survey wave. To construct past earnings estimates, individuals were grouped by 22 three-year birth cohorts, three education categories (less
than high school, high school degree or equivalent, and some college or more), and five broad occupational categories (management, professional, and related; service; sales and office; construction, maintenance, production, transportation; and the self-employed from all occupations), and part-time employment status. When the birth-year cohort is not observed in the CPS, estimates are based on education and occupation types for men and women separately. ${ }^{8}$

## 4 Methods

### 4.1 RIF decomposition

We use the inverse hyperbolic sine (IHS) transformation and the recentered influence function (RIF) regression method for our analysis. We apply the IHS to adjust for the skewness of lifetime earnings and other covariates. Going forward, we refer to our transformed measure of lifetime earnings simply as lifetime earnings for brevity. Following Firpo et al. (2009) and Fortin et al. (2011), we apply the RIF regression method to lifetime earnings to allow for an extension of the conventional two-fold Oaxaca-Blinder (OB) decomposition (Oaxaca, 1973; Blinder, 1973) providing detailed decompositions of the earnings gaps at the $\tau$-th quantile between White non-Hispanic and Black households and White non-Hispanic and Hispanic households. Further, the RIF regression approach provides a detailed decomposition of the unconditional distribution of lifetime earnings without the concern of path dependence, which may occur with conditional decomposition methods. ${ }^{9}$

Denoting lifetime earnings as LE, we calculate the RIF for lifetime earnings using an indicator function, $\mathbb{1}\{\cdot\}$; the marginal density for lifetime earnings, $f_{\mathrm{LE}}(\cdot)$; and the population $\tau$-quantile, $Q_{\tau}$, of the unconditional distribution of lifetime earnings. The RIF is given by the following equation:

$$
\operatorname{RIF}\left(\operatorname{LE} ; Q_{\tau}\right)=Q_{\tau}+\frac{\tau-\mathbb{1}\left\{\mathrm{LE} \leq Q_{\tau}\right\}}{f_{\mathrm{LE}}\left(Q_{\tau}\right)} .
$$

[^5]Assuming that ignorability and overlapping support hold, as explained in Firpo et al. (2018), estimates for the lifetime-earnings gap, $\hat{\Delta}_{0}^{\tau}$, between White households and a reference group is determined by:

$$
\begin{gathered}
\hat{\Delta}_{0}^{\tau}=\underbrace{\left(\bar{X}_{W}-\bar{X}_{R}\right)^{\prime} \cdot \hat{\gamma}_{W, \tau}}_{\hat{\Delta}_{x}^{\tau} \text { (Explained) }}+\underbrace{\bar{X}_{R}^{\prime} \cdot\left(\hat{\gamma}_{W, \tau}-\hat{\gamma}_{R, \tau}\right)}_{\hat{\Delta}_{S}^{\tau} \text { (Unexplained) }}, \quad \text { where } \\
\hat{\gamma}_{g, \tau}=\left(\sum_{i \in G} X_{i} \cdot X_{i}^{\prime}\right)^{-1} \cdot \sum_{i \in G} X_{i} \cdot \widehat{\operatorname{RIF}}\left(\operatorname{LE}_{g i} ; Q_{g, \tau}\right), \quad g=R, W .
\end{gathered}
$$

Race groups are denoted by $g$; W denotes the White non-Hispanic households; $R$ denotes the comparison household, Black or Hispanic; and the vector of covariates is denoted by $X .{ }^{10}$ Details on the included covariates are described in the subsequent sections. The differences in covariates and the composition (explained) effect for explaining the racial lifetime-earnings gap is described by $\hat{\Delta}_{X}^{\tau}$, and the structural (unexplained) effect of race on the lifetimeearnings gap is described by $\hat{\Delta}_{S}^{\tau}$.

### 4.2 Two-stage RIF decomposition

The results of the standard Oaxaca-Blinder decomposition may be inconsistent if the conditional expectation of the explanatory variables is misspecified (Barsky et al. (2002)). To adjust for potential model misspecification, there is a host of reweighting approaches, from nonparametric reweighting, as described by Barsky et al. (2002), to semiparametric approaches, as described by DiNardo et al. (1996) and Firpo et al. (2018). To determine the robustness of our estimates, we apply the two-stage decomposition approach described by Firpo and Pinto (2016), Firpo et al. (2018), and Rios-Avila (2020), who include reweighting the distribution of explanatory variables and further decomposing the structural and composition effects.

For the first stage, we employ weighting factors, $\omega$, for White respondents, the comparison group, and a counter-factual White group, for which the weighting factors are estimated using

[^6]a probit regression. Subsequently, we estimate the overall lifetime-earnings gap between White respondents and the comparison group at the $\tau$-th quantile, which is given by
\[

$$
\begin{gathered}
\hat{\Delta}_{0}^{\tau}=\underbrace{\begin{array}{c}
\hat{\Delta}_{X, p}^{\tau} \\
\begin{array}{c}
\text { (Pure Explained) }
\end{array} \hat{\Delta}_{X, e}^{\tau} \text { (Specification Error) }
\end{array}+\underbrace{\begin{array}{c}
\hat{\Delta}_{S, p}^{\tau} \\
\text { (Pure Unexplained) }
\end{array}+\begin{array}{c}
\hat{\Delta}_{s, e}^{\tau} \\
\text { (Reweighting Error) }
\end{array}}_{\hat{\Delta}_{X}^{\tau} \text { (Unexplained) }}, \text { where }}_{\hat{\Delta}_{X}^{\tau} \text { (Explained) }} \begin{array}{c}
\hat{\Delta}_{0}^{\tau}=\underbrace{\left(\bar{X}_{W}^{C}-\bar{X}_{R}\right)^{\prime} \cdot \hat{\gamma}_{R, \tau}}_{\hat{\Delta}_{X, p}^{\tau}}+\underbrace{\bar{X}_{W}^{C} \cdot\left(\hat{\gamma}_{W, \tau}^{C}-\hat{\gamma}_{R, \tau}\right)}_{\hat{\Delta}_{X, e}^{\tau}}+\underbrace{\bar{X}_{W}^{\prime} \cdot\left(\hat{\gamma}_{W, \tau}-\hat{\gamma}_{W, \tau}^{C}\right)}_{\hat{\Delta}_{S, p}^{\tau}}+\underbrace{\left(\bar{X}_{W}-\bar{X}_{W}^{C}\right)^{\prime} \cdot \hat{\gamma}_{W, \tau}^{C}}_{\hat{\Delta}_{S, e}^{\tau}}, \\
\hat{\gamma}_{g, \tau}=\left(\sum_{i \in G} \hat{\omega}_{g} \cdot X_{i} \cdot X_{i}^{\prime}\right)^{-1} \cdot \sum_{i \in G} \hat{\omega}_{g} \cdot X_{i} \cdot \widehat{\operatorname{RIF}}\left(\operatorname{LE}_{g i} ; Q_{g, \tau}\right), \quad g=R, W \\
\hat{\gamma}_{W, \tau}^{C}=\left(\sum_{i \in G} \hat{\omega}_{W}^{C} \cdot X_{i} \cdot X_{i}^{\prime}\right)^{-1} \cdot \sum_{i \in G} \hat{\omega}_{W}^{C} \cdot X_{i} \cdot \widehat{\operatorname{RIF}}\left(\mathrm{LE}_{W i} ; Q_{W, \tau}\right) .
\end{array}, .
\end{gathered}
$$
\]

The composition effect is decomposed into the pure composition effect (pure explained), $\hat{\Delta}_{X, p}^{\tau}$, and specification error, $\hat{\Delta}_{X, e}^{\tau}$, which allows for the assessment of the approximation error from the Firpo et al. (2018) two-stage procedure. Similarly, the structural effect is further decomposed between the pure structural effect (pure unexplained), $\hat{\Delta}_{S, p}^{\tau}$, and the reweighting error, $\hat{\Delta}_{S, p}^{\tau}$. To contextualize the role of the two-stage decomposition on lifetime-earning gaps, we also decompose the earnings gap by only including human capital characteristics. By focusing on a parsimonious model, we can evaluate the tradeoff between the reweighting error and the issue of common support.

## 5 Lifetime Earnings and Its Components

A family's lifetime earnings are a joint function of the number of years worked across the working life, the family's number of working members, and the rate of compensation of employment. In the following subsections, we discuss SCF data for each of these components and then describe the levels and differences in lifetime earnings by race.

### 5.1 Amount of employment

Lifetime earnings depend in part on the amount of employment, which is most accurately measured as the combined respondent and spouse/partner (if present) years of full-time work. Similar to comparing current earnings and lifetime earnings, considering only current work status provides a naïve picture of amount of employment; it does not provide any meaningful information about length of unemployment/time out of the labor force and age entering and exiting the workforce, which are vital contributors to lifetime earnings. Table 1 shows current unemployment rates for respondents, as measured by an indicator developed with the SCF's current work status variable and labor force bulletin variable. ${ }^{11}$ Unemployment rates are highest for Black and "other" race individuals ( 8.9 percent and 7.2 percent, respectively) and lowest for Hispanic and White individuals ( 4.8 percent and 5.1 percent, respectively).

Having current employment certainly leads to more earnings, but measuring years of full-time work provides a clearer picture of career longevity and lifetime earnings. Table 2 demonstrates that mean and median years full-time are slightly higher for White respondents than for their non-White counterparts, though as we will discuss below the differences by race are substantially greater for the overall household. Table 3 confirms how years of full-time work translate into lifetime earnings (conditional on nonzero earnings ${ }^{12}$ ): For both single and married/partnered households, higher years of full-time work lead to higher lifetime earnings. For single households, there is about a $\$ 1$ million increase in average lifetime earnings from the lowest (0-19 years) to the highest (40-59 years) bin of years of full-time work; for married households, there is a $\$ 2.5$ million increase in average lifetime earnings from the lowest (0-19 years) to the highest (80+ years) bin of years of full-time work.

[^7]
### 5.2 Number of workers

Household years of full-time work and lifetime earnings are magnified when a spouse/ partner is present and both the respondent and spouse/partner work. We show how a categorization of households by marital status and current employment status ${ }^{13}$ of the primary adults varies by race and how lifetime earnings distributions change by household work status. Table 4 indicates that more than 40 percent of White respondents and respondents of "other" races are married/living with their partner and that both partners work. By contrast, among the race groups, Black respondents have the lowest share of married/partnered families with two working partners (24 percent) and the largest share of single and working respondents (43 percent). Hispanic respondents are more evenly split over the categories of married/living with partner with one earner (28 percent), single and working (28 percent), and married/living with partner with two earners (34 percent).

Spouses/partners with a long work history will also boost household lifetime earnings. Table 2 shows that, as with the respondents, spouses/partners of White and "other" race respondents have more years of full-time work than spouses/partners of Black and Hispanic respondents. Mean combined household full-time years of work ranges from 31.7 for Black families to 39.5 for White familes. Notably, median years of full-time work for spouses/partners of Black and Hispanic respondents are zero. Table 3 shows that those who are married/living with their partner have higher household lifetime earnings than single individuals even within the same category of household years of full-time work. This is due in part to selection: Higher-earning people are more likely to be partnered. However, this also reflects the effect of having two earners in the household.

[^8]
### 5.3 Compensation for work

Finally, lifetime earnings are a function of an individual's rate of employment compensation. Figures 1a and 1b show kernel densities of IHS transformed current job earnings for male respondents and female respondents by race, conditional on earnings being greater than zero. The distribution for male respondents has a longer right-hand tail than that of female respondents, indicating that the range of current job earnings for male respondents extends significantly higher than current job earnings reported by female respondents, but the bulk of observations fall roughly in the same range for both. Black and Hispanic male respondents have generally lower current job earnings than their White and "other" race counterparts. The pattern is somewhat different for female respondents: Hispanic female respondents remain the lowest earning group, but Black and White female respondents have distributions that are much more similar to Hispanic females relative to the comparison of the male racial-group distributions. As in the male distribution, female individuals of "other" races generally have the highest earnings.

Figure 1c is a kernel density of IHS transformed current job earnings for female spouses and partners by respondent race for those with earnings greater than zero. As with the current job earnings for male and female respondents, spouses/partners of "other" race respondents have the highest earnings, followed by spouses/partners of White, Black, and Hispanic respondents.

Presenting current household earnings, Figure 2 shows kernel density distributions by respondent race that are roughly similar to those of current job earnings; that is, households with a White or "other" race respondent have higher earnings than households with a Black or Hispanic head.

### 5.4 Lifetime earnings by race

Table 5 compares mean earnings by respondent race for different measures of earnings (respondent annual earnings on current job, current household earnings, and household lifetime earnings), both conditional on nonzero earnings and unconditional. Across all measures, earnings are highest for "other" race respondents, followed closely by White respon-
dents. Mean household lifetime earnings (conditional on nonzero earnings) are $\$ 2$ million for "other" race respondents and $\$ 1.97$ million for White respondents. Black and Hispanic earnings are significantly lower across the board. Mean household lifetime earnings (conditional on nonzero earnings) are about $\$ 1.2$ million for both Black and Hispanic respondents.

Figures 3a and 3b show ratios comparing mean and median non-White earnings with White earnings for various earnings definitions. White/Black mean earnings ratios are largest for unconditional current household earnings (2.05) and progressively decrease for conditional current household earnings (1.91), conditional respondent current job earnings (1.79), and conditional household lifetime earnings (1.56). White/Hispanic mean earnings ratios are about 1.8 for unconditional current household earnings, conditional current household earnings, and conditional respondent current job earnings; White/Hispanic conditional household lifetime earnings also have the lowest ratio (1.64). White/ "other" race mean earnings are all less than 1 (indicating that mean earnings for individuals of "other" races are higher than White earnings). However, as with the White/Black and White/Hispanic ratios, the conditional household lifetime-earnings ratio is closest to 1 (0.98), and the unconditional current household earnings ratio is furthest from 1 (0.84). Figure 4 is a kernel density of IHS transformed household lifetime earnings by respondent race, conditional on having earnings greater than zero. Similarly to Figures 1 and 2, it shows that Hispanic and Black households have lower lifetime earnings compared with White and "other" race households. White and "other" race household lifetime earnings have roughly identical distributions.

## 6 Determinants of Compensation Level

Each of the components of lifetime earnings - number of earners, length of period of employment, and compensation while employed-is itself complex and the subject of a large body of scholarship. Decisions about marriage, cohabitation, and divorce are subject to a wide range of factors that we do not broach in this paper. Similarly, labor supply, employment, and retirement are complicated outcomes that are influenced by a diverse set of factors that are not discussed in this paper. The only component of lifetime earnings that we parse in this analysis - to a certain extent - is compensation. Two of the factors that influence the
level of earnings that we will discuss briefly, and include in our decomposition analysis, are educational attainment and business ownership. This section illustrates differences in household education and business ownership by race and compares lifetime-earnings outcomes for households with different education levels and business-ownership status.

### 6.1 Household education

Higher levels of education are well known to lead to higher earnings generally; this paper considers additional nuance by focusing on household education levels, factoring in the presence of a spouse/partner and their education as well as that of the respondent. Table 6 shows shares of households by household education level and race. The largest share of White (26.6 percent) and "other" race (46.4 percent) households fall into the category of being married/living with their partner and both partners possessing a bachelor's degree or higher. By contrast, the largest share of Black households (25.3 percent) are single individuals with a high school diploma/GED or less, and the largest share of Hispanic individuals (36.4 percent) are married/living with their partner and both primary adults have a high school diploma/GED or less.

Table 7 provides evidence that lifetime earnings increase with education. Conditional on nonzero earnings, a single individual with a bachelor's degree or higher earns an average of $\$ 1.5$ million over their lifetime, while a single individual with a high school diploma or GED earns $\$ 830,000$; similarly, a married/partnered household in which the respondent and spouse/partner each have a bachelor's degree or higher has mean lifetime earnings of $\$ 3.3$ million, while a married/partnered household with two high school graduates has mean lifetime earnings of $\$ 1.7$ million. This table also highlights the impact of considering household education levels rather than simply respondent education levels. Mean household lifetime earnings (conditional on earnings being greater than zero) of a married/partnered household are more than double those of a single household with the same education level. A similar pattern is repeated across almost all the other earnings percentiles in the table.

Figure 5 adds a third dimension to the impact of household education on lifetime earnings for White, married/partnered households with respondents aged 55 to 59: years of full-time work. Even with restrictions on race, household composition, and respondent age, there is
considerable variation within the lowest and highest terciles of household years of full-time work, both across education levels and earnings percentiles, as well as between the lowest and highest terciles. ${ }^{14}$ The median White family in the highest tercile of years of full-time work in which both the respondent and spouse have a bachelor's degree or higher has lifetime earnings of $\$ 4.6$ million, over $\$ 1$ million more than than a similarly educated White family in the lowest tercile of years of full-time work. Even for families within the same tercile of years of full-time work, education makes a significant difference; this is particularly true for those in the lowest tercile of years of full-time work, where households with two college graduates earn more than twice as much as households with two high school graduates.

### 6.2 Business ownership

Business ownership is the second factor affecting compensation that this paper explores. Table 8 shows that about one-fifth of White and "other" race households own a business in which they have an active or non-active management role. This rate is significantly lower for Black and Hispanic households at 7.5 percent and 9.7 percent, respectively. White and "other" race households also have the highest shares of ownership of businesses with values greater than or equal to $\$ 200,000, \$ 500,000$, and $\$ 1$ million. Hispanic households are less than half as likely to own a business of each value compared with White and "other" race households, while Black households are even less likely. About 2 percent of Black households own businesses valued at or above $\$ 200,000$, about 1 percent own businesses valued at or above $\$ 500,000$, and only 0.5 percent own businesses valued at or above $\$ 1$ million. Table 9 shows the distribution of lifetime earnings by business ownership and value. Owning a business increases mean household lifetime earnings (conditional on nonzero earnings) by more than $\$ 800,000$. This outcome varies meaningfully by business value; owning a business worth less than $\$ 200,000$ adds about $\$ 480,000$ to the average household lifetime earnings relative to not owning a business, while owning a business valued at or above $\$ 200,000$ adds about $\$ 1.3$ million to average household lifetime earnings.

[^9]
## 7 Decomposing Racial Disparities in Lifetime Earnings

Across all model specifications, we find that the lifetime-earnings gap between Black and White non-Hispanic respondents and between Hispanic and White non-Hispanic respondents is statistically significant. We also find that the composition effect between Black and White non-Hispanic respondents and between Hispanic and White non-Hispanic respondents is statistically significant. Additionally, the composition effect accounted for the majority of the gap in earnings for all specifications, except for the 90th percentile and beyond, as depicted in Figure 6 for the RIF regression. ${ }^{15}$

In Table 10, we decompose the lifetime-earnings gaps between White and Black respondents using an RIF regression for a parsimonious model that includes only human capital characteristics for the respondent. Human capital characteristics are years of full-time employment, age, education, and occupation. ${ }^{16}$ We find that the human capital covariates explain 54 to 80 percent of the overall lifetime-earnings gap between Black and White respondents. Years of full-time employment account for the largest share of the explained portion of the earnings gap at the bottom of the distribution, up to the 30th percentile, with a consistently decreasing share across the distribution. For the top of the earnings distribution, respondents' education level accounts for 58 percent of the explained portion of the earnings gap. The share decreases for lower levels of earnings to 38 percent at the 15 th percentile. Occupation also accounts for a significant share of the earnings gap, with the highest relative share, 18 percent, at the top of the distribution. Moving down the distribution, the share consistently falls, dropping to 4 percent at the 15 th percentile. We find that age does not significantly explain the overall earnings gap between White and Black respondents.

We also apply an RIF regression including human capital covariates to examine the lifetime-earnings gap between White and Hispanic respondents. We present the results in Table 11. ${ }^{17}$ The majority of the earnings gap between White and Hispanic respondents is

[^10]explained by the included covariates, with the smallest shares at the top of the distribution. Educational differences account for most of the overall explained portion of the earnings gap. The highest share, 74 percent, is at the 15 th percentile, and the lowest share, 52 percent, is at the 85 th percentile. Years of full-time employment account for the secondhighest share of the explained lifetime-earnings gap for the majority of the distribution. At the 15th percentile, years of full-time employment account for 37 percent of the explained earnings gap, and the share decreases to 15 percent at the top of the earnings distribution. For respondents at the 85th percentile, occupation differences account for the second-largest share of the explained gap ( 20 percent), and differences in occupation reduce the overall earnings gap at the bottom of the distribution. ${ }^{18}$ We find that differences in age account for a significant share of the explained portion of the earnings gap, particularly at the top of the distribution. At the 85th percentile, age accounts for 14 percent of the explained portion of the earnings gap, and this share consistently falls along the distribution, landing at -4 percent at the 15 th percentile and showing weak significance at the 15 th and 30 th percentiles.

In Table 12, we include a richer set of covariates to examine other factors that might explain the lifetime-earnings gap between White and Black respondents. Additional covariates include the respondent and spouse's annual earnings from the preceding year, the number of children in the household, an indicator for nonprimary family members living in the household, the presence of health insurance, marriage status, and labor union participation. When we include the additional covariates, years of full-time employment and education level account for most of the explained earnings gap across the distribution, consistent with the model with only human capital covariates. We find that differences in the presence of health insurance account for a significant portion of the explained earnings gap for the bottom half of the distribution, from 5 percent at the 50 th percentile to 10 percent at the 15 th percentile. Annual spousal earnings are also important in explaining lifetime-earnings gaps at the bottom of the distribution, from 3 to 4 percent, but up to the 30 th percentile. Age also accounts for a portion of the explained earnings gap, but the importance is inconsistent

[^11]across the distribution.
For the lifetime-earnings gap between White and Hispanic households, we provide a detailed decomposition in Table 13 with the same set of covariates used for the White-Black gap. As with the parsimonious model, we find that most of the explained earnings gap between White and Hispanic respondents is accounted for by differences in years of fulltime employment and education. Differences in respondent age also account for a significant portion of the explained earnings gap. As in our analysis of the White-Black gap, we find that differences in the presence of health insurance are important for the bottom half of the lifetime-earnings distribution but account for a higher share of the explained earnings gap. We find weak significance for spousal earnings' accounting for a portion of the explained earnings gap and find inconsistent importance across the distribution for the number of children in contributing to the explained earnings gap.

Table 14 compares the results for the total share explained and the key covariates for specifications with and without the business-ownership indicator. Adding the business-ownership indicator increases the total explained share by 2 to 3 percent. For both the White-Black and White-Hispanic decompositions, but particularly for the White-Black decomposition, business ownership contributes a higher percentage of the explained share toward the top of the lifetime-earnings distribution; its contribution increases from 5.4 percent to 8.4 percent from the 15 th percentile to the 85 th percentile in the White-Black decomposition and from 3.1 percent to 5.4 percent from the 15 th percentile to the 85 th percentile in the WhiteHispanic decomposition. The overall share explained by our specification decreases at the higher end of the distribution, meaning that the additional explanatory power of business ownership among those percentiles is particularly notable. The explanatory contributions of other covariates highlighted in this table (education level, occupation, and years of fulltime work) remain large and significant when the business-ownership indicator is added. The share of the explained gap accounted for by each of these covariates shrinks slightly when the business-ownership indicator is added, but these declines should be interpreted cautiously because the total share explained increases.

As discussed by Barsky et al. (2002), the Oaxaca-Blinder decomposition may suffer from nontrivial misspecification error of the conditional expectation function. The authors there-
fore recommend a reweighting approach similar to that of DiNardo et al. (1996) to correct for the error. Figure 7 depicts the two-stage RIF decomposition across the earnings distribution when White respondents are reweighted using a probit regression. As in the non-reweighted model, the composition effect, explained, accounts for most of the overall lifetime-earnings gap between White and Black respondents and between White and Hispanic respondents. We find marginal differences between the RIF and two-stage RIF decomposition for the covariates' contribution to the explained portion of the earnings gaps; therefore, we limit our discussion of the two-stage RIF to the specification error as insights from the detailed decomposition results are less novel. Figure 8 further decomposes the composition effect between the pure composition effect (pure explained) and specification error. The specification error enables us to evaluate the performance of the reweighting procedure used to determine the composition effect. We find small specification errors across most of the distribution, and the two-stage RIF regression results presented in Tables 15 and 16 are consistent with the RIF decomposition results provided in Tables 10 and 11. Specification errors are smallest across the broad middle of the lifetime-earnings distribution and modestly larger in both tails.

## 8 Discussion and Policy Relevance

We find that racial gaps in household lifetime earnings are smaller than racial gaps in individual and household current earnings, but the former are still significant and large and merit further research to understand contributing factors. Our paper advances the literature on racial disparities in lifetime earnings by estimating an RIF decomposition using both a lifetime-earnings measure that is more robust than the measure some past research uses and the Survey of Consumer Finances, which provides a large sample and over-samples wealthy households. We also broaden the White-Black-gap focus that much of the existing literature adopts by exploring gaps among White, Black, Hispanic, and "other" race households. Finally, our paper generally considers lifetime earnings and covariates from a household perspective as opposed to an individual perspective, which provides a more complete and realistic picture of how people earn, spend, save, and build wealth.

White-Black and White-Hispanic household lifetime-earnings ratios are both about 1.6. We show descriptively that the number of workers in a household, current work status, years of full-time work, current job earnings, household education level, and business ownership all contribute positively to household lifetime earnings. White and Asian households tend to have higher values of these variables compared with Black and Hispanic households. The RIF decomposition results confirm the importance of human capital characteristics (such as years of full-time work, age, education level, and occupation). They account for a significant portion of both the White-Black and White-Hispanic explained lifetime-earnings gaps, whether alone or combined with other covariates.

For the White-Black lifetime-earnings gap, years of full-time work is most important for lifetime-earnings percentiles below the median, but this characteristic contributes progressively less to the explained gap at higher percentiles. Conversely, education level contributes the most to the explained gap at the highest percentiles and matters less for the lower percentiles. For the White-Hispanic lifetime-earnings gap, education level is by far the most significant factor, but both education and years of full-time work generally account for less of the explained gap at higher percentiles than at lower percentiles. Occupation and age play a more important role at higher percentiles than at lower percentiles. Apart from these factors, having health insurance and annual spousal earnings make the most notable contributions to the explained portion of the White-Hispanic lifetime-earnings gap, but their explanatory power wanes toward the top of the distribution. Including a business-owner indicator slightly dampens the effect of education, occupation, and years of full-time work, but these covariates remain important contributors to the explained gap. Business ownership makes a larger contribution at the higher end of the distribution, particularly in the White-Black decomposition (8.2 and 8.4 percent at the 70th and 85th percentiles, respectively), which is especially notable because the overall share explained decreases at these percentiles.

Given the importance of human capital factors, policies focused on increasing Black and Hispanic representation among college graduates and in high-paying jobs will be instrumental in closing the lifetime-earnings gap. Improvement in elementary- and secondary-school performance in math and science is particularly crucial, given the large share of high-paying occupations that are concentrated in technology-oriented sectors. The important role of
years of full-time work in accounting for explained racial disparities in lifetime earnings also points to a variety of potential policy implications. One of those would involve boosting labor force participation and reducing the amount of nonwork at the bottom of the earnings distribution, a policy implication that is also emphasized in the work of Bayer and Charles (2018) and Glover et al. (2023).

## Tables and Figures

Table 1: Respondent unemployment rate by race

|  | $\%$ |
| :--- | :---: |
| White | 5.1 |
| Black | 8.9 |
| Hispanic | 4.8 |
| Other Race | 7.2 |

Source: SCF 2007-2019
Note: Restricted to respondents aged 40-59, spouse/partner (if present) aged 30-65. Summary statistics are survey-weighted.

Table 2: Years full-time by respondent race

|  | Respondent |  | Spouse/partner |  |
| :--- | :---: | :---: | :---: | :---: |
| Mean Years Full-Time |  |  | Household |  |
| $\quad$ White | 27.2 |  | 12.3 |  |
| Black | 24.2 |  | 7.5 | 39.5 |
| Hispanic | 24.3 |  | 8.6 | 31.7 |
| Other Race | 23.8 |  |  | 32.9 |
| Median Years Full-Time |  | 10.7 | 34.5 |  |
| White | 28 |  |  |  |
| Black | 25 | 10 | 37 |  |
| Hispanic | 0 | 30 |  |  |
| Other Race | 25 | 0 | 30 |  |

## Source: SCF 2007-2019

Note: Restricted to respondents aged 40-59, spouse/partner (if present) aged 30-65. Summary statistics are survey-weighted.

Table 3: Household lifetime earnings (conditional on nonzero earnings) by household years full-time

| Years | Mean | Percentiles |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 15th | 30th | 50th | 70th | 85th |
| Single |  |  |  |  |  |  |
| 0 to 19 | 518,027 | 174,750 | 275,453 | 418,785 | 620,283 | 901,580 |
| 20 to 39 | 1,150,672 | 598,564 | 781,743 | 1,013,801 | 1,318,656 | 1,691,311 |
| 40 to 59 | 1,572,452 | 974,758 | 1,179,359 | 1,419,190 | 1,817,406 | 2,164,349 |
| Married/living with partner |  |  |  |  |  |  |
| 0 to 19 | 851,410 | 252,089 | 434,910 | 690,382 | 1,080,652 | 1,510,886 |
| 20 to 39 | 1,744,186 | 861,968 | 1,112,630 | 1,502,142 | 1,997,196 | 2,599,097 |
| 40 to 59 | 2,394,217 | 1,405,090 | 1,693,321 | 2,080,743 | 2,711,404 | 3,426,348 |
| 60 to 79 | 2,997,161 | 1,900,043 | 2,272,932 | 2,754,449 | 3,398,192 | 4,058,255 |
| 80+ | 3,333,917 | 2,375,674 | 2,859,190 | 3,049,934 | 3,660,695 | 4,283,419 |

Source: SCF 2007-2019
Note: Restricted to respondents aged 40-59, spouse/partner (if present) aged 30-65. Summary statistics are survey-weighted.

Table 4: Respondent and spouse/partner marital and work status share by respondent race

|  | Single |  |  | Married/living with partner |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Pop. <br> Share | Not <br> Working | Working | Pop. Share | Neither <br> Working | Working |  |
|  |  |  |  |  |  | Either | Both |
| White | 35.5\% | 8.6\% | 26.9\% | 64.5\% | 2.8\% | 19.8\% | 41.9\% |
| Black | 60.5\% | 17.5\% | 42.9\% | $39.5 \%$ | 2.7\% | 12.9\% | 24.0\% |
| Hispanic | 35.0\% | 7.3\% | 27.7\% | 65.0\% | 3.1\% | 27.6\% | 34.3\% |
| Other Race | 25.9\% | 6.7\% | 19.2\% | 74.1\% | 2.9\% | 26.8\% | 44.4\% |

Source: SCF 2007-2019
Note: Restricted to respondents aged 40-59, spouse/partner (if present) aged 30-65. Summary statistics are survey-weighted. Single denotes the respondent is neither married nor living with a partner.

Figure 1: Current job earnings (IHS) by race; conditional on earnings $>0$


Source: SCF 2007-2019.
Note: Restricted to respondents aged 40-59, spouse/partner (if present) aged 30-65. Kernel densities are survey-weighted.

Figure 2: Household earnings (wage income, IHS) by respondent race; conditional on earnings $>0$


Source: SCF 2007-2019.
Note: Restricted to respondents aged 40-59, spouse/partner (if present) aged 30-65. Kernel densities are survey-weighted.

Table 5: Mean earnings by race of respondent and earnings definition

|  | Respondent |  | Household |  |
| :--- | :---: | :--- | :--- | :--- |
|  | Annual |  |  | Lifetime |
| Mean earnings |  |  |  |  |
| White | 75,276 | 105,374 |  |  |
| Black | 39,458 | 51,411 |  |  |
| Hispanic | 42,660 | 57,862 |  |  |
| Other Race | 88,821 | 125,056 |  |  |
| Mean earnings, nonzero earnings |  |  |  |  |
| White | 98,876 | 122,393 | $1,974,869$ |  |
| Black | 55,184 | 63,950 | $1,265,390$ |  |
| Hispanic | 54,399 | 66,823 | $1,207,491$ |  |
| Other Race | 113,021 | 138,961 | $2,005,165$ |  |

Source: SCF 2007-2019
Note: Restricted to respondents aged 40-59, spouse/partner (if present) aged 3065. Summary statistics are survey-weighted. The respondent's annual earnings are from their current job, and the household annual earnings are from wage income. Lifetime earnings estimates are available only for households with nonzero earnings.

Figure 3: Mean and median earnings ratios


Source: SCF 2007-2019.
Note: Restricted to respondents aged 40-59, spouse/partner (if present) aged 30-65. Summary statistics are survey-weighted.

Figure 4: Household lifetime earnings (IHS) by respondent race; conditional on earnings $>0$


Source: SCF 2007-2019.
Note: Restricted to respondents aged 40-59, spouse/partner (if present) aged 30-65. Kernel densities are survey-weighted.

Table 6: Household education by respondent race

|  | White | Black | Hispanic | Other Race |
| :---: | :---: | :---: | :---: | :---: |
| Neither married nor living with partner | 35.5\% | 60.5\% | 35.0\% | 25.9\% |
| HS diploma or less | 12.7\% | 25.3\% | 19.1\% | 9.1\% |
| Some college | 11.1\% | 21.0\% | 8.7\% | 6.7\% |
| Bachelor's or higher | 11.7\% | 14.2\% | 7.2\% | 10.1\% |
| Married/living with partner | 64.5\% | 39.5\% | 65.0\% | 74.1\% |
| Both R and SP have HS diploma or less | 12.5\% | 11.3\% | 36.4\% | 7.2\% |
| Either R or SP has some college* | 10.2\% | 8.7\% | 10.7\% | 6.6\% |
| Both R and SP have some college | 6.5\% | 4.0\% | 4.2\% | 4.8\% |
| Either R or SP has bachelor's or higher* | 8.6\% | 6.3\% | 5.0\% | 9.1\% |
| Both R and SP have bachelor's or higher | 26.6\% | 9.2\% | 8.6\% | 46.4\% |

Source: SCF 2007-2019
Note: Restricted to respondents (R) aged 40-59, spouse/partner (SP) (if present) aged 30-65.
Summary statistics are survey-weighted.

* Partner has lower education.
Table 7: Household lifetime earnings (conditional on nonzero earnings) by household education

|  | Mean | Percentiles |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 15th | 30th | 50th | 70th | 85th |
| Single |  |  |  |  |  |  |
| High school diploma or GED | 828,546 | 382,554 | 574,332 | 788,997 | 1,026,068 | 1,276,274 |
| Bachelor's degree or higher | 1,524,432 | 865,390 | 1,088,654 | 1,398,174 | 1,745,313 | 2,136,772 |
| Married/living with partner |  |  |  |  |  |  |
| Both have high school diploma or GED | 1,724,676 | 1,090,061 | 1,343,606 | 1,666,255 | 2,024,553 | 2,399,341 |
| Either R or SP has bachelor's or higher* | 2,461,052 | 1,517,669 | 1,878,690 | 2,305,706 | 2,838,023 | 3,436,097 |
| Both have bachelor's or higher | 3,250,086 | 1,938,133 | 2,417,681 | 3,030,135 | 3,684,019 | 4,362,102 |
| Source: SCF 2007-2019 |  |  |  |  |  |  |

Figure 5: Household lifetime earnings (conditional on earnings $>0$ ) by household education and years of full-time work for White, married/living with partner households with respondent aged 55-59


Source: SCF 2007-2019.
Note: Restricted to respondents aged 55-59, spouse/partner (if present) aged 30-65. Summary statistics are survey-weighted.

Table 8: Business ownership and value by race

|  | Business owner | Business value $\geq$ |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  | \$200,000 | \$500,000 | \$1 million |
| White | 19.5\% | 7.8\% | 5.4\% | 3.4\% |
| Black | 7.5\% | 1.9\% | 0.9\% | 0.5\% |
| Hispanic | 9.7\% | 3.0\% | 2.0\% | 1.0\% |
| Other Race | 19.2\% | 8.6\% | 6.1\% | 3.1\% |

Source: SCF 2007-2019
Note: Restricted to respondents aged 40-59, spouse/partner (if present) aged 30-65. Summary statistics are survey-weighted. Business ownership denotes the household owns a business in which they have an active or non-active management role. The total value of business(es) included businesses the household owns and has either an active or non-active management role in.

Table 9: Household lifetime earnings (conditional on nonzero earnings) by business ownership status and business value


Source: SCF 2007-2019
Note: Restricted to respondents aged 40-59, spouse/partner (if present) aged 30-65. Summary statistics are survey-weighted. Business ownership denotes the household owns a business in which they have an active or non-active management role. The total value of business(es) included businesses the household owns and has either an active or non-active management role in.
Table 10: Decomposition of White-Black lifetime earnings for the respondent-Human capital characteristics only

| Percentiles | 15th | Share | 30th | Share | 50th | Share | 70th | Share | 85th | Share |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| IHS(Lifetime earnings for the respondent) |  |  |  |  |  |  |  |  |  |  |
| White non-Hispanic | $\begin{gathered} 14.240^{* * *} \\ (0.03) \end{gathered}$ |  | $\begin{gathered} 14.532^{* * *} \\ (0.02) \end{gathered}$ |  | $\begin{gathered} 14.813^{* * *} \\ (0.01) \end{gathered}$ |  | $\begin{gathered} 15.047^{* * *} \\ (0.02) \end{gathered}$ |  | $\begin{gathered} 15.347^{* * *} \\ (0.02) \end{gathered}$ |  |
| Black | $\begin{gathered} 13.769^{* * *} \\ (0.09) \end{gathered}$ |  | $\begin{gathered} 14.127^{* * *} \\ (0.06) \end{gathered}$ |  | $\begin{gathered} 14.380^{* * *} \\ (0.02) \end{gathered}$ |  | $\begin{gathered} 14.712^{* * *} \\ (0.05) \end{gathered}$ |  | $\begin{gathered} 14.996^{* * *} \\ (0.02) \end{gathered}$ |  |
| Difference | $\begin{gathered} 0.471^{* * *} \\ (0.09) \end{gathered}$ |  | $\begin{gathered} 0.405^{* * *} \\ (0.06) \end{gathered}$ |  | $\begin{gathered} 0.433^{* * *} \\ (0.03) \end{gathered}$ |  | $\begin{gathered} 0.335^{* * *} \\ (0.05) \end{gathered}$ |  | $\begin{gathered} 0.351^{* * *} \\ (0.03) \end{gathered}$ |  |
| Explained | $\begin{gathered} 0.375 * * * \\ (0.05) \end{gathered}$ | 79.6\% | $\begin{gathered} 0.296^{* * *} \\ (0.03) \end{gathered}$ | 73.1\% | $\begin{gathered} 0.234^{* * *} \\ (0.02) \end{gathered}$ | 54.0\% | $\begin{gathered} 0.252^{* * *} \\ (0.03) \end{gathered}$ | $75.2 \%$ | $\begin{gathered} 0.255^{* * *} \\ (0.03) \end{gathered}$ | 72.6\% |
| Unexplained | $\begin{aligned} & 0.096 \\ & (0.08) \end{aligned}$ | $20.4 \%$ | $\begin{gathered} 0.109^{* *} \\ (0.05) \end{gathered}$ | $26.9 \%$ | $\begin{gathered} 0.198^{* *} * \\ (0.03) \end{gathered}$ | 45.7\% | $\begin{gathered} 0.082^{*} \\ (0.04) \end{gathered}$ | $24.5 \%$ | $\begin{gathered} 0.097^{* * *} \\ (0.03) \end{gathered}$ | 27.6\% |
| Explained |  |  |  |  |  |  |  |  |  |  |
| Years of full-time work | $\begin{gathered} 0.221^{* * *} \\ (0.04) \end{gathered}$ | 58.9\% | $\begin{gathered} 0.139^{* * *} \\ (0.02) \end{gathered}$ | 47.0\% | $\begin{gathered} 0.098^{* * *} \\ (0.02) \end{gathered}$ | 41.9\% | $\begin{gathered} 0.082^{* * *} \\ (0.01) \end{gathered}$ | $32.5 \%$ | $\begin{gathered} 0.059^{* * *} \\ (0.01) \end{gathered}$ | 23.1\% |
| Age | $\begin{aligned} & -0.001 \\ & (0.01) \end{aligned}$ | -0.3\% | $\begin{aligned} & 0.001 \\ & (0.00) \end{aligned}$ | 0.3\% | $\begin{aligned} & 0.001 \\ & (0.01) \end{aligned}$ | 0.4\% | $\begin{aligned} & 0.001 \\ & (0.01) \end{aligned}$ | 0.4\% | $\begin{aligned} & 0.002 \\ & (0.01) \end{aligned}$ | 0.8\% |
| Education | $\begin{gathered} 0.142^{* * *} \\ (0.02) \end{gathered}$ | $37.9 \%$ | $\begin{gathered} 0.124^{* * *} \\ (0.01) \end{gathered}$ | 41.9\% | $\begin{gathered} 0.107^{* * *} \\ (0.01) \end{gathered}$ | 45.7\% | $\begin{gathered} 0.133^{* * *} \\ (0.02) \end{gathered}$ | $52.8 \%$ | $\begin{gathered} 0.149^{* * *} \\ (0.02) \end{gathered}$ | 58.4\% |
| Occupation | $\begin{aligned} & 0.013 \\ & (0.01) \end{aligned}$ | 3.5\% | $\begin{gathered} 0.031^{* * *} \\ (0.01) \end{gathered}$ | 10.5\% | $\begin{gathered} 0.028^{* * *} \\ (0.01) \end{gathered}$ | 12.0\% | $\begin{gathered} 0.036^{* * *} \\ (0.01) \end{gathered}$ | 14.3\% | $\begin{gathered} 0.045^{* * *} \\ (0.01) \end{gathered}$ | 17.6\% |
| Observations |  |  |  |  |  |  |  |  |  |  |
| White non-Hispanic | 1515 |  | 1515 |  | 1515 |  | 1515 |  | 1515 |  |
| Black | 294 |  | 294 |  | 294 |  | 294 |  | 294 |  |
| Total | 1809 |  | 1809 |  | 1809 |  | 1809 |  | 1809 |  |

[^12]Table 11: Decomposition of White-Hispanic lifetime earnings for the respondent-Human capital characteristics only

| Percentiles | 15th | Share | 30th | Share | 50th | Share | 70th | Share | 85th | Share |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| IHS(Lifetime earnings for the respondent) |  |  |  |  |  |  |  |  |  |  |
| White non-Hispanic | $\begin{gathered} 14.240^{* * *} \\ (0.03) \end{gathered}$ |  | $\begin{gathered} 14.532^{* * *} \\ (0.02) \end{gathered}$ |  | $\begin{gathered} 14.813^{* * *} \\ (0.01) \end{gathered}$ |  | $\begin{gathered} 15.047^{* * *} \\ (0.02) \end{gathered}$ |  | $\begin{gathered} 15.347^{* * *} \\ (0.02) \end{gathered}$ |  |
| Hispanic | $\begin{gathered} 13.858^{* * *} \\ (0.08) \end{gathered}$ |  | $\begin{gathered} 14.162^{* * *} \\ (0.05) \end{gathered}$ |  | $\begin{gathered} 14.393^{* * *} \\ (0.04) \end{gathered}$ |  | $\begin{gathered} 14.660^{* * *} \\ (0.04) \end{gathered}$ |  | $\begin{gathered} 14.901^{* * *} \\ (0.03) \end{gathered}$ |  |
| Difference | $\begin{gathered} 0.382^{* * *} \\ (0.07) \end{gathered}$ |  | $\begin{gathered} 0.369^{* * *} \\ (0.05) \end{gathered}$ |  | $\begin{gathered} 0.420^{* * *} \\ (0.04) \end{gathered}$ |  | $\begin{gathered} 0.387^{* * *} \\ (0.04) \end{gathered}$ |  | $\begin{gathered} 0.447^{* * *} \\ (0.04) \end{gathered}$ |  |
| Explained | $\begin{gathered} 0.395^{* *} * \\ (0.06) \end{gathered}$ | 103.4\% | $\begin{gathered} 0.364^{* * *} \\ (0.04) \end{gathered}$ | 98.6\% | $\begin{gathered} 0.270^{* * *} \\ (0.03) \end{gathered}$ | 64.3\% | $\begin{gathered} 0.276^{* * *} \\ (0.03) \end{gathered}$ | 71.3\% | $\begin{gathered} 0.261^{* * *} \\ (0.03) \end{gathered}$ | $58.4 \%$ |
| Unexplained | $\begin{aligned} & -0.013 \\ & (0.07) \end{aligned}$ | -3.4\% | $\begin{aligned} & 0.006 \\ & (0.04) \end{aligned}$ | 1.6\% | $\begin{gathered} 0.150^{* * *} \\ (0.03) \end{gathered}$ | $35.7 \%$ | $\begin{gathered} 0.111^{* * *} \\ (0.04) \end{gathered}$ | 28.7\% | $\begin{gathered} 0.185^{* * *} \\ (0.04) \end{gathered}$ | $41.4 \%$ |
| Explained |  |  |  |  |  |  |  |  |  |  |
| Years of full-time work | $\begin{gathered} 0.146^{* * *} \\ (0.04) \end{gathered}$ | 37.0\% | $\begin{gathered} 0.091^{* * *} \\ (0.02) \end{gathered}$ | 25.0\% | $\begin{gathered} 0.064^{* * *} \\ (0.01) \end{gathered}$ | 23.7\% | $\begin{gathered} 0.054^{* * *} \\ (0.01) \end{gathered}$ | 19.6\% | $\begin{gathered} 0.039^{* * *} \\ (0.01) \end{gathered}$ | 14.9\% |
| Age | $\begin{gathered} -0.017^{*} \\ (0.01) \end{gathered}$ | -4.3\% | $\begin{gathered} 0.012^{*} \\ (0.01) \end{gathered}$ | $3.3 \%$ | $\begin{gathered} 0.027^{* * *} \\ (0.01) \end{gathered}$ | 10.0\% | $\begin{gathered} 0.027^{* * *} \\ (0.01) \end{gathered}$ | 9.8\% | $\begin{gathered} 0.036^{* * *} \\ (0.01) \end{gathered}$ | 13.8\% |
| Education | $\begin{gathered} 0.292^{* * *} \\ (0.05) \end{gathered}$ | $73.9 \%$ | $\begin{gathered} 0.250^{* * *} \\ (0.03) \end{gathered}$ | 68.7\% | $\begin{gathered} 0.162^{* * *} \\ (0.02) \end{gathered}$ | 60.0\% | $\begin{gathered} 0.145^{* * *} \\ (0.02) \end{gathered}$ | $52.5 \%$ | $\begin{gathered} 0.135^{* * *} \\ (0.02) \end{gathered}$ | 51.7\% |
| Occupation | $\begin{gathered} -0.026^{* *} \\ (0.01) \\ \hline \end{gathered}$ | -6.6\% | $\begin{aligned} & 0.010 \\ & (0.01) \\ & \hline \end{aligned}$ | 2.7\% | $\begin{gathered} 0.018^{* *} \\ (0.01) \end{gathered}$ | 6.7\% | $\begin{gathered} 0.050^{* * *} \\ (0.01) \end{gathered}$ | 18.1\% | $\begin{gathered} 0.051^{* * *} \\ (0.01) \\ \hline \end{gathered}$ | 19.5\% |
| Observations |  |  |  |  |  |  |  |  |  |  |
| White non-Hispanic | 1515 |  | 1515 |  | 1515 |  | 1515 |  | 1515 |  |
| Hispanic | 243 |  | 243 |  | 243 |  | 243 |  | 243 |  |
| Total | 1758 |  | 1758 |  | 1758 |  | 1758 |  | 1758 |  |

[^13]Table 12: Decomposition of White-Black lifetime earnings for the respondent

Note: Results are survey-weighted and use the 2019 SCF survey wave. Imputation and sample variance corrected standard errors in parentheses. Five imputations and 999 bootstrapped samples were used. Age, education, and occupation were grouped for decomposition.
Table 12: Decomposition of White-Black lifetime earnings for the respondent (Cont.)

| Percentiles | 15th | Share | 30th | Share | 50th | Share | 70th | Share | 85th | Share |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Union | -0.001 | -0.3\% | -0.000 | 0.0\% | -0.001 | -0.4\% | 0.002 | 0.8\% | 0.003 | 1.2\% |
|  | (0.00) |  | (0.00) |  | (0.00) |  | (0.00) |  | (0.00) |  |
| Age | -0.000 | 0.0\% | 0.001 | 0.3\% | 0.002 | 0.9\% | 0.002 | 0.8\% | 0.002 | 0.8\% |
|  | (0.00) |  | (0.01) |  | (0.01) |  | (0.01) |  | (0.01) |  |
| Education | $0.128^{* * *}$ | $32.3 \%$ | 0.109*** | 34.6\% | 0.098*** | 42.6\% | $0.125^{* * *}$ | $50.8 \%$ | $0.142^{* * *}$ | 56.3\% |
|  | (0.02) |  | (0.01) |  | (0.01) |  | (0.02) |  | (0.02) |  |
| Occupation | 0.004 | 1.0\% | $0.021^{* * *}$ | 6.7\% | $0.017^{* * *}$ | 7.4\% | 0.022** | 8.9\% | 0.033*** | $13.1 \%$ |
|  | (0.01) |  | (0.01) |  | (0.01) |  | (0.01) |  | (0.01) |  |
| Observations |  |  |  |  |  |  |  |  |  |  |
| White non-Hispanic | 1515 |  | 1515 |  | 1515 |  | 1515 |  | 1515 |  |
| Black | 294 |  | 294 |  | 294 |  | 294 |  | 294 |  |
| Total | 1809 |  | 1809 |  | 1809 |  | 1809 |  | 1809 |  |

[^14]Table 13: Decomposition of White-Hispanic lifetime earnings for the respondent

| Percentiles | 15th | Share | 30th | Share | 50th | Share | 70th | Share | 85th | Share |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| IHS(Lifetime earnings for the respondent) |  |  |  |  |  |  |  |  |  |  |
| White non-Hispanic | 14.240*** |  | 14.532*** |  | 14.813*** |  | 15.047*** |  | 15.347*** |  |
|  | (0.03) |  | (0.02) |  | (0.01) |  | (0.02) |  | (0.02) |  |
| Hispanic | 13.858*** |  | 14.162*** |  | 14.393*** |  | 14.660*** |  | 14.901*** |  |
|  | (0.08) |  | (0.05) |  | (0.04) |  | (0.04) |  | (0.03) |  |
| Difference | 0.382*** |  | 0.369*** |  | 0.420*** |  | 0.387*** |  | $0.447^{* * *}$ |  |
|  | (0.07) |  | (0.05) |  | (0.04) |  | (0.04) |  | (0.04) |  |
| Explained | $0.433^{* * *}$ | 113.4\% | 0.395*** | 107.0\% | $0.286^{* * *}$ | 68.1\% | 0.287*** | 74.2\% | $0.246^{* * *}$ | 55.0\% |
|  | (0.07) |  | (0.04) |  | (0.03) |  | (0.03) |  | (0.03) |  |
| Unexplained | -0.051 | -13.4\% | -0.026 | -7.0\% | 0.134*** | $31.9 \%$ | 0.100*** | 25.8\% | 0.200*** | 44.7\% |
|  | (0.08) |  | (0.04) |  | (0.03) |  | (0.04) |  | (0.04) |  |
| Explained |  |  |  |  |  |  |  |  |  |  |
| IHS(Respondent annual earnings) | 0.000 | 0.0\% | 0.000 | 0.0\% | 0.000 | 0.0\% | 0.000 | 0.0\% | 0.000 | 0.0\% |
|  | (0.00) |  | (0.00) |  | (0.00) |  | (0.00) |  | (0.00) |  |
| IHS(Spouse annual earnings) | 0.007* | 1.6\% | 0.007* | 1.8\% | 0.004 | 1.4\% | 0.003 | 1.0\% | -0.001 | -0.4\% |
|  | (0.00) |  | (0.00) |  | (0.00) |  | (0.00) |  | (0.00) |  |
| No. of Children | -0.005 | -1.2\% | -0.010** | -2.5\% | -0.004 | -1.4\% | -0.004 | -1.4\% | $-0.021^{* * *}$ | -8.5\% |
|  | (0.01) |  | (0.00) |  | (0.00) |  | (0.00) |  | (0.01) |  |
| Nonprimary family living in household | 0.004 | 0.9\% | 0.002 | 0.5\% | 0.004 | 1.4\% | 0.004 | 1.4\% | -0.001 | -0.4\% |
|  | (0.01) |  | (0.00) |  | (0.00) |  | (0.00) |  | (0.01) |  |
| Has health insurance | 0.050*** | 11.5\% | 0.049*** | 12.4\% | 0.014** | 4.9\% | 0.008 | 2.8\% | 0.003 | 1.2\% |
|  | (0.02) |  | (0.01) |  | (0.01) |  | (0.01) |  | (0.01) |  |
| Divorced | 0.001 | 0.2\% | 0.003 | 0.8\% | 0.003 | 1.0\% | 0.003 | 1.0\% | 0.003 | 1.2\% |
|  | (0.00) |  | (0.00) |  | (0.00) |  | (0.00) |  | (0.00) |  |
| Years of full-time work | 0.138*** | 31.9\% | 0.083*** | 21.0\% | 0.059*** | 20.6\% | 0.048*** | 16.7\% | 0.036*** | 14.6\% |
|  | (0.04) |  | (0.02) |  | (0.01) |  | (0.01) |  | (0.01) |  |

Table 13: Decomposition of White-Hispanic lifetime earnings for the respondent (Cont.)

| Percentiles | 15th | Share | 30th | Share | 50th | Share | 70th | Share | 85th | Share |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Union | 0.000 | 0.0\% | 0.000 | 0.0\% | 0.000 | 0.0\% | -0.000 | 0.0\% | -0.000 | 0.0\% |
|  | (0.00) |  | (0.00) |  | (0.00) |  | (0.00) |  | (0.00) |  |
| Age | -0.011 | -2.5\% | 0.019** | 4.8\% | 0.031*** | 10.8\% | 0.032*** | 11.1\% | $0.043^{* * *}$ | $17.5 \%$ |
|  | (0.01) |  | $(0.01)$ |  | (0.01) |  | (0.01) |  | (0.01) |  |
| Education | $0.270^{* * *}$ | 62.4\% | $0.228^{* * *}$ | 57.7\% | $0.147^{* * *}$ | 51.4\% | $0.134^{* * *}$ | 46.7\% | $0.128^{* * *}$ | $52.0 \%$ |
|  | (0.05) |  | (0.03) |  | (0.02) |  | (0.02) |  | (0.02) |  |
| Occupation | -0.022* | -5.1\% | 0.015* | 3.8\% | $0.027^{* * *}$ | 9.4\% | 0.059*** | 20.6\% | $0.056^{* * *}$ | 22.8\% |
|  | (0.01) |  | (0.01) |  | (0.01) |  | (0.01) |  | (0.01) |  |
| Observations |  |  |  |  |  |  |  |  |  |  |
| White non-Hispanic | 1515 |  | 1515 |  | 1515 |  | 1515 |  | 1515 |  |
| Hispanic | 243 |  | 243 |  | 243 |  | 243 |  | 243 |  |
| Total | 1758 |  | 1758 |  | 1758 |  | 1758 |  | 1758 |  |
| Bootstrapped Samples | 999 |  | 999 |  | 999 |  | 999 |  | 999 |  |

[^15]Table 14: Effect of business ownership on lifetime-earnings gaps-Total explained and key covariates

| Percentiles | 15th | Share | 30th | Share | 50th | Share | 70th | Share | 85th | Share |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Panel A: Decomposition of White-Black lifetime earnings for the respondent |  |  |  |  |  |  |  |  |  |  |
| With business owner indicator |  |  |  |  |  |  |  |  |  |  |
| Total explained ${ }^{\diamond}$ | 0.407*** | 86.4\% | $0.323^{* * *}$ | 79.8\% | 0.240*** | 55.4\% | 0.257*** | 76.7\% | 0.263*** | 74.9\% |
| Business owner | 0.022*** | 5.4\% | 0.016*** | 5.0\% | 0.020*** | 8.3\% | 0.021*** | 8.2\% | 0.022*** | 8.4\% |
| Education | 0.125*** | 30.7\% | 0.108*** | $33.4 \%$ | 0.096*** | 40.0\% | 0.123*** | 47.9\% | 0.140*** | $53.2 \%$ |
| Occupation | -0.004 | -1.0\% | 0.015** | 4.6\% | 0.010 | 4.2\% | 0.015 | 5.8\% | 0.025** | 9.5\% |
| Years of full-time work | 0.207*** | 50.9\% | $0.125^{* * *}$ | $38.7 \%$ | 0.088*** | $36.7 \%$ | 0.072*** | 28.0\% | 0.053*** | 20.2\% |
| Without business owner indicator |  |  |  |  |  |  |  |  |  |  |
| Total explained ${ }^{\diamond}$ | 0.396 ${ }^{* * *}$ | 84.1\% | $0.315^{* * *}$ | 77.8\% | 0.230*** | 53.1\% | 0.246*** | 73.4\% | 0.252*** | 71.8\% |
| Education | 0.128*** | $32.3 \%$ | 0.109*** | $34.6 \%$ | $0.098 * * *$ | 42.6\% | 0.125*** | 50.8\% | 0.142*** | $56.3 \%$ |
| Occupation | 0.004 | 1.0\% | 0.021*** | 6.7\% | 0.017*** | 7.4\% | 0.022** | 8.9\% | 0.033*** | 13.1\% |
| Years of full-time work | 0.209*** | 52.8\% | $0.126^{* * *}$ | 40.0\% | 0.090*** | 39.1\% | 0.074*** | 30.1\% | 0.055*** | 21.8\% |
| Panel B: Decomposition of White-Hispanic lifetime earnings for the respondent |  |  |  |  |  |  |  |  |  |  |
| With business owner indicator |  |  |  |  |  |  |  |  |  |  |
| Total explained ${ }^{\diamond}$ | 0.445*** | 116.5\% | 0.404*** | 109.5\% | 0.297*** | 70.7\% | 0.299*** | 77.3\% | 0.258*** | 57.7\% |
| Business owner | 0.014*** | 3.1\% | 0.010*** | 2.5\% | 0.012*** | 4.0\% | 0.013*** | 4.3\% | 0.014** | 5.4\% |
| Education | 0.268*** | $60.2 \%$ | $0.227^{* * *}$ | $56.2 \%$ | $0.146^{* * *}$ | 49.2\% | 0.133*** | 44.5\% | $0.127^{* * *}$ | 49.2\% |
| Occupation | -0.023** | -5.2\% | 0.014* | 3.5\% | $0.026^{* * *}$ | 8.8\% | 0.058*** | 19.4\% | 0.055*** | $21.3 \%$ |
| Years of full-time work | 0.136 ${ }^{* * *}$ | 30.6\% | 0.082*** | 20.3\% | 0.058*** | 19.5\% | 0.047*** | 15.7\% | 0.035*** | 13.6\% |
| Without business owner indicator |  |  |  |  |  |  |  |  |  |  |
| Total explained ${ }^{\diamond}$ | 0.433 ${ }^{* * *}$ | 113.4\% | 0.395*** | 107.0\% | 0.286*** | 68.1\% | 0.287*** | 74.2\% | $0.246^{* * *}$ | 55.0\% |
| Education | 0.270*** | $62.4 \%$ | 0.228*** | 57.7\% | $0.147^{* * *}$ | $51.4 \%$ | 0.134*** | 46.7\% | $0.128^{* * *}$ | $52.0 \%$ |
| Occupation | -0.022* | -5.1\% | 0.015* | 3.8\% | $0.027^{* * *}$ | 9.4\% | 0.059*** | 20.6\% | 0.056*** | 22.8\% |
| Years of full-time work | $0.138^{* * *}$ | 31.9\% | 0.083*** | 21.0\% | 0.059*** | 20.6\% | 0.048*** | 16.7\% | 0.036*** | 14.6\% |

Note: Results are survey-weighted and use the 2019 SCF survey wave. Imputation and sample variance corrected standard errors in parentheses. Five imputations and 999 bootstrapped samples were used. Age, education, and occupation were grouped for decomposition. For select variables, contributions and shares are provided. ${ }^{* * *} p<0.01,{ }^{* *} p<0.05,{ }^{*} p<0.1$
${ }^{\bullet}$ Contributions and shares are of the overall difference in lifetime-earnings gaps are provided.
Table 15: Two-stage decomposition of White-Black lifetime earnings for the respondent-Human capital characteristics only

Note: Results are survey-weighted and use the 2019 SCF survey wave. Imputation and sample variance corrected standard errors in parentheses. Five imputations ${ }_{* * *} 999$ bootstrapped samples were used. Age, education, and occupation were grouped for decomposition.

| Percentiles | 15th | Share | 30th | Share | 50th | Share | 70th | Share | 85th | Share |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Education | $0.140^{* * *}$ | 36.7\% | 0.123*** | 40.9\% | $0.106^{* * *}$ | 44.0\% | $\begin{gathered} 0.131^{* * *} \\ (0.02) \end{gathered}$ | 51.4\% | $0.146^{* * *}$ | $56.4 \%$ |
| Occupation | (0.02) |  | (0.01) |  | (0.01) |  |  |  | (0.02) |  |
|  | 0.015* | 3.9\% | 0.031*** | 10.3\% | 0.027*** | 11.2\% | 0.033*** | 12.9\% | 0.042*** | 16.2\% |
|  | (0.01) |  | (0.01) |  | (0.01) |  | (0.01) |  | (0.01) |  |
| Observations |  |  |  |  |  |  |  |  |  |  |
| White non-Hispanic | 1515 |  | 1515 |  | 1515 |  | 1515 |  | 1515 |  |
| Black | 294 |  | 294 |  | 294 |  | 294 |  | 294 |  |
| Total | 1809 |  | 1809 |  | 1809 |  | 1809 |  | 1809 |  |

[^16]Table 16: Two-stage decomposition of White-Hispanic lifetime earnings for the respondent-Human capital characteristics only

Note: Results are survey-weighted and use the 2019 SCF survey wave. Imputation and sample variance corrected standard errors in parentheses. Five imputations and 999 bootstrapped samples were used. Age, education, and occupation were grouped for decomposition.


Figure 6: Aggregate Decomposition of the Lifetime-earnings Gap


Figure 7: Aggregate Two-stage Decomposition of the Lifetime-earnings Gap


Figure 8: Composition Effects of the Lifetime-earnings Gap


## References

Aliprantis, D., D. Carroll, and E. R. Young (2022). The dynamics of the racial wealth gap. Federal Reserve Bank of Cleveland Working Paper (19-18R).

Arias, E., B. Tejada-Vera, K. D. Kochanek, and F. B. Ahmad (2022). Provisional life expectancy estimates for 2021. Vital Statistics Rapid Release 23.

Barsky, R., J. Bound, K. K. Charles, and J. P. Lupton (2002). Accounting for the black-white wealth gap. Journal of the American Statistical Association 97(459), 663-673.

Bayer, P. and K. K. Charles (2018). Divergent paths: A new perspective on earnings differences between black and white men since 1940. The Quarterly Journal of Economics 133(3), 1459-1501.

Björklund, A. (1993). A comparison between actual distributions of annual and lifetime income: Sweden 1951-89. Review of Income and Wealth 39(4), 377-386.

Black, D., A. Haviland, S. Sanders, and L. Taylor (2006). Why do minority men earn less? A study of wage differentials among the highly educated. The Review of Economics and Statistics 88(2), 300-313.

Blackburn, M. L. (2004). The role of test scores in explaining race and gender differences in wages. Economics of Education Review 23(6), 555-576.

Blinder, A. S. (1973). Wage discrimination: Reduced form and structural estimates. Journal of Human resources, 436-455.

Böhlmark, A. and M. J. Lindquist (2006). Life-cycle variations in the association between current and lifetime income: Replication and extension for Sweden. Journal of Labor Economics 24 (4), 879-896.

Bricker, J., A. Henriques Volz, and K. B. Moore (2017). Updates to the sampling of wealthy families in the Survey of Consumer Finances.

Bricker, J. and J. Thompson (2016). Does education loan debt influence household financial distress? An assessment using the 2007-2009 Survey of Consumer Finances panel. Contemporary Economic Policy 34 (4), 660-677.

Brunello, G., G. Weber, and C. T. Weiss (2017). Books are forever: Early life conditions, education and lifetime earnings in Europe. The Economic Journal 127(600), 271-296.

Carnevale, A. P., B. Cheah, and S. J. Rose (2011). The college pay off: Education, occupations, lifetime earnings.

Charles, K. K. and J. Guryan (2008). Prejudice and wages: An empirical assessment of Becker's The Economics of Discrimination. Journal of political economy 116(5), 773-809.

Creamer, J. (2020). Inequalities persist despite decline in poverty for all major race and hispanic origin groups.

Czajka, J. L., J. E. Jacobson, and S. Cody (2003). Survey estimates of wealth: A comparative analysis and review of the Survey of Income and Program Participation. Soc. Sec. Bull. $65(1)$.

Dettling, L. J., J. W. Hsu, L. Jacobs, K. B. Moore, and J. P. Thompson (2017). Recent trends in wealth-holding by race and ethnicity: Evidence from the Survey of Consumer Finances.

DiNardo, J., N. M. Fortin, and T. Lemieux (1996). Labor market institutions and the distribution of wages, 1973-1992: A semiparametric approach. Econometrica 64 (5), 10011044.

Emeka, A. (2007). Race and lifetime earnings: Assessing the cumulative costs of minority status using cross-sectional data.

Fairlie, R. W. and W. A. Sundstrom (1997). The racial unemployment gap in long-run perspective. The American Economic Review 87(2), 306-310.

Firpo, S., N. M. Fortin, and T. Lemieux (2009). Unconditional quantile regressions. Econometrica 77(3), 953-973.

Firpo, S. and C. Pinto (2016). Identification and estimation of distributional impacts of interventions using changes in inequality measures. Journal of Applied Econometrics 31 (3), 457-486.

Firpo, S. P., N. M. Fortin, and T. Lemieux (2018). Decomposing wage distributions using recentered influence function regressions. Econometrics 6(2).

Fortin, N., T. Lemieux, and S. Firpo (2011). Chapter 1 - decomposition methods in economics. Volume 4 of Handbook of Labor Economics, pp. 1-102. Elsevier.

Fryer, R. G., D. Pager, and J. L. Spenkuch (2013). Racial disparities in job finding and offered wages. The Journal of Law and Economics 56(3), 633-689.

Gensowski, M. (2018). Personality, IQ, and lifetime earnings. Labour Economics 51, 170-183.

Glover, A., J. Mustre-del Rio, E. Pollard, et al. (2023). Lifetime earnings differences across black and white individuals: Years worked matter. Federal Reserve Bank of Kansas City Economic Review 108(1).

Gordon, G., J. B. Jones, U. Neelakantan, and K. Athreya (2023). Incarceration, employment, and earnings: Dynamics and differences. Review of Economic Dynamics.

Guvenen, F., G. Kaplan, J. Song, and J. Weidner (2017). Lifetime incomes in the United States over six decades. Technical report, National Bureau of Economic Research.

Haider, S. and G. Solon (2006). Life-cycle variation in the association between current and lifetime earnings. American economic review 96(4), 1308-1320.

Hurst, E., Y. Rubinstein, and K. Shimizu (2021). Task-based discrimination. Technical report, National Bureau of Economic Research.

Huynh, M., K. Rupp, and J. Sears (2002). The assessment of Survey of Income and Program Participation (SIPP) benefit data using longitudinal administrative records.

Hyytinen, A., P. Ilmakunnas, E. Johansson, and O. Toivanen (2019). Heritability of lifetime earnings. The Journal of Economic Inequality 17, 319-335.

Jacobs, L., E. Llanes, K. Moore, J. Thompson, and A. H. Volz (2022). Wealth concentration in the USA using an expanded measure of net worth. Oxford Economic Papers 74 (3), 623-642.

Jacobs, L., E. Llanes, K. Moore, J. P. Thompson, and A. H. Volz (2020). Wealth distribution and retirement preparation among early savers. Board of Governors of the Federal Reserve System Finance and Economics Discussion Series (2020-043).

Jang, C. J. and H. C. Lee (2022). A review of racial disparities in infant mortality in the US. Children $9(2), 257$.

Kakar, V., G. E. Daniels Jr., and O. Petrovska (2019, July). Does student loan debt contribute to racial wealth gaps? A decomposition analysis. Journal of Consumer Affairs 53(4), 1920-1947.

Karahan, F., S. Ozkan, and J. Song (2022). Anatomy of lifetime earnings inequality: Heterogeneity in job ladder risk vs. human capital. FRB St. Louis Working Paper (2022-2).

Karger, E. and A. Wray (2023). The black-white lifetime earnings gap. Technical report, Working paper.

Keister, L. A. and S. Moller (2000). Wealth inequality in the United States. Annual Review of Sociology 26(1), 63-81.

Kennickell, A. B. (1999). Revisions to the SCF weighting methodology: Accounting for race/ethnicity and homeownership. Federal Reserve Board, mimeo.

Kennickell, A. B. (2006). Who's asking? Interviewers, their incentives, and data quality in field surveys. Survey of Consumer Finances Working Paper, SCF Web Site: http://www. federalreserve. gov/pubs/oss/oss2/scfindex. html.

Kim, C., C. R. Tamborini, and A. Sakamoto (2015). Field of study in college and lifetime earnings in the United States. Sociology of Education 88(4), 320-339.

King, A. G. and C. B. Knapp (1978). Race and the determinants of lifetime earnings. ILR Review 31 (3), 347-355.

Mustre-del Río, J. and E. Pollard (2019). What explains lifetime earnings differences across individuals? Federal Reserve Bank of Kansas City Economic Review (QI), 35-56.

National Association of REALTORS (2023). Snapshot of race and home buying in America.
National Center for Education Statistics (2023). Educational attainment of young adults. Condition of Education.

Neal, D. A. and W. R. Johnson (1996). The role of premarket factors in black-white wage differences. Journal of political Economy 104 (5), 869-895.

Nielsen, E. (2019). Test questions, economic outcomes, and inequality. Finance and Economics Discussion Series (2019-013).

Nybom, M. (2017). The distribution of lifetime earnings returns to college. Journal of Labor Economics 35(4), 903-952.

Oaxaca, R. (1973). Male-female wage differentials in urban labor markets. International economic review, 693-709.

O'Neill, J. (1990). The role of human capital in earnings differences between black and white men. Journal of Economic Perspectives 4(4), 25-45.

Osterman, M. J., B. E. Hamilton, J. A. Martin, A. K. Driscoll, and C. P. Valenzuela (2023). Births: Final data for 2021. National Vital Statistics Reports 72(1).

O'Neill, J. E. and D. M. O'Neill (2006). What do wage differentials tell about labor market discrimination? In The economics of immigration and social diversity, pp. 293-357. Emerald Group Publishing Limited.

Patten, E. (2016). Racial, gender wage gaps persist in U.S. despite some progress.

Rios-Avila, F. (2020). Recentered influence functions (RIFs) in stata: RIF regression and RIF decomposition. The Stata Journal 20(1), 51-94.

Tamborini, C. R., C. Kim, and A. Sakamoto (2015). Education and lifetime earnings in the United States. Demography 52(4), 1383-1407.

Thompson, J. and A. H. Volz (2021). A new look at racial disparities using a more comprehensive wealth measure. Federal Reserve Bank of Boston, Current Policy Perspectives.

Thompson, J. P. and G. Suarez (2019). Accounting for racial wealth disparities in the United States.

Thompson, O. (2021). Human capital and black-white earnings gaps, 1966-2017. Technical report, National Bureau of Economic Research.

Weller, C. E. and J. P. Thompson (2018). Wealth inequality more pronounced among Asian Americans than among whites. Challenge 61 (2), 183-202.

Wolff, E. (1995). Top heavy: A study of increasing inequality of wealth in America. The Twentieth Century Fund Press.

Wolff, E. N. (2021a). The declining wealth of the middle class, 1983-2016. Contemporary Economic Policy 39(3), 461-478.

Wolff, E. N. (2021b). Wealth inequality in the United States. NBER Reporter (2), 14-17.

## Appendix

Table A.1: Decomposition of White-Black lifetime earnings for the respondent—Human capital characteristics only

| Percentiles | 15th | Share | 30th | Share | 50th | Share | 70th | Share | 85th | Share |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| IHS(Lifetime earnings for the respondent) |  |  |  |  |  |  |  |  |  |  |
| White non-Hispanic | $\begin{gathered} 14.240^{* * *} \\ (0.03) \end{gathered}$ |  | $\begin{gathered} 14.532^{* * *} \\ (0.02) \end{gathered}$ |  | $\begin{gathered} 14.813^{* * *} \\ (0.01) \end{gathered}$ |  | $\begin{gathered} 15.047^{* * *} \\ (0.02) \end{gathered}$ |  | $\begin{gathered} 15.347^{* * *} \\ (0.02) \end{gathered}$ |  |
| Black | $\begin{gathered} 13.769^{* * *} \\ (0.09) \end{gathered}$ |  | $\begin{gathered} 14.127^{* * *} \\ (0.06) \end{gathered}$ |  | $\begin{gathered} 14.380^{* * *} \\ (0.02) \end{gathered}$ |  | $\begin{gathered} 14.712^{* * *} \\ (0.05) \end{gathered}$ |  | $\begin{gathered} 14.996^{* * *} \\ (0.02) \end{gathered}$ |  |
| Difference | $\begin{gathered} 0.471^{* * *} \\ (0.09) \end{gathered}$ |  | $\begin{gathered} 0.405^{* * *} \\ (0.06) \end{gathered}$ |  | $\begin{gathered} 0.433^{* * *} \\ (0.03) \end{gathered}$ |  | $\begin{gathered} 0.335 * * * \\ (0.05) \end{gathered}$ |  | $\begin{gathered} 0.351 * * * \\ (0.03) \end{gathered}$ |  |
| Explained | $\begin{gathered} 0.375^{* * *} \\ (0.05) \end{gathered}$ | 79.6\% | $\begin{gathered} 0.296^{* * *} \\ (0.03) \end{gathered}$ | 73.1\% | $\begin{gathered} 0.234^{* * *} \\ (0.02) \end{gathered}$ | 54.0\% | $\begin{gathered} 0.252^{* * *} \\ (0.03) \end{gathered}$ | 75.2\% | $\begin{gathered} 0.255^{* * *} \\ (0.03) \end{gathered}$ | $72.6 \%$ |
| Unexplained | $\begin{aligned} & 0.096 \\ & (0.08) \end{aligned}$ | 20.4\% | $\begin{gathered} 0.109^{* *} \\ (0.05) \end{gathered}$ | 26.9\% | $\begin{gathered} 0.198^{* * *} \\ (0.03) \end{gathered}$ | 45.7\% | $\begin{gathered} 0.082^{*} \\ (0.04) \end{gathered}$ | 24.5\% | $\begin{gathered} 0.097^{* * *} \\ (0.03) \end{gathered}$ | 27.6\% |
| Explained |  |  |  |  |  |  |  |  |  |  |
| Years of full-time work | $\begin{gathered} 0.221^{* * *} \\ (0.04) \end{gathered}$ | 58.9\% | $\begin{gathered} 0.139^{* * *} \\ (0.02) \end{gathered}$ | 47.0\% | $\begin{gathered} 0.098^{* * *} \\ (0.02) \end{gathered}$ | 41.9\% | $\begin{gathered} 0.082^{* * *} \\ (0.01) \end{gathered}$ | $32.5 \%$ | $\begin{gathered} 0.059^{* * *} \\ (0.01) \end{gathered}$ | 23.1\% |
| Age | $\begin{aligned} & -0.001 \\ & (0.01) \end{aligned}$ | -0.3\% | $\begin{aligned} & 0.001 \\ & (0.00) \end{aligned}$ | 0.3\% | $\begin{aligned} & 0.001 \\ & (0.01) \end{aligned}$ | 0.4\% | $\begin{aligned} & 0.001 \\ & (0.01) \end{aligned}$ | 0.4\% | $\begin{aligned} & 0.002 \\ & (0.01) \end{aligned}$ | 0.8\% |
| Education | $\begin{gathered} 0.142^{* * *} \\ (0.02) \end{gathered}$ | $37.9 \%$ | $\begin{gathered} 0.124^{* * *} \\ (0.01) \end{gathered}$ | 41.9\% | $\begin{gathered} 0.107^{* * *} \\ (0.01) \end{gathered}$ | 45.7\% | $\begin{gathered} 0.133^{* * *} \\ (0.02) \end{gathered}$ | 52.8\% | $\begin{gathered} 0.149 * * * \\ (0.02) \end{gathered}$ | $58.4 \%$ |
| Occupation | $\begin{aligned} & 0.013 \\ & (0.01) \end{aligned}$ | 3.5\% | $\begin{gathered} 0.031^{* * *} \\ (0.01) \end{gathered}$ | 10.5\% | $\begin{gathered} 0.028^{* * *} \\ (0.01) \end{gathered}$ | 12.0\% | $\begin{gathered} 0.036^{* * *} \\ (0.01) \end{gathered}$ | 14.3\% | $\begin{gathered} 0.045^{* * *} \\ (0.01) \end{gathered}$ | 17.6\% |
| Unexplained |  |  |  |  |  |  |  |  |  |  |
| Years of full-time work | $\begin{aligned} & -0.621 \\ & (0.50) \end{aligned}$ |  | $\begin{aligned} & -0.278 \\ & (0.18) \end{aligned}$ |  | $\begin{gathered} -0.197^{*} \\ (0.11) \end{gathered}$ |  | $\begin{gathered} -0.215^{*} \\ (0.12) \end{gathered}$ |  | $\begin{aligned} & 0.089 \\ & (0.11) \end{aligned}$ |  |
| Age | $\begin{aligned} & 0.160 \\ & (0.17) \\ & \hline \end{aligned}$ |  | $\begin{aligned} & 0.091 \\ & (0.09) \end{aligned}$ |  | $\begin{aligned} & 0.067 \\ & (0.05) \\ & \hline \end{aligned}$ |  | $\begin{gathered} -0.027 \\ (0.07) \end{gathered}$ |  | $\begin{gathered} -0.023 \\ (0.07) \end{gathered}$ |  |

Note: Results are survey-weighted and use the 2019 SCF survey wave. Imputation and sample variance corrected standard errors in parentheses. Five imputations and 999 bootstrapped samples were used. Age, education, and occupation were grouped for decomposition. *** $p<0.01,{ }^{* *} p<0.05,{ }^{*} p<0.1$

| Percentiles | 15th | Share | 30th | Share | 50th | Share | 70th | Share | 85th | Share |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Education | -0.268 |  | 0.054 |  | -0.054 |  | -0.238** |  | -0.200*** |  |
|  | (0.28) |  | (0.15) |  | (0.09) |  | (0.10) |  | (0.06) |  |
| Occupation | -0.009 |  | -0.032 |  | -0.142** |  | -0.129 |  | -0.043 |  |
|  | (0.10) |  | (0.08) |  | (0.06) |  | (0.08) |  | (0.09) |  |
| Constant | 0.835 |  | 0.273 |  | 0.525*** |  | 0.691*** |  | 0.273 |  |
|  | (0.68) |  | (0.27) |  | (0.17) |  | (0.24) |  | (0.19) |  |
| Observations |  |  |  |  |  |  |  |  |  |  |
| White non-Hispanic | 1515 |  | 1515 |  | 1515 |  | 1515 |  | 1515 |  |
| Black | 294 |  | 294 |  | 294 |  | 294 |  | 294 |  |
| Total | 1809 |  | 1809 |  | 1809 |  | 1809 |  | 1809 |  | Note: Results are survey-weighted and use the 2019 SCF survey wave. Imputation and sample variance corrected standard errors in parentheses. Five imputations and 999 bootstrapped samples were used. Age, education, and occupation were grouped for decomposition.

Table A.2: Decomposition of White-Hispanic lifetime earnings for the respondent-Human capital characteristics only

Note: Results are survey-weighted and use the 2019 SCF survey wave. Imputation and sample variance corrected standard errors in parentheses. Five imputations and 999 bootstrapped samples were used. Age, education, and occupation were grouped for decomposition.

| Percentiles | 15th | Share | 30th | Share | 50th | Share | 70th | Share | 85th | Share |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Education | 0.182* |  | 0.085 |  | -0.112* |  | $-0.171^{* * *}$ |  | -0.155*** |  |
|  | (0.11) |  | (0.07) |  | (0.07) |  | (0.05) |  | (0.05) |  |
| Occupation | -0.001 |  | -0.005 |  | -0.103* |  | -0.025 |  | 0.029 |  |
|  | (0.08) |  | (0.05) |  | (0.06) |  | (0.07) |  | (0.11) |  |
| Constant | 0.298 |  | -0.127 |  | 0.372** |  | 0.109 |  | 0.054 |  |
|  | (0.60) |  | (0.20) |  | (0.16) |  | (0.16) |  | (0.18) |  |
| Observations |  |  |  |  |  |  |  |  |  |  |
| White non-Hispanic | 1515 |  | 1515 |  | 1515 |  | 1515 |  | 1515 |  |
| Hispanic | 243 |  | 243 |  | 243 |  | 243 |  | 243 |  |
| Total | 1758 |  | 1758 |  | 1758 |  | 1758 |  | 1758 |  |

Note: Results are survey-weighted and use the 2019 SCF survey wave. Imputation and sample variance corrected standard errors in parentheses. Five imputations and 999 bootstrapped samples were used. Age, education, and occupation were grouped for decomposition.
Table A.3: Decomposition of White-Black lifetime earnings for the respondent

| Percentiles | 15th | Share | 30th | Share | 50th | Share | 70th | Share | 85th | Share |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| IHS(Lifetime earnings for the respondent) |  |  |  |  |  |  |  |  |  |  |
| White non-Hispanic | $\begin{gathered} 14.240^{* * *} \\ (0.03) \end{gathered}$ |  | $\begin{gathered} 14.532^{* * *} \\ (0.02) \end{gathered}$ |  | $\begin{gathered} 14.813^{* * *} \\ (0.01) \end{gathered}$ |  | $\begin{gathered} 15.047^{* * *} \\ (0.02) \end{gathered}$ |  | $\begin{gathered} 15.347^{* * *} \\ (0.02) \end{gathered}$ |  |
| Black | $\begin{gathered} 13.769^{* * *} \\ (0.09) \end{gathered}$ |  | $\begin{gathered} 14.127^{* * *} \\ (0.06) \end{gathered}$ |  | $\begin{gathered} 14.380^{* * *} \\ (0.02) \end{gathered}$ |  | $\begin{gathered} 14.712^{* * *} \\ (0.05) \end{gathered}$ |  | $\begin{gathered} 14.996^{* * *} \\ (0.02) \end{gathered}$ |  |
| Difference | $\begin{gathered} 0.471^{* * *} \\ (0.09) \end{gathered}$ |  | $\begin{gathered} 0.405^{* * *} \\ (0.06) \end{gathered}$ |  | $\begin{gathered} 0.433^{* * *} \\ (0.03) \end{gathered}$ |  | $\begin{gathered} 0.335^{* * *} \\ (0.05) \end{gathered}$ |  | $\begin{gathered} 0.351^{* * *} \\ (0.03) \end{gathered}$ |  |
| Explained | $\begin{gathered} 0.396^{* * *} \\ (0.05) \end{gathered}$ | 84.1\% | $\begin{gathered} 0.315^{* * *} \\ (0.03) \end{gathered}$ | 77.8\% | $\begin{gathered} 0.230^{* * *} \\ (0.02) \end{gathered}$ | 53.1\% | $\begin{gathered} 0.246^{* * *} \\ (0.03) \end{gathered}$ | 73.4\% | $\begin{gathered} 0.252^{* * *} \\ (0.03) \end{gathered}$ | 71.8\% |
| Unexplained | $\begin{aligned} & 0.076 \\ & (0.08) \end{aligned}$ | 16.1\% | $\begin{gathered} 0.090^{*} \\ (0.05) \end{gathered}$ | $22.2 \%$ | $\begin{gathered} 0.203^{* * *} \\ (0.03) \end{gathered}$ | 46.9\% | $\begin{gathered} 0.089^{* *} \\ (0.04) \end{gathered}$ | 26.6\% | $\begin{gathered} 0.099^{* * *} \\ (0.03) \end{gathered}$ | 28.2\% |
| Explained |  |  |  |  |  |  |  |  |  |  |
| IHS(Respondent annual earnings) | $\begin{aligned} & 0.000 \\ & (0.00) \end{aligned}$ | 0.0\% | $\begin{aligned} & 0.001 \\ & (0.00) \end{aligned}$ | 0.3\% | $\begin{aligned} & 0.004 \\ & (0.00) \end{aligned}$ | 1.7\% | $\begin{aligned} & 0.006 \\ & (0.00) \end{aligned}$ | 2.4\% | $\begin{aligned} & 0.004 \\ & (0.00) \end{aligned}$ | 1.6\% |
| IHS(Spouse annual earnings) | $\begin{gathered} 0.013^{* *} \\ (0.01) \end{gathered}$ | 3.3\% | $\begin{gathered} 0.012^{* *} \\ (0.00) \end{gathered}$ | 3.8\% | $\begin{aligned} & 0.007 \\ & (0.00) \end{aligned}$ | 3.0\% | $\begin{aligned} & 0.006 \\ & (0.01) \end{aligned}$ | 2.4\% | $\begin{gathered} -0.002 \\ (0.01) \end{gathered}$ | -0.8\% |
| No. of Children | $\begin{aligned} & 0.003 \\ & (0.00) \end{aligned}$ | 0.8\% | $\begin{gathered} 0.005^{* *} \\ (0.00) \end{gathered}$ | 1.6\% | $\begin{aligned} & 0.002 \\ & (0.00) \end{aligned}$ | 0.9\% | $\begin{aligned} & 0.002 \\ & (0.00) \end{aligned}$ | 0.8\% | $\begin{gathered} 0.011^{* *} \\ (0.00) \end{gathered}$ | 4.4\% |
| Nonprimary family living in household | $\begin{aligned} & 0.001 \\ & (0.00) \end{aligned}$ | 0.3\% | $\begin{aligned} & 0.000 \\ & (0.00) \end{aligned}$ | 0.0\% | $\begin{aligned} & 0.001 \\ & (0.00) \end{aligned}$ | 0.4\% | $\begin{aligned} & 0.001 \\ & (0.00) \end{aligned}$ | 0.4\% | $\begin{gathered} -0.000 \\ (0.00) \end{gathered}$ | 0.0\% |
| Has health insurance | $\begin{gathered} 0.039^{* * *} \\ (0.01) \end{gathered}$ | 9.8\% | $\begin{gathered} 0.038^{* * *} \\ (0.01) \end{gathered}$ | 12.1\% | $\begin{gathered} 0.011^{* *} \\ (0.01) \end{gathered}$ | 4.8\% | $\begin{aligned} & 0.006 \\ & (0.01) \end{aligned}$ | 2.4\% | $\begin{aligned} & 0.002 \\ & (0.01) \end{aligned}$ | 0.8\% |
| Divorced | $\begin{aligned} & 0.000 \\ & (0.00) \end{aligned}$ | 0.0\% | $\begin{aligned} & 0.001 \\ & (0.00) \end{aligned}$ | 0.3\% | $\begin{aligned} & 0.001 \\ & (0.00) \end{aligned}$ | 0.4\% | $\begin{aligned} & 0.001 \\ & (0.00) \end{aligned}$ | 0.4\% | $\begin{aligned} & 0.001 \\ & (0.00) \end{aligned}$ | 0.4\% |
| Years of full-time work | $\begin{gathered} 0.209^{* * *} \\ (0.04) \end{gathered}$ | 52.8\% | $\begin{gathered} 0.126^{* * *} \\ (0.02) \end{gathered}$ | 40.0\% | $\begin{gathered} 0.090^{* *} * \\ (0.01) \end{gathered}$ | 39.1\% | $\begin{gathered} 0.074^{* * *} \\ (0.01) \\ \hline \end{gathered}$ | 30.1\% | $\begin{gathered} 0.055^{* * *} \\ (0.01) \end{gathered}$ | 21.8\% |

Note: Results are survey-weighted and use the 2019 SCF survey wave. Imputation and sample variance corrected standard errors in parentheses. Five imputations and 999 bootstrapped samples were used. Age, education, and occupation were grouped for decomposition.
$* * * p<0.01, * * p<0.05, * p<0.1$
Table A.3: Decomposition of White-Black lifetime earnings for the respondent (Cont.)

| Percentiles | 15th | Share | 30th | Share | 50th | Share | 70th | Share | 85th | Share |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Union | -0.001 | -0.3\% | -0.000 | 0.0\% | -0.001 | -0.4\% | 0.002 | 0.8\% | 0.003 | 1.2\% |
|  | (0.00) |  | (0.00) |  | (0.00) |  | (0.00) |  | (0.00) |  |
| Age | -0.000 | 0.0\% | 0.001 | 0.3\% | 0.002 | 0.9\% | 0.002 | 0.8\% | 0.002 | 0.8\% |
|  | (0.00) |  | (0.01) |  | (0.01) |  | (0.01) |  | (0.01) |  |
| Education | $0.128^{* * *}$ | $32.3 \%$ | 0.109*** | $34.6 \%$ | 0.098*** | 42.6\% | 0.125*** | 50.8\% | 0.142 ${ }^{* * *}$ | 56.3\% |
|  | (0.02) |  | (0.01) |  | (0.01) |  | (0.02) |  | (0.02) |  |
| Occupation | 0.004 | 1.0\% | 0.021*** | 6.7\% | 0.017*** | 7.4\% | 0.022** | 8.9\% | 0.033*** | 13.1\% |
|  | (0.01) |  | (0.01) |  | (0.01) |  | (0.01) |  | (0.01) |  |
| Unexplained |  |  |  |  |  |  |  |  |  |  |
| IHS(Respondent annual earnings) | 0.099 |  | 0.033 |  | -0.020 |  | -0.045 |  | -0.179 |  |
|  | (0.30) |  | (0.16) |  | (0.17) |  | (0.18) |  | (0.21) |  |
| IHS(Spouse annual earnings) | -0.091 |  | -0.018 |  | -0.015 |  | -0.083*** |  | -0.061** |  |
|  | (0.07) |  | (0.02) |  | (0.02) |  | (0.03) |  | (0.03) |  |
| No. of Children | -0.000 |  | 0.043 |  | 0.018 |  | 0.036 |  | 0.040 |  |
|  | (0.05) |  | (0.04) |  | (0.02) |  | (0.03) |  | (0.03) |  |
| Nonprimary family living in household | 0.007 |  | -0.007 |  | -0.018 |  | -0.028* |  | -0.000 |  |
|  | (0.03) |  | (0.01) |  | (0.01) |  | (0.01) |  | (0.02) |  |
| Has health insurance | -0.004 |  | -0.001 |  | 0.009 |  | 0.018 |  | 0.041 |  |
|  | (0.09) |  | (0.05) |  | (0.03) |  | (0.04) |  | (0.04) |  |
| Divorced | -0.046 |  | $-0.058^{* * *}$ |  | -0.056*** |  | $-0.057^{* * *}$ |  | $-0.052^{* * *}$ |  |
|  | (0.03) |  | (0.02) |  | (0.02) |  | (0.02) |  | (0.02) |  |
| Years of full-time work | -0.635 |  | -0.303* |  | -0.217** |  | -0.216* |  | 0.083 |  |
|  | (0.49) |  | (0.17) |  | (0.10) |  | (0.12) |  | (0.11) |  |
| Union | 0.038 |  | -0.019 |  | -0.012 |  | -0.030 |  | -0.056** |  |
|  | (0.03) |  | (0.02) |  | (0.02) |  | (0.02) |  | (0.02) |  |
| Age | 0.129 |  | 0.153* |  | 0.120** |  | 0.025 |  | 0.040 |  |
|  | (0.17) |  | (0.09) |  | (0.05) |  | (0.08) |  | (0.08) |  |

[^17]Table A.3: Decomposition of White-Black lifetime earnings for the respondent (Cont.)

| Percentiles | 15th | Share | 30th | Share | 50th | Share | 70th | Share | 85th | Share |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Education | -0.221 |  | 0.103 |  | -0.047 |  | -0.226** |  | -0.195*** |  |
|  | (0.28) |  | (0.14) |  | (0.09) |  | (0.09) |  | (0.06) |  |
| Occupation | 0.039 |  | 0.005 |  | -0.133* |  | -0.108 |  | -0.066 |  |
|  | (0.14) |  | (0.10) |  | (0.08) |  | (0.09) |  | (0.10) |  |
| Constant | 0.762 |  | 0.157 |  | 0.574** |  | 0.803*** |  | 0.505* |  |
|  | (0.83) |  | (0.33) |  | (0.28) |  | (0.30) |  | (0.29) |  |
| Observations |  |  |  |  |  |  |  |  |  |  |
| White non-Hispanic | 1515 |  | 1515 |  | 1515 |  | 1515 |  | 1515 |  |
| Black | 294 |  | 294 |  | 294 |  | 294 |  | 294 |  |
| Total | 1809 |  | 1809 |  | 1809 |  | 1809 |  | 1809 |  |
| Note: Results are survey-weighted and use the 2019 SCF survey wave. Imputation and sample variance corrected standard errors in parentheses. Five imputations and 999 bootstrapped samples were used. Age, education, and occupation were grouped for decomposition.${ }^{* * *} p<0.01,{ }^{* *} p<0.05,^{*} p<0.1$ |  |  |  |  |  |  |  |  |  |  |

Table A.4: Decomposition of White-Hispanic lifetime earnings for the respondent

| Percentiles | 15th | Share | 30th | Share | 50th | Share | 70th | Share | 85th | Share |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| IHS(Lifetime earnings for the respondent) |  |  |  |  |  |  |  |  |  |  |
| White non-Hispanic | $14.240^{* * *}$ |  | 14.532*** |  | 14.813*** |  | 15.047*** |  | $15.347^{* * *}$ |  |
|  | (0.03) |  | (0.02) |  | (0.01) |  | (0.02) |  | (0.02) |  |
| Hispanic | 13.858*** |  | 14.162*** |  | 14.393*** |  | $14.660^{* * *}$ |  | 14.901*** |  |
|  | (0.08) |  | (0.05) |  | (0.04) |  | (0.04) |  | (0.03) |  |
| Difference | $0.382^{* * *}$ |  | 0.369*** |  | $0.420^{* * *}$ |  | 0.387*** |  | $0.447^{* * *}$ |  |
|  | (0.07) |  | (0.05) |  | (0.04) |  | (0.04) |  | (0.04) |  |
| Explained | $0.433^{* * *}$ | 113.4\% | 0.395*** | 107.0\% | $0.286^{* * *}$ | 68.1\% | 0.287*** | 74.2\% | 0.246*** | 55.0\% |
|  | (0.07) |  | (0.04) |  | (0.03) |  | (0.03) |  | (0.03) |  |
| Unexplained | -0.051 | -13.4\% |  | -7.0\% | $0.134^{* * *}$ | $31.9 \%$ | 0.100*** | 25.8\% | 0.200*** | 44.7\% |
|  | (0.08) |  | (0.04) |  | (0.03) |  | (0.04) |  | (0.04) |  |
| Explained |  |  |  |  |  |  |  |  |  |  |
| IHS(Respondent annual earnings) | 0.000 | 0.0\% | 0.000 | 0.0\% | 0.000 | 0.0\% | 0.000 | 0.0\% | 0.000 | 0.0\% |
|  | (0.00) |  | (0.00) |  | (0.00) |  | (0.00) |  | (0.00) |  |
| IHS(Spouse annual earnings) | 0.007* | 1.6\% | 0.007* | 1.8\% | 0.004 | 1.4\% | 0.003 | 1.0\% | -0.001 | -0.4\% |
|  |  |  |  |  |  |  | (0.00) |  | $(0.00)$ |  |
| No. of Children | -0.005 | -1.2\% | $-0.010^{* *}$ | -2.5\% | -0.004 | -1.4\% | -0.004 | -1.4\% | $-0.021^{* * *}$ | -8.5\% |
|  | (0.01) |  | (0.00) |  | (0.00) |  | (0.00) |  | (0.01) |  |
| Nonprimary family living in household | 0.004 | 0.9\% | 0.002 | 0.5\% | 0.004 | 1.4\% | 0.004 | 1.4\% | -0.001 | -0.4\% |
|  | (0.01) |  | (0.00) |  | (0.00) |  | (0.00) |  | (0.01) |  |
| Has health insurance | 0.050*** | 11.5\% | 0.049*** | 12.4\% | 0.014** | 4.9\% | 0.008 | 2.8\% | 0.003 | 1.2\% |
|  | (0.02) |  | (0.01) |  | (0.01) |  | (0.01) |  | (0.01) |  |
| Divorced | 0.001 | 0.2\% | 0.003 | 0.8\% | 0.003 | 1.0\% | 0.003 | 1.0\% | 0.003 | 1.2\% |
|  | (0.00) |  | (0.00) |  | (0.00) |  | (0.00) |  | (0.00) |  |
| Years of full-time work | $0.138^{* * *}$ | $31.9 \%$ | 0.083*** | 21.0\% | 0.059*** | 20.6\% | 0.048*** | 16.7\% | 0.036*** | 14.6\% |
|  | (0.04) |  |  |  |  |  | (0.01) |  | (0.01) |  |

Note: Results are survey-weighted and use the 2019 SCF survey wave. Imputation and sample variance corrected standard errors in parentheses. Five imputations and 999 bootstrapped samples were used. Age, education, and occupation were grouped for decomposition.
$* * * p<0.01, * * p<0.05, * p<0.1$
Table A.4: Decomposition of White-Hispanic lifetime earnings for the respondent (Cont.)

| Percentiles | 15th | Share | 30th | Share | 50th | Share | 70th | Share | 85th | Share |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Union | 0.000 | 0.0\% | 0.000 | 0.0\% | 0.000 | 0.0\% | -0.000 | 0.0\% | -0.000 | 0.0\% |
|  | (0.00) |  | (0.00) |  | (0.00) |  | (0.00) |  | (0.00) |  |
| Age | -0.011 | -2.5\% | 0.019** | 4.8\% | 0.031*** | 10.8\% | 0.032*** | 11.1\% | 0.043*** | 17.5\% |
|  | (0.01) |  | (0.01) |  | (0.01) |  | (0.01) |  | (0.01) |  |
| Education | 0.270*** | $62.4 \%$ | 0.228*** | 57.7\% | 0.147*** | $51.4 \%$ | 0.134*** | 46.7\% | 0.128*** | 52.0\% |
|  | (0.05) |  | (0.03) |  | (0.02) |  | (0.02) |  | (0.02) |  |
| Occupation | ${ }^{-0.022 *}$ | -5.1\% | 0.015* | 3.8\% | 0.027*** | 9.4\% | 0.059*** | 20.6\% | 0.056*** | 22.8\% |
|  | (0.01) |  | (0.01) |  | (0.01) |  | (0.01) |  | (0.01) |  |
| Unexplained |  |  |  |  |  |  |  |  |  |  |
| IHS(Respondent annual earnings) | -0.160 |  | -0.204* |  | 0.006 |  | 0.155* |  | 0.140 |  |
|  | (0.20) |  | (0.12) |  | (0.08) |  | (0.08) |  | (0.12) |  |
| IHS(Spouse annual earnings) | -0.000 |  | 0.021 |  | -0.011 |  | 0.005 |  | -0.026 |  |
|  | (0.04) |  | (0.03) |  | (0.03) |  | (0.02) |  | (0.04) |  |
| No. of Children | -0.024 |  | 0.027 |  | 0.000 |  | 0.040 |  | 0.102** |  |
|  | (0.05) |  | (0.04) |  | (0.04) |  | (0.04) |  | (0.05) |  |
| Nonprimary family living in household | -0.004 |  | 0.038* |  | 0.008 |  | -0.025 |  | -0.031 |  |
|  | (0.04) |  | (0.02) |  | (0.02) |  | (0.02) |  | (0.02) |  |
| Has health insurance | 0.096 |  | 0.070** |  | -0.006 |  | -0.057 |  | -0.059 |  |
|  | (0.06) |  | (0.03) |  | (0.03) |  | (0.04) |  | (0.05) |  |
| Divorced | -0.014 |  | -0.046* |  | $-0.060^{* * *}$ |  | -0.031 |  | 0.005 |  |
|  | (0.04) |  | (0.02) |  | (0.02) |  | (0.03) |  | (0.02) |  |
| Years of full-time work | -0.797 |  | -0.091 |  | -0.005 |  | 0.126 |  | 0.261** |  |
|  | (0.55) |  | (0.16) |  | (0.11) |  | (0.10) |  | (0.11) |  |
| Union | -0.032 |  | -0.016 |  | 0.005 |  | 0.004 |  | 0.005 |  |
|  | (0.02) |  | (0.02) |  | (0.01) |  | (0.01) |  | (0.02) |  |
| Age | 0.235** |  | 0.065 |  | -0.048 |  | 0.082 |  | 0.068 |  |
|  | (0.11) |  | (0.07) |  | (0.05) |  | (0.06) |  | (0.07) |  |

[^18]Table A.4: Decomposition of White-Hispanic lifetime earnings for the respondent (Cont.)

| Percentiles | 15th | Share | 30th | Share | 50th | Share | 70th | Share | 85th | Share |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Education | 0.141 |  | 0.073 |  | -0.111* |  | -0.154*** |  | -0.140** |  |
|  | (0.12) |  | (0.07) |  | (0.06) |  | (0.05) |  | (0.06) |  |
| Occupation | -0.020 |  | -0.004 |  | -0.107* |  | 0.002 |  | 0.061 |  |
|  | (0.09) |  | (0.05) |  | (0.06) |  | (0.07) |  | (0.10) |  |
| Constant | 0.529 |  | 0.041 |  | 0.463** |  | -0.048 |  | -0.185 |  |
|  | (0.67) |  | (0.25) |  | (0.18) |  | (0.18) |  | (0.24) |  |
| Observations |  |  |  |  |  |  |  |  |  |  |
| White non-Hispanic | 1515 |  | 1515 |  | 1515 |  | 1515 |  | 1515 |  |
| Hispanic | 243 |  | 243 |  | 243 |  | 243 |  | 243 |  |
| Total | 1758 |  | 1758 |  | 1758 |  | 1758 |  | 1758 |  |
| Bootstrapped Samples | 999 |  | 999 |  | 999 |  | 999 |  | 999 |  |
| Note: Results are survey-weighted and use the 2019 SCF survey wave. Imputation and sample variance corrected standard errors in parentheses. Five imputations and 999 bootstrapped samples were used. Age, education, and occupation were grouped for decomposition.${ }^{* * *} p<0.01,{ }^{* *} p<0.05,{ }^{*} p<0.1$ |  |  |  |  |  |  |  |  |  |  |

Table A.5: Decomposition of White-Black lifetime earnings for the respondent with business ownership indicator

Note: Results are survey-weighted and use the 2019 SCF survey wave. Imputation and sample variance corrected standard errors in parentheses. Five imputations and 999 bootstrapped samples were used. Age, education, and occupation were grouped for decomposition.

| Percentiles | 15th | Share | 30th | Share | 50th | Share | 70th | Share | 85th | Share |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Union | -0.001 | -0.2\% | -0.000 | 0.0\% | -0.001 | -0.4\% | 0.002 | 0.8\% | 0.003 | 1.1\% |
|  | (0.00) |  | (0.00) |  | (0.00) |  | (0.00) |  | (0.00) |  |
| Business owner | $0.022^{* * *}$ | $5.4 \%$ | $0.016^{* * *}$ | 5.0\% | 0.020*** | 8.3\% | $0.021^{* * *}$ | 8.2\% | 0.022*** | 8.4\% |
|  | $(0.01)$ |  | (0.00) |  | $(0.00)$ |  | $(0.01)$ |  | (0.01) |  |
| Age | -0.000 | 0.0\% | 0.001 | 0.3\% | 0.002 | 0.8\% | 0.002 | 0.8\% | 0.002 | 0.8\% |
|  | (0.00) |  | (0.01) |  | (0.01) |  | (0.01) |  | (0.01) |  |
| Education | $0.125^{* * *}$ | $30.7 \%$ | $0.108^{* * *}$ | $33.4 \%$ | $0.096^{* * *}$ | 40.0\% | $0.123^{* * *}$ | 47.9\% | $0.140^{* * *}$ | $53.2 \%$ |
|  | $(0.02)$ |  | $(0.01)$ |  | $(0.01)$ |  | $(0.02)$ |  | (0.02) |  |
| Occupation | -0.004 | -1.0\% | 0.015** | 4.6\% | 0.010 | 4.2\% | 0.015 | 5.8\% | 0.025** | 9.5\% |
|  | (0.01) |  | (0.01) |  | (0.01) |  | (0.01) |  | (0.01) |  |
| Unexplained |  |  |  |  |  |  |  |  |  |  |
| IHS(Respondent annual earnings) | 0.165 |  | -0.001 |  | -0.049 |  | -0.114 |  | -0.192 |  |
|  | (0.32) |  | (0.16) |  | (0.17) |  | (0.19) |  | (0.21) |  |
| IHS(Spouse annual earnings) | -0.092 |  | -0.010 |  | -0.006 |  | -0.070*** |  | -0.054* |  |
|  | (0.07) |  | (0.02) |  | (0.02) |  | (0.03) |  | (0.03) |  |
| No. of Children | -0.003 |  | 0.035 |  | 0.008 |  | 0.024 |  | 0.032 |  |
|  | (0.05) |  | (0.03) |  | (0.02) |  | (0.03) |  | (0.03) |  |
| Nonprimary family living in household | 0.007 |  | -0.008 |  | -0.019* |  | -0.030** |  | -0.001 |  |
|  | (0.03) |  | (0.01) |  | (0.01) |  | (0.01) |  | (0.02) |  |
| Has health insurance | -0.002 |  | -0.001 |  | 0.009 |  | 0.017 |  | 0.041 |  |
|  | (0.09) |  | (0.05) |  | (0.03) |  | (0.04) |  | (0.04) |  |
| Divorced | -0.041 |  | $-0.058^{* * *}$ |  | $-0.056^{* * *}$ |  | $-0.059^{* * *}$ |  | $-0.051^{* * *}$ |  |
|  | (0.03) |  | (0.02) |  | (0.02) |  | (0.02) |  | (0.02) |  |
| Years of full-time work | -0.649 |  | $-0.286 *$ |  | -0.201** |  | -0.187 |  | 0.094 |  |
|  | (0.49) |  | (0.17) |  | (0.10) |  | (0.12) |  | (0.11) |  |
| Union | 0.039 |  | -0.023 |  | -0.017 |  | -0.037 |  | $-0.060^{* *}$ |  |
|  | (0.03) |  | (0.02) |  | (0.02) |  | (0.02) |  | (0.02) |  |

[^19] and 999 bootstrapped samples were used. Age, education, and occupation were grouped for decomposition.
${ }^{* * *} p<0.01,{ }^{* *} p<0.05, * p<0.1$
Table A.6: Decomposition of White-Hispanic lifetime earnings for the respondent with business ownership indicator

| Percentiles | 15th | Share | 30th | Share | 50th | Share | 70th | Share | 85th | Share |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| IHS(Lifetime earnings for the respondent) |  |  |  |  |  |  |  |  |  |  |
| White non-Hispanic | $14.240^{* * *}$ |  | 14.532*** |  | 14.813*** |  | 15.047*** |  | $15.347^{* * *}$ |  |
|  | (0.03) |  | (0.02) |  | (0.01) |  | (0.02) |  | (0.02) |  |
| Hispanic | $13.858^{* * *}$ |  | 14.162*** |  | $14.393 * * *$ |  | 14.660*** |  | 14.901*** |  |
|  | (0.08) |  | (0.05) |  | (0.04) |  | (0.04) |  | (0.03) |  |
| Difference | 0.382*** |  | 0.369*** |  | 0.420*** |  | $0.387^{* * *}$ |  | 0.447*** |  |
|  | (0.07) |  | (0.05) |  | (0.04) |  | (0.04) |  | (0.04) |  |
| Explained | 0.445*** | 116.5\% | 0.404*** | 109.5\% | 0.297*** | 70.7\% | 0.299*** | 77.3\% | 0.258*** | 57.7\% |
|  | (0.07) |  | (0.04) |  | (0.03) |  | (0.03) |  | (0.03) |  |
| Unexplained | -0.063 | -16.5\% | -0.034 | -9.2\% | 0.123*** | 29.3\% | 0.088** | $22.7 \%$ | 0.188*** | 42.1\% |
|  | (0.08) |  | (0.04) |  | (0.03) |  | (0.04) |  | (0.04) |  |
| Explained |  |  |  |  |  |  |  |  |  |  |
| IHS(Respondent annual earnings) | 0.000 | 0.0\% | 0.000 | 0.0\% | 0.000 | 0.0\% | 0.001 | 0.3\% | 0.001 | 0.4\% |
|  | (0.00) |  | (0.00) |  | (0.00) |  | (0.01) |  | (0.00) |  |
| IHS(Spouse annual earnings) | 0.007* | 1.6\% | 0.006* | 1.5\% | 0.004 | 1.3\% | 0.003 | 1.0\% | -0.001 | -0.4\% |
|  | (0.00) |  | (0.00) |  | (0.00) |  | (0.00) |  | (0.00) |  |
| No. of Children | -0.003 | -0.7\% | -0.009** | $-2.2 \%$ | -0.003 | -1.0\% | -0.003 | -1.0\% | -0.020** | -7.8\% |
|  | (0.01) |  | (0.00) |  | (0.00) |  | (0.00) |  | (0.01) |  |
| No. of nonprim. family living in household | 0.004 | 0.9\% | 0.002 | 0.5\% | 0.004 | 1.3\% | 0.003 | 1.0\% | -0.001 | -0.4\% |
|  | (0.01) |  | (0.00) |  | (0.00) |  | (0.00) |  | (0.01) |  |
| Has health insurance | 0.051*** | 11.5\% | 0.050*** | $12.4 \%$ | 0.015** | 5.1\% | 0.009 | 3.0\% | 0.004 | 1.6\% |
|  | (0.02) |  | (0.01) |  | (0.01) |  | (0.01) |  | (0.01) |  |
| Divorced | 0.001 | 0.2\% | 0.002 | 0.5\% | 0.003 | 1.0\% | 0.003 | 1.0\% | 0.003 | 1.2\% |
|  | (0.00) |  | (0.00) |  | (0.00) |  | (0.00) |  | (0.00) |  |
| Years of full-time work | 0.136*** | $30.6 \%$ | 0.082*** | 20.3\% | 0.058*** | 19.5\% | 0.047*** | 15.7\% | 0.035*** | 13.6\% |
|  | (0.04) |  | (0.02) |  | (0.01) |  | (0.01) |  | (0.01) |  |

Note: Results are survey-weighted and use the 2019 SCF survey wave. Imputation and sample variance corrected standard errors in parentheses. Five imputations and 999 bootstrapped samples were used. Age, education, and occupation were grouped for decomposition.
Table A.6: Decomposition of White-Hispanic lifetime earnings for the respondent with business ownership indicator (Cont.)

| Percentiles | 15th | Share | 30th | Share | 50th | Share | 70th | Share | 85th | Share |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Union | 0.000 | 0.0\% | 0.000 | 0.0\% | 0.000 | 0.0\% | -0.000 | 0.0\% | -0.000 | 0.0\% |
|  | (0.00) |  | (0.00) |  | (0.00) |  | (0.00) |  | (0.00) |  |
| Business owner | 0.014*** | 3.1\% | 0.010*** | 2.5\% | 0.012*** | 4.0\% | 0.013*** | 4.3\% | 0.014** | 5.4\% |
|  | (0.01) |  | (0.00) |  | (0.00) |  | (0.00) |  | (0.01) |  |
| Age | -0.011 | $-2.5 \%$ | 0.019** | 4.7\% | 0.031*** | 10.4\% | 0.032*** | 10.7\% | 0.042*** | 16.3\% |
|  | (0.01) |  | (0.01) |  | (0.01) |  | (0.01) |  | (0.01) |  |
| Education | 0.268*** | $60.2 \%$ | 0.227*** | $56.2 \%$ | 0.146*** | $49.2 \%$ | 0.133*** | 44.5\% | 0.127*** | 49.2\% |
|  | (0.05) |  | (0.03) |  | (0.02) |  | (0.02) |  | (0.02) |  |
| Occupation | -0.023** | -5.2\% | 0.014* | 3.5\% | 0.026*** | 8.8\% | 0.058*** | 19.4\% | 0.055*** | 21.3\% |
|  | (0.01) |  | (0.01) |  | (0.01) |  | (0.01) |  | $(0.01)$ |  |
| Unexplained |  |  |  |  |  |  |  |  |  |  |
| IHS(Respondent annual earnings) | -0.128 |  | -0.221 |  | -0.005 |  | 0.140 |  | 0.080 |  |
|  | (0.20) |  | (0.14) |  | (0.09) |  | (0.10) |  | (0.13) |  |
| IHS(Spouse annual earnings) | 0.001 |  | 0.025 |  | -0.006 |  | 0.010 |  | -0.017 |  |
|  | (0.04) |  | (0.03) |  | (0.03) |  | (0.03) |  | (0.03) |  |
| No. of Children | -0.032 |  | 0.018 |  | -0.010 |  | 0.029 |  | 0.086* |  |
|  | (0.05) |  | (0.04) |  | (0.04) |  | (0.04) |  | (0.05) |  |
| No. of nonprim. family living in household | -0.005 |  | 0.034 |  | 0.004 |  | -0.029 |  | -0.038* |  |
|  | (0.04) |  | (0.02) |  | (0.02) |  | (0.02) |  | (0.02) |  |
| Has health insurance | 0.095 |  | 0.065** |  | -0.011 |  | -0.063* |  | -0.070 |  |
|  | (0.06) |  | (0.03) |  | (0.03) |  | (0.04) |  | (0.04) |  |
| Divorced | -0.007 |  | -0.038 |  | $-0.051^{* * *}$ |  | -0.021 |  | 0.019 |  |
|  | (0.04) |  | (0.02) |  | (0.02) |  | (0.03) |  | (0.02) |  |
| Years of full-time work | -0.798 |  | -0.076 |  | 0.010 |  | 0.143 |  | 0.296*** |  |
|  | (0.55) |  | (0.16) |  | (0.11) |  | (0.10) |  | (0.11) |  |
| Union | -0.032 |  | -0.017 |  | 0.004 |  | 0.003 |  | 0.002 |  |
|  | (0.02) |  | (0.02) |  | (0.01) |  | (0.01) |  | (0.02) |  |

Note: Results are survey-weighted and use the 2019 SCF survey wave. Imputation and sample variance corrected standard errors in parentheses. Five imputations and 999 bootstrapped samples were used. Age, education, and occupation were grouped for decomposition. ${ }^{* * *} p<0.01,{ }^{* *} p<0.05,{ }^{*} p<0.1$

| Percentiles | 15th | Share | 30th | Share | 50th | Share | 70th | Share | 85th | Share |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Business owner | 0.007 |  | -0.011 |  | -0.010 |  | -0.012 |  | -0.030 |  |
|  | $(0.02)$ |  | (0.01) |  | (0.01) |  | (0.01) |  | (0.02) |  |
| Age | 0.227** |  | 0.051 |  | -0.064 |  | 0.064 |  | 0.041 |  |
|  | (0.11) |  | (0.07) |  | (0.05) |  | (0.06) |  | (0.07) |  |
| Education | 0.142 |  | 0.076 |  | -0.109* |  | $-0.151^{* * *}$ |  | -0.136** |  |
|  | $(0.12)$ |  | (0.07) |  | $(0.06)$ |  | (0.05) |  | (0.05) |  |
| Occupation | -0.002 |  | 0.002 |  | -0.098* |  | 0.011 |  | 0.063 |  |
|  | (0.09) |  | (0.05) |  | (0.05) |  | (0.07) |  | (0.10) |  |
| Constant | $0.469$ |  | $0.057$ |  | 0.468** |  | -0.037 |  | -0.109 |  |
|  |  |  |  |  |  |  | (0.19) |  | (0.26) |  |
| Observations |  |  |  |  |  |  |  |  |  |  |
| White non-Hispanic | 1515 |  | 1515 |  | 1515 |  | 1515 |  | 1515 |  |
| Hispanic | 243 |  | 243 |  | 243 |  | 243 |  | 243 |  |
| Total | 1758 |  | 1758 |  | 1758 |  | 1758 |  | 1758 |  |
| Bootstrapped Samples | 999 |  | 999 |  | 999 |  | 999 |  | 999 |  | and 999 bootstrapped samples were used. Age, education, and occupation were grouped for decomposition. ${ }^{* * *} p<0.01,{ }^{* *} p<0.05,{ }^{*} p<0.1$

Table A.7: Two-stage decomposition of White-Black lifetime earnings for the respondent-Human capital characteristics only

Note: Results are survey-weighted and use the 2019 SCF survey wave. Imputation and sample variance corrected standard errors in parentheses. Five imputations ${ }_{* * *} 999$ bootstrapped samples were used. Age, education, and occupation were grouped for decomposition.

| Percentiles | 15th | Share | 30th | Share | 50th | Share | 70th | Share | 85th | Share |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Education | $\begin{gathered} 0.140^{* * *} \\ (0.02) \end{gathered}$ | 36.7\% | $\begin{gathered} 0.123^{* * *} \\ (0.01) \end{gathered}$ | 40.9\% | $\begin{gathered} 0.106^{* * *} \\ (0.01) \end{gathered}$ | 44.0\% | $\begin{gathered} 0.131^{* * *} \\ (0.02) \end{gathered}$ | 51.4\% | $\begin{gathered} 0.146^{* * *} \\ (0.02) \end{gathered}$ | $56.4 \%$ |
| Occupation | $\begin{gathered} 0.015^{*} \\ (0.01) \end{gathered}$ | 3.9\% | $\begin{gathered} 0.031^{* * *} \\ (0.01) \end{gathered}$ | 10.3\% | $\begin{gathered} 0.027^{* * *} \\ (0.01) \end{gathered}$ | 11.2\% | $\begin{gathered} 0.033^{* * *} \\ (0.01) \end{gathered}$ | $12.9 \%$ | $\begin{gathered} 0.042^{* * *} \\ (0.01) \end{gathered}$ | 16.2\% |
| Explained Specification Error |  |  |  |  |  |  |  |  |  |  |
| Years of full-time work | $\begin{gathered} -2.030^{* * *} \\ (0.67) \end{gathered}$ |  | $\begin{gathered} -0.382^{* * *} \\ (0.14) \end{gathered}$ |  | $\begin{gathered} -0.168^{* *} \\ (0.08) \end{gathered}$ |  | $\begin{aligned} & 0.007 \\ & (0.06) \end{aligned}$ |  | $\begin{gathered} -0.023 \\ (0.06) \end{gathered}$ |  |
| Age | $\begin{gathered} 0.465^{* *} \\ (0.21) \end{gathered}$ |  | $\begin{gathered} 0.146^{* *} \\ (0.07) \end{gathered}$ |  | $\begin{aligned} & 0.026 \\ & (0.04) \end{aligned}$ |  | $\begin{aligned} & 0.005 \\ & (0.03) \end{aligned}$ |  | $\begin{gathered} 0.084^{* *} \\ (0.04) \end{gathered}$ |  |
| Education | $\begin{gathered} -0.117 \\ (0.29) \end{gathered}$ |  | $\begin{aligned} & 0.140 \\ & (0.09) \end{aligned}$ |  | $\begin{gathered} -0.081^{*} \\ (0.05) \end{gathered}$ |  | $\begin{aligned} & -0.046 \\ & (0.04) \end{aligned}$ |  | $\begin{gathered} -0.067^{*} \\ (0.04) \end{gathered}$ |  |
| Occupation | $\begin{aligned} & 0.148 \\ & (0.11) \end{aligned}$ |  | $\begin{gathered} -0.087^{* *} \\ (0.03) \end{gathered}$ |  | $\begin{aligned} & 0.016 \\ & (0.03) \end{aligned}$ |  | $\begin{aligned} & -0.028 \\ & (0.03) \end{aligned}$ |  | $\begin{gathered} -0.028 \\ (0.05) \end{gathered}$ |  |
| Constant | $\begin{gathered} 1.705^{* *} \\ (0.69) \end{gathered}$ |  | $\begin{aligned} & 0.200 \\ & (0.19) \end{aligned}$ |  | $\begin{gathered} 0.239^{* *} \\ (0.11) \end{gathered}$ |  | $\begin{aligned} & 0.025 \\ & (0.09) \end{aligned}$ |  | $\begin{aligned} & 0.067 \\ & (0.08) \end{aligned}$ |  |
| Unexplained |  |  |  |  |  |  |  |  |  |  |
| Total | $\begin{gathered} -0.080 \\ (0.10) \end{gathered}$ |  | $\begin{gathered} 0.087^{*} \\ (0.05) \end{gathered}$ |  | $\begin{gathered} 0.160^{* * *} \\ (0.03) \end{gathered}$ |  | $\begin{gathered} 0.116^{* * *} \\ (0.04) \end{gathered}$ |  | $\begin{gathered} 0.059^{* *} \\ (0.02) \end{gathered}$ |  |
| Reweight group error | $\begin{gathered} -0.009 \\ (0.03) \end{gathered}$ |  | $\begin{aligned} & -0.006 \\ & (0.01) \end{aligned}$ |  | $\begin{gathered} -0.006 \\ (0.01) \end{gathered}$ |  | $\begin{aligned} & -0.007 \\ & (0.01) \end{aligned}$ |  | $\begin{gathered} -0.002 \\ (0.01) \end{gathered}$ |  |
| Pure | $\begin{gathered} -0.071 \\ (0.09) \end{gathered}$ |  | $\begin{gathered} 0.093^{* *} \\ (0.05) \end{gathered}$ |  | $\begin{gathered} 0.166^{* * *} \\ (0.03) \end{gathered}$ |  | $\begin{gathered} 0.123^{* * *} \\ (0.04) \end{gathered}$ |  | $\begin{gathered} 0.061^{* *} \\ (0.03) \end{gathered}$ |  |
| Pure Unexplained |  |  |  |  |  |  |  |  |  |  |
| Years of full-time work | $\begin{aligned} & 1.421^{*} \\ & (0.83) \end{aligned}$ |  | $\begin{aligned} & 0.107 \\ & (0.20) \\ & \hline \end{aligned}$ |  | $\begin{aligned} & -0.029 \\ & (0.10) \\ & \hline \end{aligned}$ |  | $\begin{gathered} -0.223^{*} \\ (0.12) \end{gathered}$ |  | $\begin{aligned} & 0.113 \\ & (0.09) \\ & \hline \end{aligned}$ |  |

[^20]| Table A.7: Two-stage decomposition of White-Black lifetime earnings for the respondent-Human capital characteristics only (Cont.) |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Percentiles | 15th | Share | 30th | Share | 50th | Share | 70th | Share | 85th | Share |
| Age | -0.315 |  | -0.058 |  | 0.040 |  | -0.030 |  | -0.110* |  |
|  | (0.25) |  | (0.10) |  | (0.06) |  | (0.07) |  | (0.07) |  |
| Education | -0.152 |  | -0.086 |  | 0.027 |  | -0.191** |  | $-0.133^{* *}$ |  |
|  | (0.36) |  | (0.16) |  | (0.10) |  | (0.10) |  | (0.06) |  |
| Occupation | -0.155 |  | 0.057 |  | -0.158** |  | -0.100 |  | -0.015 |  |
|  | (0.15) |  | (0.09) |  | (0.07) |  | (0.08) |  | (0.09) |  |
| Constant | -0.870 |  | 0.073 |  | 0.286* |  | $0.665^{* * *}$ |  | 0.206 |  |
|  | (0.90) |  | (0.29) |  | (0.16) |  | (0.23) |  | (0.18) |  |
| Reweight group error |  |  |  |  |  |  |  |  |  |  |
| Years of full-time work | -0.021 |  | -0.008 |  | -0.005 |  | -0.003 |  | -0.002 |  |
|  | (0.03) |  | (0.01) |  | (0.01) |  | (0.00) |  | (0.00) |  |
| Age | 0.015** |  | 0.002 |  | -0.003* |  | $-0.007^{* * *}$ |  | $-0.005^{* *}$ |  |
|  | (0.01) |  | (0.00) |  |  |  |  |  |  |  |
| Education | 0.002 |  | 0.001 |  | 0.001 |  | 0.002 |  | 0.003 |  |
|  | (0.00) |  | (0.00) |  | (0.00) |  | (0.00) |  | (0.00) |  |
| Occupation | -0.005 |  | -0.001 |  | 0.001 |  | 0.001 |  | 0.003** |  |
|  | (0.01) |  | (0.00) |  | (0.00) |  | (0.00) |  | (0.00) |  |
| Observations |  |  |  |  |  |  |  |  |  |  |
| White non-Hispanic | 1515 |  | 1515 |  | 1515 |  | 1515 |  | 1515 |  |
| Black | 294 |  | 294 |  | 294 |  | 294 |  | 294 |  |
| Total | 1809 |  | 1809 |  | 1809 |  | 1809 |  | 1809 |  |

Note: Results are survey-weighted and use the 2019 SCF survey wave. Imputation and sample variance corrected standard errors in parentheses. Five imputations and 999 bootstrapped samples were used. Age, education, and occupation were grouped for decomposition.
Table A.8: Two-stage decomposition of White-Hispanic lifetime earnings for the respondent-Human capital characteristics only

| Percentiles | 15th | Share | 30th | Share | 50th | Share | 70th | Share | 85th | Share |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| IHS(Lifetime earnings for the respondent) |  |  |  |  |  |  |  |  |  |  |
| White non-Hispanic | $\begin{gathered} 14.240^{* * *} \\ (0.03) \end{gathered}$ |  | $\begin{gathered} 14.532^{* * *} \\ (0.02) \end{gathered}$ |  | $\begin{gathered} 14.813^{* * *} \\ (0.01) \end{gathered}$ |  | $\begin{gathered} 15.047^{* * *} \\ (0.02) \end{gathered}$ |  | $\begin{gathered} 15.347^{* * *} \\ (0.02) \end{gathered}$ |  |
| White (Reweight) | $\begin{gathered} 13.827^{* * *} \\ (0.10) \end{gathered}$ |  | $\begin{gathered} 14.221^{* * *} \\ (0.05) \end{gathered}$ |  | $\begin{gathered} 14.503^{* * *} \\ (0.02) \end{gathered}$ |  | $\begin{gathered} 14.806^{* * *} \\ (0.03) \end{gathered}$ |  | $\begin{gathered} 15.018^{* * *} \\ (0.04) \end{gathered}$ |  |
| Hispanic | $\begin{gathered} 13.858^{* * *} \\ (0.08) \end{gathered}$ |  | $\begin{gathered} 14.162^{* * *} \\ (0.05) \end{gathered}$ |  | $\begin{gathered} 14.393^{* * *} \\ (0.04) \end{gathered}$ |  | $\begin{gathered} 14.660^{* * *} \\ (0.04) \end{gathered}$ |  | $\begin{gathered} 14.901^{* * *} \\ (0.03) \end{gathered}$ |  |
| Difference | $\begin{gathered} 0.382^{* * *} \\ (0.07) \end{gathered}$ |  | $\begin{gathered} 0.369^{* * *} \\ (0.05) \end{gathered}$ |  | $\begin{gathered} 0.420^{* * *} \\ (0.04) \end{gathered}$ |  | $\begin{gathered} 0.387^{* * *} \\ (0.04) \end{gathered}$ |  | $\begin{gathered} 0.447^{* * *} \\ (0.04) \end{gathered}$ |  |
| Total Explained | $\begin{gathered} 0.413^{* * *} \\ (0.10) \end{gathered}$ | 108.1\% | $\begin{gathered} 0.310^{* * *} \\ (0.05) \end{gathered}$ | 84.0\% | $\begin{gathered} 0.310^{* * *} \\ (0.03) \end{gathered}$ | 73.8\% | $\begin{gathered} 0.240^{* * *} \\ (0.03) \end{gathered}$ | 62.0\% | $\begin{gathered} 0.330^{* * *} \\ (0.04) \end{gathered}$ | 73.8\% |
| Total Unexplained | $\begin{aligned} & -0.031 \\ & (0.09) \end{aligned}$ | -8.1\% | $\begin{aligned} & 0.059 \\ & (0.05) \end{aligned}$ | 16.0\% | $\begin{gathered} 0.110^{* * *} \\ (0.03) \end{gathered}$ | 26.2\% | $\begin{gathered} 0.147^{* * *} \\ (0.03) \end{gathered}$ | 38.0\% | $\begin{gathered} 0.117^{* * *} \\ (0.04) \end{gathered}$ | 26.2\% |
| Explained |  |  |  |  |  |  |  |  |  |  |
| Total | $\begin{gathered} 0.413^{* * *} \\ (0.10) \end{gathered}$ |  | $\begin{gathered} 0.310^{* * *} \\ (0.05) \end{gathered}$ |  | $\begin{gathered} 0.310^{* * *} \\ (0.03) \end{gathered}$ |  | $\begin{gathered} 0.240^{* * *} \\ (0.03) \end{gathered}$ |  | $\begin{gathered} 0.330^{* * *} \\ (0.04) \end{gathered}$ |  |
| Pure | $\begin{gathered} 0.396^{* * *} \\ (0.06) \end{gathered}$ | 95.9\% | $\begin{gathered} 0.362^{* * *} \\ (0.04) \end{gathered}$ | 116.8\% | $\begin{gathered} 0.270^{* * *} \\ (0.03) \end{gathered}$ | 87.1\% | $\begin{gathered} 0.273^{* * *} \\ (0.03) \end{gathered}$ | 113.8\% | $\begin{gathered} 0.259^{* * *} \\ (0.03) \end{gathered}$ | 78.5\% |
| Specification Error | $\begin{aligned} & 0.017 \\ & (0.07) \end{aligned}$ | 4.1\% | $\begin{aligned} & -0.052 \\ & (0.04) \end{aligned}$ | -16.8\% | $\begin{gathered} 0.041^{* *} \\ (0.02) \end{gathered}$ | 13.2\% | $\begin{gathered} -0.033^{*} \\ (0.02) \end{gathered}$ | -13.8\% | $\begin{gathered} 0.070^{* * *} \\ (0.03) \end{gathered}$ | $21.2 \%$ |
| Pure Explained |  |  |  |  |  |  |  |  |  |  |
| Years of full-time work | $\begin{gathered} 0.147^{* * *} \\ (0.05) \end{gathered}$ | $37.1 \%$ | $\begin{gathered} 0.092^{* * *} \\ (0.03) \end{gathered}$ | $25.4 \%$ | $\begin{gathered} 0.065^{* * *} \\ (0.02) \end{gathered}$ | $24.1 \%$ | $\begin{gathered} 0.054^{* * *} \\ (0.01) \end{gathered}$ | 19.8\% | $\begin{gathered} 0.039^{* * *} \\ (0.01) \end{gathered}$ | 15.1\% |
| Age | -0.017* | -4.3\% | 0.012* | 3.3\% | 0.026*** | 9.6\% | $0.026^{* * *}$ | 9.5\% | $0.036^{* * *}$ | 13.9\% |

Note: Results are survey-weighted and use the 2019 SCF survey wave. Imputation and sample variance corrected standard errors in parentheses. Five imputations and 999 bootstrapped samples were used. Age, education, and occupation were grouped for decomposition.
Table A.8: Two-stage decomposition of White-Hispanic lifetime earnings for the respondent-Human capital characteristics only (Cont.)

| Percentiles | 15th | Share | 30th | Share | 50th | Share | 70th | Share | 85th | Share |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Education | (0.01) | 72.7\% | (0.01) | 68.2\% | (0.01) | 59.3\% | (0.01) | 53.1\% | (0.01) | 52.1\% |
|  | 0.288*** |  | 0.247*** |  | 0.160*** |  | 0.145*** |  | 0.135*** |  |
|  | (0.05) |  | (0.03) |  | (0.02) |  | (0.02) |  | (0.02) |  |
| Occupation | $-0.022^{*}$ | $-5.6 \%$ | 0.011 | 3.0\% | 0.018** | 6.7\% | 0.048*** | 17.6\% | 0.049*** | 18.9\% |
|  | (0.01) |  | (0.01) |  | (0.01) |  | (0.01) |  | (0.01) |  |
| Explained Specification |  |  |  |  |  |  |  |  |  |  |
| Years of full-time work | $-0.945$ |  | -0.134 |  | -0.009 |  | 0.068 |  | 0.035 |  |
|  | (0.81) |  | (0.15) |  | (0.09) |  | (0.08) |  | (0.09) |  |
| Age | 0.199 |  | 0.034 |  | 0.014 |  | -0.024 |  | 0.050 |  |
|  | (0.18) |  | (0.06) |  | (0.03) |  | (0.04) |  | (0.04) |  |
| Education | 0.089 |  | 0.080 |  | $-0.127 * *$ |  | -0.159*** |  | -0.147*** |  |
|  | (0.16) |  | (0.09) |  | (0.05) |  | (0.04) |  | (0.04) |  |
| Occupation | -0.028 |  | ${ }^{-0.161 * * *}$ |  | -0.062* |  | $-0.083^{* *}$ |  | -0.058 |  |
|  | (0.10) |  | (0.05) |  | (0.03) |  | (0.04) |  | (0.05) |  |
| Constant | ${ }^{0.702}$ |  | 0.129 |  | 0.225* |  | 0.165 |  | 0.190** |  |
|  | (0.83) |  | (0.26) |  | (0.12) |  | (0.12) |  | (0.09) |  |
| Unexplained | -0.031 |  | 0.059 |  | 0.110*** |  | 0.147*** |  | 0.117*** |  |
| Total | (0.09) |  | (0.05) |  | (0.03) |  | (0.03) |  | (0.04) |  |
|  | -0.010 |  | -0.002 |  | ${ }^{0.002}$ |  | ${ }^{0.002}$ |  | ${ }^{0.003}$ |  |
| Reweight group error | (0.03) |  | (0.02) |  | (0.01) |  | (0.01) |  | (0.01) |  |
|  | -0.021 |  | 0.061 |  | 0.108*** |  | 0.145*** |  | 0.114*** |  |
| Pure | (0.08) |  | (0.04) |  | (0.03) |  | (0.04) |  | (0.04) |  |

Note: Results are survey-weighted and use the 2019 SCF survey wave. Imputation and sample variance corrected standard errors in parentheses. Five imputations and 999 bootstrapped samples were used. Age, education, and occupation were grouped for decomposition.
Table A.8: Two-stage decomposition of White-Hispanic lifetime earnings for the respondent-Human capital characteristics only (Cont.)

(0.13) (0.10) (0.11) $\begin{array}{lll}-0.074 & 0.081 & -0.007 \\ (0.05) & (0.05) & (0.05)\end{array}$ $0.014-0.014 \quad-0.009$ (0.07) (0.06) (0.05) $\begin{array}{lll}-0.041 & 0.061 & 0.087\end{array}$ (0.11) (0.17) $(00.0)$
700.0
$(00.0)$
100.0
$(00.0)$
000.0
$(00.0)$
$000.0^{-}$
GIGL
 Note: Results are survey-weighted and use the 2019 SCF survey wave. Imputation and sample variance corrected standard errors in parentheses. Five imputations and 999 bootstrapped samples were used. Age, education, and occupation were grouped for decomposition.
${ }^{* * *} p<0.01,{ }^{* *} p<0.05, * p<0.1$
Table A.9: Two-stage decomposition of White-Black lifetime earnings for the respondent

| Percentiles | 15th | Share | 30th | Share | 50th | Share | 70th | Share | 85th | Share |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| IHS(Lifetime earnings for the respondent) |  |  |  |  |  |  |  |  |  |  |
| White non-Hispanic | $\begin{gathered} 14.240^{* * *} \\ (0.03) \end{gathered}$ |  | $\begin{gathered} 14.532^{* * *} \\ (0.02) \end{gathered}$ |  | $\begin{gathered} 14.813^{* * *} \\ (0.01) \end{gathered}$ |  | $\begin{gathered} 15.047^{* * *} \\ (0.02) \end{gathered}$ |  | $\begin{gathered} 15.347^{* * *} \\ (0.02) \end{gathered}$ |  |
| White (Reweight) | $\begin{gathered} 13.685^{* * *} \\ (0.11) \end{gathered}$ |  | $\begin{gathered} 14.207^{* * *} \\ (0.05) \end{gathered}$ |  | $\begin{gathered} 14.528^{* * *} \\ (0.03) \end{gathered}$ |  | $\begin{gathered} 14.832^{* * *} \\ (0.02) \end{gathered}$ |  | $\begin{gathered} 15.047^{* * *} \\ (0.03) \end{gathered}$ |  |
| Black | $\begin{gathered} 13.769^{* * *} \\ (0.09) \end{gathered}$ |  | $\begin{gathered} 14.127^{* * *} \\ (0.06) \end{gathered}$ |  | $\begin{gathered} 14.380^{* * *} \\ (0.02) \end{gathered}$ |  | $\begin{gathered} 14.712^{* * *} \\ (0.05) \end{gathered}$ |  | $\begin{gathered} 14.996^{* * *} \\ (0.02) \end{gathered}$ |  |
| Difference | $\begin{gathered} 0.471^{* * *} \\ (0.09) \end{gathered}$ |  | $\begin{gathered} 0.405^{* * *} \\ (0.06) \end{gathered}$ |  | $\begin{gathered} 0.433^{* * *} \\ (0.03) \end{gathered}$ |  | $\begin{gathered} 0.335^{* * *} \\ (0.05) \end{gathered}$ |  | $\begin{gathered} 0.351^{* * *} \\ (0.03) \end{gathered}$ |  |
| Total Explained | $\begin{gathered} 0.555^{* * *} \\ (0.11) \end{gathered}$ | 117.8\% | $\begin{gathered} 0.325^{* * *} \\ (0.05) \end{gathered}$ | 80.2\% | $\begin{gathered} 0.285^{* * *} \\ (0.03) \end{gathered}$ | 65.8\% | $\begin{gathered} 0.215^{* * *} \\ (0.03) \end{gathered}$ | 64.2\% | $\begin{gathered} 0.300^{* * *} \\ (0.03) \end{gathered}$ | 85.5\% |
| Total Unexplained | $\begin{gathered} -0.084 \\ (0.10) \end{gathered}$ | -17.8\% | $\begin{aligned} & 0.080 \\ & (0.05) \end{aligned}$ | 19.8\% | $\begin{gathered} 0.148^{* * *} \\ (0.03) \end{gathered}$ | $34.2 \%$ | $\begin{gathered} 0.120^{* * *} \\ (0.04) \end{gathered}$ | $35.8 \%$ | $\begin{gathered} 0.051^{*} \\ (0.03) \end{gathered}$ | 14.5\% |
| Explained |  |  |  |  |  |  |  |  |  |  |
| Total | $\begin{gathered} 0.555^{* * *} \\ (0.11) \end{gathered}$ |  | $\begin{gathered} 0.325^{* * *} \\ (0.05) \end{gathered}$ |  | $\begin{gathered} 0.285^{* *} * \\ (0.03) \end{gathered}$ |  | $\begin{gathered} 0.215^{* * *} \\ (0.03) \end{gathered}$ |  | $\begin{gathered} 0.300^{* *} * \\ (0.03) \end{gathered}$ |  |
| Pure | $\begin{gathered} 0.401^{* * *} \\ (0.05) \end{gathered}$ | 72.3\% | $\begin{gathered} 0.326^{* * *} \\ (0.04) \end{gathered}$ | 100.3\% | $\begin{gathered} 0.246^{* * *} \\ (0.03) \end{gathered}$ | 86.3\% | $\begin{gathered} 0.261^{* * *} \\ (0.03) \end{gathered}$ | 121.4\% | $\begin{gathered} 0.271^{* * *} \\ (0.03) \end{gathered}$ | 90.3\% |
| Specification Error | $\begin{gathered} 0.155^{*} \\ (0.08) \end{gathered}$ | 27.9\% | $\begin{aligned} & -0.001 \\ & (0.03) \end{aligned}$ | -0.3\% | $\begin{gathered} 0.039^{* *} \\ (0.02) \end{gathered}$ | 13.7\% | $\begin{gathered} -0.046^{* * *} \\ (0.02) \end{gathered}$ | -21.4\% | $\begin{aligned} & 0.029 \\ & (0.02) \end{aligned}$ | 9.7\% |
| Pure Explained |  |  |  |  |  |  |  |  |  |  |
| IHS(Respondent annual earnings) | $\begin{aligned} & 0.001 \\ & (0.00) \end{aligned}$ | 0.2\% | $\begin{aligned} & 0.001 \\ & (0.00) \end{aligned}$ | 0.3\% | $\begin{aligned} & 0.005 \\ & (0.00) \end{aligned}$ | 2.0\% | $\begin{aligned} & 0.008 \\ & (0.01) \end{aligned}$ | 3.1\% | $\begin{aligned} & 0.006 \\ & (0.00) \end{aligned}$ | 2.2\% |
| IHS(Spouse annual earnings) | $\begin{gathered} 0.013^{* *} \\ (0.01) \end{gathered}$ | $3.2 \%$ | $\begin{gathered} 0.012^{* *} \\ (0.00) \end{gathered}$ | $3.7 \%$ | $\begin{aligned} & 0.007 \\ & (0.00) \end{aligned}$ | 2.8\% | $\begin{array}{r} 0.006 \\ (0.01) \\ \hline \end{array}$ | 2.3\% | $\begin{gathered} -0.002 \\ (0.01) \end{gathered}$ | -0.7\% |
| Note: Results are survey-weighted and use the 2019 SCF survey wave. Imputation and sample variance corrected standard errors in parentheses. Five imputations and 999 bootstrapped samples were used. Age, education, and occupation were grouped for decomposition.${ }^{* * *} p<0.01,{ }^{* *} p<0.05,{ }^{*} p<0.1$ |  |  |  |  |  |  |  |  |  |  |

Table A.9: Two-stage decomposition of White-Black lifetime earnings for the respondent (Cont.)

| Percentiles | 15th | Share | 30th | Share | 50th | Share | 70th | Share | 85th | Share |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| No. of Children | 0.003 | 0.7\% | 0.006** | 1.8\% | 0.002 | 0.8\% | 0.002 | 0.8\% | 0.011** | 4.1\% |
|  | (0.00) |  | (0.00) |  | (0.00) |  | (0.00) |  | (0.00) |  |
| Nonprimary family living in household | 0.001 | 0.2\% | 0.000 | 0.0\% | 0.000 | 0.0\% | 0.000 | 0.0\% | -0.000 | 0.0\% |
|  | (0.00) |  | (0.00) |  | (0.00) |  | (0.00) |  | (0.00) |  |
| Has health insurance | 0.039*** | 9.7\% | $0.038^{* * *}$ | 11.7\% | 0.011** | 4.5\% | 0.006 | 2.3\% | 0.002 | 0.7\% |
|  | (0.01) |  | (0.01) |  | (0.01) |  | (0.01) |  | (0.01) |  |
| Divorced | 0.002 | 0.5\% | 0.003 | 0.9\% | 0.004 | 1.6\% | 0.004 | 1.5\% | 0.004 | 1.5\% |
|  | (0.00) |  | (0.00) |  | (0.00) |  | (0.00) |  | (0.00) |  |
| Years of full-time work | $0.217^{* * *}$ | $54.1 \%$ | $0.131^{* * *}$ | $40.2 \%$ | 0.093*** | $37.8 \%$ | 0.076*** | $29.1 \%$ | 0.057*** | 21.0\% |
|  | (0.04) |  | (0.03) |  | (0.02) |  | (0.01) |  | (0.01) |  |
| Union | -0.001 | -0.2\% | -0.000 | 0.0\% | -0.001 | -0.4\% | 0.002 | 0.8\% | 0.003 | 1.1\% |
|  | (0.00) |  | (0.00) |  | (0.00) |  | (0.00) |  | (0.00) |  |
| Age | -0.004 | -1.0\% | 0.006 | 1.8\% | 0.011 | 4.5\% | 0.011 | 4.2\% | 0.015 | 5.5\% |
|  | (0.01) |  | (0.01) |  | (0.01) |  | (0.01) |  | (0.01) |  |
| Education | 0.127*** | $31.7 \%$ | 0.109*** | $33.4 \%$ | 0.098*** | $39.8 \%$ | 0.126*** | 48.3\% | 0.145*** | 53.5\% |
|  | (0.02) |  | (0.01) |  | (0.01) |  | (0.02) |  | (0.02) |  |
| Occupation | 0.004 | 1.0\% | 0.020*** | 6.1\% | 0.015** | 6.1\% | 0.019* | 7.3\% | 0.029*** | 10.7\% |
|  | (0.01) |  | (0.01) |  | (0.01) |  | (0.01) |  | (0.01) |  |
| Explained Specification Error |  |  |  |  |  |  |  |  |  |  |
| IHS(Respondent annual earnings) | -0.217 |  | -0.075 |  | 0.003 |  | -0.067 |  | -0.081 |  |
|  | (0.25) |  | (0.08) |  | (0.06) |  | (0.06) |  | (0.07) |  |
| IHS(Spouse annual earnings) | -0.038 |  | 0.004 |  | 0.003 |  | 0.012 |  | -0.015 |  |
|  | (0.03) |  | (0.01) |  | (0.01) |  | (0.01) |  | (0.01) |  |
| No. of Children | 0.038 |  | 0.028 |  | -0.004 |  | -0.005 |  | 0.035** |  |
|  | (0.05) |  | (0.02) |  | (0.01) |  | (0.01) |  | (0.01) |  |
| Nonprimary family living in household | -0.045** |  | 0.000 |  | -0.001 |  | -0.004 |  | 0.011 |  |
|  | (0.02) |  | (0.01) |  | (0.01) |  | (0.01) |  | (0.01) |  |

[^21]Table A.9: Two-stage decomposition of White-Black lifetime earnings for the respondent (Cont.)

| Percentiles | 15th | Share | 30th | Share | 50th | Share | 70th | Share | 85th | Share |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Has health insurance | 0.082 |  | 0.002 |  | $-0.079^{* * *}$ |  | -0.014 |  | -0.012 |  |
|  | (0.08) |  | (0.04) |  | (0.03) |  | (0.02) |  | (0.03) |  |
| Divorced | -0.094 |  | -0.009 |  | 0.008 |  | 0.011 |  | -0.005 |  |
|  | (0.06) |  | (0.02) |  | (0.01) |  | (0.01) |  | (0.01) |  |
| Years of full-time work | -1.966*** |  | -0.341** |  | -0.106 |  | 0.021 |  | 0.001 |  |
|  | (0.75) |  | (0.15) |  | (0.07) |  | (0.06) |  | (0.06) |  |
| Union | -0.002 |  | -0.025* |  | -0.006 |  | -0.035*** |  | -0.014 |  |
|  | (0.03) |  | (0.01) |  | (0.01) |  | (0.01) |  | (0.02) |  |
| Age | 0.570*** |  | 0.202*** |  | 0.010 |  | -0.006 |  | 0.109*** |  |
|  | (0.22) |  | (0.07) |  | (0.04) |  | (0.04) |  | (0.04) |  |
| Education | -0.172 |  | 0.098 |  | -0.054 |  | -0.055 |  | -0.070* |  |
|  | (0.31) |  | (0.09) |  | (0.06) |  | (0.04) |  | (0.04) |  |
| Occupation | 0.178 |  | -0.121*** |  | -0.012 |  | -0.050 |  | -0.058 |  |
|  | (0.18) |  | (0.04) |  | (0.04) |  | (0.03) |  | (0.04) |  |
| Constant | 1.822** |  | 0.237 |  | 0.276** |  | 0.145 |  | 0.129 |  |
|  | (0.86) |  | (0.22) |  | (0.13) |  | (0.13) |  | (0.11) |  |
| Unexplained |  |  |  |  |  |  |  |  |  |  |
| Total | -0.084 |  | 0.080 |  | 0.148*** |  | 0.120*** |  | 0.051* |  |
|  | (0.10) |  | (0.05) |  | (0.03) |  | (0.04) |  | (0.03) |  |
| Reweight group error | 0.004 |  | -0.008 |  | -0.016 |  | -0.018* |  | -0.013 |  |
|  | (0.04) |  | (0.02) |  | (0.01) |  | (0.01) |  | (0.01) |  |
| Pure | -0.088 |  | 0.088* |  | $0.163^{* * *}$ |  | $0.138^{* * *}$ |  | 0.065** |  |
|  | (0.09) |  | (0.05) |  | (0.03) |  | (0.04) |  | (0.03) |  |
| Pure Unexplained |  |  |  |  |  |  |  |  |  |  |
| IHS(Respondent annual earnings) | 0.319 |  | 0.109 |  | -0.022 |  | 0.023 |  | -0.097 |  |
|  | (0.35) |  | (0.17) |  | (0.18) |  | (0.15) |  | (0.21) |  |

[^22]Table A.9: Two-stage decomposition of White-Black lifetime earnings for the respondent (Cont.)

| Percentiles | 15th | Share | 30th | Share | 50th | Share | 70th | Share | 85th | Share |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| IHS(Spouse annual earnings) | -0.053 |  | -0.023 |  | -0.018 |  | -0.096*** |  | -0.046 |  |
|  | (0.08) |  | (0.02) |  | (0.02) |  | (0.03) |  | (0.03) |  |
| No. of Children | -0.038 |  | $0.015$ |  | $0.021$ |  | 0.041 |  | 0.005 |  |
|  | (0.07) |  | (0.04) |  | (0.02) |  | (0.03) |  | (0.03) |  |
| Nonprimary family living in household | 0.054 |  | -0.007 |  | -0.017 |  | -0.025* |  | -0.012 |  |
|  | $(0.04)$ |  | (0.02) |  | (0.01) |  | (0.01) |  | (0.01) |  |
| Has health insurance | -0.086 |  | $-0.003$ |  | $0.088^{* *}$ |  | $0.032$ |  | 0.053 |  |
|  | (0.11) |  | $(0.05)$ |  | $(0.04)$ |  | (0.04) |  | (0.04) |  |
| Divorced | 0.041 |  | -0.049** |  | $-0.064^{* * *}$ |  | $-0.067^{* * *}$ |  | -0.048** |  |
|  | (0.07) |  | $(0.02)$ |  | $(0.02)$ |  | $(0.02)$ |  | $(0.02)$ |  |
| Years of full-time work | 1.342 |  | 0.041 |  | -0.111 |  | -0.237** |  | 0.082 |  |
|  | (0.88) |  | (0.20) |  | (0.09) |  | (0.12) |  | (0.09) |  |
| Union | 0.041 |  | 0.006 |  | -0.006 |  | 0.005 |  | -0.042* |  |
|  | (0.04) |  | (0.02) |  | (0.02) |  | (0.02) |  | $(0.02)$ |  |
| Age | -0.461* |  | -0.055 |  | 0.109 |  | 0.033 |  | -0.074 |  |
|  | (0.27) |  | (0.11) |  | (0.07) |  | (0.08) |  | (0.08) |  |
| Education | -0.049 |  | 0.006 |  | 0.007 |  | $-0.172^{*}$ |  | -0.126** |  |
|  | (0.38) |  | (0.16) |  | (0.10) |  | (0.10) |  | $(0.06)$ |  |
| Occupation | -0.137 |  | 0.127 |  | -0.121 |  | -0.059 |  | -0.008 |  |
|  | (0.23) |  | (0.11) |  | (0.08) |  | (0.09) |  | (0.10) |  |
| Constant | -1.060 |  | -0.080 |  | 0.297 |  | 0.658** |  | 0.376 |  |
|  | (1.16) |  | (0.35) |  | (0.28) |  |  |  | (0.28) |  |
| Reweight group error |  |  |  |  |  |  |  |  |  |  |
| IHS(Respondent annual earnings) | -0.003 |  | -0.001 |  | -0.001 |  | -0.003 |  | -0.002 |  |
|  | (0.00) |  | $(0.00)$ |  | (0.00) |  | (0.00) |  | (0.00) |  |
| IHS(Spouse annual earnings) | -0.001 |  | -0.000 |  | -0.000 |  | 0.000 |  | -0.000 |  |
|  | (0.00) |  | (0.00) |  | (0.00) |  | (0.00) |  | (0.00) |  |

[^23]Table A.9: Two-stage decomposition of White-Black lifetime earnings for the respondent (Cont.)

| Percentiles | 15th | Share | 30th | Share | 50th | Share | 70th | Share | 85th | Share |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| No. of Children | 0.000 |  | 0.000 |  | -0.000 |  | -0.000 |  | -0.000 |  |
|  | (0.00) |  | (0.00) |  | (0.00) |  | (0.00) |  | (0.00) |  |
| Nonprimary family living in household | -0.002 |  | 0.000 |  | 0.000 |  | 0.000 |  | 0.000 |  |
|  | (0.00) |  | (0.00) |  | (0.00) |  | (0.00) |  | (0.00) |  |
| Has health insurance | 0.000 |  | 0.000 |  | 0.000 |  | -0.000 |  | 0.000 |  |
|  | (0.00) |  | (0.00) |  | (0.00) |  | (0.00) |  | (0.00) |  |
| Divorced | 0.006 |  | -0.002 |  | -0.004** |  | -0.004** |  | -0.003** |  |
|  | (0.01) |  | (0.00) |  | (0.00) |  | (0.00) |  | (0.00) |  |
| Years of full-time work | -0.019 |  | -0.006 |  | -0.004 |  | -0.003 |  | -0.002 |  |
|  | (0.04) |  | (0.01) |  | (0.01) |  | (0.01) |  | (0.00) |  |
| Union | 0.000 |  | 0.000 |  | 0.000 |  | 0.000 |  | -0.000 |  |
|  | (0.00) |  | (0.00) |  | (0.00) |  | (0.00) |  | (0.00) |  |
| Age | 0.024** |  | 0.001 |  | -0.008*** |  | -0.011** |  | $-0.008^{* * *}$ |  |
|  | (0.01) |  | (0.00) |  | (0.00) |  | (0.00) |  | (0.00) |  |
| Education | 0.000 |  | -0.000 |  | -0.000 |  | -0.001 |  | -0.002 |  |
|  | (0.01) |  | (0.00) |  | (0.00) |  | (0.00) |  | (0.00) |  |
| Occupation | -0.002 |  | 0.001 |  | 0.002 |  | 0.003 |  | 0.004 |  |
|  | (0.01) |  | (0.00) |  | (0.00) |  | (0.00) |  | (0.00) |  |
| Observations |  |  |  |  |  |  |  |  |  |  |
| White non-Hispanic | 1515 |  | 1515 |  | 1515 |  | 1515 |  | 1515 |  |
| Black | 294 |  | 294 |  | 294 |  | 294 |  | 294 |  |
| Total | 1809 |  | 1809 |  | 1809 |  | 1809 |  | 1809 |  |

Note: Results are survey-weighted and use the 2019 SCF survey wave. Imputation and sample variance corrected standard errors in parentheses. Five imputations and 999 bootstrapped samples were used. Age, education, and occupation were grouped for decomposition.
$* * * p<0.01,{ }^{* *} p<0.05,{ }^{*} p<0.1$
Table A.10: Two-stage decomposition of White-Hispanic lifetime earnings for the respondent

| Percentiles | 15th | Share | 30th | Share | 50th | Share | 70th | Share | 85th | Share |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| IHS(Lifetime earnings for the respondent) |  |  |  |  |  |  |  |  |  |  |
| White non-Hispanic | $\begin{gathered} 14.240^{* * *} \\ (0.03) \end{gathered}$ |  | $\begin{gathered} 14.532^{* * *} \\ (0.02) \end{gathered}$ |  | $\begin{gathered} 14.813^{* * *} \\ (0.01) \end{gathered}$ |  | $\begin{gathered} 15.047^{* * *} \\ (0.02) \end{gathered}$ |  | $\begin{gathered} 15.347^{* * *} \\ (0.02) \end{gathered}$ |  |
| White (Reweight) | $\begin{gathered} 13.833^{* * *} \\ (0.09) \end{gathered}$ |  | $\begin{gathered} 14.211^{* * *} \\ (0.05) \end{gathered}$ |  | $\begin{gathered} 14.494^{* * *} \\ (0.03) \end{gathered}$ |  | $\begin{gathered} 14.800^{* * *} \\ (0.03) \end{gathered}$ |  | $\begin{gathered} 14.997^{* * *} \\ (0.03) \end{gathered}$ |  |
| Hispanic | $\begin{gathered} 13.858^{* * *} \\ (0.08) \end{gathered}$ |  | $\begin{gathered} 14.162^{* * *} \\ (0.05) \end{gathered}$ |  | $\begin{gathered} 14.393^{* * *} \\ (0.04) \end{gathered}$ |  | $\begin{gathered} 14.660^{* * *} \\ (0.04) \end{gathered}$ |  | $\begin{gathered} 14.901^{* * *} \\ (0.03) \end{gathered}$ |  |
| Difference | $\begin{gathered} 0.382^{* * *} \\ (0.07) \end{gathered}$ |  | $\begin{gathered} 0.369^{* * *} \\ (0.05) \end{gathered}$ |  | $\begin{gathered} 0.420^{* * *} \\ (0.04) \end{gathered}$ |  | $\begin{gathered} 0.387^{* * *} \\ (0.04) \end{gathered}$ |  | $\begin{gathered} 0.447^{* * *} \\ (0.04) \end{gathered}$ |  |
| Total Explained | $\begin{gathered} 0.408^{* * *} \\ (0.09) \end{gathered}$ | 106.8\% | $\begin{gathered} 0.321^{* * *} \\ (0.05) \end{gathered}$ | 87.0\% | $\begin{gathered} 0.318^{* * *} \\ (0.03) \end{gathered}$ | 75.7\% | $\begin{gathered} 0.247^{* * *} \\ (0.04) \end{gathered}$ | 63.8\% | $\begin{gathered} 0.351 * * * \\ (0.04) \end{gathered}$ | 78.5\% |
| Total Unexplained | $\begin{gathered} -0.026 \\ (0.09) \end{gathered}$ | -6.8\% | $\begin{aligned} & 0.049 \\ & (0.05) \end{aligned}$ | 13.3\% | $\begin{gathered} 0.102^{* * *} \\ (0.03) \end{gathered}$ | 24.3\% | $\begin{gathered} 0.140^{* * *} \\ (0.03) \end{gathered}$ | $36.2 \%$ | $\begin{gathered} 0.096^{* * *} \\ (0.03) \end{gathered}$ | 21.5\% |
| Explained |  |  |  |  |  |  |  |  |  |  |
| Total | $\begin{gathered} 0.408^{* * *} \\ (0.09) \end{gathered}$ |  | $\begin{gathered} 0.321^{* * *} \\ (0.05) \end{gathered}$ |  | $\begin{gathered} 0.318^{* * *} \\ (0.03) \end{gathered}$ |  | $\begin{gathered} 0.247^{* * *} \\ (0.04) \end{gathered}$ |  | $\begin{gathered} 0.351^{* * *} \\ (0.04) \end{gathered}$ |  |
| Pure | $\begin{gathered} 0.401^{* * *} \\ (0.06) \end{gathered}$ | 98.3\% | $\begin{gathered} 0.368^{* * *} \\ (0.04) \end{gathered}$ | 114.6\% | $\begin{gathered} 0.269^{* * *} \\ (0.03) \end{gathered}$ | 84.6\% | $\begin{gathered} 0.275^{* * *} \\ (0.03) \end{gathered}$ | 111.3\% | $\begin{gathered} 0.243^{* * *} \\ (0.03) \end{gathered}$ | 69.2\% |
| Specification Error | $\begin{aligned} & 0.007 \\ & (0.07) \end{aligned}$ | 1.7\% | $\begin{gathered} -0.047 \\ (0.04) \end{gathered}$ | -14.6\% | $\begin{gathered} 0.049^{* *} \\ (0.02) \end{gathered}$ | 15.4\% | $\begin{gathered} -0.028 \\ (0.02) \end{gathered}$ | -11.3\% | $\begin{gathered} 0.108^{* * *} \\ (0.02) \end{gathered}$ | $30.8 \%$ |
| Pure Explained |  |  |  |  |  |  |  |  |  |  |
| IHS(Respondent annual earnings) | $\begin{aligned} & 0.001 \\ & (0.00) \end{aligned}$ | 0.2\% | $\begin{aligned} & 0.001 \\ & (0.00) \end{aligned}$ | 0.3\% | $\begin{aligned} & 0.005 \\ & (0.00) \end{aligned}$ | 1.9\% | $\begin{aligned} & 0.007 \\ & (0.01) \end{aligned}$ | 2.5\% | $\begin{aligned} & 0.005 \\ & (0.00) \end{aligned}$ | 2.1\% |
| IHS(Spouse annual earnings) | $\begin{gathered} 0.005^{*} \\ (0.00) \end{gathered}$ | $1.2 \%$ | $\begin{aligned} & 0.005 \\ & (0.00) \\ & \hline \end{aligned}$ | $1.4 \%$ | $\begin{array}{r} 0.003 \\ (0.00) \\ \hline \end{array}$ | 1.1\% | $\begin{aligned} & 0.002 \\ & (0.00) \end{aligned}$ | 0.7\% | $\begin{gathered} -0.001 \\ (0.00) \end{gathered}$ | -0.4\% |
| Note: Results are survey-weighted and use the 2019 SCF survey wave. Imputation and sample variance corrected standard errors in parentheses. Five imputations and 999 bootstrapped samples were used. Age, education, and occupation were grouped for decomposition.${ }^{* * *} p<0.01,{ }^{* *} p<0.05, * p<0.1$ |  |  |  |  |  |  |  |  |  |  |

Table A.10: Two-stage decomposition of White-Hispanic lifetime earnings for the respondent (Cont.)

| Percentiles | 15th | Share | 30th | Share | 50th | Share | 70th | Share | 85th | Share |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| No. of Children | -0.003 | -0.7\% | $-0.007^{* *}$ | -1.9\% | -0.003 | -1.1\% | -0.003 | -1.1\% | -0.015** | -6.2\% |
|  | (0.00) |  | (0.00) |  | (0.00) |  | (0.00) |  | (0.01) |  |
| Nonprimary family living in household | 0.003 | 0.7\% | 0.001 | 0.3\% | 0.003 | 1.1\% | 0.003 | 1.1\% | -0.001 | -0.4\% |
|  | (0.00) |  | (0.00) |  | (0.00) |  | (0.00) |  | (0.00) |  |
| Has health insurance | 0.049*** | $12.2 \%$ | 0.047*** | $12.8 \%$ | 0.013** | 4.8\% | 0.008 | 2.9\% | 0.003 | 1.2\% |
|  | (0.02) |  | (0.01) |  | (0.01) |  | (0.01) |  | (0.01) |  |
| Divorced | 0.002 | 0.5\% | 0.003 | 0.8\% | 0.004 | 1.5\% | 0.004 | 1.5\% | 0.005 | 2.1\% |
|  | (0.00) |  | (0.00) |  | (0.00) |  | (0.00) |  | (0.00) |  |
| Years of full-time work | 0.120*** | 29.9\% | 0.072*** | 19.6\% | 0.051*** | 19.0\% | 0.042*** | 15.3\% | 0.031*** | 12.8\% |
|  | (0.04) |  | (0.02) |  | (0.02) |  | (0.01) |  | (0.01) |  |
| Union | 0.000 | 0.0\% | 0.000 | 0.0\% | 0.000 | 0.0\% | -0.000 | 0.0\% | -0.001 | -0.4\% |
|  | (0.00) |  | (0.00) |  | (0.00) |  | (0.00) |  | (0.00) |  |
| Age | -0.009 | $-2.2 \%$ | 0.018** | 4.9\% | 0.028*** | $10.4 \%$ | 0.028*** | 10.2\% | 0.037*** | 15.2\% |
|  | (0.01) |  | (0.01) |  | (0.01) |  | (0.01) |  | (0.01) |  |
| Education | $0.252^{* * *}$ | 62.8\% | 0.213*** | 57.9\% | 0.141*** | $52.4 \%$ | 0.132*** | 48.0\% | 0.128*** | 52.7\% |
|  | (0.04) |  | (0.03) |  | (0.02) |  | (0.02) |  | (0.02) |  |
| Occupation | -0.019* | -4.7\% | 0.014* | 3.8\% | $0.024^{* * *}$ | 8.9\% | 0.051*** | 18.5\% | 0.050*** | 20.6\% |
|  | (0.01) |  | (0.01) |  | (0.01) |  | (0.01) |  | (0.01) |  |
| Explained Specification Error |  |  |  |  |  |  |  |  |  |  |
| IHS(Respondent annual earnings) | 0.117 |  | 0.156* |  | 0.104** |  | 0.072 |  | 0.029 |  |
|  | (0.13) |  | (0.09) |  | (0.05) |  | (0.05) |  | (0.05) |  |
| IHS(Spouse annual earnings) | -0.009 |  | 0.027 |  | 0.017 |  | 0.026 |  | -0.020 |  |
|  | (0.04) |  | (0.02) |  | (0.02) |  | (0.02) |  | (0.02) |  |
| No. of Children | -0.018 |  | 0.051 |  | 0.028 |  | 0.015 |  | 0.081*** |  |
|  | (0.06) |  | (0.03) |  | (0.02) |  | (0.02) |  | (0.02) |  |
| Nonprimary family living in household | 0.030 |  | 0.010 |  | 0.002 |  | -0.010 |  | 0.017 |  |
|  | (0.03) |  | (0.01) |  | (0.01) |  | (0.01) |  | (0.01) |  |

Note: Results are survey-weighted and use the 2019 SCF survey wave. Imputation and sample variance corrected standard errors in parentheses. Five imputations and 999 bootstrapped samples were used. Age, education, and occupation were grouped for decomposition. *** $p<0.01$, ** $p<0.05,{ }^{*} p<0.1$
Table A.10: Two-stage decomposition of White-Hispanic lifetime earnings for the respondent (Cont.)

| Percentiles | 15th | Share | 30th | Share | 50th | Share | 70th | Share | 85th | Share |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Has health insurance | 0.010 |  | 0.015 |  | -0.061** |  | -0.065** |  | -0.040 |  |
|  | (0.06) |  | (0.04) |  | (0.03) |  | (0.03) |  | (0.03) |  |
| Divorced | $-0.025$ |  | $-0.014$ |  | $-0.020$ |  | 0.018 |  | 0.014 |  |
|  | (0.03) |  | (0.02) |  | (0.01) |  | (0.01) |  | (0.01) |  |
| Years of full-time work | -0.795 |  | -0.218 |  | -0.016 |  | 0.098 |  | 0.068 |  |
|  | (0.62) |  | (0.15) |  | (0.09) |  | (0.08) |  | (0.08) |  |
| Union | $0.021$ |  | -0.017 |  | $-0.004$ |  | $-0.018^{*}$ |  | -0.014 |  |
|  | (0.02) |  | $(0.01)$ |  | $(0.01)$ |  | $(0.01)$ |  | (0.02) |  |
| Age | 0.148 |  | 0.069 |  | 0.031 |  | -0.015 |  | 0.081** |  |
|  | (0.17) |  | (0.06) |  | (0.03) |  | (0.04) |  | $(0.04)$ |  |
| Education | 0.058 |  | 0.075 |  | -0.110** |  | $-0.141^{* * *}$ |  | -0.149*** |  |
|  | (0.17) |  | (0.09) |  | (0.06) |  | (0.05) |  | (0.03) |  |
| Occupation | -0.045 |  | -0.138** |  | -0.036 |  | -0.043 |  | -0.039 |  |
|  | $(0.10)$ |  | (0.05) |  | $(0.04)$ |  | (0.04) |  | $(0.05)$ |  |
| Constant | 0.514 |  | $-0.065$ |  |  |  |  |  | 0.079 |  |
|  |  |  | (0.25) |  | (0.13) |  | (0.15) |  | (0.11) |  |
| Unexplained |  |  |  |  |  |  |  |  |  |  |
| Total | -0.026 |  | 0.049 |  | $0.102^{* * *}$ |  | $0.140^{* * *}$ |  | $0.096 * * *$ |  |
|  | (0.09) |  | (0.05) |  | (0.03) |  | (0.03) |  | (0.03) |  |
| Reweight group error | 0.037 |  | 0.029* |  | 0.024* |  | 0.018 |  | 0.018 |  |
|  | (0.03) |  | (0.02) |  | (0.01) |  | (0.01) |  | (0.01) |  |
| Pure | -0.063 |  | 0.020 |  | 0.078** |  | $0.123^{* * *}$ |  | 0.078** |  |
|  | (0.09) |  | (0.05) |  | (0.03) |  | (0.04) |  | (0.04) |  |
| Pure Unexplained |  |  |  |  |  |  |  |  |  |  |
| IHS(Respondent annual earnings) | -0.282 |  | -0.367** |  | -0.102 |  | 0.080 |  | 0.109 |  |
|  | (0.21) |  | (0.15) |  | (0.09) |  | (0.09) |  | (0.12) |  |

[^24]Table A.10: Two-stage decomposition of White-Hispanic lifetime earnings for the respondent (Cont.)

| Percentiles | 15th | Share | 30th | Share | 50th | Share | 70th | Share | 85th | Share |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| IHS(Spouse annual earnings) | 0.008 |  | -0.005 |  | -0.026 |  | -0.020 |  | -0.007 |  |
|  | (0.05) |  | (0.03) |  | (0.03) |  | (0.03) |  | (0.04) |  |
| No. of Children | -0.005 |  | -0.029 |  | -0.030 |  | 0.023 |  | 0.013 |  |
|  | (0.08) |  | (0.05) |  | (0.04) |  | (0.04) |  | (0.05) |  |
| Nonprimary family living in household | -0.037 |  | 0.026 |  | 0.006 |  | -0.014 |  | $-0.050^{* * *}$ |  |
|  | $(0.04)$ |  | $(0.02)$ |  | (0.02) |  | (0.02) |  | $(0.02)$ |  |
| Has health insurance | 0.086 |  | 0.055 |  | 0.054 |  | $0.007$ |  | -0.020 |  |
|  | (0.07) |  | (0.05) |  | (0.03) |  | (0.04) |  | (0.05) |  |
| Divorced | 0.011 |  | -0.033 |  | -0.041** |  | -0.049* |  | -0.009 |  |
|  | (0.05) |  | $(0.03)$ |  | $(0.02)$ |  | $(0.02)$ |  | (0.02) |  |
| Years of full-time work | -0.012 |  | 0.124 |  | 0.011 |  | 0.030 |  | 0.194* |  |
|  | (0.78) |  | (0.18) |  | (0.13) |  | (0.09) |  | (0.11) |  |
| Union | -0.054* |  | 0.001 |  | 0.009 |  | 0.023 |  | 0.019 |  |
|  | (0.03) |  | $(0.02)$ |  | (0.02) |  | $(0.02)$ |  | $(0.02)$ |  |
| Age | 0.088 |  | -0.002 |  | -0.077 |  | 0.094 |  |  |  |
|  | (0.19) |  | (0.08) |  | (0.06) |  | (0.07) |  | (0.06) |  |
| Education | 0.084 |  | 0.002 |  | -0.005 |  | -0.019 |  | 0.004 |  |
|  | (0.16) |  | (0.11) |  | (0.07) |  | (0.06) |  | (0.06) |  |
| Occupation | 0.035 |  | 0.141* |  | -0.069 |  | 0.048 |  | 0.101 |  |
|  | (0.13) |  | (0.07) |  | (0.06) |  | (0.07) |  | (0.10) |  |
| Constant | 0.015 |  | 0.106 |  | 0.346* |  | -0.082 |  | -0.264 |  |
|  | (0.84) |  | (0.31) |  | (0.20) |  | (0.19) |  | (0.23) |  |
| Reweight group error |  |  |  |  |  |  |  |  |  |  |
| IHS(Respondent annual earnings) | 0.004 |  | 0.005 |  | -0.000 |  | -0.004* |  | -0.004* |  |
|  | (0.01) |  | (0.00) |  | (0.00) |  | (0.00) |  | (0.00) |  |
| IHS(Spouse annual earnings) | 0.003 |  | -0.000 |  | -0.000 |  | -0.001 |  | 0.001 |  |
|  | (0.00) |  | (0.00) |  | (0.00) |  | (0.00) |  | (0.00) |  |

[^25]Table A.10: Two-stage decomposition of White-Hispanic lifetime earnings for the respondent (Cont.)

| Percentiles | 15th | Share | 30th | Share | 50th | Share | 70th | Share | 85th | Share |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| No. of Children | -0.003 |  | 0.002 |  | 0.001 |  | 0.000 |  | 0.001 |  |
|  | (0.01) |  | (0.00) |  | (0.00) |  | (0.00) |  | (0.00) |  |
| Nonprimary family living in household | 0.005 |  | 0.002 |  | 0.001 |  | -0.000 |  | 0.002 |  |
|  | (0.00) |  | (0.00) |  | (0.00) |  | (0.00) |  | (0.00) |  |
| Has health insurance | 0.002 |  | 0.002 |  | 0.002 |  | 0.002 |  | 0.001 |  |
|  | (0.00) |  | (0.00) |  | (0.00) |  | (0.00) |  | (0.00) |  |
| Divorced | 0.000 |  | -0.000 |  | -0.001 |  | -0.002 |  | -0.002 |  |
|  | (0.00) |  | (0.00) |  | (0.00) |  | (0.00) |  | (0.00) |  |
| Years of full-time work | 0.027 |  | 0.013 |  | 0.008 |  | 0.005 |  | 0.004 |  |
|  | (0.03) |  | (0.01) |  | (0.01) |  | (0.01) |  | (0.00) |  |
| Union | 0.000 |  | -0.000 |  | -0.000 |  | -0.000 |  | 0.000 |  |
|  | (0.00) |  | (0.00) |  | (0.00) |  | (0.00) |  | (0.00) |  |
| Age | -0.003 |  | 0.000 |  | 0.001 |  | 0.006 |  | 0.003 |  |
|  | (0.01) |  | (0.00) |  | (0.00) |  | (0.01) |  | (0.00) |  |
| Education | 0.016* |  | 0.011* |  | 0.011** |  | 0.008** |  | 0.005 |  |
|  | (0.01) |  | (0.01) |  | (0.00) |  | (0.00) |  | (0.00) |  |
| Occupation | -0.013 |  | -0.005 |  | 0.001 |  | 0.004 |  | 0.006* |  |
|  | (0.01) |  | (0.00) |  | (0.00) |  | (0.00) |  | (0.00) |  |
| Observations |  |  |  |  |  |  |  |  |  |  |
| White non-Hispanic | 1515 |  | 1515 |  | 1515 |  | 1515 |  | 1515 |  |
| Hispanic | 243 |  | 243 |  | 243 |  | 243 |  | 243 |  |
| Total | 1758 |  | 1758 |  | 1758 |  | 1758 |  | 1758 |  |

Note: Results are survey-weighted and use the 2019 SCF survey wave. Imputation and sample variance corrected standard errors in parentheses. Five imputations and 999 bootstrapped samples were used. Age, education, and occupation were grouped for decomposition.
$* * * p<0.01,{ }^{* *} p<0.05,^{*} p<0.1$

Table A.11: Summary statistics for decomposition covariates

|  | Total | White | Black | Hispanic | Other <br> Race |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Mean respondent annual earnings | 67,022 | 75,276 | 39,458 | 42,660 | 88,821 |
| Mean spouse/partner annual earnings | 22,622 | 25,324 | 13,328 | 13,377 | 33,408 |
| Mean number of children | 1 | 1 | 1 | 1 | 1 |
| Share with nonprimary family living in household | 12.4\% | 10.1\% | 15.6\% | 22.8\% | 11.5\% |
| Share with employer-provided health insurance | 62.3\% | 67.1\% | $51.7 \%$ | 45.0\% | 67.3\% |
| Share who are divorced | 22.4\% | 23.1\% | 24.7\% | 19.4\% | 13.1\% |
| Mean household years of full-time work | 37.3 | 39.5 | 31.7 | 32.9 | 34.5 |
| Share with R or SP covered by union | 17.8\% | 17.3\% | 20.5\% | 18.4\% | 15.7\% |
| Share who are business owners | 16.6\% | 19.5\% | 7.5\% | 9.7\% | 19.2\% |
| Mean business value | 191,526 | 247,911 | 25,460 | 50,364 | 219,781 |
| Mean respondent age | 50 | 50 | 49 | 48 | 49 |
| Share of respondents by educational attainment |  |  |  |  |  |
| No high school diploma or GED | 10.7\% | 6.5\% | 12.9\% | 34.9\% | 7.5\% |
| High school diploma or GED | 28.6\% | 28.6\% | 32.5\% | 29.7\% | 15.2\% |
| Some college | 26.2\% | 26.6\% | 31.2\% | 19.6\% | 20.8\% |
| Bachelor's | 21.1\% | 23.5\% | 15.5\% | 10.6\% | 27.0\% |
| Master's, professional, or doctorate | 13.4\% | 14.8\% | 7.9\% | 5.2\% | 29.5\% |
| Share of respondents by occupation |  |  |  |  |  |
| Managerial/professional | 36.1\% | 39.6\% | 25.8\% | 21.0\% | 51.2\% |
| Technical/sales/services | 23.5\% | 22.2\% | 27.7\% | 28.0\% | 19.1\% |
| Other* | 23.7\% | 22.3\% | 22.5\% | 37.7\% | 14.9\% |
| Not working | 16.7\% | 15.8\% | 24.0\% | 13.3\% | 14.7\% |

Source: SCF 2007-2019
Note: Restricted to respondents (R) aged 40-59, spouse/partner (SP) (if present) aged 30-65. Summary statistics are survey-weighted.

* Including production/craft/repair workers, operators, laborers, farmers, foresters, fishers.


[^0]:    Hope Bodenschatz (Hope.Bodenschatz@bos.frb.org) is a senior research assistant in the Federal Reserve Bank of Boston Research Department. Gerald E. Daniels Jr. (Gerald.Daniels@Howard.edu) is an associate professor of economics at Howard University. Jeffrey P. Thompson (Ieffrey.Thompson@bos.frb.org) is a vice president and economist in the Federal Reserve Bank of Boston Research Department, where he is the director of the New England Public Policy Center

[^1]:    ${ }^{1}$ The "other" race group includes Asian, Native American, and other race groups.
    ${ }^{2}$ Measured over the 2007-2019 period and expressed in inflation-adjusted 2019 dollars.

[^2]:    ${ }^{3}$ Work-history information provided in the SCF is used to construct lifetime-earnings histories for each respondent and spouse, if present. The earnings are "lifetime" in that they cover the span of employment from the ages when respondents and spouses first worked to the ages at the time of the survey, which range from 40 to 59 for the respondents and 30 to 65 for spouses (if present). The average lifetime earnings is calculated for the 2007-2019 surveys and is presented in inflation-adjusted 2019 dollars.

[^3]:    ${ }^{4}$ The majority of the questions in the survey are designed to represent the economically dominant single individual or couple (married or living together) in a household. The unit of analysis is the "primary economic unit" (PEU), which is defined as the single individual or couple and all other individuals in the household who are financially interdependent.
    ${ }^{5}$ The SCF includes 999 bootstrapped samples. Data missing from the survey were imputed using five imputation replicates (implicates). Standard error estimates are corrected for both multiple imputation and sample variance in our analysis. See the Federal Reserve Board's Standard Error Documentation.

[^4]:    ${ }^{6}$ For additional details about the racial identifier, see the Federal Reserve Board's SAS macro for the Survey of Consumer Finances.
    ${ }^{7}$ Before 1998, a respondent could provide only a single response to a question regarding their race and ethnicity.

[^5]:    ${ }^{8}$ For a detailed discussion on the lifetime-earnings estimates employed in our analysis, see Jacobs et al. (2022).
    ${ }^{9}$ See Fortin et al. (2011) and Firpo et al. (2018) for additional discussions.

[^6]:    ${ }^{10}$ The decomposition may also be written as $\hat{\Delta}_{0}^{\tau}=\left(\bar{X}_{W}-\bar{X}_{R}\right)^{\prime} \cdot \hat{\gamma}_{R, \tau}+\bar{X}_{W}{ }^{\prime} \cdot\left(\hat{\gamma}_{W, \tau}-\hat{\gamma}_{R, \tau}\right)$, where the reference group for the composition and structural effects is exchanged.

[^7]:    ${ }^{11}$ The numerator is based on the current work status recode variable ( x 4100 ). A respondent is unemployed if they are temporarily laid off, not expecting to return to job, and has no current work (also including students); on sick/maternity leave, but not expecting to return to work; unemployed and looking for work (also including homemakers, students, and individuals with disabilities); an unpaid volunteer; or an unpaid family worker (R's who volunteer that they work in a family business or farm and are unpaid, not including "volunteer work" for charitable or nonprofit organizations). The denominator (being in the labor force) is defined using the bulletin variable "lf," specifically whether R is "working in some way."
    ${ }^{12}$ The share of households with zero lifetime earnings is extremely small: 0.8 percent weighted and 0.7 percent unweighted. The share with zero household annual earnings (wage income) is 14 percent weighted (17 percent unweighted) and zero respondent annual earnings on current job is 24 percent weighted (27 percent unweighted).

[^8]:    ${ }^{13} \mathrm{R}$ and SP employment status is defined using the current work status recode variables x4100 and x4700. R or SP is employed if they are a worker only; worker + disabled; worker + retired; worker + student; worker + homemaker; worker + unemployed/looking for work; worker + temporarily laid off; temporarily laid off, expecting to return to work; on sick/maternity leave and expecting to return to work (also including disabled); on sabbatical and expecting to go back to work; or other combination incl. WORKER beside 11, $12,13,14,15,16,17$. Otherwise, they are considered to be not working.

[^9]:    ${ }^{14}$ The thresholds for the terciles of years of full-time work are 48 years and 63 years.

[^10]:    ${ }^{15}$ Our analysis focuses on illuminating the effects of key covariates in accounting for the explained earnings gap. All tables in the main text exclude detailed decompositions of the structural effects. To view the full decomposition results, see the Appendix.
    ${ }^{16}$ Figure 6 (A) depicts the aggregate decomposition of White-Black lifetime earnings in five-percentile increments across the entire wealth distribution.
    ${ }^{17}$ Figure 6 (B) depicts the aggregate decomposition of White-Hispanic lifetime earnings in five-percentile

[^11]:    increments across the entire wealth distribution.
    ${ }^{18}$ At the 15 th percentile and below, 35 percent of White respondents report not working compared with 22 percent of Hispanic respondents based on survey-weighted estimates.

[^12]:    Note: Results are survey-weighted and use the 2019 SCF survey wave. Imputation and sample variance corrected standard errors in parentheses. Five imputations and 999 bootstrapped samples were used. Age, education, and occupation were grouped for decomposition.

[^13]:    Note: Results are survey-weighted and use the 2019 SCF survey wave. Imputation and sample variance corrected standard errors in parentheses. Five imputations
    and 999 bootstrapped samples were used. Age, education, and occupation were grouped for decomposition.
    ${ }^{* * *} p<0.01,{ }^{* *} p<0.05,{ }^{*} p<0.1$

[^14]:    Note: Results are survey-weighted and use the 2019 SCF survey wave. Imputation and sample variance corrected standard errors in parentheses. Five imputations and 999 bootstrapped samples were used. Age, education, and occupation were grouped for decomposition. *** $p<0.01$, ** $p<0.05,{ }^{*} p<0.1$

[^15]:    Note: Results are survey-weighted and use the 2019 SCF survey wave. Imputation and sample variance corrected standard errors in parentheses. Five imputations and 999 bootstrapped samples were used. Age, education, and occupation were grouped for decomposition. ${ }^{* * *} p<0.01,{ }^{* *} p<0.05,{ }^{*} p<0.1$

[^16]:    Note: Results are survey-weighted and use the 2019 SCF survey wave. Imputation and sample variance corrected standard errors in parentheses. Five imputations and 999 bootstrapped samples were used. Age, education, and occupation were grouped for decomposition.

[^17]:    Note: Results are survey-weighted and use the 2019 SCF survey wave. Imputation and sample variance corrected standard errors in parentheses. Five imputations and 999 bootstrapped samples were used. Age, education, and occupation were grouped for decomposition. ${ }^{* * *} p<0.01,{ }^{* *} p<0.05,{ }^{*} p<0.1$

[^18]:    Note: Results are survey-weighted and use the 2019 SCF survey wave. Imputation and sample variance corrected standard errors in parentheses. Five imputations and 999 bootstrapped samples were used. Age, education, and occupation were grouped for decomposition. ${ }^{* * *} p<0.01,{ }^{* *} p<0.05,{ }^{*} p<0.1$

[^19]:    Note: Results are survey-weighted and use the 2019 SCF survey wave. Imputation and sample variance corrected standard errors in parentheses. Five imputations and 999 bootstrapped samples were used. Age, education, and occupation were grouped for decomposition.
    ${ }^{* * *} p<0.01,{ }^{* *} p<0.05,{ }^{*} p<0.1$

[^20]:    Note: Results are survey-weighted and use the 2019 SCF survey wave. Imputation and sample variance corrected standard errors in parentheses. Five imputations and 999 bootstrapped samples were used. Age, education, and occupation were grouped for decomposition. ${ }^{* * *} p<0.01,{ }^{* *} p<0.05,{ }^{*} p<0.1$

[^21]:    Note: Results are survey-weighted and use the 2019 SCF survey wave. Imputation and sample variance corrected standard errors in parentheses. Five imputations and 999 bootstrapped samples were used. Age, education, and occupation were grouped for decomposition. ${ }^{* * *} p<0.01,{ }^{* *} p<0.05,{ }^{*} p<0.1$

[^22]:    Note: Results are survey-weighted and use the 2019 SCF survey wave. Imputation and sample variance corrected standard errors in parentheses. Five imputations and 999 bootstrapped samples were used. Age, education, and occupation were grouped for decomposition. ${ }^{* * *} p<0.01,{ }^{* *} p<0.05,{ }^{*} p<0.1$

[^23]:    Note: Results are survey-weighted and use the 2019 SCF survey wave. Imputation and sample variance corrected standard errors in parentheses. Five imputations and 999 bootstrapped samples were used. Age, education, and occupation were grouped for decomposition.
    ${ }^{* * *} p<0.01,{ }^{* *} p<0.05,{ }^{*} p<0.1$

[^24]:    Note: Results are survey-weighted and use the 2019 SCF survey wave. Imputation and sample variance corrected standard errors in parentheses. Five imputations and 999 bootstrapped samples were used. Age, education, and occupation were grouped for decomposition.
    ${ }^{* * *} p<0.01,{ }^{* *} p<0.05,{ }^{*} p<0.1$

[^25]:    Note: Results are survey-weighted and use the 2019 SCF survey wave. Imputation and sample variance corrected standard errors in parentheses. Five imputations and 999 bootstrapped samples were used. Age, education, and occupation were grouped for decomposition.
    *** $p<0.01$, ** $p<0.05,{ }^{*} p<0.1$

