

# Is College Still Worth It? The New Calculus of Falling Returns

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## Abstract

The college *income* premium—the extra income earned by a family headed by a college graduate over an otherwise similar family without a bachelor’s degree—remains positive but has declined for recent graduates. The college *wealth* premium (extra wealth) has declined more noticeably among all cohorts born after 1940. Among non-Hispanic white family heads born in the 1980s, the college wealth premium is at a historic low; among all other races and ethnicities, it is statistically indistinguishable from zero. Using variables available for the first time in the 2016 Survey of Consumer Finances, we find that controlling for the education of one’s parents reduces our estimates of college and postgraduate income and wealth premiums by 8 to 18 percent. Controlling also for measures of a respondent’s financial acumen—which may be partly innate—, our estimates of the value added by college and a postgraduate degree fall by 30 to 60 percent. Taken together, our results suggest that college and post-graduate education may be failing some recent graduates as a financial investment. We explore a variety of explanations and conclude that falling college wealth premiums may be due to the luck of when you were born, financial liberalization and the rising cost of higher education.

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## Is College Still Worth It? The New Calculus of Falling Returns

Having a four-year college degree is associated with many positive outcomes, including higher income and wealth; better health; a higher likelihood of being a homeowner and of being partnered (married or cohabiting); and a lower risk of becoming delinquent on any obligation. (See Table 1, Panel a.) Among college graduates, families headed by someone who completed a post-graduate degree fare even better than families with only a bachelor's degree on these and other measures. (See Table 1, Panel b.) The fact that an increasing share of the adult population has a bachelor's degree or higher suggests a widespread belief that college is, indeed, worth it. (See Figure 1.)

Yet signs have emerged that the economic benefits of college may be diminishing. Despite large income and wealth advantages enjoyed on average by families with a bachelor's degree or more over families without post-secondary degrees, recent cohorts of college graduates appear to be faring less well than previous generations.<sup>2</sup> Are these concerns justified?

We use the Federal Reserve Board's Survey of Consumer Finances (SCF), which covers family heads born throughout the 20<sup>th</sup> century, to determine whether the economic and financial benefits of obtaining a post-secondary degree have changed over time. Our evidence is mixed but discouraging on balance—recent college graduates' income advantage remains positive but has declined recently, while the wealth-building advantage of higher education has declined sharply among recent graduates. Across racial and ethnic groups born in the 1980s, only the wealth premium of non-Hispanic white college graduates remains statistically significant. Thus, we identify a striking divergence between the income and wealth outcomes of college graduates across birth cohorts.

Our findings highlight the fact that income and wealth measures, while related, are distinct and may provide different insights into college and post-graduate experiences. We consider several potential explanations, each of which may contribute something to the patterns we identify. We conclude that the most likely explanations are a combination of the following:

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<sup>2</sup> For evidence that college graduates enjoy large income and wealth advantages over non-graduates on average, see Emmons, Kent and Ricketts (2018a). For evidence that recent cohorts (including non-graduates and graduates alike) have fallen behind the wealth-accumulation trajectories of earlier generations, see Emmons, Kent and Ricketts (2018b).

- The luck of when you were born, since beginning to save and accumulate wealth at a time when asset prices (stocks, bonds, housing) are high makes subsequent rates of return low and vice versa;
- Financial liberalization, which may have created more opportunities for people born in the 1980s than in the 1940s, for example, to utilize credit when they were young, affecting their wealth but not their incomes; and
- The rising cost of higher education, which would not reduce college-graduates' incomes but would reduce their wealth, at least early in life.

The paper has five sections. We document the large income and wealth premiums enjoyed by the typical bachelor's and post-graduate degree holders over the typical non-grad in Section I; this is the conventional wisdom. In Section II, we show with SCF data that aggregate statistics conceal important differences between income and wealth trends across college graduates from different birth cohorts. In Section III, we use new data available for the first time in the 2016 SCF to document the extent to which a college graduate's inherited characteristics and personal characteristics explain adult outcomes that otherwise are attributed to college when those variables are omitted from a statistical model. Section IV explores possible explanations for our main finding that wealth premiums have declined precipitously for successive generations of college graduates. Section V concludes.

## I. **Income and Wealth Premiums Enjoyed by the Typical College Graduate**

The conventional wisdom that bachelor's and, even more, post-graduate degrees pay off in terms of higher income and wealth are strongly supported in aggregate data (that is, pooled across race, ethnicity and birth year). We present income and wealth trends for three separate groups—families headed by someone with both a bachelor's and a post-graduate degree; families headed by someone whose highest level of education is a bachelor's degree; and families headed by someone whose highest education is less than a four-year college degree. Our data source throughout is the SCF.<sup>3</sup>

***Share of families with bachelor's and post-graduate degrees.*** The share of U.S. families headed by a college grad has increased significantly in recent years. (See Figure 2.) In 1989, about 23 percent of families were headed by someone with a four-year college degree or more; by 2016, the share had

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<sup>3</sup> See Bricker et al. (2017) for a description of the methodology and some results from recent waves of the SCF. See Emmons, Kent and Ricketts (2018a) for income and wealth trends across education levels.

reached 34 percent. Families headed by someone with a post-graduate (as well as a four-year college) degree increased from almost 9 percent of all families in 1989 to about 13 percent in 2016. Among white families alone (not shown), the share of families with a four-year degree or more increased from 26 to 38 percent between 1989 and 2016, while among families of all other races and ethnicities, the share increased from 14 to 25 percent.

**Family income.** The income premium enjoyed by the median bachelor's-degree holding family over the median income of a non-grad family has held steady during the last few decades at about 100 percent. (See Figures 3 and 4.) The income premium enjoyed by the median post-graduate degree holding family over the median non-grad family has increased, standing in 2016 at about 175 percent. The share of all income earned by college grad families increased from 45 to 63 percent between 1989 and 2016, as both the number of college grad families and their average income increased faster than those of nongrads.

**Family wealth (net worth).** Figure 5 shows that the median net worth of both bachelor's and post-graduate degree holding families increased between 1989 and 2016, while the median non-grad family's wealth declined during that period. Thus, the wealth premium enjoyed by the bachelor's-degree holding family over the median wealth of the non-grad family has climbed noticeably during the last few decades. (See Figure 6.) The wealth premium enjoyed by the median post-graduate degree holding family over the median non-grad family also roughly doubled, standing in 2016 at over 700 percent (i.e., eight times as large). The share of all wealth owned by college grad families increased even more than was the case for income—from 50 to 74 percent between 1989 and 2016.

**What these figures hide.** The median income and net-worth figures from aggregate data shown here turn out to be misleading when careful account is taken of key underlying demographic dimensions and family and individual characteristics. Comparing families that are similar in terms of race and ethnicity, year of birth and family size, we find that college income and wealth premiums are overstated in the aggregate data. Moreover, the conclusions that college wealth premiums are larger and are increasing faster than college income premiums are reversed when comparing demographically matched groups of families. In fact, we show in Section II that wealth premiums have fallen across successive birth cohorts. Among those born in the 1980s, the wealth premiums of bachelor's and post-graduate degree holders are statistically indistinguishable from zero for all college groups with the single exception of white four-year degree holders. In section III, using newly available data in the 2016 SCF, we find that even the dwindling or non-existent college income and wealth premiums we estimated in

Section II likely overstate the causal effect of post-secondary education. College degree attainment is linked to other inherited and personal characteristics which also predict financial outcomes, the inclusion of these variables in the model further weakens income and wealth premiums.

## II. College Income and Wealth Premiums among Demographically Matched Families

Large and growing income and wealth premiums associated with college degrees measured in aggregate data mask a diverse range of experiences among college-grad and post-graduate families when compared to non-grad families of the same race and ethnicity who were born in the same decade. It turns out that very favorable income and wealth outcomes experienced by mostly white college grads born many decades ago cause aggregate data to overstate the income and wealth advantages experienced by more recent college grads.

To quantify the changing economic benefits of post-secondary degrees, we estimate the income and wealth premiums earned by families with a bachelor's degree and, separately, those with a post-graduate degree compared to otherwise similar families without college degrees. The advanced degrees that qualify a family as post-graduate are quite diverse, see Table A1 for a description of all variables used.

We focus on college graduates who belong to one of six decade-long cohorts starting with SCF respondents born during the 1930s, concluding with those born during the 1980s.<sup>4</sup> Due to historical discrimination in both education and asset-building programs, as well as our long time horizon, we estimate cohort-specific college and post-graduate income and wealth premiums separately for each of the four racial and ethnic groups available in the public release of the SCF.<sup>5</sup>

**Usual Income.** To measure income for the SCF, the interviewers requested information on the family's cash income, before taxes, for the full calendar year preceding the survey. The components of

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<sup>4</sup> Family respondents born before 1930 or after 1989 are included in the regressions but are not highlighted in any of the tables and figures displayed due to low sample size and survivorship bias among older cohorts.

<sup>5</sup> The groups are non-Hispanic white, non-Hispanic African-American or black, Hispanic of any race, and other races and ethnicities. This latter group includes respondents that identify as Asian, American Indian/Alaska Native, Native Hawaiian/Pacific Islander, another race, or multiple races or ethnicities. In order to protect the identity of respondents, Board staff combine results for all of the "other" groups. We also estimated regressions of income and wealth including all races and ethnicities simultaneously; results were qualitatively similar but more difficult to interpret. See Emmons and Ricketts (2017) for an interpretation of large, relatively unchanging racial and ethnic wealth gaps as the result primarily of structural, systemic or other unobservable factors rather than differences in individual effort or choice. Also see Darity et al. (2018) for a discussion of structural and systemic determinants of racial wealth gaps.

income in the SCF are wages, self-employment and business income, taxable and tax-exempt interest, dividends, realized capital gains, food stamps and other related support programs provided by government, pensions and withdrawals from retirement accounts, Social Security, alimony and other support payments, and miscellaneous sources of income for all members of the primary economic unit in the household. All income figures are adjusted for inflation to be comparable to values recorded in 2016.

A household's "usual income" adjusted for family size is our preferred measure of earnings. In addition to recording a household's actual income in the past year, respondents are asked: "Is this income unusually high or low compared to what you would expect in a "normal" year, or is it normal?"<sup>6</sup> In instances where the respondent reports the family's actual income was unusually high or low we use the "normal" income provided in a follow-up question. If the respondent reports actual income as normal, that is considered usual income. This measure functions as a type of permanent income, insulated from yearly income fluctuations that were perceived by the respondent as temporary.

We adjust for household size as follows:

$$U_i = \frac{u_i}{\sqrt{H_i}}$$

where  $u_i$  is the usual income of household  $i$  and  $H_i$  is the number of people in that household, excluding individuals that do not usually live there and who are financially independent. The square-root adjustment we use is one of the "equivalence scales" recommended by the Organization for Economic Cooperation and Development (OECD) to reflect important economies of scale in household consumption.<sup>7</sup> This also partially adjusts for households with multiple income earners.

To assess secular trends in the returns to higher education we pool responses for all ten triennial SCF survey years, the first of which was conducted in 1989 and the most recent in 2016. This provides a sample of 47,776 households. Our full specification is a log-quadratic ordinary least-squares (OLS) regression of the form:

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<sup>6</sup> This question wasn't asked until the 1992 survey wave and the follow-up question capturing the usual income level wasn't introduced until the 1995 survey wave. Actual income is used in place of usual income for both the 1989 and 1992 samples.

<sup>7</sup> See OECD (2008).

$$\ln(U_i) = \beta_0 + \beta_1 A_i + \beta_2 A_i^2 + \beta_3 A_i^3 + \beta_4 G_i + \beta_5 P_i + \beta_6 C_{i,1} + \dots + \beta_{6+k-1} C_{i,k-1} + \beta_{6+k} C_{i,1} * G_i + \dots + \beta_{6+2k-1} C_{i,k-1} + \beta_{6+2k} C_{i,1} * P_i + \dots + \beta_{6+3k-1} C_{i,k-1} + \varepsilon$$

We apply the natural log to size-adjusted usual income.  $A_i$  is the age of the household respondent and  $A_i^2$  and  $A_i^3$  are the squared and cubic terms flexibly capturing the effects of the life cycle.  $G_i$  and  $P_i$  are binary variables equal to one if the respondent earned a terminal four-year college degree or continued on and achieved a post-graduate degree, respectively. Therefore,  $\beta_4$  and  $\beta_5$  represent the income premium attributed to a terminal four-year college degree and post-graduate degree, respectively. The effect on expected earnings associated with the respondent's birth cohort (defined by decades) is captured by  $k$  binary variables denoted as  $C_{i,1:k}$  with  $k - 1$  binaries included in the specification to both avoid perfect multicollinearity and allow control of the reference group. Birth cohorts and education binaries are interacted to capture changing college premiums over time. For ease of interpretation, we opt to vary the omitted birth cohort and focus on differences in  $\beta_4$  and  $\beta_5$  in order to compare changing college premiums over time.

For example, when omitting  $C_i$  for the 1980s cohort,  $\beta_4$  and  $\beta_5$  are the earnings premiums associated with a terminal four-year degree and postgraduate degree for households born in the 1980s relative to their non-college educated peers also born in the 1980s. Omitting  $C_i$  for the 1950s cohort would change the reference group to the average household born in the 1950s that did not graduate from college, and so on.

Estimation was conducted using R statistical software and relied upon the survey and mitools packages.<sup>8</sup> Source code is available upon request. Nonresponse-adjusted sampling weights were used in the analysis to adjust for the fact that the SCF sample is not an equal-probability design. Given the oversample of wealthy households and the use of both wealth and income as dependent variables we believe that using weights in the regression analyses is appropriate.<sup>9</sup> Standard errors are bootstrapped with 999 replicates in accordance with the sample design and are adjusted for imputation uncertainty.<sup>10</sup>

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<sup>8</sup> R Core Team (2017), Lumley (2017) and Lumley (2004). Publicly available scripts written by Anthony Damico (2016) were particularly helpful for working with SCF data in R.

<sup>9</sup> For more on the unique dual-frame sample design of the SCF, see Kennickell (1998). For a thoughtful discussion of whether or not to incorporate weights into regression analysis, see Solon et al. (2013).

<sup>10</sup> See Kennickell (2000) for information on the construction of these replicates.

There is substantial heterogeneity in both income and wealth across racial and ethnic groups, even among college-educated families.<sup>11</sup> Rather than relying on binary variables to adjust for large and persistent racial and ethnic wealth gaps, we partitioned the sample and estimated regressions separately for each of the four racial and ethnic groups. Regression results for non-Hispanic white (henceforth referred to as white) and non-Hispanic African-American or black (henceforth, black) families are shown in Tables 2 and 3, respectively. Results for Hispanic and other families are in Tables A2 and A3, respectively. The relatively small sample sizes for Hispanic and other racial and ethnic college-graduate families greatly diminishes the statistical precision of our estimates but results for these groups do not alter any of our main conclusions.

***Trends in the expected income premiums of college graduates.*** We found that bachelor's-degree income premiums over otherwise similar non-degree families—from the same birth decade and race or ethnicity—declined somewhat among white families, on balance, between the 1930s and the 1980s birth cohorts. Among black families, there was no significant change between the 1940s and the 1980s. The regression results are in Tables 2 and 3 for white and black bachelor's degree holders, respectively, while our estimates of college income premiums over non-graduates are displayed in Figures 7 and 8, respectively. The figures show our point estimates and 95-percent confidence intervals. Our estimates of college income premiums clearly are positive for all birth cohorts among both white and black college grads.<sup>12</sup>

The income advantages for families headed by post-graduate degree holders over non-degree families were typically higher at the mean relative to families headed by terminal bachelor's holders. (See Figures 9 and 10 for whites and blacks, respectively, and Figures A3 and A4 for Hispanics and other families, respectively.) Post-graduate income premiums for whites followed a more pronounced downward trajectory than among white bachelor's degree holders. Among black post-grads, the income premium ranged more widely and was large for all cohorts. Post-graduate degree holders of all races and ethnicities from all six birth decades we consider enjoy a substantial income advantage over those without any post-secondary education.

***Household net worth.*** Household net worth, also adjusted for household size, is our preferred measure of wealth. The SCF is considered the gold standard of balance sheet information precisely

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<sup>11</sup> Emmons and Ricketts (2017).

<sup>12</sup> Except for a few early cohorts in which confidence bands were very wide, the same conclusion applies to Hispanic and other bachelor's degree holders. (See Figures A1 and A2.)

because of its detailed accounting of household assets and liabilities. Family net worth is the difference between a family's assets and its debts at a point in time. Total assets include both financial assets, such as bank accounts, mutual funds and securities, as well as tangible assets, including real estate, vehicles and durable goods. Total debt includes home-secured borrowing (mortgages), other secured borrowing (such as vehicle loans) and unsecured debts (such as credit cards and student loans). Debt incurred in association with a privately owned business or to finance investment real estate is subtracted from the asset's value, rather than being included in the family's debt. All wealth figures also are adjusted for inflation.

We adjust net worth for household size in the same way we adjusted usual income:

$$W_i = \frac{w_i}{\sqrt{H_i}}$$

Our wealth specification has the same structural form (explanatory variables and their interactions) as that used to estimate the income premium. However, the transformation used for the dependent variable ( $W$ ) is the inverse hyperbolic sine (IHS) transformation rather than the natural log.<sup>13</sup> The transformed dependent variable is given by:

$$\sinh^{-1}(\theta W_i) = \ln \left[ \theta W_i + (\theta^2 W_i^2 + 1)^{\frac{1}{2}} \right] / \theta$$

where  $\theta$  is a scaling parameter which controls how much of the function's domain is approximately linear and how much resembles the natural logarithm. The IHS transformation is quite useful when working with wealth outcomes because it can accommodate negative and zero balances (unlike the natural log transformation). The scaling parameter is estimated using maximum likelihood (ML), and we use 0.0001 as is typical in the literature.<sup>14</sup> As shown in Halvorsen and Palmquist (1980), unlike in a log-linear model, the expected change in wealth attributed to a terminal four-year degree and postgraduate degree is not simply  $100 \times \beta_4$  and  $100 \times \beta_5$ . The semi-logarithmic nature of the IHS requires a modified

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<sup>13</sup> Johnson (1949) pioneered the use of the IHS transformation. Burbidge, Magee, and Robb (1988) provide an excellent overview of the transformation. See Pence (2006) for an informative application of IHS in the context of working with SCF data.

<sup>14</sup> See Burbidge, Magee, and Robb (1988); Kennickell and Sundén (1997), Pence (2002), Gale and Pence (2006), and Emmons and Ricketts (2017).

form of the Halvorsen-Palmquist transformation to provide a similar percentage-change interpretation. We use the same form as that used in Gale and Pence (2006):  $e^{\beta\theta} - 1$ .

Similar to the regressions of usual income, we estimate six variations of our wealth specification, switching the omitted birth cohort for each. Again, due to considerably different wealth outcomes and historical context, we estimate regressions separately for the four racial and ethnic groups available within the SCF. See Tables 4 and 5 for white and black families, respectively. Tables A4 and A5 contain results for Hispanic and other families, respectively.

***Trends in the estimated wealth premiums of college graduates.*** In contrast to relatively stable income premiums, the wealth advantage enjoyed by four-year college grad families over otherwise similar non-grad families declined progressively between the 1930s and 1980s cohorts. Among white four-year degree holders, for example, the 1930s cohort owned 247 percent more wealth, and the 1940s cohort 195 percent more, than non-grad families of the same age. But the 1980s cohort owned only 42 percent more wealth. (See Figure 11.) Among black bachelor's-degree families, the wealth premium peaked at 509 percent in the 1930s cohort, fell to 177 percent for the 1960s cohort but was statistically indistinguishable from zero for both the 1970s and the 1980s cohorts. (See Figure 12.) In other words, we cannot reject the null hypothesis that  $\beta_4 = 0$  for the average black grad family born in those decades.

To be clear, these estimates take into account the fact that the older cohorts have had more time to accumulate wealth than the younger cohorts. Our models explicitly adjust for age by including a flexible life-cycle component in each specification.

The results are even starker among post-graduate families. Among white post-graduate degree holders, the 403 percent wealth advantage enjoyed by members of the 1930s cohort had shrunk to only 116- and 28-percent advantages among 1970s and 1980s families, respectively. (See Figure 13.) This represents a much steeper drop-off for the white 1970s cohort than that seen among four-year graduates. For the 1980s cohort, the expected wealth premium over non-grad families is statistically indistinguishable from zero at standard confidence levels. The t-statistic estimated for  $\beta_5$  falls to 1.95, just below the threshold for rejecting the null hypothesis that  $\beta_5 = 0$ .

Among black post-graduate families, the expected wealth premium ranged from 509 percent for the 1940s cohort to levels slightly above, but statistically indistinguishable from, zero for cohorts born in

the 1960s, 1970s and 1980s. (See Figure 14.) This suggests that, on average, black families headed by post-graduates born in the 1960s, 1970s and 1980s have not accumulated more wealth than black non-grad families born in the same decades.

In sum, whites are the only racial or ethnic group born in the 1980s for whom a bachelor's degree provides a reliable wealth advantage over comparable non-grad families--albeit one that is much smaller than those enjoyed by earlier cohorts of college graduates. Even more surprisingly, the expected wealth premium among families headed by someone with a post-graduate degree who was born in the 1980s is indistinguishable from zero at standard confidence levels for all races and ethnicities.<sup>15</sup>

### III. The True (Causal) Return on a College Education: Evidence from the 2016 SCF

The evidence presented thus far has shown a clear declining return over time in expected wealth for college graduates and postgraduates compared to non-grads. On the other hand, the college income premium has remained relatively stable. Quasi-panels of participants from 1989 to 2016 have made these types of comparisons possible, but the data is limited with regard to exposing the “true” effect of a college education.<sup>16</sup>

The choice to attend and subsequently complete college is not random or arbitrary; it is instead related to numerous financial and non-financial considerations, among them parents' wealth<sup>17</sup> intelligence,<sup>18</sup> socio-cognitive skills,<sup>19</sup> race,<sup>20</sup> financial acumen,<sup>21</sup> and parents' education.<sup>22</sup> In this section, we evaluate how some of these variables influence college completion. Doing so addresses significant omitted variable biases that artificially inflate post-secondary premiums.

For the first time, the 2016 SCF data included measures of many previously omitted constructs (parents' education and financial acumen; see Table A1). We used these to more accurately predict income and wealth outcomes. First, we recreated the full 1989-2016 models separately by race.<sup>23</sup>

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<sup>15</sup> Figures A5 through A8 show that these conclusions hold also for Hispanic families and those of all other races and ethnicities.

<sup>16</sup> Bosworth and Anders (2008) find that SCF quasi-panels perform favorably compared to true panels such as the Panel Study of Income Dynamics, especially for wealth outcomes.

<sup>17</sup> See Conley (2001); Kim and Sherraden (2011).

<sup>18</sup> See Sewell and Shah (1967).

<sup>19</sup> See Robbins, Allen, Casillas, Peterson and Le (2006).

<sup>20</sup> See Light and Strayer (2002).

<sup>21</sup> See Lusardi, Mitchell and Curto (2010).

<sup>22</sup> See Emmons, Kent and Ricketts (2018a) for an analysis looking at parents' education and own college completion. See Heckman et al (2016) for a model that encompasses several of these background factors.

<sup>23</sup> Cohort main effects and interactions were not included. Due to the nature of single-year data, it is not possible to separately estimate both life cycle and cohort effects.

Results using only the 2016 data were qualitatively similar to the full sample, as the terminal white college graduate income premium was 65 percent and the white postgrad income premium was 96 percent. The terminal white college graduate wealth premium was 232 percent and the white postgrad wealth premium was 332 percent. (See Tables 6 and 7 for white respondent results; see Appendix B, Tables B1-B6 for all other respondents.) Collectively, these results suggest that there are large financial returns to college.

However, as already noted, these figures may exaggerate the true—that is, causal—college premium. Other variables, chief among them one’s parents’ education, may play a role in potential earnings and wealth accumulation. Furthermore, this role may be direct as well as indirect (through own education). In other words, we predicted that parents’ education would affect college attendance and completion, which would in turn affect later financial outcomes. Own college education would thus mediate (i.e. explain) some of the relationship between parents’ education and income and wealth. Part of the effect of college would be transmitting the effect of parents’ education.

***Higher education as a mediating process between family background characteristics and individuals’ adult outcomes.*** Mediation analysis provides an empirical test of this hypothesis.<sup>24</sup> Importantly, mediation tests causal relationships between variables. While the SCF is not longitudinal and thus a pure causal effect cannot be tested, we can be confident that reverse causality in the ordering of these variables is not possible. We assume the vast majority of parental education is completed prior to the child’s education. This makes parental education an ideal predictor of child’s family wealth and supports our inclusion of child’s education as a mediator. We estimate the following regression models<sup>25</sup> in order to test for mediation:

$$C \text{ path: } y_i = \beta_0 + \beta_1 A_i + \varepsilon$$

$$A \text{ path: } b_i = \beta_0 + \beta_1 A_i + \varepsilon$$

$$B \text{ and } C' \text{ paths: } y_i = \beta_0 + \beta_1 A_i + \beta_2 b_i + \varepsilon$$

where  $y$  is either the natural log of adjusted usual income or the IHS transformed adjusted net worth;  $A_i$  is either the respondent’s father’s education or mother’s education (binaries: less than a 4-year degree or at least a 4-year degree);  $b$  is the education of the respondent (binary: less than a 4-year degree or at least a 4-year degree).

Analyses were conducted using R’s “survey” package. Data from the 2016 SCF survey wave was weighted and combined using the `scf.MIcombine` function. Individual regressions established estimates

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<sup>24</sup> See Hayes (2017) for a thorough introduction to mediation.

<sup>25</sup> Models for B, C and C’ paths are OLS regressions; the A path uses a binary logistic regression.

for A, B, C, and C' paths. First, income and wealth were individually regressed onto the parental education variables (C path). Next, own education was individually regressed onto the parental education variables (A path). Finally, income and wealth were regressed onto all predictors (father's education and own education or mother's education and own education) (B and C' paths). The indirect effect (effect of predictor through mediator) was tested via the Sobel test,<sup>26,27</sup> and the relative indirect effect was calculated to determine the proportion of the total effect that was mediated.<sup>28,29</sup> The white sample was the largest ( $N = 4,480$ ) and is thus presented below. Additional results for blacks, Hispanics, and other races are available in Appendix B, Tables B7-12.

Two types of results would support our contention of an overinflated college premium. First, if the significant direct effect between the original predictors (i.e., mother's and father's education) and income and wealth is reduced but remains significant, this would indicate a partial mediation. In other words, part of the effect of these predictors on income and wealth could be said to work through own education, but part of the effect would work independently of own education. Secondly, if the significant direct effect between the original predictors and income and wealth is reduced to non-significance, this would indicate a full mediation. *All* of the effect of the predictors on income and wealth would be said to work through own education. Either of these results would support that looking at own education without considering other variables is misleading, as education would simply be explaining some of the effect of parental education.

**Parental education.** Father's education ( $b = 0.43$ ,  $SE = 0.03$ ,  $t(4,478) = 12.46$ ,  $p < .001$ , pseudo  $R^2 = 0.03$ ) and mother's education ( $b = 0.26$ ,  $SE = 0.03$ ,  $t(4,478) = 7.65$ ,  $p < .001$ ; pseudo  $R^2 = 0.01$ ) both individually predicted child's family income. Own education partially mediated 63 percent of the relationship between father's education and family income (indirect effect = 0.70, Sobel  $z = 18.11$ ,  $p < .001$ ; C' path:  $b = 0.16$ ,  $SE = 0.04$ ,  $t(4,477) = 4.27$ ,  $p < .001$ , pseudo  $R^2 = 0.16$ ). In contrast, own education fully mediated the relationship (90.5 percent mediated) between mother's education and income (indirect effect = 0.61, Sobel  $z = 14.99$ ,  $p < .001$ ; C' path:  $b = 0.02$ ,  $SE = 0.03$ ,  $t(4,477) = 0.75$ ,  $p = .45$ , pseudo  $R^2 = 0.16$ ).

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<sup>26</sup> See Preacher and Leonardelli (2001).

<sup>27</sup> While bootstrapping is typically considered superior, testing the indirect effect via the Sobel method was used in order to take advantage of all five weighted imputations using scf.MIcombine.

<sup>28</sup> See Preacher and Kelley (2011).

<sup>29</sup> Note that the proportion mediated is only reported when the original C path is significant and unstandardized coefficients do not change sign from path C to path C' (otherwise, values greater than 1 are possible).

These findings suggest that over half of the effect of a father's education and the entire significant effect of a mother's education on an adult child's family income are manifested through the child's own education. More highly educated parents may be more involved in the intellectual development of their child. Mothers with higher levels of education have been found to read more frequently to their children, for example, and regular reading is related to increases in childhood literacy, socio-emotional improvement, and school success.<sup>30</sup> Because the effect of father's education was a partial mediation, this suggests that this effect works both through the child's own education and through other pathways, whereas the effect of a mother's education on a child's family income works primarily through the child's own education.

Parents' education was also clearly impactful in terms of family wealth outcomes. Father's education ( $b = 3,788.64$ ,  $SE = 571.04$ ,  $t(4,478) = 6.63$ ,  $p < .001$ , pseudo  $R^2 = 0.01$ ) individually predicted child's family wealth. Own education fully mediated this relationship (indirect effect = 12,275.20, Sobel  $z = 16.12$ ,  $p < .001$ ,  $C'$  path:  $b = -930.58$ ,  $SE = 602.20$ ,  $t(4,477) = -1.55$ ,  $p = .12$ , pseudo  $R^2 = 0.09$ ), indicating father's education primarily works through the child's own education to affect family wealth outcomes. Mother's education, on the other hand, did not directly predict child's family wealth ( $b = -679.18$ ,  $SE = 811.58$ ,  $t(4,478) = -0.84$ ,  $p = .40$ ; pseudo  $R^2 = 0.00$ ). Introducing child's education yielded a significant indirect effect of 10,848.33 (Sobel  $z = 13.89$ ,  $p < .001$ ). This result is indicative of an inconsistent mediation.<sup>31</sup> In this case, mother's education *only* affected child's family wealth through the child's education; without accounting for the child's education, there was no relationship between mother's education and child's family wealth.

We turn now to the income and wealth premiums of a terminal college degree and a postgraduate degree. Including both fathers' and mothers' education reduced the post-secondary income and wealth premiums by 7 percent and 13 percent, respectively, and reduced the post-graduate income and wealth premiums by 8 percent and 17 percent, respectively. Failing to account for parents' education overinflated the college and post-graduate income and wealth premiums.

**Financial acumen and decision making.** There are several other variables new to the 2016 SCF that can shed additional light on the "true" effect of education on financial outcomes. These are financial acumen variables which include financial literacy, self-assessed financial knowledge and risk-taking, search intensity when saving and borrowing, and active saving. (See Table A1.) Some of these

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<sup>30</sup> See Child Trends Database (2015).

<sup>31</sup> See Kenny (2018).

individual characteristics may be at least partially innate, so measuring them in adults provides some insight into factors that are exogenous to education and its effects.<sup>32</sup>

In order to examine the effect of these variables in accounting for some of the relationship between education, income and wealth, we utilized multiple regression. All variables, including age variables, own education, parents' education, and financial acumen, were regressed onto income and wealth. This model was compared to the simple model of only lifecycle and own education. Results are in Tables 6 and 7. (See Tables B1-B6 for black, Hispanic and other race results).

Clearly, parents' education and financial acumen were important variables previously omitted in estimations of the college and post-graduate premiums (see Table 8). Together, these variables reduced the income premium by 32 percent for white terminal bachelor's degree holders and by 29 percent for white postgraduate degree holders. The reductions of the wealth premium were even starker, with this premium being reduced by over half for graduates and postgraduates (54.4 percent and 60.4 percent, respectively).

These results contribute to a novel perspective illustrating that the college premium may not be all it seems. Although terminal college graduates and postgraduates enjoy significant income and wealth advantages over non-grads, attributing these premiums solely to the effect of college would be a mistake. These analyses indicate that the college premium is inflated, and accounting for other predictive variables allows for a more accurate portrayal. The omitted variable bias outlined in this section has ramifications for the premiums estimated in Section II. Those premiums may be upwardly biased estimates of the true income and wealth premiums. Future waves of the SCF will allow for the possibility of more in-depth cohort analyses.

#### **IV. Why Has the College Income Premium Been More Durable than the Wealth Premium?**

Why have college wealth premiums over non-grads declined in successive cohorts? And why do generational trends in wealth accumulation differ so markedly from those for income? Plausible explanations for a declining college wealth premium across successive birth cohorts—even while the college income premium remains largely intact—must satisfy three criteria:

- The explanation describes factors that affect wealth accumulation differently than they affect income;

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<sup>32</sup> For example, see Cronqvist and Siegel (2015); Lusardi, Mitchell and Curto (2010); and Webbink (2005).

- The explanation is consistent with a decline in the college wealth premium that has been underway for many decades with a large cumulative effect; and
- The explanation is not primarily related to the racial and ethnic mix, the educational attainment or the average family size of particular cohorts, since our premium estimates explicitly control for these elements.

We consider two broad categories of explanations—those that highlight changes in the external environment (such as the economy, financial markets and practices, the cost of college) and others that reflect changing demographics or preferences of college-graduate families in the population (such as the health, educational attainment, family structure, racial and ethnic mix and preferences toward wealth). We conclude that only a handful of potential explanations are plausible.

***Changes in the external environment.*** We briefly consider six potential external explanations for the divergence between college income and wealth premiums across birth cohorts, dismissing three of them as implausible:

- Stagnation of college wages
- The Great Recession
- Discrimination
- Aggregate wealth fluctuations
- Financial liberalization
- Rising cost of college

Table 9 summarizes our evaluation of whether each of these external explanations meets the criteria we set out above.

**Stagnation of college-grad wages: Not plausible.** To be sure, we found some weakening of college and post-graduate income premiums across successive cohorts, especially the 1980s cohort. This is consistent with a recent analysis that identified a declining demand for cognitive task occupations after about 2000. Combined with a continuing surge in the number of new college graduates entering the labor market, this resulted in stagnating wages in those jobs along with a “cascade” of college

graduates into lower-skill jobs. These underemployed college graduates, in turn, pushed some low-skilled workers out of the job market altogether.<sup>33</sup>

Supportive evidence that a college degree has lost some of its income-earning luster can be seen in unemployment and underemployment trends. The unemployment rate in March 2018 among recent college graduates was 3.8 percent while the overall unemployment rate was 4.1 percent, according to the Federal Reserve Bank of New York.<sup>34</sup> The rate of underemployment—working in a job that does not require a college degree—was 42.5 percent among recent graduates. The last time the overall unemployment rate was this low (August 2001), the unemployment and underemployment rates for recent college graduates were only 3.2 and 38.0 percent, respectively—0.6 and 4.5 percentage points lower. Thus, a very tight job market in 2018 is not benefitting recent college graduates as much as it did in 2001.

This evidence fails as an explanation for the divergence between college income and wealth premiums because it says nothing about the wealth-accumulation process itself. Income trends certainly could affect wealth trends but there is nothing in the wage-stagnation evidence to explain a change in this relationship that affected the 1980s cohort the most. Because it identifies a turning point in wages for recent college graduates around 2000, it cannot be the cause of declining income and wealth premiums among older college graduates—those born before the 1980s.

**The Great Recession: Not plausible.** Income and wealth declined for many families during the Great Recession but college income and wealth premiums across the entire population did not. Kuhn, Schularick, and Steins (2017) show that income and wealth inequality increased after the Great Recession, favoring higher-income and –wealth families, who generally are more highly educated. The Great Recession also cannot explain a decline in the college wealth premium that had been in place for several decades before 2008.

**Discrimination: Not plausible.** The legacies of historical and, in some cases, ongoing discrimination in housing, education, employment, credit markets and other spheres of life profoundly influence income and wealth outcomes across race and ethnicity.<sup>35</sup> However, we identified similar trends in college income and wealth premiums using 1989-2016 data in all four racial and ethnic groups

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<sup>33</sup> See Beaudry, Green and Sand (2014).

<sup>34</sup> See “The Labor Market for Recent Undergraduates,” Federal Reserve Bank of New York, [https://www.newyorkfed.org/research/college-labor-market/college-labor-market\\_underemployment\\_rates.html](https://www.newyorkfed.org/research/college-labor-market/college-labor-market_underemployment_rates.html).

<sup>35</sup> See Emmons and Ricketts (2017).

separately. Thus, discrimination is not a plausible explanation for the striking divergence between college income and wealth premiums across cohorts as well as race and ethnicity that we found.

**Aggregate wealth fluctuations: Plausible.** Pure luck (in terms of a favorable financial climate) may play a role in explaining large differences in wealth accumulation across cohorts. A generation that acquires assets when their prices are low has an advantage over a subsequent generation that accumulates assets when they are expensive. Gale and Pence (2006) found that differences in the amount of capital gains received by various birth cohorts were substantial in SCF data through 2001.

We illustrate this effect with a simple dollar-cost averaging simulation exercise applied to the six decades of interest. We use the ratio of aggregate household wealth to disposable personal income as the source of potential windfall capital gains.<sup>36</sup> (See Figure 15.) This ratio has fluctuated in a range between five and six for at least 65 years with only a few exceptions. The ratio was below five—i.e., assets were cheap—during the 1970s and early 1980s. The ratio was above six—i.e., assets were expensive—in 1999, between 2004 and 2007 and from 2013 to 2017. If the long run is a guide, the ratio might be expected to move down toward its historical average level over time.

To illustrate the vagaries of asset valuation, we simulated a dollar-cost averaging strategy for wealth accumulation by each generational cohort. We assumed that each generation invested one dollar in the economy's assets at average ages 30, 40, 50, 60, 70 and 80 if they were alive to do so.

Figure 16 shows the per-dollar net valuation effects on each generation's portfolio in calendar time; Figure 17 does the same over each generation's life cycle. The 1930s generation invested one dollar in 1965, which subsequently declined in value as the wealth-to-income ratio declined. The 1930s generation invested a second dollar in 1975 at the lower prices available then; the 1940s generation invested its first dollar in 1975, and so on.

At the first peak of asset valuation in 1999, all generations that had had a chance to invest—the 1930s, 1940s, 1950s and 1960s cohorts—showed about a 20-percent capital gain per dollar invested.

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<sup>36</sup> In the long run, we would expect this ratio to be roughly constant because the capital stock (the underlying source of household wealth) and the economy's output could be expected to grow at about the same rate (i.e., the capital-output ratio is roughly constant). Deviations in the ratio of household wealth—calculated from market prices—to disposable personal income therefore represent transitory valuation effects. Under the assumptions just enumerated, the expected long-run value of these valuation effects is zero. Any temporary deviations are windfalls or shortfalls that may be experienced differently across generations due to the timing of their investments.

These gains were greatly reduced by the subsequent fall in asset valuations, only to be restored by another surge in capital gains in the mid-2000s.

When the 1970s cohort invested its first dollar in 2005, asset prices were unusually high. The crash in asset values around the Great Recession therefore quickly created a 20-percent capital loss for the 1970s cohort. All previous generations also saw their capital gains evaporate but, because they went into the Great Recession with large accumulated gains, their wealth per dollar invested remained higher than that of the 1970s cohort.

The sharp rebound in asset valuations after the Great Recession lifted all five invested generations in parallel. By 2015, when the 1980s cohort invested its first dollar, the large spread of accumulated capital gains per dollar invested was similar to that seen a decade earlier. At the end of this simulation in 2017, the accumulated per-dollar capital gains among the six generations were 26 percent, 25 percent, 21 percent, 14 percent, 6 percent and 8 percent for the 1930s through the 1980s cohorts, respectively. In other words, the benefits of pure luck—the differential capital gains created by aggregate wealth fluctuations—lined up almost perfectly with the declining college wealth premiums we found across successive cohorts.

The life-cycle perspective represented in Figure 17 shows that the three oldest cohorts have generally had fortuitous asset price fluctuations in the broader economy. The 1940s cohort, in particular, spent only one year (average age of 63) slightly below zero. The 1960s and 1970s cohorts, on the other hand, have spent one quarter (the 1960s) and three quarters (the 1970s) of their lives so far after age 30 below zero. It is also noteworthy that this explanation has little to say about the very low wealth premiums we estimate for the 1980s cohort, which had done little asset accumulation by the end of our sample period.

**Financial liberalization: Plausible.** We have argued that income, driven in large part by labor-market outcomes, is an important predictor of wealth both because saving out of income directly adds to wealth and because some of the determinants of income also contribute to wealth accumulation—factors such as innate cognitive ability, any legacies of discrimination experienced and educational attainment.<sup>37</sup>

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<sup>37</sup> See Emmons and Noeth (2013).

However, a separate “financial channel” of wealth accumulation also appears to be important, particularly for college graduates. Accumulation of financial knowledge takes time, so young college graduates are potentially vulnerable to making financial mistakes.<sup>38</sup> A highly deregulated financial environment is one in which those who are less financially savvy, including young people, have greater access to credit and consequently greater risk associated with managing more consumer debt.

Two of the most consequential legal changes in consumer finance were a 1978 Supreme Court decision that effectively undermined state usury ceilings<sup>39</sup> and the 2005 bankruptcy law that made it much more difficult for consumers to discharge their unsecured debts.<sup>40</sup> The 2005 act added private student loans to the list of debts that are presumptively non-dischargeable in bankruptcy. Aided by advances in computing power to analyze risk and implement risk-based pricing, financial institutions in recent decades have greatly expanded lending to consumers, including higher-risk groups such as young people.

The explosion of consumer debt beginning in the early 1980s has been remarkable. Figure 18 shows that the ratio of all household loans to disposable personal income doubled between the early 1980s and the peak of the housing bubble in 2007. Most of that increase was in the form of mortgage debt but non-mortgage debt also grew faster than incomes. The household debt-to-income ratio declined sharply during and after the Great Recession but remains today higher than at any time before 2003. Likewise, the rate of mortgage serious delinquency—a measure of household debt burden—was higher in 2017 than in any year before 2007. (See Figure 19.)

The long-term increase in debt and debt burden have been particularly large for college graduates. Table 10 shows median debt-to-income ratios at various ages for each of the decadal birth cohorts we study. SCF respondents with bachelor’s degrees born in the 1960s had a median debt-to-income ratio of 34 percent when they were 26 years old. College grads born in the 1970s had a median 53-percent debt-to-income ratio at the same age; while college grads born in the 1980s had a 109-percent debt-to-income ratio—double the level of the 1970s cohort and triple the level of the 1960s cohort. Very similar profiles are visible at ages 36, 46 and 56. In each case, college grads born two

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<sup>38</sup> See Agarwal et al (2009).

<sup>39</sup> *Marquette National Bank of Minneapolis v. First Omaha Services Corp.* (435 U.S. 299, 1978).

<sup>40</sup> Bankruptcy Abuse Prevention and Consumer Protection Act (Pub.L. 109–8, 119 Stat. 23, 2005). See White (2007) for an extensive discussion.

decades later owed roughly twice as much debt relative to their incomes as their 20-year older counterparts.

In sum, financial liberalization during the last 40 years has coincided with a vast increase of household indebtedness and debt burden. College graduates have not been immune; in fact, debt ratios generally are higher among college grads than non-grads. The leveraging of college-grad balance sheets over time is entirely consistent with the progressive weakening of their overall financial positions that we identified.

**Rising cost of college: Plausible.** A secular increase in the cost of attending college checks all of the boxes as a plausible explanation for our findings—it directly affects wealth, not income; it is a long-running story; and it is unrelated to changes in the demographics of college graduates for which we could control.

Figure 20 shows that, while the overall price level has increased by a factor of four since 1978, the cost of college tuition and fees has increased by a factor of almost 14—more than triple the overall increase in consumer prices. Moreover, the rate of excess tuition increases—the amount by which college-tuition inflation exceeded overall inflation—increased after 2000. If the secular increase in the cost of attending college is part of the explanation of progressively weaker wealth outcomes across cohorts, then an acceleration of college costs might show up as a marked deterioration in wealth for the affected cohorts. This is, in fact, what we find—the 1980s cohort of college graduates, most of whom attended college after 2000, experienced a very sharp decline in wealth outcomes.

In sum, we find the rising cost of college to be a highly plausible explanation for why wealth outcomes of successive cohorts of college graduates have deteriorated—especially the youngest ones. While continuing to help graduates earn a sizable income premium over non-grads, colleges and universities have been unable or unwilling to mitigate rising college costs over time. This has eliminated up-front a significant amount of the economic value those graduates will earn over time.

***Changes in the demographics or attitudes of college graduates.*** We briefly consider four potential explanations for the divergence between college income and wealth premiums based on changing demographics or preferences of college graduates, dismissing two of them as implausible:

- Declining quantity or quality of education
- Declining family size

- Declining health
- Changing preferences toward wealth accumulation

**Declining quantity or quality of education: Not plausible.** Declining quantity of education is ruled out by our research design; we study differences in family income and wealth across given education levels. Even if the share of a birth cohort obtaining post-secondary education had declined, our estimates would not be affected.

As for a potential decline in the quality of education, we dismiss this explanation because it sheds no light on why income and wealth trends would differ. If this were an important part of the story, the decline in the quality of successive cohorts of graduates would need to relate specifically to wealth accumulation and not to income generation.

**Declining family size: Not plausible.** Gale and Pence (2006) identified changes in family size and family structure—for example, fewer elderly widows due to improvements in the health of older men in successive cohorts—as important determinants of cohort wealth. We control explicitly for family size when estimating college income and wealth premiums so this cannot be an important factor. The decline in widowhood among older cohorts seems unlikely to explain the progressive decline in wealth premiums across cohorts that are still relatively young in our sample.

**Declining health: Uncertain.** Gale and Pence (2006) provided strong evidence from the SCF through 2001 that improved health among older families was an important reason why older families—but not younger families—had accumulated wealth rapidly during the 1990s. We leave for future work an extension of their research on changing health status across different birth cohorts and points in the life cycle. Even if we find a continuation of the trend toward healthier aging after 2001, we doubt that this would explain deteriorating income or wealth trends among young and middle-aged families. Nonetheless, it is possible that the health of younger people or more recent cohorts may have stagnated or declined in a way that is important for wealth accumulation. For example, declines in mental health or increases in substance abuse could have negative wealth impacts through high out-of-pocket treatment expenses that did not affect income (or earlier generations) to the same extent.

**Changing preferences toward wealth: Uncertain.** As in the case of potential declines in health of later-born cohorts of college graduates, it is possible that preferences toward wealth accumulation may have changed over time. Perhaps people born in the 1930s and 1940s, for example, grew up in the shadow of the Great Depression and developed preferences toward saving and borrowing that

predisposed them to accumulate much more wealth than their incomes might have predicted. As the memories and preferences of that time changed, subsequent cohorts might have chosen a flatter wealth-accumulation path.

## **V. Summary and Conclusion**

Using the SCF, we showed that large and increasing family income and wealth premiums in aggregate data associated with bachelor's and post-graduate degrees over families without any post-secondary education are misleading. Comparing college-graduate families to non-grad families of the same race and ethnicity born in the same decade, we confirmed that income premiums generally remain positive. However, these premiums have declined somewhat among recent cohorts of all races and ethnicities except black families.

Looking carefully at bachelor's and post-graduate wealth premiums by race and ethnicity and birth decade, we show that conclusions drawn from aggregate data are notably different. High and rising wealth premiums enjoyed by college-grad families in aggregate data in fact are much lower and declining across successive birth cohorts. Among families born in the 1980s, the college wealth premium weakens to the point of statistical insignificance with the single exception of white bachelor's-degree holders, which remains positive but much smaller than that enjoyed by previous cohorts.

So why has the college wealth premium declined so much? We conclude that several factors and trends are necessary to make sense of the striking decline in college wealth premiums across successive birth cohorts of all races and ethnicities while college income premiums declined much less. While the discussion offered here is speculative, these factors deserve further research.

First, some birth cohorts appear to have encountered more favorable financial environments for wealth accumulation than others. Broad movements in asset prices were favorable for people born before the 1970s, because they were able to buy houses, stocks and other financial assets at relatively low valuations before the mid-1990s. Having accumulated sizable capital gains already, these older cohorts were better able to weather the asset-price declines of the early 2000s and the Great Recession and then were able to ride the markets higher again in recent years. The 1970s cohort, on the other hand, came of age only after asset prices had escalated. The 1980s generation, after missing out on unusually high asset price capital gains, will be hard pressed to enjoy the same rate of return in the future.

Second, we believe the era of financial liberalization that followed the effective elimination of usury ceilings in 1978 affected later-born cohorts. Consumer debt burdens increased sharply from the mid-1980s, especially among younger families and those with college degrees. As shown in Table 10, a typical 26-year old family head born in the 1980s who had a bachelor's degree had triple the debt-to-income ratio of a typical 1960s family with the same education at the same age. Although slightly less dramatic, debt-to-income ratios had doubled at ages 36, 46 and 56 among typical families 20 years younger than their forerunners (e.g., 1970s cohort compared to 1950s cohort. 1960s cohort compared to 1940s cohort, etc.).

Finally, the spiraling cost of attending college is likely to have affected the wealth accumulation of the youngest college graduates in our sample to a significant extent. The fact that excess tuition inflation increased after 2000, precisely when the 1980s cohort was in college, lines up with a sharp decline in that group's college wealth premium.

We also show with new data from the 2016 SCF that even the shrunken college income and wealth premiums we estimate are likely overestimates of the causal effect of post-secondary education on adult outcomes. College graduates are self-selected so we should expect at least part of their favorable income and wealth outcomes to be due ultimately to their more favorable family and individual characteristics. We estimate that parents' education alone is responsible for between 8 and 18 percent of their superior income and wealth outcomes. Adding measures of financial acumen, at least some of which may be innate, raises the share of adult outcomes that may be mediated, rather than strictly caused, by post-secondary education to half or more.

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**Table 1**

**Characteristics of Families in the 2016 SCF by Education Level**

SCF Respondent's Highest Education	Share of All U.S. Families (Percent)	Median Family Income (2016 \$)	Median Family Net Worth (2016 \$)	Share Reporting Respondent's Health as Good or Excellent (Percent)	Share that Own Primary Residence (Percent)	Share Married or Cohabiting (Percent)	Share Delinquent on Loan Obligations 60+ Days (Percent)
<b>Panel A: Families Headed by College Grads and Non-Grads</b>							
Less than a four-year college degree	66.0	40,505	53,502	66.3	58.2	53.8	6.9
At least a four-year college degree	34.0	91,947	290,904	86.3	74.4	62.4	3.7
<b>Panel B: Families Headed by Four-Year Degree Holders and Postgraduate Degree Holders</b>							
At most a four-year college degree	20.9	84,251	228,580	85.0	72.4	59.7	4.2
A postgraduate degree	13.1	112,200	443,148	88.2	77.7	66.6	2.8

The sources for all the tables and figures are the Federal Reserve's Survey of Consumer Finances and authors' calculations.

**Table 2**

**Income Regressions: White, Non-Hispanic Families**

Dependent Variable Usual Income  
 Racial/Ethnic Group White, Non-Hispanic  
 Psuedo R<sup>2</sup> 0.21  
 N 37,044

Independent Variables	(1)				(2)				(3)				(4)				(5)				(6)				
	β	SE	t-stat	p-value	β	SE	t-stat	p-value	β	SE	t-stat	p-value	β	SE	t-stat	p-value	β	SE	t-stat	p-value	β	SE	t-stat	p-value	
Intercept	7.00	0.13	54.15	0.00	7.16	0.14	52.22	0.00	7.21	0.14	51.93	0.00	7.27	0.14	52.21	0.00	7.31	0.14	52.33	0.00	7.37	0.13	56.18	0.00	
Life-Cycle	Age	0.15	0.01	18.49	0.00	0.15	0.01	18.49	0.00	0.15	0.01	18.49	0.00	0.15	0.01	18.49	0.00	0.15	0.01	18.49	0.00	0.15	0.01	18.49	0.00
	Age <sup>2</sup>	0.00	0.00	-14.33	0.00	0.00	0.00	-14.33	0.00	0.00	0.00	-14.33	0.00	0.00	0.00	-14.33	0.00	0.00	0.00	-14.33	0.00	0.00	0.00	-14.33	0.00
	Age <sup>3</sup>	0.00	0.00	11.12	0.00	0.00	0.00	11.12	0.00	0.00	0.00	11.12	0.00	0.00	0.00	11.12	0.00	0.00	0.00	11.12	0.00	0.00	0.00	11.12	0.00
Income Premium	Terminal Four-Year Graduate (G)	0.72	0.05	13.30	0.00	0.64	0.02	27.17	0.00	0.57	0.02	23.68	0.00	0.60	0.02	30.19	0.00	0.60	0.03	20.38	0.00	0.43	0.04	10.11	0.00
	Postgraduate (P)	1.08	0.04	27.06	0.00	0.95	0.02	41.96	0.00	0.92	0.02	38.34	0.00	0.81	0.03	28.76	0.00	0.80	0.03	27.43	0.00	0.54	0.07	8.07	0.00
Birth Cohorts	Born Before 1930 OR After 1989	-0.14	0.03	-5.48	0.00	-0.30	0.02	-12.04	0.00	-0.35	0.03	-12.45	0.00	-0.41	0.03	-12.77	0.00	-0.45	0.03	-13.40	0.00	-0.51	0.04	-12.91	0.00
	Born in 1930s	<i>(Omitted)</i>				-0.16	0.03	-6.01	0.00	-0.21	0.03	-7.01	0.00	-0.27	0.03	-8.03	0.00	-0.31	0.04	-8.39	0.00	-0.37	0.04	-9.35	0.00
	Born in 1940s	0.16	0.03	6.01	0.00	<i>(Omitted)</i>				-0.05	0.02	-2.93	0.00	-0.11	0.02	-5.44	0.00	-0.15	0.02	-6.27	0.00	-0.21	0.03	-6.44	0.00
	Born in 1950s	0.21	0.03	7.01	0.00	0.05	0.02	2.93	0.00	<i>(Omitted)</i>				-0.06	0.02	-3.31	0.00	-0.10	0.02	-4.71	0.00	-0.16	0.03	-5.31	0.00
	Born in 1960s	0.27	0.03	8.03	0.00	0.11	0.02	5.44	0.00	0.06	0.02	3.31	0.00	<i>(Omitted)</i>				-0.04	0.02	-2.16	0.03	-0.10	0.03	-4.00	0.00
	Born in 1970s	0.31	0.04	8.39	0.00	0.15	0.02	6.27	0.00	0.10	0.02	4.71	0.00	0.04	0.02	2.16	0.03	<i>(Omitted)</i>				-0.06	0.03	-2.12	0.03
	Born in 1980s	0.37	0.04	9.35	0.00	0.21	0.03	6.44	0.00	0.16	0.03	5.31	0.00	0.10	0.03	4.00	0.00	0.06	0.03	2.12	0.03	<i>(Omitted)</i>			
Cohort X Income Premium	Born Before 1930 OR After 1989 * G	-0.11	0.06	-1.83	0.07	-0.03	0.04	-0.84	0.40	0.04	0.04	0.90	0.37	0.01	0.04	0.37	0.71	0.00	0.04	0.10	0.92	0.18	0.05	3.43	0.00
	Born in 1930s * G	<i>(Omitted)</i>				0.08	0.06	1.34	0.18	0.15	0.06	2.52	0.01	0.13	0.06	2.17	0.03	0.12	0.06	1.87	0.06	0.30	0.07	4.26	0.00
	Born in 1940s * G	-0.08	0.06	-1.34	0.18	<i>(Omitted)</i>				0.07	0.03	2.22	0.03	0.05	0.03	1.52	0.13	0.04	0.04	0.99	0.32	0.22	0.05	4.32	0.00
	Born in 1950s * G	-0.15	0.06	-2.52	0.01	-0.07	0.03	-2.22	0.03	<i>(Omitted)</i>				-0.02	0.03	-0.83	0.41	-0.03	0.04	-0.87	0.39	0.14	0.05	3.12	0.00
	Born in 1960s * G	-0.13	0.06	-2.17	0.03	-0.05	0.03	-1.52	0.13	0.02	0.03	0.83	0.41	<i>(Omitted)</i>				-0.01	0.03	-0.28	0.78	0.17	0.05	3.60	0.00
	Born in 1970s * G	-0.12	0.06	-1.87	0.06	-0.04	0.04	-0.99	0.32	0.03	0.04	0.87	0.39	0.01	0.03	0.28	0.78	<i>(Omitted)</i>				0.18	0.05	3.31	0.00
	Born in 1980s * G	-0.30	0.07	-4.26	0.00	-0.22	0.05	-4.32	0.00	-0.14	0.05	-3.12	0.00	-0.17	0.05	-3.60	0.00	-0.18	0.05	-3.31	0.00	<i>(Omitted)</i>			
	Born Before 1930 OR After 1989 * P	-0.07	0.05	-1.39	0.16	0.05	0.04	1.22	0.22	0.08	0.04	1.94	0.05	0.20	0.04	4.59	0.00	0.21	0.04	5.17	0.00	0.47	0.07	6.26	0.00
	Born in 1930s * P	<i>(Omitted)</i>				0.12	0.04	2.82	0.00	0.16	0.05	3.38	0.00	0.27	0.05	5.71	0.00	0.28	0.05	5.52	0.00	0.54	0.08	7.13	0.00
	Born in 1940s * P	-0.12	0.04	-2.82	0.00	<i>(Omitted)</i>				0.03	0.03	0.96	0.34	0.15	0.04	3.93	0.00	0.16	0.04	4.19	0.00	0.42	0.07	5.80	0.00
	Born in 1950s * P	-0.16	0.05	-3.38	0.00	-0.03	0.03	-0.96	0.34	<i>(Omitted)</i>				0.11	0.04	2.96	0.00	0.12	0.04	3.19	0.00	0.38	0.07	5.49	0.00
	Born in 1960s * P	-0.27	0.05	-5.71	0.00	-0.15	0.04	-3.93	0.00	-0.11	0.04	-2.96	0.00	<i>(Omitted)</i>				0.01	0.04	0.27	0.79	0.27	0.07	3.89	0.00
Born in 1970s * P	-0.28	0.05	-5.52	0.00	-0.16	0.04	-4.19	0.00	-0.12	0.04	-3.19	0.00	-0.01	0.04	-0.27	0.79	<i>(Omitted)</i>				0.26	0.07	3.65	0.00	
Born in 1980s * P	-0.54	0.08	-7.13	0.00	-0.42	0.07	-5.80	0.00	-0.38	0.07	-5.49	0.00	-0.27	0.07	-3.89	0.00	-0.26	0.07	-3.65	0.00	<i>(Omitted)</i>				

Note: Standard errors are bootstrapped with 999 replicates in accordance with the sample design and are adjusted for imputation uncertainty. Nonresponse-adjusted sampling weights were also used.

**Table 3**

**Income Regressions: Black Families**

**Dependent Variable** Usual Income

**Racial/Ethnic Group** Black

**Pseudo R<sup>2</sup>** 0.14

**N** 5,186

Independent Variables	(1)				(2)				(3)				(4)				(5)				(6)				
	β	SE	t-stat	p-value	β	SE	t-stat	p-value	β	SE	t-stat	p-value	β	SE	t-stat	p-value	β	SE	t-stat	p-value	β	SE	t-stat	p-value	
Intercept	7.34	0.32	22.77	0.00	7.53	0.33	22.65	0.00	7.61	0.33	22.96	0.00	7.68	0.35	22.08	0.00	7.87	0.33	24.14	0.00	7.70	0.33	23.63	0.00	
Life-Cycle	Age	0.10	0.02	4.85	0.00	0.10	0.02	4.85	0.00	0.10	0.02	4.85	0.00	0.10	0.02	4.85	0.00	0.10	0.02	4.85	0.00	0.10	0.02	4.85	0.00
	Age <sup>2</sup>	0.00	0.00	-3.13	0.00	0.00	0.00	-3.13	0.00	0.00	0.00	-3.13	0.00	0.00	0.00	-3.13	0.00	0.00	0.00	-3.13	0.00	0.00	0.00	-3.13	0.00
	Age <sup>3</sup>	0.00	0.00	1.84	0.07	0.00	0.00	1.84	0.07	0.00	0.00	1.84	0.07	0.00	0.00	1.84	0.07	0.00	0.00	1.84	0.07	0.00	0.00	1.84	0.07
Income Premium	Terminal Four-Year Graduate (G)	1.09	0.11	10.04	0.00	0.76	0.09	8.76	0.00	0.73	0.06	11.74	0.00	0.74	0.05	14.56	0.00	0.66	0.07	10.04	0.00	0.71	0.13	5.30	0.00
	Postgraduate (P)	1.25	0.17	7.33	0.00	0.92	0.19	4.81	0.00	1.08	0.07	15.39	0.00	0.73	0.14	5.33	0.00	0.85	0.08	11.27	0.00	1.09	0.11	10.21	0.00
Birth Cohorts	Born Before 1930 OR After 1989	-0.13	0.06	-2.29	0.02	-0.32	0.07	-4.67	0.00	-0.40	0.07	-5.87	0.00	-0.47	0.08	-6.00	0.00	-0.66	0.08	-8.71	0.00	-0.49	0.08	-6.06	0.00
	Born in 1930s	<i>(Omitted)</i>				-0.19	0.06	-3.05	0.00	-0.27	0.06	-4.43	0.00	-0.34	0.07	-4.69	0.00	-0.53	0.08	-6.77	0.00	-0.35	0.09	-4.15	0.00
	Born in 1940s	0.19	0.06	3.05	0.00	<i>(Omitted)</i>				-0.08	0.06	-1.44	0.15	-0.15	0.06	-2.62	0.01	-0.34	0.07	-4.92	0.00	-0.17	0.08	-2.15	0.03
	Born in 1950s	0.27	0.06	4.43	0.00	0.08	0.06	1.44	0.15	<i>(Omitted)</i>				-0.07	0.05	-1.53	0.12	-0.26	0.05	-5.12	0.00	-0.09	0.06	-1.38	0.17
	Born in 1960s	0.34	0.07	4.69	0.00	0.15	0.06	2.62	0.01	0.07	0.05	1.53	0.12	<i>(Omitted)</i>				-0.19	0.05	-3.60	0.00	-0.02	0.07	-0.24	0.81
	Born in 1970s	0.53	0.08	6.77	0.00	0.34	0.07	4.92	0.00	0.26	0.05	5.12	0.00	0.19	0.05	3.60	0.00	<i>(Omitted)</i>				0.17	0.05	3.37	0.00
	Born in 1980s	0.35	0.09	4.15	0.00	0.17	0.08	2.15	0.03	0.09	0.06	1.38	0.17	0.02	0.07	0.24	0.81	-0.17	0.05	-3.37	0.00	<i>(Omitted)</i>			
Cohort X Income Premium	Born Before 1930 OR After 1989 * G	-0.49	0.21	-2.37	0.02	-0.17	0.21	-0.79	0.43	-0.14	0.20	-0.68	0.49	-0.15	0.19	-0.80	0.42	-0.07	0.19	-0.35	0.72	-0.12	0.24	-0.50	0.62
	Born in 1930s * G	<i>(Omitted)</i>				0.32	0.13	2.44	0.01	0.35	0.12	2.87	0.00	0.34	0.12	2.80	0.01	0.43	0.12	3.61	0.00	0.38	0.18	2.07	0.04
	Born in 1940s * G	-0.32	0.13	-2.44	0.01	<i>(Omitted)</i>				0.03	0.11	0.26	0.79	0.02	0.10	0.17	0.87	0.10	0.10	1.00	0.32	0.05	0.16	0.31	0.76
	Born in 1950s * G	-0.35	0.12	-2.87	0.00	-0.03	0.11	-0.26	0.79	<i>(Omitted)</i>				-0.01	0.08	-0.14	0.88	0.07	0.09	0.81	0.42	0.02	0.14	0.15	0.88
	Born in 1960s * G	-0.34	0.12	-2.80	0.01	-0.02	0.10	-0.17	0.87	0.01	0.08	0.14	0.88	<i>(Omitted)</i>				0.09	0.09	0.98	0.33	0.03	0.14	0.23	0.82
	Born in 1970s * G	-0.43	0.12	-3.61	0.00	-0.10	0.10	-1.00	0.32	-0.07	0.09	-0.81	0.42	-0.09	0.09	-0.98	0.33	<i>(Omitted)</i>				-0.05	0.15	-0.36	0.72
	Born in 1980s * G	-0.38	0.18	-2.07	0.04	-0.05	0.16	-0.31	0.76	-0.02	0.14	-0.15	0.88	-0.03	0.14	-0.23	0.82	0.05	0.15	0.36	0.72	<i>(Omitted)</i>			
	Born Before 1930 OR After 1989 * P	-0.49	0.22	-2.27	0.02	-0.16	0.22	-0.73	0.46	-0.32	0.12	-2.63	0.01	0.02	0.18	0.11	0.91	-0.10	0.13	-0.75	0.45	-0.34	0.16	-2.13	0.03
	Born in 1930s * P	<i>(Omitted)</i>				0.33	0.28	1.19	0.24	0.17	0.19	0.87	0.38	0.51	0.23	2.25	0.02	0.39	0.19	2.08	0.04	0.15	0.20	0.77	0.44
	Born in 1940s * P	-0.33	0.28	-1.19	0.24	<i>(Omitted)</i>				-0.16	0.18	-0.87	0.38	0.18	0.25	0.74	0.46	0.06	0.21	0.29	0.78	-0.18	0.22	-0.82	0.41
	Born in 1950s * P	-0.17	0.19	-0.87	0.38	0.16	0.18	0.87	0.38	<i>(Omitted)</i>				0.34	0.16	2.13	0.03	0.22	0.10	2.15	0.03	-0.02	0.12	-0.14	0.89
	Born in 1960s * P	-0.51	0.23	-2.25	0.02	-0.18	0.25	-0.74	0.46	-0.34	0.16	-2.13	0.03	<i>(Omitted)</i>				-0.12	0.17	-0.72	0.47	-0.36	0.17	-2.17	0.03
	Born in 1970s * P	-0.39	0.19	-2.08	0.04	-0.06	0.21	-0.29	0.78	-0.22	0.10	-2.15	0.03	0.12	0.17	0.72	0.47	<i>(Omitted)</i>				-0.24	0.13	-1.83	0.07
	Born in 1980s * P	-0.15	0.20	-0.77	0.44	0.18	0.22	0.82	0.41	0.02	0.12	0.14	0.89	0.36	0.17	2.17	0.03	0.24	0.13	1.83	0.07	<i>(Omitted)</i>			

Note: Standard errors are bootstrapped with 999 replicates in accordance with the sample design and are adjusted for imputation uncertainty. Nonresponse-adjusted sampling weights were also used.

**Table 4**

**Wealth Regressions: White, Non-Hispanic Families**

Dependent Variable Net Worth

Racial/Ethnic Group White, Non-Hispanic

Pseudo R<sup>2</sup> 0.30

N 37,044

Independent Variables	(1)					(2)					(3)					(4)					(5)					(6)					
	$\beta$	SE	H-P( $\beta$ )	t-stat	p-value	$\beta$	SE	H-P( $\beta$ )	t-stat	p-value	$\beta$	SE	H-P( $\beta$ )	t-stat	p-value	$\beta$	SE	H-P( $\beta$ )	t-stat	p-value	$\beta$	SE	H-P( $\beta$ )	t-stat	p-value	$\beta$	SE	H-P( $\beta$ )	t-stat	p-value	
Intercept	-21,044	2,075		-10.14	0.00	-20,491	2,134		-9.60	0.00	-20,758	2,183		-9.51	0.00	-21,252	2,123		-10.01	0.00	-21,962	2,084		-10.54	0.00	-22,629	1,932		-11.71	0.00	
Life-Cycle	Age	1,412	127		11.08	0.00	1,412	127		11.08	0.00	1,412	127		11.08	0.00	1,412	127		11.08	0.00	1,412	127		11.08	0.00	1,412	127		11.08	0.00
	Age <sup>2</sup>	-9	2		-3.90	0.00	-9	2		-3.90	0.00	-9	2		-3.90	0.00	-9	2		-3.90	0.00	-9	2		-3.90	0.00	-9	2		-3.90	0.00
	Age <sup>3</sup>	0	0		0.23	0.82	0	0		0.23	0.82	0	0		0.23	0.82	0	0		0.23	0.82	0	0		0.23	0.82	0	0		0.23	0.82
Wealth Premium	Terminal Four-Year Graduate (G)	12,451	633	2.47	19.66	0.00	10,823	446	1.95	24.27	0.00	10,476	444	1.85	23.59	0.00	9,791	435	1.66	22.53	0.00	8,483	633	1.34	13.39	0.00	3,511	752	0.42	4.67	0.00
	Postgraduate (P)	16,151	596	4.03	27.10	0.00	15,935	449	3.92	35.46	0.00	14,727	530	3.36	27.77	0.00	13,251	661	2.76	20.04	0.00	7,707	995	1.16	7.74	0.00	2,506	1,283	0.28	1.95	0.05
Birth Cohorts	Born Before 1930 OR After 1989	-1,354	380	-0.13	-3.56	0.00	-1,907	418	-0.17	-4.56	0.00	-1,640	458	-0.15	-3.58	0.00	-1,146	478	-0.11	-2.40	0.02	-436	511	-0.04	-0.85	0.39	232	520	0.02	0.45	0.66
	Born in 1930s			(Omitted)			-553	368	-0.05	-1.50	0.13	-285	410	-0.03	-0.70	0.49	208	459	0.02	0.45	0.65	918	484	0.10	1.90	0.06	1,586	554	0.17	2.86	0.00
	Born in 1940s	553	368	0.06	1.50	0.13			(Omitted)			268	323	0.03	0.83	0.41	761	376	0.08	2.03	0.04	1,471	439	0.16	3.35	0.00	2,139	524	0.24	4.08	0.00
	Born in 1950s	285	410	0.03	0.70	0.49	-268	323	-0.03	-0.83	0.41			(Omitted)		494	309	0.05	1.60	0.11	1,204	382	0.13	3.15	0.00	1,871	496	0.21	3.77	0.00	
	Born in 1960s	-208	459	-0.02	-0.45	0.65	-761	376	-0.07	-2.03	0.04	-494	309	-0.05	-1.60	0.11			(Omitted)		710	339	0.07	2.09	0.04	1,378	411	0.15	3.35	0.00	
	Born in 1970s	-918	484	-0.09	-1.90	0.06	-1,471	439	-0.14	-3.35	0.00	-1,204	382	-0.11	-3.15	0.00	-710	339	-0.07	-2.09	0.04			(Omitted)		668	430	0.07	1.55	0.12	
	Born in 1980s	-1,586	554	-0.15	-2.86	0.00	-2,139	524	-0.19	-4.08	0.00	-1,871	496	-0.17	-3.77	0.00	-1,378	411	-0.13	-3.35	0.00	-668	430	-0.06	-1.55	0.12			(Omitted)		
Cohort X Income Premium	Born Before 1930 OR After 1989 * G	-2,460	821	-0.22	-2.99	0.00	-831	684	-0.08	-1.22	0.22	-485	725	-0.05	-0.67	0.50	200	677	0.02	0.30	0.77	1,508	849	0.16	1.78	0.08	6,480	960	0.91	6.75	0.00
	Born in 1930s * G			(Omitted)			1,629	755	0.18	2.16	0.03	1,975	718	0.22	2.75	0.01	2,660	761	0.30	3.50	0.00	3,968	883	0.49	4.49	0.00	8,940	1,030	1.44	8.68	0.00
	Born in 1940s * G	-1,629	755	-0.15	-2.16	0.03			(Omitted)			346	627	0.04	0.55	0.58	1,031	659	0.11	1.57	0.12	2,339	766	0.26	3.06	0.00	7,311	852	1.08	8.59	0.00
	Born in 1950s * G	-1,975	718	-0.18	-2.75	0.01	-346	627	-0.03	-0.55	0.58			(Omitted)		685	607	0.07	1.13	0.26	1,993	739	0.22	2.70	0.01	6,965	897	1.01	7.77	0.00	
	Born in 1960s * G	-2,660	761	-0.23	-3.50	0.00	-1,031	659	-0.10	-1.57	0.12	-685	607	-0.07	-1.13	0.26			(Omitted)		1,308	736	0.14	1.78	0.08	6,280	795	0.87	7.90	0.00	
	Born in 1970s * G	-3,968	883	-0.33	-4.49	0.00	-2,339	766	-0.21	-3.06	0.00	-1,993	739	-0.18	-2.70	0.01	-1,308	736	-0.12	-1.78	0.08			(Omitted)		4,972	964	0.64	5.16	0.00	
	Born in 1980s * G	-8,940	1,030	-0.59	-8.68	0.00	-7,311	852	-0.52	-8.59	0.00	-6,965	897	-0.50	-7.77	0.00	-6,280	795	-0.47	-7.90	0.00	-4,972	964	-0.39	-5.16	0.00			(Omitted)		
	Born Before 1930 OR After 1989 * P	-1,369	823	-0.13	-1.66	0.10	-1,153	738	-0.11	-1.56	0.12	55	803	0.01	0.07	0.95	1,531	841	0.17	1.82	0.07	7,075	1,154	1.03	6.13	0.00	12,276	1,280	2.41	9.59	0.00
	Born in 1930s * P			(Omitted)			216	696	0.02	0.31	0.76	1,424	797	0.15	1.79	0.07	2,900	902	0.34	3.22	0.00	8,444	1,226	1.33	6.89	0.00	13,645	1,398	2.91	9.76	0.00
	Born in 1940s * P	-216	696	-0.02	-0.31	0.76			(Omitted)			1,208	722	0.13	1.67	0.09	2,684	769	0.31	3.49	0.00	8,228	1,125	1.28	7.32	0.00	13,429	1,369	2.83	9.81	0.00
	Born in 1950s * P	-1,424	797	-0.13	-1.79	0.07	-1,208	722	-0.11	-1.67	0.09			(Omitted)		1,476	789	0.16	1.87	0.06	7,020	1,142	1.02	6.14	0.00	12,221	1,441	2.39	8.48	0.00	
	Born in 1960s * P	-2,900	902	-0.25	-3.22	0.00	-2,684	769	-0.24	-3.49	0.00	-1,476	789	-0.14	-1.87	0.06			(Omitted)		5,544	1,196	0.74	4.63	0.00	10,745	1,329	1.93	8.09	0.00	
	Born in 1970s * P	-8,444	1,226	-0.57	-6.89	0.00	-8,228	1,125	-0.56	-7.32	0.00	-7,020	1,142	-0.50	-6.14	0.00	-5,544	1,196	-0.43	-4.63	0.00			(Omitted)		5,201	1,439	0.68	3.61	0.00	
	Born in 1980s * P	-13,645	1,398	-0.74	-9.76	0.00	-13,429	1,369	-0.74	-9.81	0.00	-12,221	1,441	-0.71	-8.48	0.00	-10,745	1,329	-0.66	-8.09	0.00	-5,201	1,439	-0.41	-3.61	0.00			(Omitted)		

Note: Standard errors are bootstrapped with 999 replicates in accordance with the sample design and are adjusted for imputation uncertainty. Nonresponse-adjusted sampling weights were also used. Household-size adjusted net worth was transformed with the inverse hyperbolic sine function, with a scaling factor of .0001. The Halvorsen-Palmquist transformation provides a similar interpretation of the coefficients on binary variables as that of a log-linear model.

**Table 5**

**Wealth Regressions: Black Families**

Dependent Variable Net Worth

Racial/Ethnic Group Black

Pseudo R<sup>2</sup> 0.19

N 5,186

Independent Variables	(1)				(2)				(3)				(4)				(5)				(6)									
	$\beta$	SE	H-P( $\beta$ )	t-stat	p-value	$\beta$	SE	H-P( $\beta$ )	t-stat	p-value	$\beta$	SE	H-P( $\beta$ )	t-stat	p-value	$\beta$	SE	H-P( $\beta$ )	t-stat	p-value	$\beta$	SE	H-P( $\beta$ )	t-stat	p-value					
Intercept	1,819	3,049		0.60	0.55	3,134	3,179		0.99	0.32	1,495	3,399		0.44	0.66	1,294	3,335		0.39	0.70	1,793	3,210		0.56	0.58	-928	3,225		-0.29	0.77
<i>Life-Cycle</i>																														
Age	-74	222		-0.33	0.74	-74	222		-0.33	0.74	-74	222		-0.33	0.74	-74	222		-0.33	0.74	-74	222		-0.33	0.74	-74	222		-0.33	0.74
Age <sup>2</sup>	10	5		2.22	0.03	10	5		2.22	0.03	10	5		2.22	0.03	10	5		2.22	0.03	10	5		2.22	0.03	10	5		2.22	0.03
Age <sup>3</sup>	0	0		-2.69	0.01	0	0		-2.69	0.01	0	0		-2.69	0.01	0	0		-2.69	0.01	0	0		-2.69	0.01	0	0		-2.69	0.01
<i>Wealth Premium</i>																														
Terminal Four-Year Graduate (G)	18,075	1,680	5.09	10.76	0.00	12,626	1,503	2.53	8.40	0.00	8,151	1,443	1.26	5.65	0.00	10,201	1,115	1.77	9.15	0.00	1,662	1,420	0.18	1.17	0.24	540	1,799	0.06	0.30	0.76
Postgraduate (P)	16,542	3,115	4.23	5.31	0.00	18,073	1,410	5.09	12.82	0.00	14,631	1,817	3.32	8.05	0.00	1,664	2,487	0.18	0.67	0.50	1,468	2,844	0.16	0.52	0.61	761	3,706	0.08	0.21	0.84
Born Before 1930 OR After 1989	-2,312	900	-0.21	-2.57	0.01	-3,626	815	-0.30	-4.45	0.00	-1,987	859	-0.18	-2.31	0.02	-1,786	865	-0.16	-2.07	0.04	-2,286	878	-0.20	-2.60	0.01	435	838	0.04	0.52	0.60
Born in 1930s	(Omitted)					-1,314	757	-0.12	-1.74	0.08	325	867	0.03	0.37	0.71	525	844	0.05	0.62	0.53	26	864	0.00	0.03	0.98	2,747	915	0.32	3.00	0.00
Born in 1940s	1,314	757	0.14	1.74	0.08	(Omitted)					1,639	632	0.18	2.59	0.01	1,840	653	0.20	2.82	0.00	1,340	755	0.14	1.77	0.08	4,061	708	0.50	5.74	0.00
Born in 1950s	-325	867	-0.03	-0.37	0.71	-1,639	632	-0.15	-2.59	0.01	(Omitted)					201	568	0.02	0.35	0.72	-299	715	-0.03	-0.42	0.68	2,422	673	0.27	3.60	0.00
Born in 1960s	-525	844	-0.05	-0.62	0.53	-1,840	653	-0.17	-2.82	0.00	-201	568	-0.02	-0.35	0.72	(Omitted)					-500	612	-0.05	-0.82	0.41	2,222	590	0.25	3.77	0.00
Born in 1970s	-26	864	0.00	-0.03	0.98	-1,340	755	-0.13	-1.77	0.08	299	715	0.03	0.42	0.68	500	612	0.05	0.82	0.41	(Omitted)					2,721	624	0.31	4.36	0.00
Born in 1980s	-2,747	915	-0.24	-3.00	0.00	-4,061	708	-0.33	-5.74	0.00	-2,422	673	-0.22	-3.60	0.00	-2,222	590	-0.20	-3.77	0.00	-2,721	624	-0.24	-4.36	0.00	(Omitted)				
<i>Cohort X Income Premium</i>																														
Born Before 1930 OR After 1989 * G	-16,824	4,133	-0.81	-4.07	0.00	-11,375	4,062	-0.68	-2.80	0.01	-6,901	3,924	-0.50	-1.76	0.08	-8,950	3,961	-0.59	-2.26	0.02	-412	3,934	-0.04	-0.10	0.92	710	4,191	0.07	0.17	0.87
Born in 1930s * G	(Omitted)					5,449	2,260	0.72	2.41	0.02	9,923	2,246	1.70	4.42	0.00	7,874	2,041	1.20	3.86	0.00	16,412	2,180	4.16	7.53	0.00	17,535	2,575	4.77	6.81	0.00
Born in 1940s * G	-5,449	2,260	-0.42	-2.41	0.02	(Omitted)					4,474	2,289	0.56	1.95	0.05	2,425	1,858	0.27	1.31	0.19	10,964	2,204	1.99	4.98	0.00	12,086	2,431	2.35	4.97	0.00
Born in 1950s * G	-9,923	2,246	-0.63	-4.42	0.00	-4,474	2,289	-0.36	-1.95	0.05	(Omitted)					-2,049	1,763	-0.19	-1.16	0.25	6,489	2,045	0.91	3.17	0.00	7,611	2,096	1.14	3.63	0.00
Born in 1960s * G	-7,874	2,041	-0.54	-3.86	0.00	-2,425	1,858	-0.22	-1.31	0.19	2,049	1,763	0.23	1.16	0.25	(Omitted)					8,539	1,738	1.35	4.91	0.00	9,661	2,053	1.63	4.71	0.00
Born in 1970s * G	-16,412	2,180	-0.81	-7.53	0.00	-10,964	2,204	-0.67	-4.98	0.00	-6,489	2,045	-0.48	-3.17	0.00	-8,539	1,738	-0.57	-4.91	0.00	(Omitted)					1,122	2,405	0.12	0.47	0.64
Born in 1980s * G	-17,535	2,575	-0.83	-6.81	0.00	-12,086	2,431	-0.70	-4.97	0.00	-7,611	2,096	-0.53	-3.63	0.00	-9,661	2,053	-0.62	-4.71	0.00	-1,122	2,405	-0.11	-0.47	0.64	(Omitted)				
Born Before 1930 OR After 1989 * P	-9,777	6,462	-0.62	-1.51	0.13	-11,307	6,220	-0.68	-1.82	0.07	-7,865	6,398	-0.54	-1.23	0.22	5,102	6,451	0.67	0.79	0.43	5,298	6,163	0.70	0.86	0.39	6,004	6,725	0.82	0.89	0.37
Born in 1930s * P	(Omitted)					-1,531	3,250	-0.14	-0.47	0.64	1,912	3,730	0.21	0.51	0.61	14,879	4,227	3.43	3.52	0.00	15,075	4,201	3.52	3.59	0.00	15,781	5,345	3.85	2.95	0.00
Born in 1940s * P	1,531	3,250	0.17	0.47	0.64	(Omitted)					3,442	2,315	0.41	1.49	0.14	16,409	2,914	4.16	5.63	0.00	16,605	3,172	4.26	5.24	0.00	17,311	4,258	4.65	4.07	0.00
Born in 1950s * P	-1,912	3,730	-0.17	-0.51	0.61	-3,442	2,315	-0.29	-1.49	0.14	(Omitted)					12,967	2,987	2.66	4.34	0.00	13,163	3,619	2.73	3.64	0.00	13,869	4,153	3.00	3.34	0.00
Born in 1960s * P	-14,879	4,227	-0.77	-3.52	0.00	-16,409	2,914	-0.81	-5.63	0.00	-12,967	2,987	-0.73	-4.34	0.00	(Omitted)					196	3,921	0.02	0.05	0.96	902	4,285	0.09	0.21	0.83
Born in 1970s * P	-15,075	4,201	-0.78	-3.59	0.00	-16,605	3,172	-0.81	-5.24	0.00	-13,163	3,619	-0.73	-3.64	0.00	-196	3,921	-0.02	-0.05	0.96	(Omitted)					706	5,349	0.07	0.13	0.89
Born in 1980s * P	-15,781	5,345	-0.79	-2.95	0.00	-17,311	4,258	-0.82	-4.07	0.00	-13,869	4,153	-0.75	-3.34	0.00	-902	4,285	-0.09	-0.21	0.83	-706	5,349	-0.07	-0.13	0.89	(Omitted)				

Note: Standard errors are bootstrapped with 999 replicates in accordance with the sample design and are adjusted for imputation uncertainty. Nonresponse-adjusted sampling weights were also used. Household-size adjusted net worth was transformed with the inverse hyperbolic sine function, with a scaling factor of .0001. The Halvorsen-Palmquist transformation provides a similar interpretation of the coefficients on binary variables as that of a log-linear model.

**Table 6: Regression models for white respondents in 2016; ln adjusted income.**

Variable Names	b	SE	t-stat	p-value	Premium	R <sup>2</sup>	b	SE	t-stat	p-value	Premium	R <sup>2</sup>	b	SE	t-stat	p-value	Premium	R <sup>2</sup>
(Intercept)	6.56	0.29	22.72	<0.001		0.23	6.51	0.30	21.78	<0.001		0.24	5.66	0.29	19.61	<0.001		0.31
age	0.20	0.02	12.06	<0.001			0.19	0.02	11.58	<0.001			0.20	0.02	12.08	<0.001		
age2	0.00	0.00	-10.49	<0.001			0.00	0.00	-10.03	<0.001			0.00	0.00	-10.94	<0.001		
age3	0.00	0.00	8.88	<0.001			0.00	0.00	8.51	<0.001			0.00	0.00	9.86	<0.001		
grad	0.65	0.02	26.24	<0.001	65		0.60	0.03	24.09	<0.001	60		0.44	0.03	17.09	<0.001	44	
postgrad	0.96	0.03	32.64	<0.001	96		0.88	0.03	28.09	<0.001	88		0.68	0.03	22.17	<0.001	68	
head.father							0.17	0.04	4.69	<0.001			0.14	0.04	3.75	<0.001		
head.mother							0.07	0.03	2.08	0.04			0.05	0.03	1.72	0.09		
test.score													0.15	0.01	12.10	<0.001		
fin.know													0.03	0.00	6.44	<0.001		
fin.risks													0.05	0.00	12.34	<0.001		
saving.legacy													0.28	0.02	12.37	<0.001		
shop.credit													0.00	0.00	0.80	0.42		
shop.save													0.00	0.00	1.20	0.23		

Note. N=4480.

**Table 7. Regression models for white respondents in 2016; IHS adjusted net worth.**

Variable Names	b	SE	t-stat	p-value	Premium	R <sup>2</sup>	b	SE	t-stat	p-value	Premium	R <sup>2</sup>	b	SE	t-stat	p-value	Premium	R <sup>2</sup>
(Intercept)	-29483.92	4801.76	6.14	<0.001		0.33	-30456.92	4903.41	6.21	<0.001		0.33	-50668.35	4507.79	-11.24	<0.001		0.42
age	1481.94	302.00	4.91	<0.001			1446.35	302.34	4.78	<0.001			1523.31	270.51	5.63	<0.001		
age2	-7.17	5.83	1.23	0.22			-5.97	5.80	1.03	0.30			-9.55	5.10	-1.87	0.06		
age3	-0.02	0.04	0.51	0.61			-0.03	0.04	0.73	0.47			0.01	0.03	0.36	0.72		
grad	12001.25	505.83	23.7	<0.001	232		11052.88	507.91	6	<0.001	202		7215.57	492.60	14.65	<0.001	106	
postgrad	14621.07	720.81	20.2	<0.001	332		13194.10	786.86	7	<0.001	274		8390.85	754.79	11.12	<0.001	131	
head.father							3449.42	606.97	5.68	<0.001			2746.43	593.48	4.63	<0.001		
head.mother							1101.61	797.70	1.38	0.17			750.03	745.47	1.01	0.31		
test.score													3058.02	277.60	11.02	<0.001		
fin.know													630.31	101.81	6.19	<0.001		
fin.risks													1308.90	83.17	15.74	<0.001		
saving.legacy													6086.12	443.66	13.72	<0.001		
shop.credit													21.02	73.47	0.29	0.77		
shop.save													297.78	82.83	3.60	<0.001		

Note. N=4480.

**Table 8.**

<b>Model</b>	<b>Income Premium (terminal graduate and postgrad, respectively)</b>	<b>Wealth Premium (terminal graduate and postgrad, respectively)</b>
Age + Age <sup>2</sup> + Age <sup>3</sup> + grad + postgrad (Model 1)	65% 96%	232% 332%
(Model 1) + father's education + mother's education	60% 88%	202% 274%
(Model 1) + father's education + mother's education + financial acumen	44% 68%	106% 131%

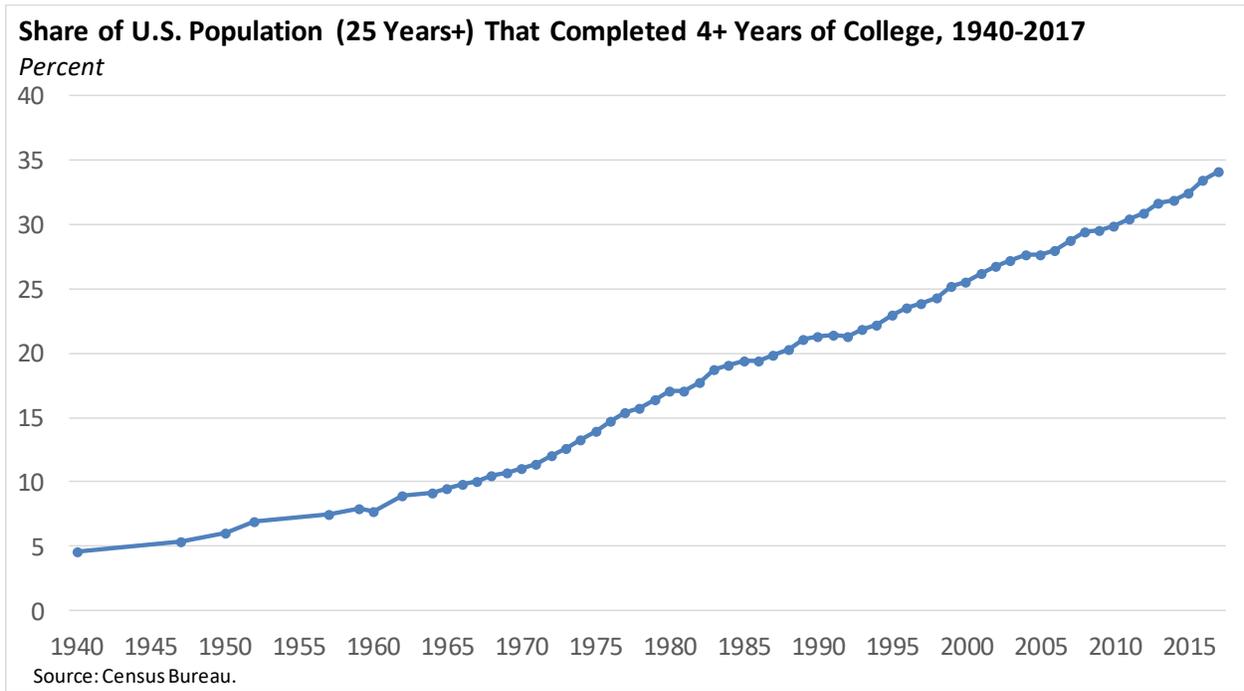
**Table 9: Potential Explanations for Declining College Wealth Premiums**

<b>Explanation</b>	<b>1) Primarily affects wealth accumulation, not income?</b>	<b>2) Long-term cumulative effects on wealth?</b>	<b>3) Not based on race and ethnicity, educational attainment or family size?</b>	<b>Conclusion: Is it a plausible explanation of a declining college wealth premium (but not income)?</b>
<b>External environment</b>				
<b>1) Wage stagnation</b>	No	No	Yes	Not plausible
<b>2) Great Recession</b>	No	No	Maybe	Not plausible
<b>3) Discrimination</b>	Maybe	Yes	No	Not plausible
<b>4) Aggregate wealth fluctuations</b>	Yes	Yes	Yes	Plausible
<b>5) Financial liberalization</b>	Yes	Yes	Yes	Plausible
<b>6) Rising cost of college</b>	Yes	Yes	Yes	Plausible
<b>Changing demographics or attitudes</b>				
<b>7) Declining quantity or quality of education</b>	No	Yes	Yes	Not plausible
<b>8) Declining family size</b>	Yes	Yes	No	Not plausible
<b>9) Declining health</b>	Maybe	Yes	Yes	Uncertain
<b>10) Changing attitudes toward wealth</b>	Yes	Yes	Yes	Uncertain

**Table 10: Median Debt-to-Income Ratios among Bachelor’s Degree Holders (percent)**

Median debt-to-income ratio							
		Birth decade of respondents					
Average age of respondents in the cohort when observed		1930s	1940s	1950s	1960s	1970s	1980s
	26					34	53
36				90	96	181	
46			77	84	124		
56	46		73	92			
Includes interpolated values.							

**Figure 1**



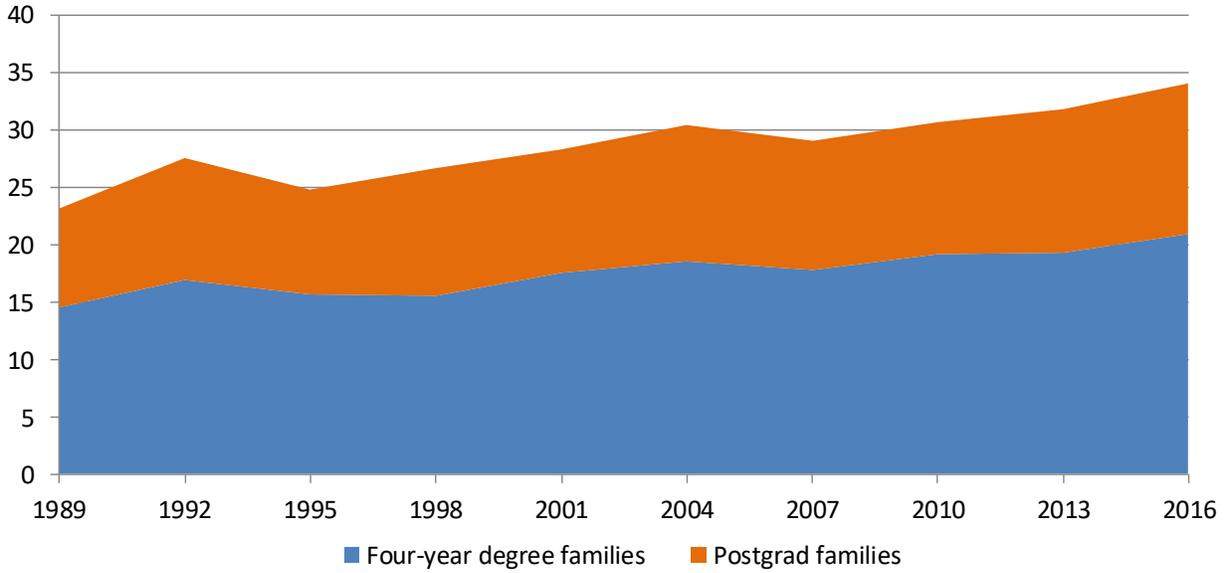
NOTE: College grads' share of the population among people aged 25 or older increased from 21.4 percent, in 1992, to 34.2 percent, in 2017.

Between 1992 and 2017, the number of college grads aged 25 or older increased by 40 million while the total number of people aged 25 or older increased by 56 million. Thus, the net increase in college grads constituted 71 percent of total net population growth among people aged 25 or older.

**Figure 2**

**U.S. Families Headed by College Graduates and Post-Graduates**

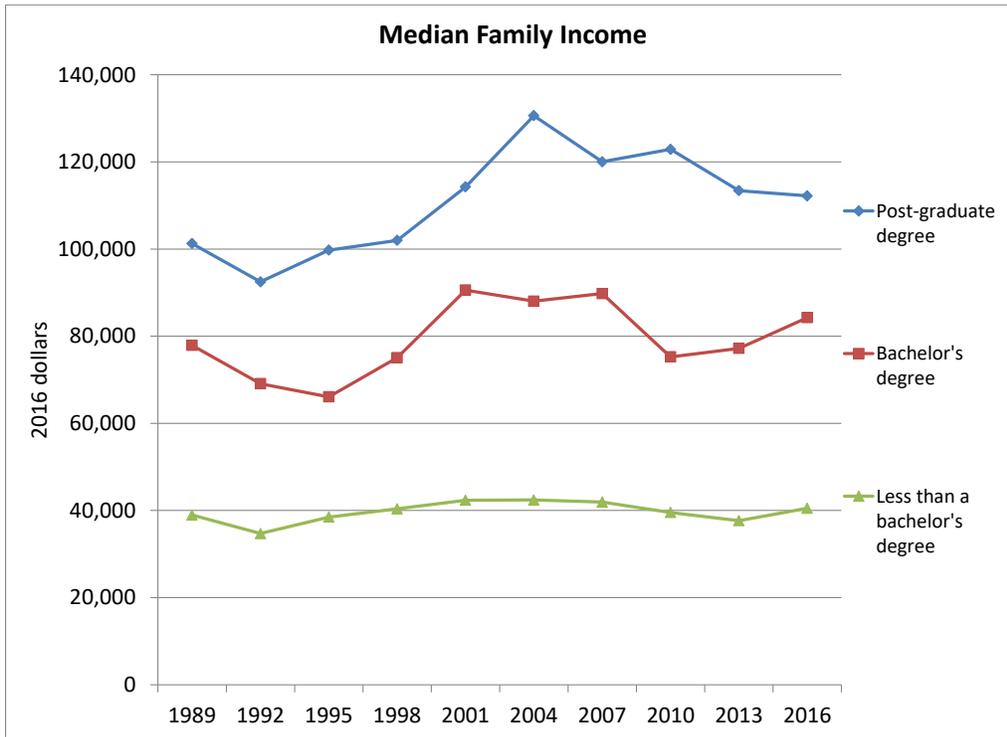
*Percent of all U.S. families*



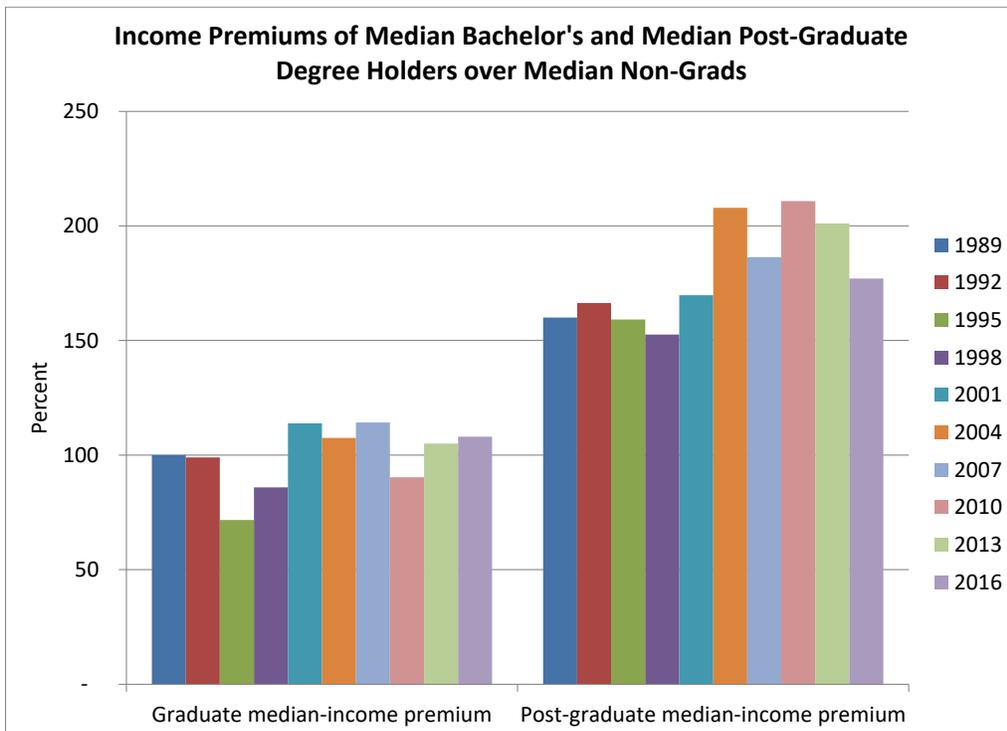
Source: Federal Reserve Board's Survey of Consumer Finances.

NOTES: Postgrad families are those headed by someone with both a four-year college degree and a postgraduate degree. The total number of U.S. families rose from 93 million in 1989 to 126 million in 2016.

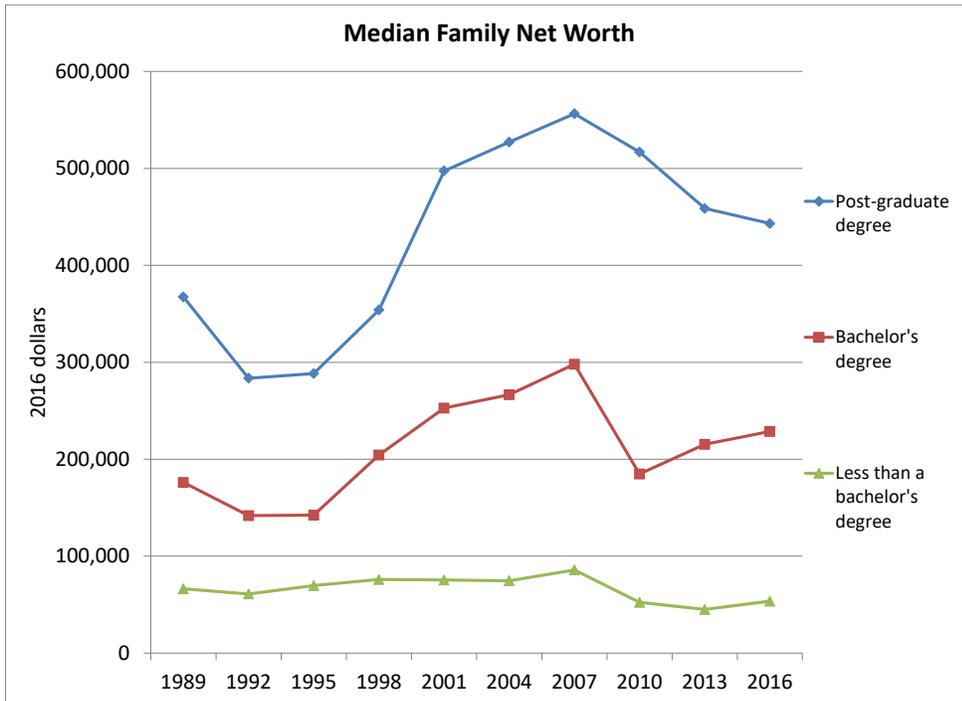
**Figure 3**



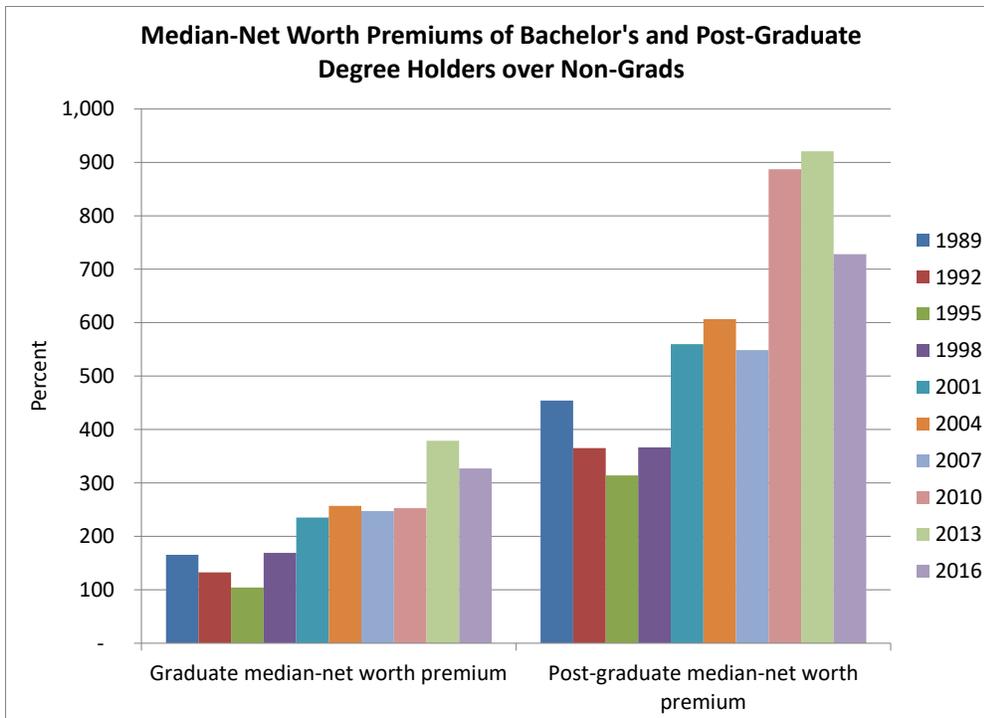
**Figure 4**



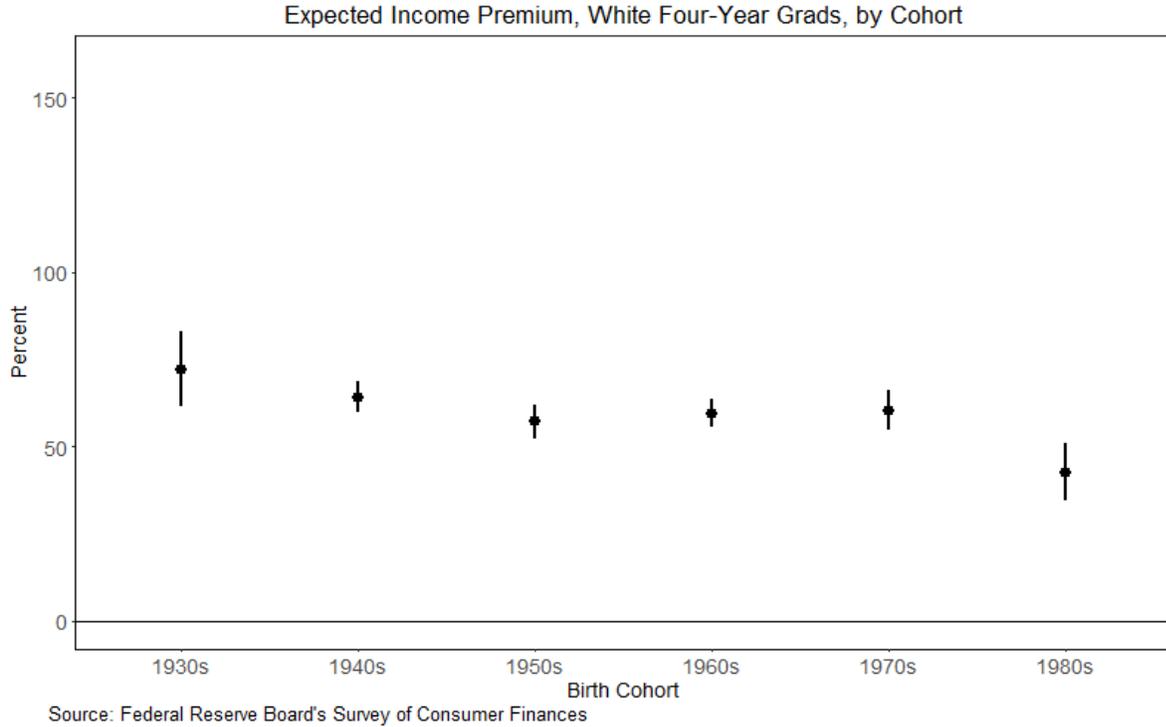
**Figure 5**



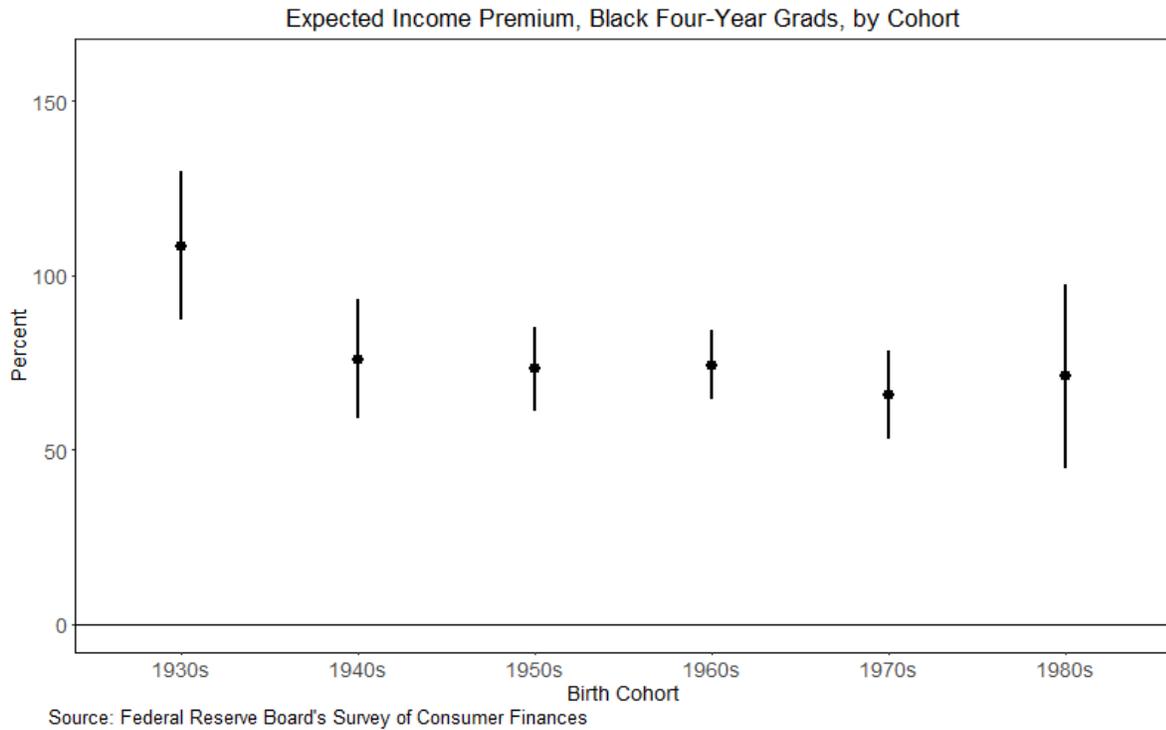
**Figure 6**



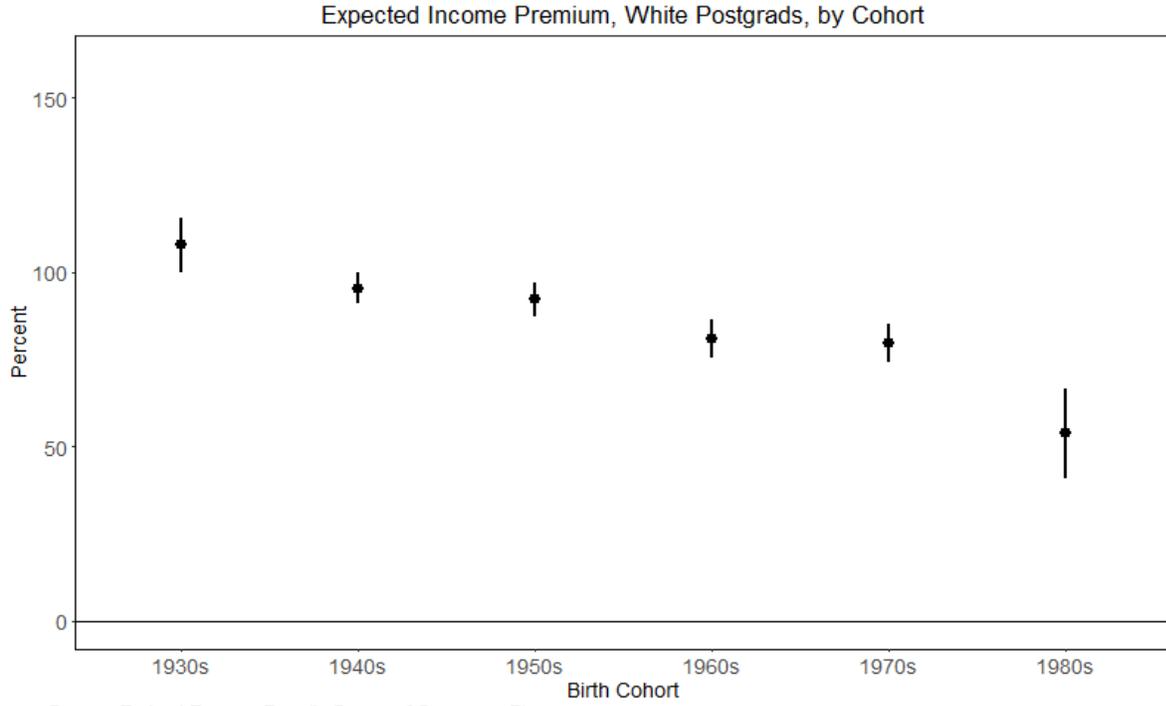
**Figure 7**



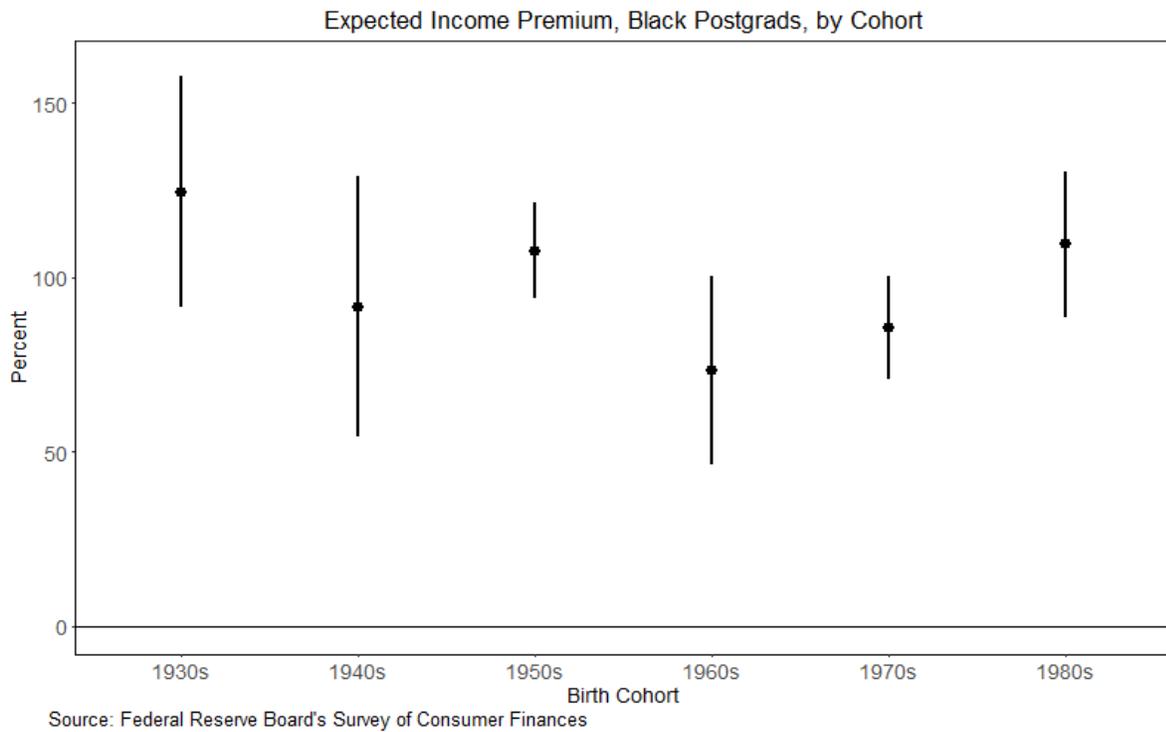
**Figure 8**



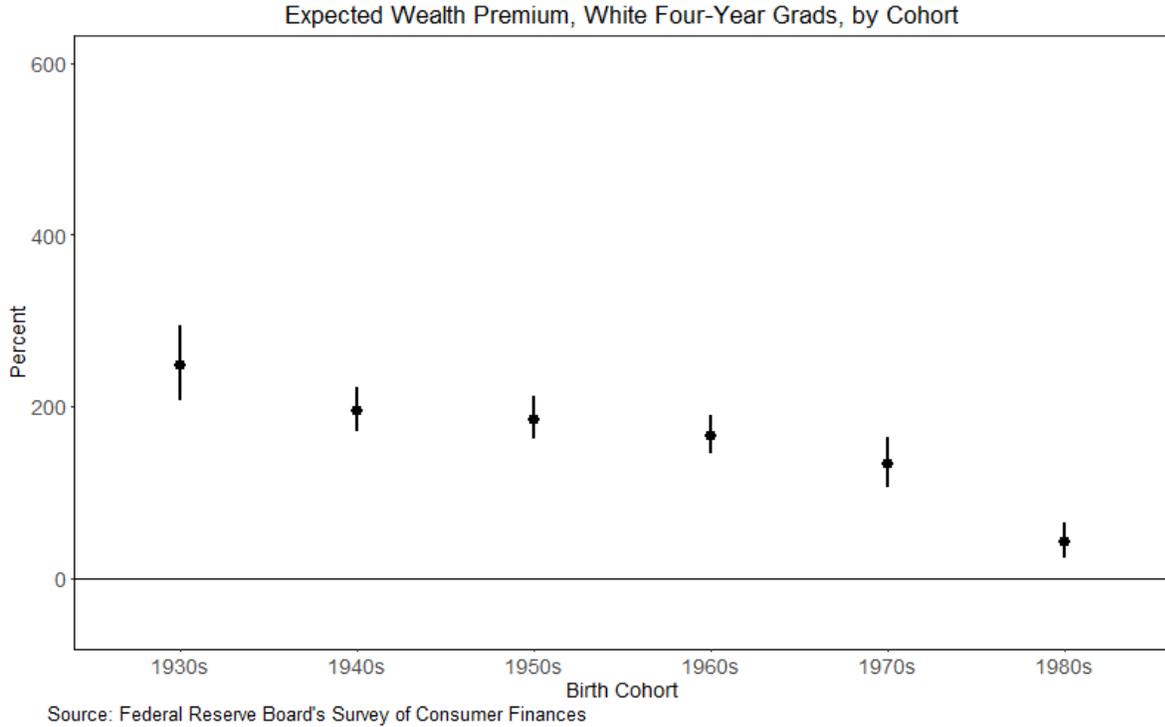
**Figure 9**



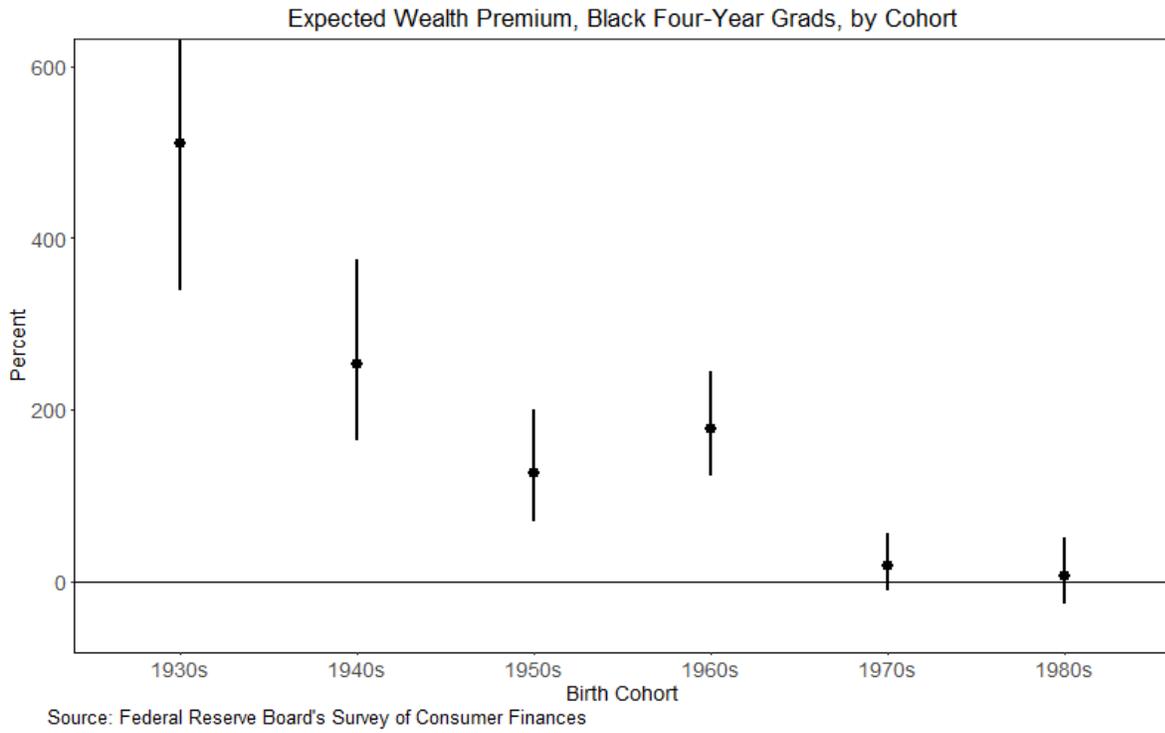
**Figure 10**



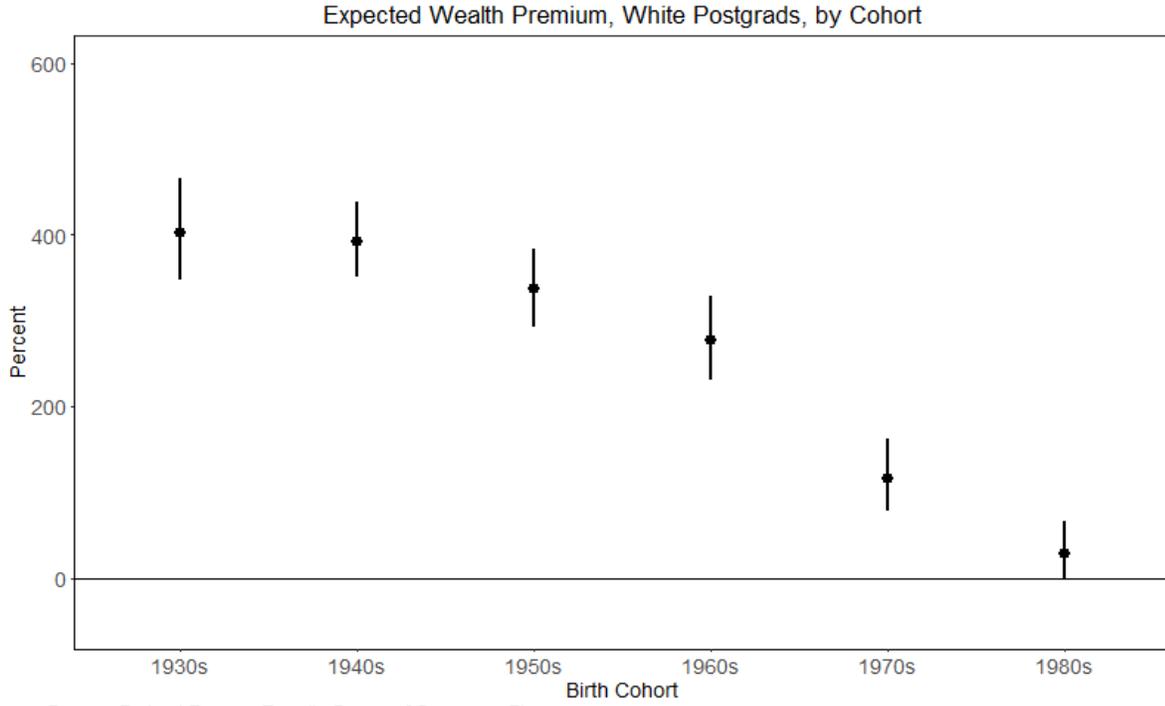
**Figure 11**



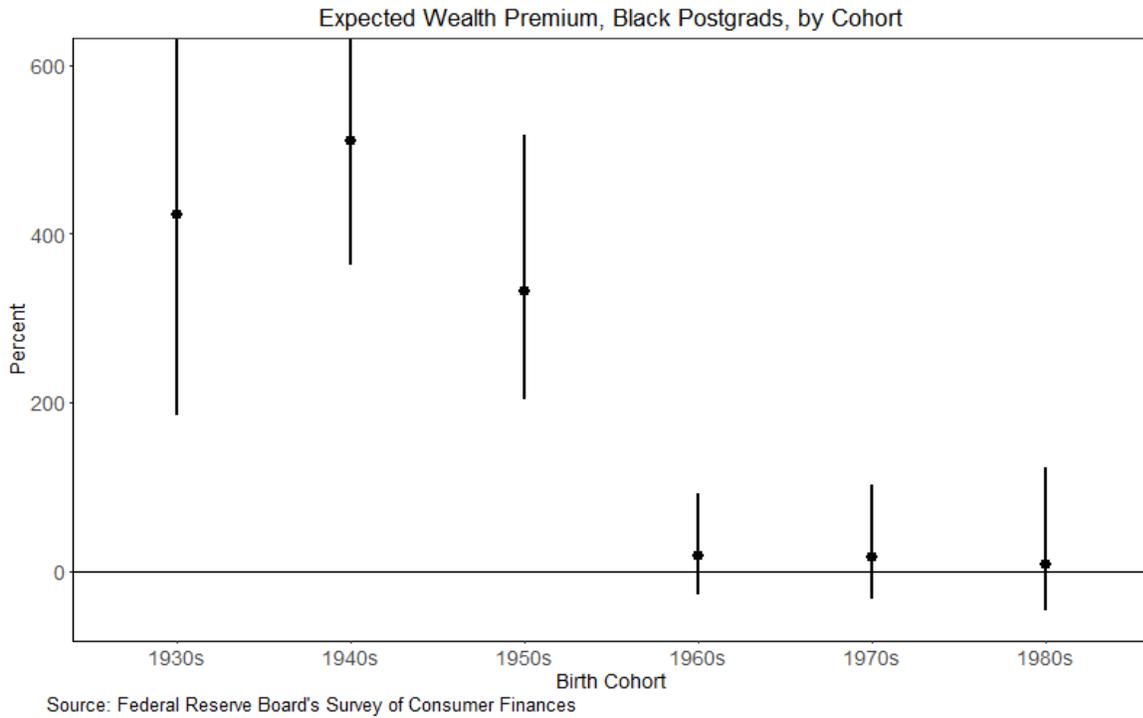
**Figure 12**



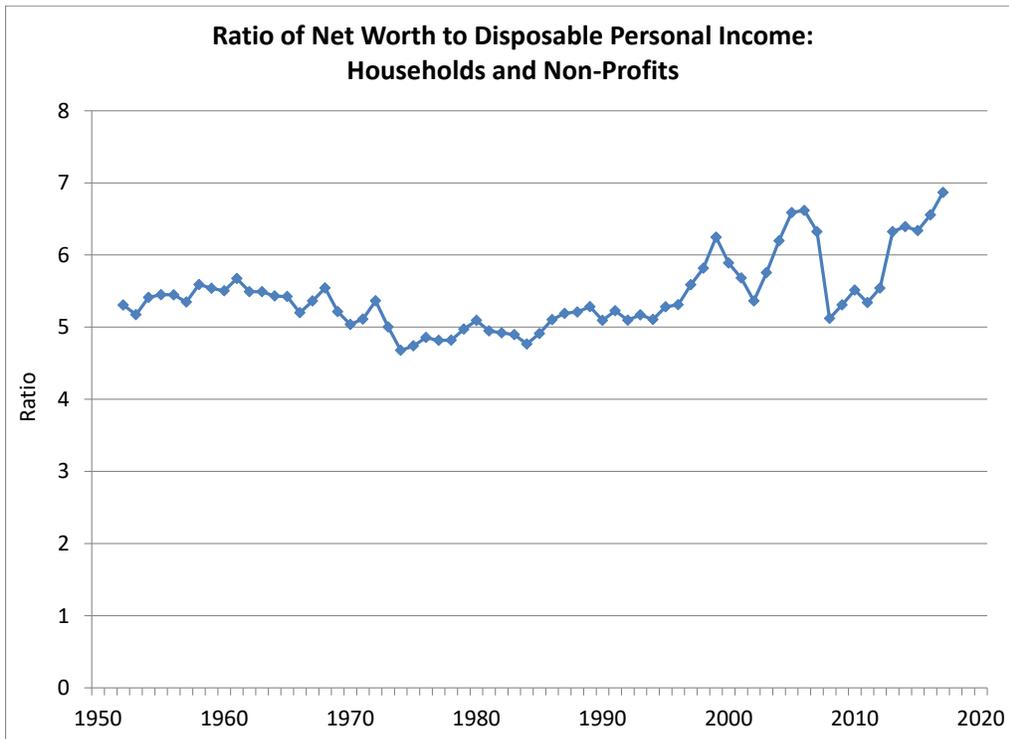
**Figure 13**



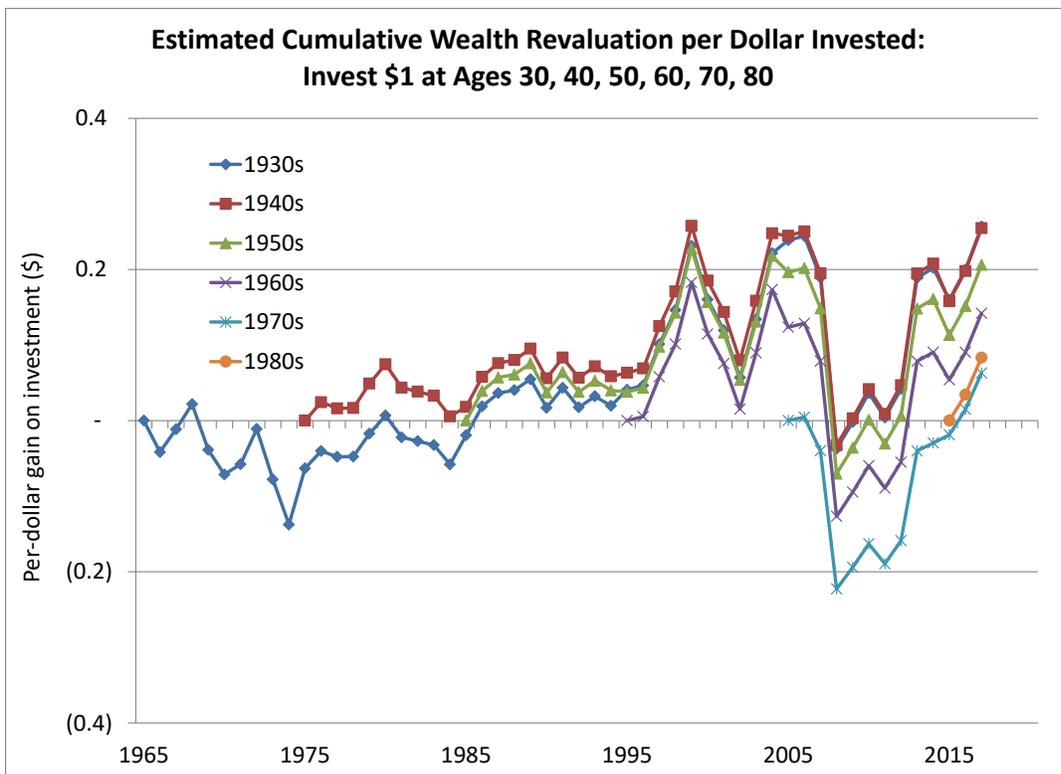
**Figure 14**



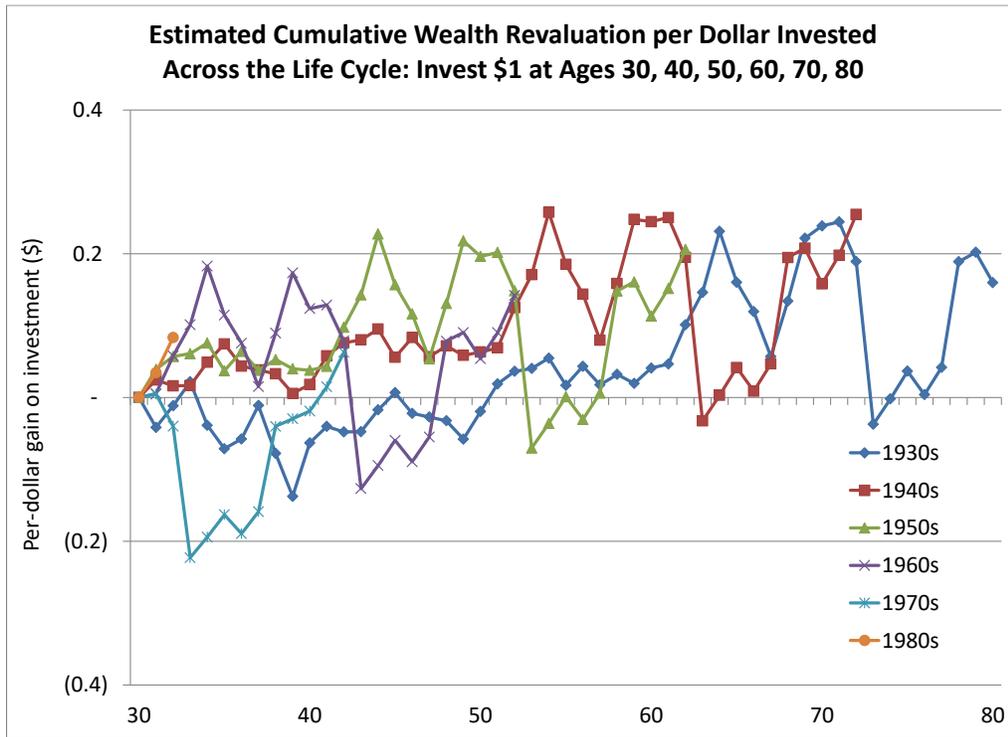
**Figure 15: Ratio of Household Net Worth to Disposable Personal Income**



**Figure 16: Simulation of Dollar-Cost Averaging: Estimated Cumulative Wealth Revaluations**

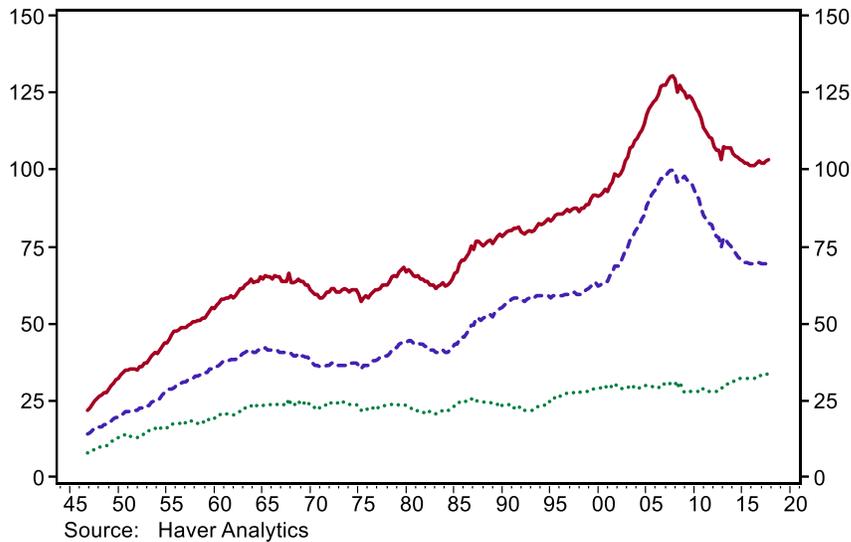


**Figure 17: Simulation of Dollar-Cost Averaging: Across the Life Cycle**

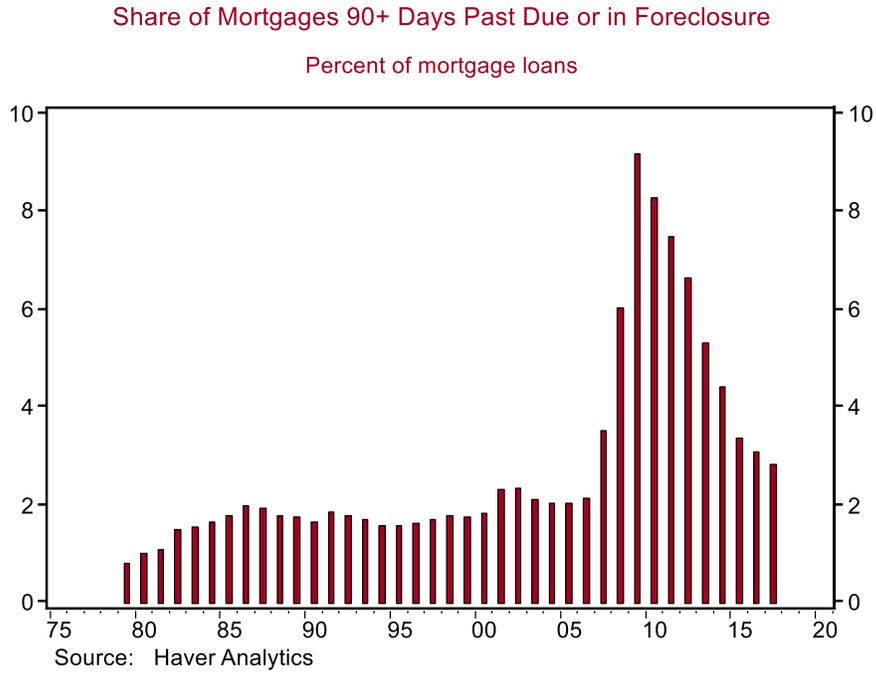


**Figure 18: Household Loans as Percent of Disposable Personal Income**

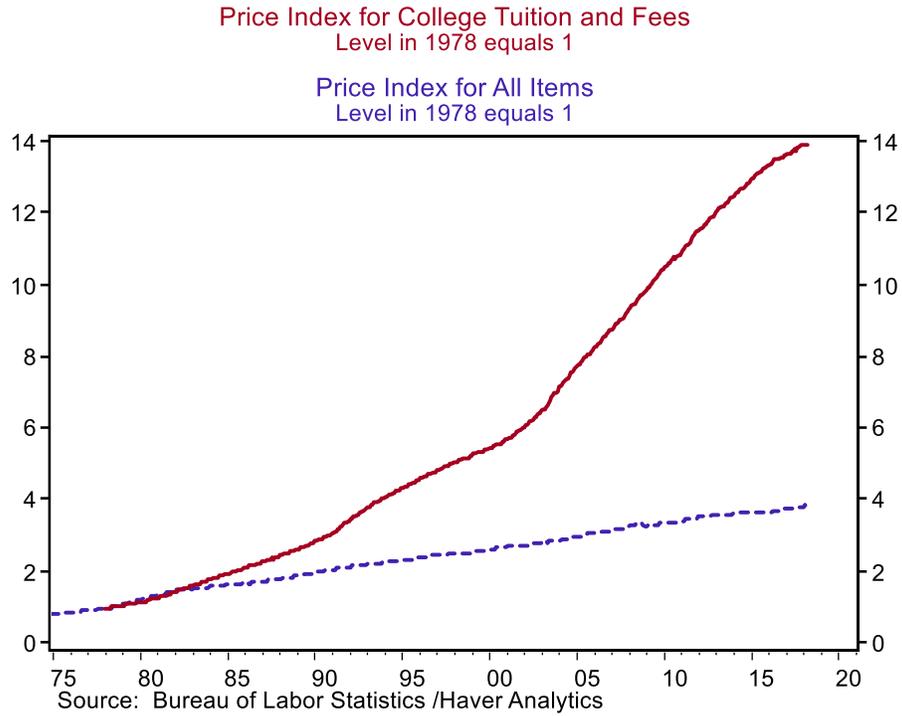
All Household Loans as Percent of Disposable Personal Income  
 All Mortgage Loans as Percent of Disposable Personal Income  
 All Non-Mortgage Loans as Percent of Disposable Personal Income



**Figure 19: Share of Mortgages Seriously Delinquent or in Foreclosure**



**Figure 20: Price Index for College Tuition and Fees**



## Appendix A

**Table A1**

Variable Descriptions			
Variable	Description	Source	Survey Waves Available
Household Size-Adjusted Net Worth	Inflation-adjusted net worth divided by the square root of household size.	Networth (Board)	1989-2016
Household Size-Adjusted Usual Income	Inflation-adjusted usual income divided by the square root of household size. NOTE: Actual income is used for 1989 and 1992 given that usual income was not available. Respondents were asked whether their household income in the past year was unusually high or unusually low. Given either response, the respondent was asked to provide their household income in a "normal" year. X7362 is inflation-adjusted using the CPI-U all items annual series. NOTE: Actual income is used for 1989 and 1992 given that X7362 is introduced in 1995 survey wave.	Income (Board) or X7362	1989-2016
Usual Income		1995-2016: X7362, X7650	1989-2016
Household Size	Number of people in the household according to the HHL. Excludes people included in the household listing who do not usually live there and who are financially independent.	X101	1989-2016
Age	Respondent's age.	X14	1989-2016
Age <sup>2</sup>	Respondent's age squared.	X14	1989-2016
Age <sup>3</sup>	Respondent's age cubed.	X14	1989-2016
4-Year College Graduate	Maximum educational attainment of household respondent was a 4-year college degree (e.g. BA, AB, BS).	1989-2013: X5901, X5904, X5905; 2016: X5931	1989-2016
Postgraduate	Maximum educational attainment of household respondent was a postgraduate degree. This includes master's degrees (e.g. MA, MS, MENG, MEd, MSW, MBA), professional degrees (e.g. MD, DDS, DVM, LLB, JD), and doctoral degrees (e.g. PhD, EDD).	1989-2013: X5901, X5904, X5905; 2016: X5931	1989-2016
White	Respondent identified their race or ethnicity as white or caucasian.	X6809	1989-2016
Black	Respondent identified their race or ethnicity as black/African-American.	X6809	1989-2016
Hispanic	Respondent identified their race or ethnicity as Hispanic/Latino.	X6809	1989-2016
Other	Respondent identified their race or ethnicity as Asian OR American Indian/Alaska Native OR Native Hawaiian/Pacific Islander OR Other OR identified with multiple races or ethnicities. NOTE: All of these responses are combined by Board staff for confidentiality reasons.	X6809	1989-2016
Birth Cohorts	Six birth cohorts represented by binary variables equal to one if the survey respondent was born within the respective decade. Decades include: 1930s, 1940s, 1950s, 1960s, 1970s, 1980s. Respondents born prior to 1930 or after 1989 were represented by a "catch-all" binary variable and included in regressions to avoid perfect multicollinearity. Results for this variable were not included in analysis.	Survey year, X14	1989-2016
College-Graduate Father	Respondent's father achieved at least a 4-year college degree. NOTE: Board staff topcoded all levels of postgraduate education higher than a 4-year degree.	X6033	2016
College-Graduate Mother	Respondent's mother achieved at least a 4-year college degree. NOTE: Board staff topcoded all levels of postgraduate education higher than a 4-year degree.	X6032	2016
Financial Literacy Test Score	Combined score on three basic questions on inflation, interest rates, and stock risk. Question 1: Do you think that the following statement is true or false: buying a single company's stock usually provides a safe return than a stock mutual fund?; Question 2: Suppose you had \$100 in a savings account and the interest rate was 2% per year. After 5 years, how much do you think you would have in the account if you left the money to grow: more than \$102, exactly \$102, or less than \$102?; Question 3: Imagine that the interest rate on your savings account was 1% per year and inflation was 2% per year. After 1 year, would you be able to buy more than today, exactly the same as today, or less than today with the money in this account?	X7558, X7559, X7560	2016
Self-Assessed Financial Knowledge	Question prompt: Some people are very knowledgeable about personal finances, while others are less knowledgeable about personal finances. On a scale from 0 to 10, what number would you (and your (husband/wife/partner)) be on the scale? 0 represents not at all knowledgeable about personal finance while 10 represents very knowledgeable about personal finance.	X7556	2016
Self-Assessed Financial Risk-Taking	Question prompt: Some people are fully prepared to take financial risks when they save or make investments, while others try to avoid taking financial risks. On a scale from 0 to 10, what number would you (and your (husband/wife/partner)) be on the scale? 0 represents not at all willing to take financial risks while 10 represents very willing to take risks.	X7557	2016
Search Intensity when Saving	Question prompt: When making major saving and investment decisions, some people (shop around OR search) for the very best terms while others don't. On a scale of 1 to 5 (1995-2013) OR 0 to 10 (2016) where would you (your family OR and your (husband/wife/partner)) be on the scale? Prior to 2016, 1 represents almost no shopping, 3 represents moderate shopping, and 5 represents a great deal of shopping. Starting in 2016, 0 represents no shopping and 10 represents a great deal of shopping.	1995-2013: X7111; 2016: X7562	1995-2016
Search Intensity when Borrowing	Question prompt: When making major decisions about borrowing money or obtaining credit, some people (shop around OR search) for the very best terms while others don't. On a scale of 1 to 5 (1995-2013) OR 0 to 10 (2016) where would you (your family OR and your husband/wife/partner) be on the scale? Prior to 2016, 1 represents almost no shopping, 3 represents moderate shopping, and 5 represents a great deal of shopping. Starting in 2016, 0 represents no shopping and 10 represents a great deal of shopping.	1995-2013: X7100; 2016: X7561	1995-2016
Actively Saving	Binary variable equal to one if the respondent answered a combination of questions. Question prompt: Which of the following statements on this page comes closest to describing your (and your (husband/wife/partner's)) saving habits? Equal to one if the respondent did NOT check "Don't save - usually spend more than income" AND did NOT check "Don't save - usually spend about as much as income" AND respondent checked "Save income of one family member, spend the other" OR "Save regularly by putting money aside each month."	X3015, X3016, X3018, X3020	1989-2016

**Table A2**

**Income Regressions: Hispanic Families**

**Dependent Variable** Usual Income  
**Racial/Ethnic Group** Hispanic, any Race  
**Pseudo R<sup>2</sup>** 0.17  
**N** 3,553

Independent Variables	(1)				(2)				(3)				(4)				(5)				(6)								
	$\beta$	SE	t-stat	p-value	$\beta$	SE	t-stat	p-value	$\beta$	SE	t-stat	p-value	$\beta$	SE	t-stat	p-value	$\beta$	SE	t-stat	p-value	$\beta$	SE	t-stat	p-value					
Intercept	6.87	0.36	19.16	0.00	6.80	0.35	19.25	0.00	6.86	0.36	19.03	0.00	6.87	0.37	18.50	0.00	6.99	0.36	19.19	0.00	7.21	0.33	21.77	0.00					
Life-Cycle	Age	0.15	0.02	6.76	0.00	0.15	0.02	6.76	0.00	0.15	0.02	6.76	0.00	0.15	0.02	6.76	0.00	0.15	0.02	6.76	0.00	0.15	0.02	6.76	0.00				
	Age <sup>2</sup>	0.00	0.00	-4.95	0.00	0.00	0.00	-4.95	0.00	0.00	0.00	-4.95	0.00	0.00	0.00	-4.95	0.00	0.00	0.00	-4.95	0.00	0.00	0.00	-4.95	0.00				
	Age <sup>3</sup>	0.00	0.00	3.35	0.00	0.00	0.00	3.35	0.00	0.00	0.00	3.35	0.00	0.00	0.00	3.35	0.00	0.00	0.00	3.35	0.00	0.00	0.00	3.35	0.00				
Income Premium	Terminal Four-Year Graduate (G)	0.47	0.25	1.89	0.06	0.27	0.40	0.70	0.49	0.77	0.08	9.37	0.00	0.39	0.11	3.50	0.00	0.84	0.07	12.52	0.00	0.50	0.10	5.10	0.00				
	Postgraduate (P)	1.12	0.14	8.00	0.00	1.29	0.14	8.97	0.00	0.99	0.17	5.72	0.00	1.16	0.13	9.05	0.00	0.92	0.10	8.86	0.00	0.89	0.09	9.50	0.00				
Birth Cohorts	Born Before 1930 OR After 1989	-0.23	0.12	-1.84	0.07	-0.15	0.12	-1.26	0.21	-0.22	0.12	-1.79	0.07	-0.23	0.12	-1.92	0.06	-0.34	0.12	-2.83	0.00	-0.57	0.12	-4.91	0.00				
	Born in 1930s	<i>(Omitted)</i>				0.08	0.09	0.85	0.40	0.01	0.09	0.14	0.89	0.00	0.10	0.01	0.99	0.00	-0.11	0.10	-1.09	0.28	-0.34	0.11	-3.05	0.00			
	Born in 1940s	<i>(Omitted)</i>				<i>(Omitted)</i>				-0.07	0.06	-1.12	0.26	<i>(Omitted)</i>				-0.19	0.08	-2.52	0.01	-0.42	0.08	-4.96	0.00				
	Born in 1950s	<i>(Omitted)</i>				<i>(Omitted)</i>				<i>(Omitted)</i>				-0.01	0.05	-0.23	0.82	<i>(Omitted)</i>				-0.13	0.05	-2.35	0.02	-0.35	0.07	-5.06	0.00
	Born in 1960s	<i>(Omitted)</i>				-0.11	0.05	-2.22	0.03	<i>(Omitted)</i>				-0.34	0.07	-4.81	0.00												
	Born in 1970s	<i>(Omitted)</i>				-0.23	0.05	-4.32	0.00	<i>(Omitted)</i>																			
	Born in 1980s	<i>(Omitted)</i>				<i>(Omitted)</i>																							
Cohort X Income Premium	Born Before 1930 OR After 1989 * G	-0.10	0.33	-0.32	0.75	0.09	0.47	0.19	0.85	-0.41	0.25	-1.63	0.10	-0.02	0.27	-0.08	0.94	-0.48	0.25	-1.94	0.05	-0.13	0.26	-0.50	0.62				
	Born in 1930s * G	<i>(Omitted)</i>				0.20	0.49	0.40	0.69	-0.30	0.29	-1.06	0.29	0.08	0.28	0.29	0.77	-0.37	0.26	-1.45	0.15	-0.03	0.27	-0.10	0.92				
	Born in 1940s * G	<i>(Omitted)</i>				<i>(Omitted)</i>				-0.50	0.40	-1.24	0.21	<i>(Omitted)</i>				-0.57	0.40	-1.43	0.15	-0.22	0.41	-0.55	0.58				
	Born in 1950s * G	<i>(Omitted)</i>				<i>(Omitted)</i>				<i>(Omitted)</i>				0.39	0.14	2.80	0.01	<i>(Omitted)</i>				0.28	0.14	2.02	0.04	<i>(Omitted)</i>			
	Born in 1960s * G	<i>(Omitted)</i>				-0.46	0.12	-3.70	0.00	<i>(Omitted)</i>				-0.11	0.14	-0.81	0.42												
	Born in 1970s * G	<i>(Omitted)</i>				0.35	0.11	3.14	0.00	<i>(Omitted)</i>																			
	Born in 1980s * G	<i>(Omitted)</i>				<i>(Omitted)</i>																							
	Born Before 1930 OR After 1989 * P	-0.53	0.92	-0.57	0.57	-0.70	0.93	-0.75	0.45	-0.40	0.87	-0.46	0.65	-0.57	0.89	-0.64	0.52	-0.33	0.90	-0.37	0.71	-0.30	0.91	-0.33	0.74				
	Born in 1930s * P	<i>(Omitted)</i>				-0.17	0.19	-0.91	0.36	0.13	0.23	0.56	0.57	-0.04	0.18	-0.22	0.83	0.19	0.18	1.10	0.27	0.22	0.16	1.44	0.15				
	Born in 1940s * P	<i>(Omitted)</i>				<i>(Omitted)</i>				0.30	0.24	1.26	0.21	<i>(Omitted)</i>				0.13	0.20	0.65	0.51	0.37	0.20	1.87	0.06	0.40	0.15	2.57	0.01
	Born in 1950s * P	<i>(Omitted)</i>				0.06	0.20	0.32	0.75	0.09	0.18	0.52	0.61																
	Born in 1960s * P	<i>(Omitted)</i>				0.23	0.16	1.50	0.13	0.26	0.17	1.52	0.13																
	Born in 1970s * P	<i>(Omitted)</i>				<i>(Omitted)</i>																							
Born in 1980s * P	<i>(Omitted)</i>				<i>(Omitted)</i>				<i>(Omitted)</i>				<i>(Omitted)</i>				<i>(Omitted)</i>				<i>(Omitted)</i>								

Note: Standard errors are bootstrapped with 999 replicates in accordance with the sample design and are adjusted for imputation uncertainty. Nonresponse-adjusted sampling weights were also used.

**Table A3**

**Income Regressions: Families of Other Races**

Dependent Variable Usual Income

Racial/Ethnic Group Other Races

Pseudo R<sup>2</sup> 0.27

N 1,993

Independent Variables	(1)				(2)				(3)				(4)				(5)				(6)				
	β	SE	t-stat	p-value	β	SE	t-stat	p-value	β	SE	t-stat	p-value	β	SE	t-stat	p-value	β	SE	t-stat	p-value	β	SE	t-stat	p-value	
Intercept	6.01	0.67	8.96	0.00	6.07	0.68	8.88	0.00	5.96	0.70	8.50	0.00	5.90	0.70	8.46	0.00	6.04	0.73	8.26	0.00	6.33	0.67	9.41	0.00	
Life-Cycle	Age	0.22	0.05	4.99	0.00	0.22	0.05	4.99	0.00	0.22	0.05	4.99	0.00	0.22	0.05	4.99	0.00	0.22	0.05	4.99	0.00	0.22	0.05	4.99	0.00
	Age <sup>2</sup>	0.00	0.00	-4.03	0.00	0.00	0.00	-4.03	0.00	0.00	0.00	-4.03	0.00	0.00	0.00	-4.03	0.00	0.00	0.00	-4.03	0.00	0.00	0.00	-4.03	0.00
	Age <sup>3</sup>	0.00	0.00	3.19	0.00	0.00	0.00	3.19	0.00	0.00	0.00	3.19	0.00	0.00	0.00	3.19	0.00	0.00	0.00	3.19	0.00	0.00	0.00	3.19	0.00
		0.00	0.00	3.19	0.00	0.00	0.00	3.19	0.00	0.00	0.00	3.19	0.00	0.00	0.00	3.19	0.00	0.00	0.00	3.19	0.00	0.00	0.00	3.19	0.00
Income Premium	Terminal Four-Year Graduate (G)	0.33	0.20	1.66	0.10	0.52	0.14	3.63	0.00	0.69	0.08	8.23	0.00	0.69	0.10	7.01	0.00	0.84	0.10	8.29	0.00	0.44	0.15	3.05	0.00
	Postgraduate (P)	1.17	0.17	6.88	0.00	1.20	0.09	13.00	0.00	1.08	0.11	9.52	0.00	1.01	0.09	10.76	0.00	1.09	0.11	9.66	0.00	0.65	0.12	5.32	0.00
Birth Cohorts	Born Before 1930 OR After 1989	-0.23	0.18	-1.26	0.21	-0.29	0.17	-1.68	0.09	-0.18	0.16	-1.12	0.26	-0.13	0.16	-0.78	0.44	-0.27	0.17	-1.56	0.12	-0.55	0.18	-3.08	0.00
	Born in 1930s	<i>(Omitted)</i>				-0.06	0.12	-0.53	0.60	0.05	0.12	0.37	0.71	0.10	0.14	0.74	0.46	-0.04	0.16	-0.24	0.81	-0.32	0.15	-2.14	0.03
	Born in 1940s	<i>(Omitted)</i>				<i>(Omitted)</i>				0.11	0.08	1.30	0.19	0.16	0.10	1.64	0.10	0.02	0.13	0.18	0.86	-0.26	0.12	-2.15	0.03
	Born in 1950s	-0.05	0.12	-0.37	0.71	-0.11	0.08	-1.30	0.19	<i>(Omitted)</i>				0.05	0.08	0.65	0.51	-0.08	0.11	-0.79	0.43	-0.37	0.11	-3.49	0.00
	Born in 1960s	-0.10	0.14	-0.74	0.46	-0.16	0.10	-1.64	0.10	-0.05	0.08	-0.65	0.51	<i>(Omitted)</i>				-0.14	0.11	-1.26	0.21	-0.42	0.12	-3.64	0.00
	Born in 1970s	0.04	0.16	0.24	0.81	-0.02	0.13	-0.18	0.86	0.08	0.11	0.79	0.43	0.14	0.11	1.26	0.21	<i>(Omitted)</i>				-0.28	0.14	-2.09	0.04
	Born in 1980s	0.32	0.15	2.14	0.03	0.26	0.12	2.15	0.03	0.37	0.11	3.49	0.00	0.42	0.12	3.64	0.00	0.28	0.14	2.09	0.04	<i>(Omitted)</i>			
	Born Before 1930 OR After 1989 * G	-0.26	0.38	-0.69	0.49	-0.46	0.34	-1.37	0.17	-0.63	0.33	-1.89	0.06	-0.63	0.35	-1.83	0.07	-0.78	0.33	-2.33	0.02	-0.38	0.36	-1.05	0.29
	Born in 1930s * G	<i>(Omitted)</i>				-0.20	0.24	-0.83	0.41	-0.37	0.21	-1.73	0.08	-0.37	0.23	-1.61	0.11	-0.51	0.22	-2.32	0.02	-0.12	0.23	-0.52	0.60
	Born in 1940s * G	0.20	0.24	0.83	0.41	<i>(Omitted)</i>				-0.17	0.17	-0.99	0.32	-0.17	0.18	-0.96	0.34	-0.31	0.17	-1.86	0.06	0.08	0.20	0.40	0.69
Born in 1950s * G	0.37	0.21	1.73	0.08	0.17	0.17	0.99	0.32	<i>(Omitted)</i>				0.00	0.13	0.01	0.99	0.00	0.13	-0.01	0.99	-0.15	0.11	-1.32	0.19	
Born in 1960s * G	0.37	0.23	1.61	0.11	0.17	0.18	0.96	0.34	0.00	0.13	0.01	0.99	<i>(Omitted)</i>				-0.15	0.14	-1.06	0.29	0.25	0.17	1.48	0.14	
Born in 1970s * G	0.51	0.22	2.32	0.02	0.31	0.17	1.86	0.06	0.15	0.11	1.32	0.19	0.15	0.14	1.06	0.29	<i>(Omitted)</i>				0.40	0.18	2.20	0.03	
Born in 1980s * G	0.12	0.23	0.52	0.60	-0.08	0.20	-0.40	0.69	-0.25	0.17	-1.48	0.14	-0.25	0.17	-1.49	0.14	-0.40	0.18	-2.20	0.03	<i>(Omitted)</i>				
Born Before 1930 OR After 1989 * P	0.02	0.39	0.05	0.96	-0.01	0.38	-0.03	0.98	0.11	0.37	0.29	0.77	0.18	0.38	0.47	0.64	0.09	0.38	0.24	0.81	0.54	0.39	1.39	0.16	
Born in 1930s * P	<i>(Omitted)</i>				-0.03	0.19	-0.16	0.88	0.09	0.19	0.46	0.64	0.16	0.19	0.86	0.39	0.07	0.21	0.34	0.74	0.52	0.19	2.69	0.01	
Born in 1940s * P	0.03	0.19	0.16	0.88	<i>(Omitted)</i>				0.12	0.13	0.89	0.37	0.19	0.13	1.42	0.15	0.10	0.14	0.73	0.46	0.55	0.15	3.70	0.00	
Born in 1950s * P	-0.09	0.19	-0.46	0.64	-0.12	0.13	-0.89	0.37	<i>(Omitted)</i>				0.07	0.14	0.50	0.62	-0.01	0.15	-0.10	0.92	0.43	0.15	2.91	0.00	
Born in 1960s * P	-0.16	0.19	-0.86	0.39	-0.19	0.13	-1.42	0.15	-0.07	0.14	-0.50	0.62	<i>(Omitted)</i>				-0.09	0.14	-0.62	0.54	0.36	0.16	2.30	0.02	
Born in 1970s * P	-0.07	0.21	-0.34	0.74	-0.10	0.14	-0.73	0.46	0.01	0.15	0.10	0.92	0.09	0.14	0.62	0.54	<i>(Omitted)</i>				0.45	0.18	2.50	0.01	
Born in 1980s * P	-0.52	0.19	-2.69	0.01	-0.55	0.15	-3.70	0.00	-0.43	0.15	-2.91	0.00	-0.36	0.16	-2.30	0.02	-0.45	0.18	-2.50	0.01	<i>(Omitted)</i>				

Note: Standard errors are bootstrapped with 999 replicates in accordance with the sample design and are adjusted for imputation uncertainty. Nonresponse-adjusted sampling weights were also used.

**Table A4**

**Wealth Regressions: Hispanic Families**

Dependent Variable Net Worth

Racial/Ethnic Group Hispanic, any Race

Pseudo R<sup>2</sup> 0.17

N 3,553

	Independent Variables	(1)				(2)				(3)				(4)				(5)				(6)			
		$\beta$	SE	H-P( $\beta$ )	t-stat p-value	$\beta$	SE	H-P( $\beta$ )	t-stat p-value	$\beta$	SE	H-P( $\beta$ )	t-stat p-value	$\beta$	SE	H-P( $\beta$ )	t-stat p-value	$\beta$	SE	H-P( $\beta$ )	t-stat p-value	$\beta$	SE	H-P( $\beta$ )	t-stat p-value
Life-Cycle	Intercept	-10,185	4,644		-2.19 0.03	-14,260	4,816		-2.96 0.00	-14,295	4,819		-2.97 0.00	-14,374	4,822		-2.98 0.00	-14,182	4,760		-2.98 0.00	-13,266	4,640		-2.86 0.00
	Age	906	331		2.73 0.01	906	331		2.73 0.01	906	331		2.73 0.01	906	331		2.73 0.01	906	331		2.73 0.01	906	331		2.73 0.01
	Age <sup>2</sup>	-5	7		-0.74 0.46	-5	7		-0.74 0.46	-5	7		-0.74 0.46	-5	7		-0.74 0.46	-5	7		-0.74 0.46	-5	7		-0.74 0.46
	Age <sup>3</sup>	0	0		-0.35 0.72	0	0		-0.35 0.72	0	0		-0.35 0.72	0	0		-0.35 0.72	0	0		-0.35 0.72	0	0		-0.35 0.72
Wealth Premium	Terminal Four-Year Graduate (G)	4,838	4,213	0.62	1.15 0.25	6,842	4,242	0.98	1.61 0.11	13,486	1,926	2.85	7.00 0.00	7,210	1,625	1.06	4.44 0.00	3,954	1,735	0.48	2.28 0.02	1,966	2,132	0.22	0.92 0.36
	Postgraduate (P)	11,622	4,062	2.20	2.86 0.00	22,768	3,420	8.75	6.66 0.00	20,195	2,588	6.53	7.80 0.00	16,902	2,759	4.42	6.13 0.00	8,744	3,733	1.40	2.34 0.02	582	3,774	0.06	0.15 0.88
Birth Cohorts	Born Before 1930 OR After 1989	-4,359	1,521	-0.35	-2.87 0.00	-284	1,444	-0.03	-0.20 0.84	-249	1,457	-0.02	-0.17 0.86	-169	1,229	-0.02	-0.14 0.89	-361	1,127	-0.04	-0.32 0.75	-1,278	1,036	-0.12	-1.23 0.22
	Born in 1930s	<i>(Omitted)</i>				4,075	1,488	0.50	2.74 0.01	4,110	1,446	0.51	2.84 0.00	4,190	1,467	0.52	2.86 0.00	3,998	1,483	0.49	2.70 0.01	3,081	1,470	0.36	2.10 0.04
	Born in 1940s	-4,075	1,488	-0.33	-2.74 0.01	<i>(Omitted)</i>				35	812	0.00	0.04 0.97	115	974	0.01	0.12 0.91	-77	945	-0.01	-0.08 0.93	-994	1,039	-0.09	-0.96 0.34
	Born in 1950s	-4,110	1,446	-0.34	-2.84 0.00	-35	812	0.00	-0.04 0.97	<i>(Omitted)</i>				80	721	0.01	0.11 0.91	-113	771	-0.01	-0.15 0.88	-1,029	913	-0.10	-1.13 0.26
	Born in 1960s	-4,190	1,467	-0.34	-2.86 0.00	-115	974	-0.01	-0.12 0.91	-80	721	-0.01	-0.11 0.91	<i>(Omitted)</i>				-192	473	-0.02	-0.41 0.68	-1,109	674	-0.10	-1.65 0.10
	Born in 1970s	-3,998	1,483	-0.33	-2.70 0.01	77	945	0.01	0.08 0.93	113	771	0.01	0.15 0.88	192	473	0.02	0.41 0.68	<i>(Omitted)</i>				-917	571	-0.09	-1.61 0.11
	Born in 1980s	-3,081	1,470	-0.27	-2.10 0.04	994	1,039	0.10	0.96 0.34	1,029	913	0.11	1.13 0.26	1,109	674	0.12	1.65 0.10	917	571	0.10	1.61 0.11	<i>(Omitted)</i>			
	Born Before 1930 OR After 1989 * G	-13,744	5,274	-0.75	-2.61 0.01	-15,749	5,630	-0.79	-2.80 0.01	-22,393	4,072	-0.89	-5.50 0.00	-16,117	3,847	-0.80	-4.19 0.00	-12,861	3,919	-0.72	-3.28 0.00	-10,873	3,866	-0.66	-2.81 0.00
Cohort X Income Premium	Born in 1930s * G	<i>(Omitted)</i>				-2,004	5,723	-0.18	-0.35 0.73	-8,648	4,924	-0.58	-1.76 0.08	-2,372	4,714	-0.21	-0.50 0.61	884	4,505	0.09	0.20 0.84	2,872	4,360	0.33	0.66 0.51
	Born in 1940s * G	2,004	5,723	0.22	0.35 0.73	<i>(Omitted)</i>				-6,644	4,812	-0.49	-1.38 0.17	-3,668	4,708	-0.04	-0.08 0.94	2,888	4,636	0.33	0.62 0.53	4,876	4,422	0.63	1.10 0.27
	Born in 1950s * G	8,648	4,924	1.37	1.76 0.08	6,644	4,812	0.94	1.38 0.17	<i>(Omitted)</i>				6,276	2,394	0.87	2.62 0.01	9,532	2,716	1.59	3.51 0.00	11,520	3,218	2.16	3.58 0.00
	Born in 1960s * G	2,372	4,714	0.27	0.50 0.61	368	4,708	0.04	0.08 0.94	-6,276	2,394	-0.47	-2.62 0.01	<i>(Omitted)</i>				3,256	2,313	0.38	1.41 0.16	5,244	2,850	0.69	1.84 0.07
	Born in 1970s * G	-884	4,505	-0.08	-0.20 0.84	-2,888	4,636	-0.25	-0.62 0.53	-9,532	2,716	-0.61	-3.51 0.00	-3,256	2,313	-0.28	-1.41 0.16	<i>(Omitted)</i>				1,988	2,865	0.22	0.69 0.49
	Born in 1980s * G	-2,872	4,360	-0.25	-0.66 0.51	-4,876	4,422	-0.39	-1.10 0.27	-11,520	3,218	-0.68	-3.58 0.00	-5,244	2,850	-0.41	-1.84 0.07	-1,988	2,865	-0.18	-0.69 0.49	<i>(Omitted)</i>			
	Born Before 1930 OR After 1989 * P	6,520	10,339	0.92	0.63 0.53	-4,625	9,964	-0.37	-0.46 0.64	-2,053	9,119	-0.19	-0.23 0.82	1,240	9,425	0.13	0.13 0.90	9,398	9,923	1.56	0.95 0.34	17,560	9,818	4.79	1.79 0.07
	Born in 1930s * P	<i>(Omitted)</i>				-11,146	5,499	-0.67	-2.03 0.04	-8,573	5,097	-0.58	-1.68 0.09	-5,280	4,742	-0.41	-1.11 0.27	2,878	5,669	0.33	0.51 0.61	11,040	5,476	2.02	2.02 0.04
	Born in 1940s * P	11,146	5,499	2.05	2.03 0.04	<i>(Omitted)</i>				2,573	4,055	0.29	0.63 0.53	5,866	4,681	0.80	1.25 0.21	14,024	5,919	3.06	2.37 0.02	22,186	5,052	8.19	4.39 0.00
	Born in 1950s * P	8,573	5,097	1.36	1.68 0.09	-2,573	4,055	-0.23	-0.63 0.53	<i>(Omitted)</i>				3,293	3,849	0.39	0.86 0.39	11,451	4,622	2.14	2.48 0.01	19,613	4,681	6.11	4.19 0.00
Born in 1960s * P	5,280	4,742	0.70	1.11 0.27	-5,866	4,681	-0.44	-1.25 0.21	-3,293	3,849	-0.28	-0.86 0.39	<i>(Omitted)</i>				8,158	4,372	1.26	1.87 0.06	16,320	4,785	4.11	3.41 0.00	
Born in 1970s * P	-2,878	5,669	-0.25	-0.51 0.61	-14,024	5,919	-0.75	-2.37 0.02	-11,451	4,622	-0.68	-2.48 0.01	-8,158	4,372	-0.56	-1.87 0.06	<i>(Omitted)</i>				8,162	5,293	1.26	1.54 0.12	
Born in 1980s * P	-11,040	5,476	-0.67	-2.02 0.04	-22,186	5,052	-0.89	-4.39 0.00	-19,613	4,681	-0.86	-4.19 0.00	-16,320	4,785	-0.80	-3.41 0.00	-8,162	5,293	-0.56	-1.54 0.12	<i>(Omitted)</i>				

Note: Standard errors are bootstrapped with 999 replicates in accordance with the sample design and are adjusted for imputation uncertainty. Nonresponse-adjusted sampling weights were also used. Household-size adjusted net worth was transformed with the inverse hyperbolic sine function, with a scaling factor of .0001. The Halvorsen-Palmquist transformation provides a similar interpretation of the coefficients on binary variables as that of a log-linear model.

**Table A5**

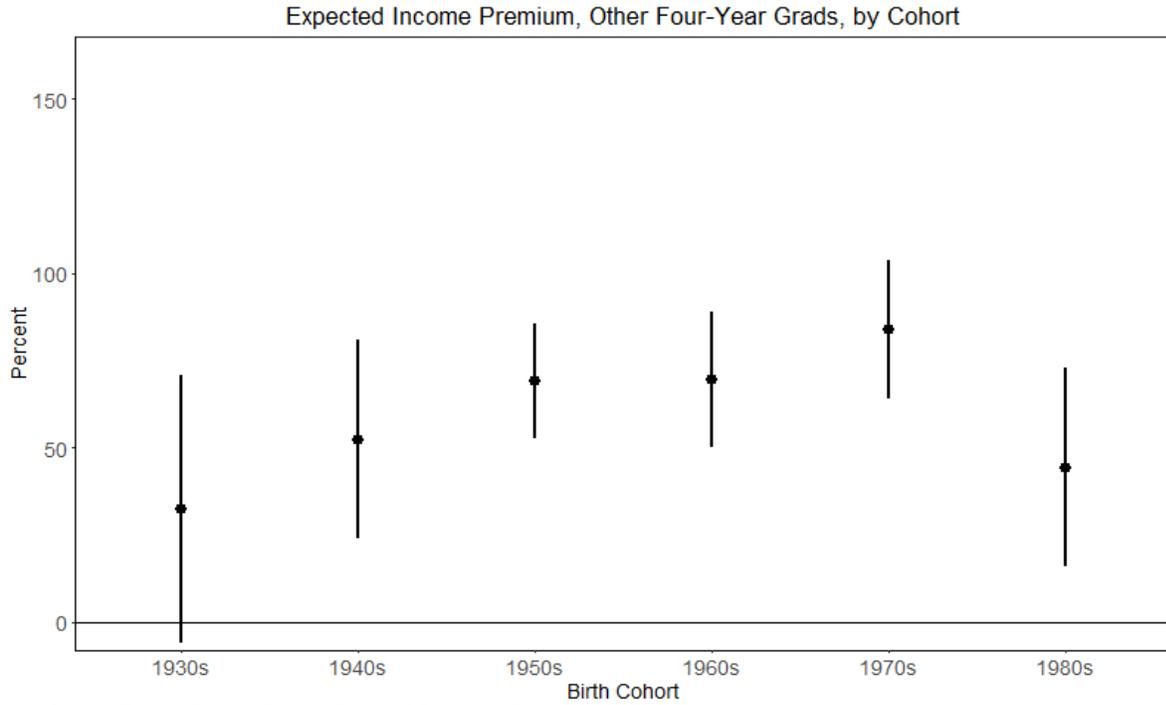
**Wealth Regressions: Families of Other Races**

Dependent Variable Net Worth  
 Racial/Ethnic Group Other Races  
 Psuedo R<sup>2</sup> 0.27  
 N 1,993

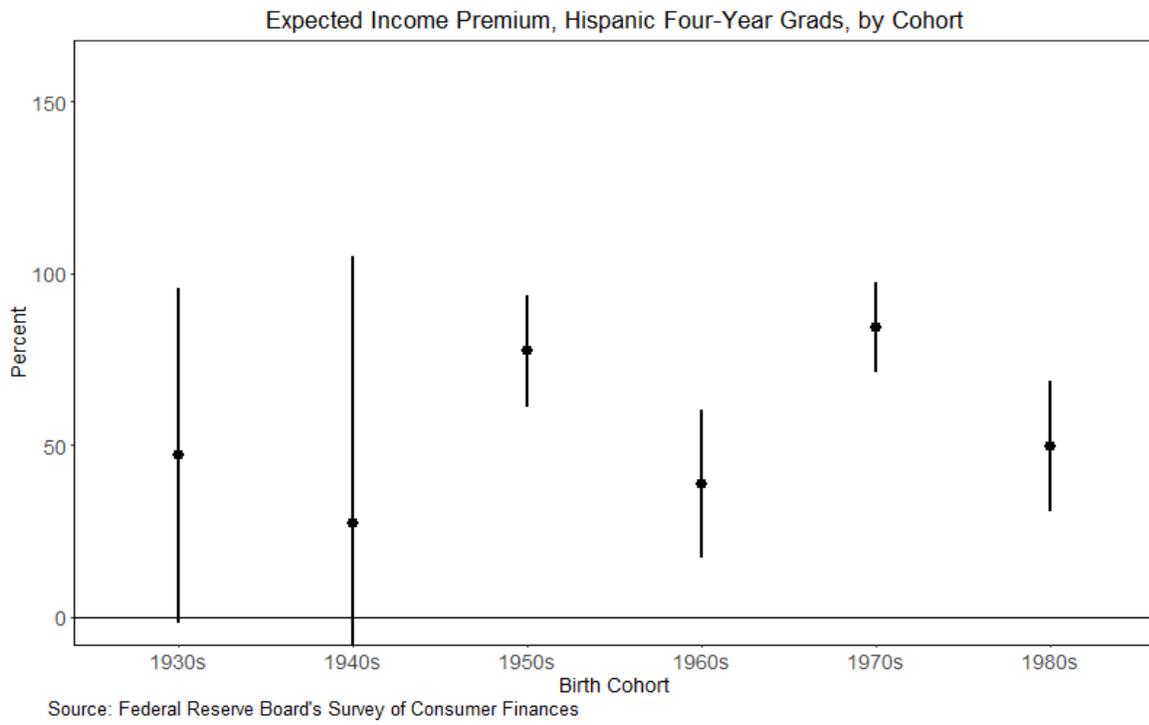
Independent Variables	(1)					(2)					(3)					(4)					(5)					(6)					
	$\beta$	SE	H-P( $\beta$ )	t-stat	p-value	$\beta$	SE	H-P( $\beta$ )	t-stat	p-value	$\beta$	SE	H-P( $\beta$ )	t-stat	p-value	$\beta$	SE	H-P( $\beta$ )	t-stat	p-value	$\beta$	SE	H-P( $\beta$ )	t-stat	p-value	$\beta$	SE	H-P( $\beta$ )	t-stat	p-value	
Intercept	-36,822	8,596		-4.28	0.00	-37,242	8,617		-4.32	0.00	-38,452	8,839		-4.35	0.00	-37,792	8,908		-4.24	0.00	-36,960	8,639		-4.28	0.00	-31,991	8,349		-3.83	0.00	
Life-Cycle	Age	2,482	581		4.27	0.00	2,482	581		4.27	0.00	2,482	581		4.27	0.00	2,482	581		4.27	0.00	2,482	581		4.27	0.00	2,482	581		4.27	0.00
	Age <sup>2</sup>	-35	12		-2.79	0.01	-35	12		-2.79	0.01	-35	12		-2.79	0.01	-35	12		-2.79	0.01	-35	12		-2.79	0.01	-35	12		-2.79	0.01
	Age <sup>3</sup>	0	0		2.06	0.04	0	0		2.06	0.04	0	0		2.06	0.04	0	0		2.06	0.04	0	0		2.06	0.04	0	0		2.06	0.04
Wealth Premium	Terminal Four-Year Graduate (G)	6,599	4,068	0.93	1.62	0.10	11,591	2,750	2.19	4.21	0.00	14,261	2,026	3.16	7.04	0.00	10,317	1,923	1.81	5.36	0.00	9,556	2,183	1.60	4.38	0.00	4,392	2,490	0.55	1.76	0.08
	Postgraduate (P)	18,728	3,375	5.51	5.55	0.00	25,445	1,909	11.74	13.33	0.00	18,118	1,937	5.12	9.35	0.00	13,178	1,992	2.74	6.61	0.00	17,489	1,856	4.75	9.42	0.00	-702	2,805	-0.07	-0.25	0.80
Birth Cohorts	Born Before 1930 OR After 1989	-2,490	2,734	-0.22	-0.91	0.36	-2,070	2,244	-0.19	-0.92	0.36	-860	2,055	-0.08	-0.42	0.68	-1,520	1,941	-0.14	-0.78	0.43	-2,352	2,228	-0.21	-1.06	0.29	-7,321	2,278	-0.52	-3.21	0.00
	Born in 1930s			(Omitted)			420	2,253	0.04	0.19	0.85	1,630	2,126	0.18	0.77	0.44	970	2,283	0.10	0.42	0.67	138	2,288	0.01	0.06	0.95	-4,831	2,577	-0.38	-1.88	0.06
	Born in 1940s	-420	2,253	-0.04	-0.19	0.85			(Omitted)			1,210	1,487	0.13	0.81	0.42	550	1,645	0.06	0.33	0.74	-282	1,893	-0.03	-0.15	0.88	-5,251	1,960	-0.41	-2.68	0.01
	Born in 1950s	-1,630	2,126	-0.15	-0.77	0.44	-1,210	1,487	-0.11	-0.81	0.42			(Omitted)			-660	1,371	-0.06	-0.48	0.63	-1,492	1,692	-0.14	-0.88	0.38	-6,461	1,856	-0.48	-3.48	0.00
	Born in 1960s	-970	2,283	-0.09	-0.42	0.67	-550	1,645	-0.05	-0.33	0.74	660	1,371	0.07	0.48	0.63			(Omitted)			-832	1,567	-0.08	-0.53	0.60	-5,801	1,621	-0.44	-3.58	0.00
	Born in 1970s	-138	2,288	-0.01	-0.06	0.95	282	1,893	0.03	0.15	0.88	1,492	1,692	0.16	0.88	0.38	832	1,567	0.09	0.53	0.60			(Omitted)			-4,969	1,826	-0.39	-2.72	0.01
	Born in 1980s	4,831	2,577	0.62	1.88	0.06	5,251	1,960	0.69	2.68	0.01	6,461	1,856	0.91	3.48	0.00	5,801	1,621	0.79	3.58	0.00	4,969	1,826	0.64	2.72	0.01			(Omitted)		
Cohort X Income Premium	Born Before 1930 OR After 1989 * G	-233	4,801	-0.02	-0.05	0.96	-5,226	4,455	-0.41	-1.17	0.24	-7,895	3,557	-0.55	-2.22	0.03	-3,951	3,709	-0.33	-1.07	0.29	-3,190	4,047	-0.27	-0.79	0.43	1,973	4,137	0.22	0.48	0.63
	Born in 1930s * G			(Omitted)			-4,993	5,112	-0.39	-0.98	0.33	-7,662	4,390	-0.54	-1.75	0.08	-3,718	4,309	-0.31	-0.86	0.39	-2,957	4,778	-0.26	-0.62	0.54	2,206	4,573	0.25	0.48	0.63
	Born in 1940s * G	4,993	5,112	0.65	0.98	0.33			(Omitted)			-2,669	3,305	-0.23	-0.81	0.42	1,274	3,423	0.14	0.37	0.71	2,036	3,600	0.23	0.57	0.57	7,199	3,778	1.05	1.91	0.06
	Born in 1950s * G	7,662	4,390	1.15	1.75	0.08	2,669	3,305	0.31	0.81	0.42			(Omitted)			3,944	2,664	0.48	1.48	0.14	4,705	3,146	0.60	1.50	0.13	9,868	3,041	1.68	3.25	0.00
	Born in 1960s * G	3,718	4,309	0.45	0.86	0.39	-1,274	3,423	-0.12	-0.37	0.71	-3,944	2,664	-0.33	-1.48	0.14			(Omitted)			761	2,895	0.08	0.26	0.79	5,924	2,932	0.81	2.02	0.04
	Born in 1970s * G	2,957	4,778	0.34	0.62	0.54	-2,036	3,600	-0.18	-0.57	0.57	-4,705	3,146	-0.38	-1.50	0.13	-761	2,895	-0.07	-0.26	0.79			(Omitted)			5,163	3,258	0.68	1.58	0.11
	Born in 1980s * G	-2,206	4,573	-0.20	-0.48	0.63	-7,199	3,778	-0.51	-1.91	0.06	-9,868	3,041	-0.63	-3.25	0.00	-5,924	2,932	-0.45	-2.02	0.04	-5,163	3,258	-0.40	-1.58	0.11			(Omitted)		
	Born Before 1930 OR After 1989 * P	-2,254	5,392	-0.20	-0.42	0.68	-8,971	5,686	-0.59	-1.58	0.11	-1,644	5,462	-0.15	-0.30	0.76	3,296	5,435	0.39	0.61	0.54	-1,015	5,667	-0.10	-0.18	0.86	17,176	5,956	4.57	2.88	0.00
	Born in 1930s * P			(Omitted)			-6,716	4,092	-0.49	-1.64	0.10	610	3,864	0.06	0.16	0.87	5,550	4,006	0.74	1.39	0.17	1,239	3,691	0.13	0.34	0.74	19,430	4,595	5.98	4.23	0.00
	Born in 1940s * P	6,716	4,092	0.96	1.64	0.10			(Omitted)			7,327	2,622	1.08	2.79	0.01	12,266	2,853	2.41	4.30	0.00	7,955	2,660	1.22	2.99	0.00	26,147	3,640	12.66	7.18	0.00
	Born in 1950s * P	-610	3,864	-0.06	-0.16	0.87	-7,327	2,622	-0.52	-2.79	0.01			(Omitted)			4,939	2,770	0.64	1.78	0.07	629	2,622	0.06	0.24	0.81	18,820	3,424	5.57	5.50	0.00
	Born in 1960s * P	-5,550	4,006	-0.43	-1.39	0.17	-12,266	2,853	-0.71	-4.30	0.00	-4,939	2,770	-0.39	-1.78	0.07			(Omitted)			-4,311	2,716	-0.35	-1.59	0.11	13,881	3,467	3.01	4.00	0.00
	Born in 1970s * P	-1,239	3,691	-0.12	-0.34	0.74	-7,955	2,660	-0.55	-2.99	0.00	-629	2,622	-0.06	-0.24	0.81	4,311	2,716	0.54	1.59	0.11			(Omitted)			18,191	3,608	5.17	5.04	0.00
Born in 1980s * P	-19,430	4,595	-0.86	-4.23	0.00	-26,147	3,640	-0.93	-7.18	0.00	-18,820	3,424	-0.85	-5.50	0.00	-13,881	3,467	-0.75	-4.00	0.00	-18,191	3,608	-0.84	-5.04	0.00			(Omitted)			

Note: Standard errors are bootstrapped with 999 replicates in accordance with the sample design and are adjusted for imputation uncertainty. Nonresponse-adjusted sampling weights were also used. Household-size adjusted net worth was transformed with the inverse hyperbolic sine function, with a scaling factor of .0001. The Halvorsen-Palmquist transformation provides a similar interpretation of the coefficients on binary variables as that of a log-linear model.

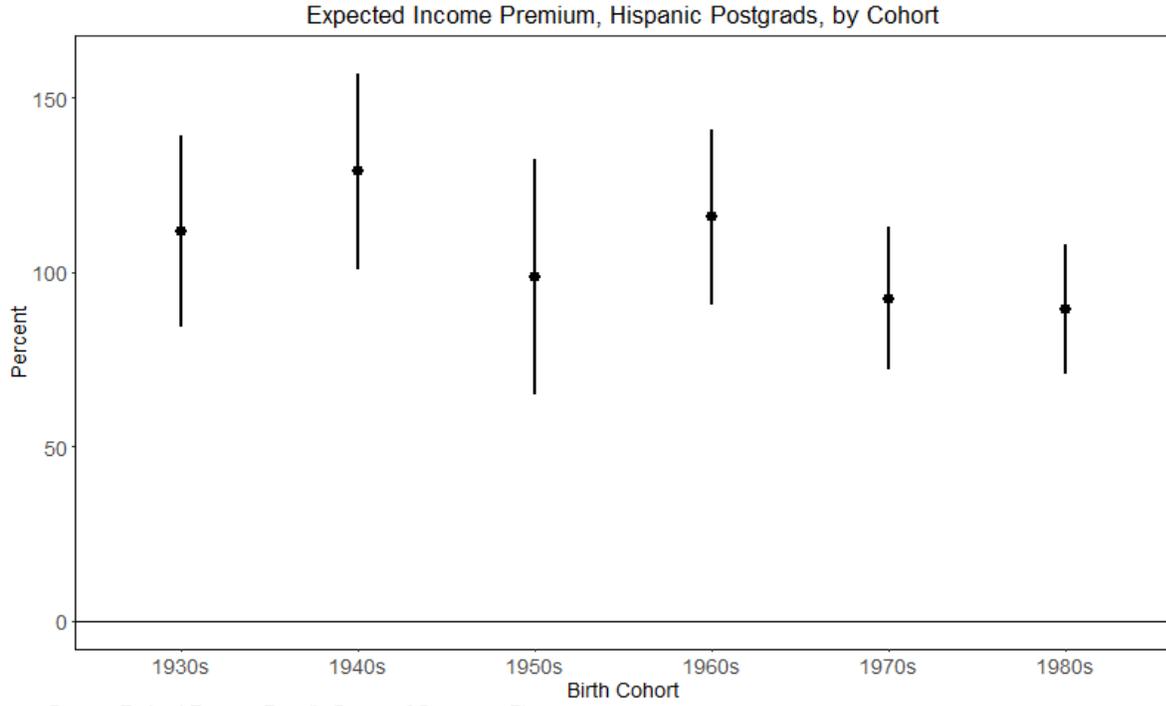
**Figure A1**



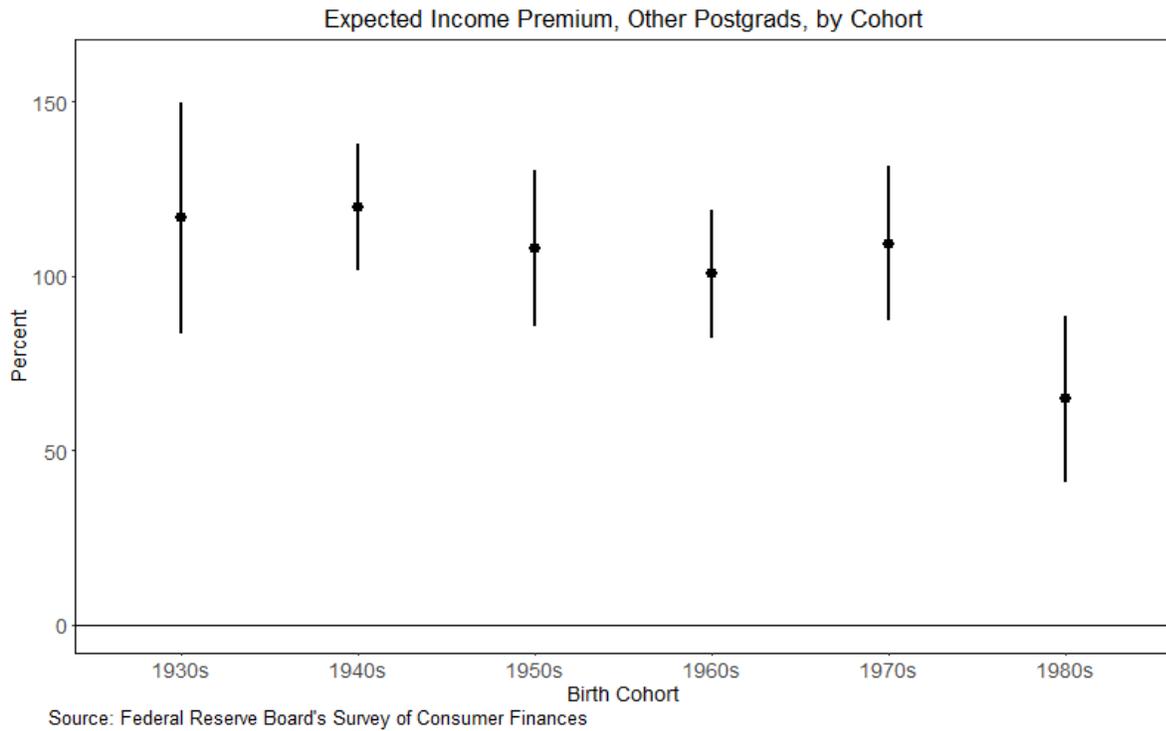
**Figure A2**



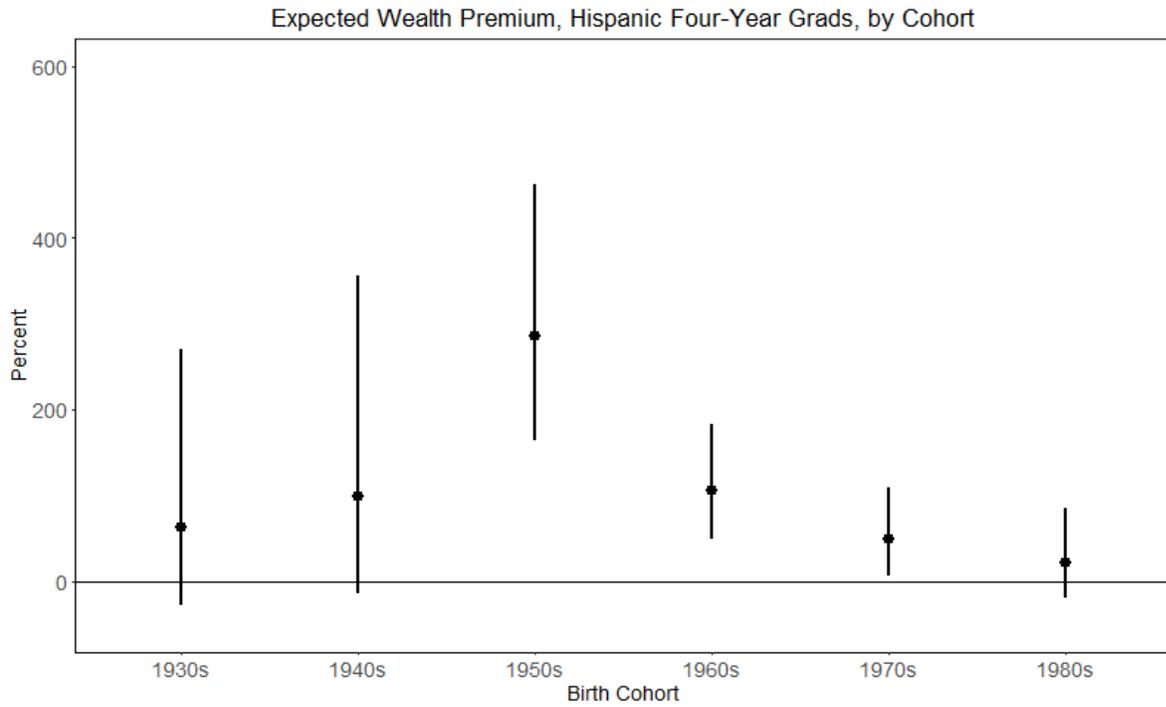
**Figure A3**



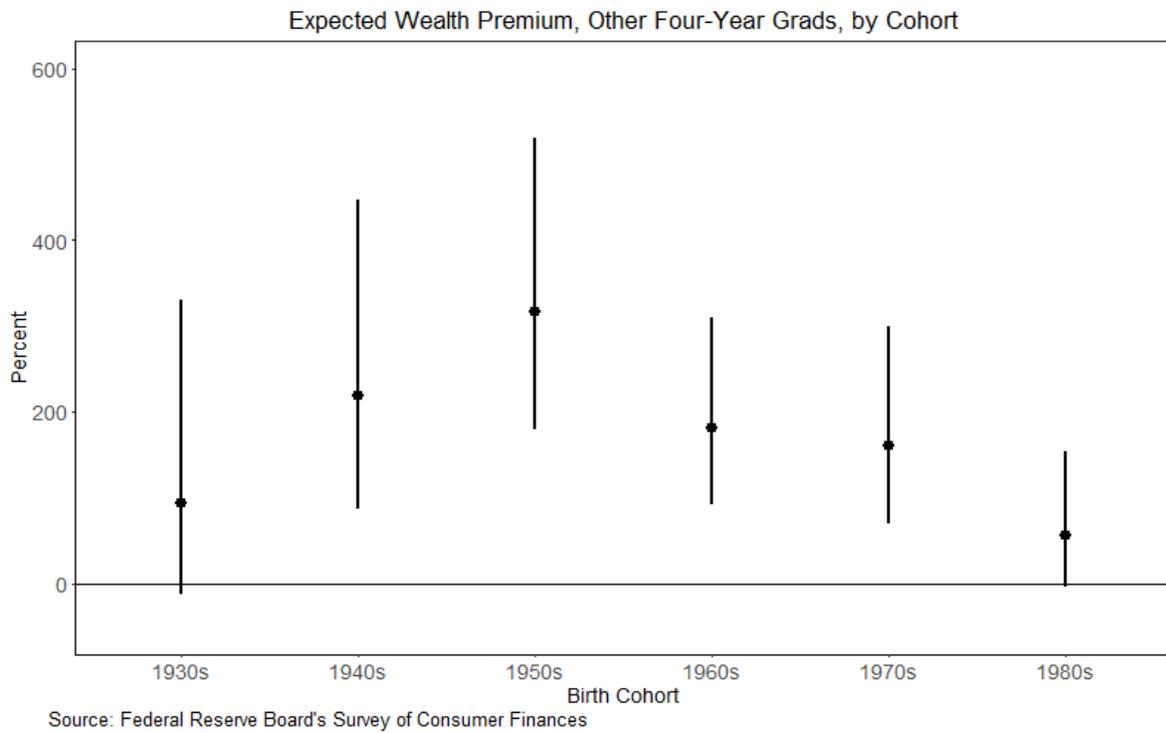
**Figure A4**



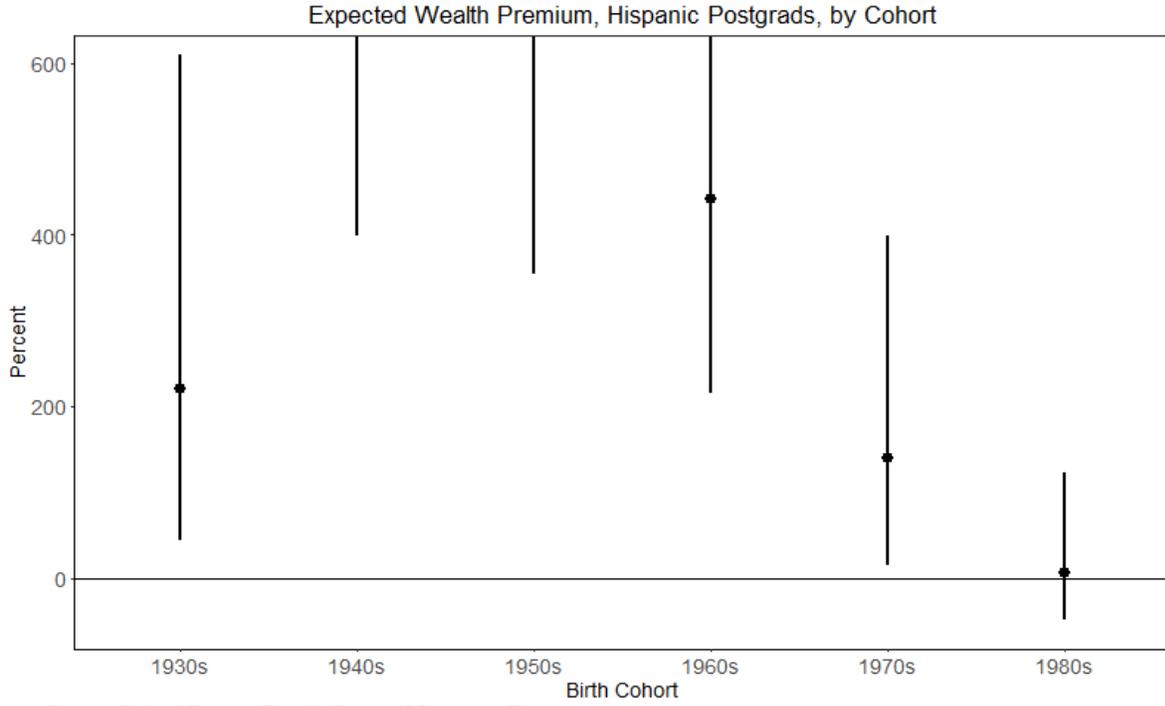
**Figure A5**



**Figure A6**



**Figure A7**



**Figure A8**



## Appendix B

### Appendix B

**Table B1. Regression results for black respondents in 2016; In adjusted income.**

Variable Names	b	SE	t-stat	p-value	Premium	R <sup>2</sup>	b	SE	t-stat	p-value	Premium	R <sup>2</sup>	b	SE	t-stat	p-value	Premium	R <sup>2</sup>
(Intercept)	7.42	0.50	14.92	<0.001		0.19	7.39	0.49	15.15	<0.001		0.21	6.75	0.45	15.03	<0.001		0.27
age	0.13	0.03	4.39	<0.001			0.13	0.03	4.29	<0.001			0.14	0.03	5.00	<0.001		
age2	0.00	0.00	-3.57	<0.001			0.00	0.00	-3.36	<0.001			0.00	0.00	-4.26	<0.001		
age3	0.00	0.00	2.82	<0.001			0.00	0.00	2.56	0.01			0.00	0.00	3.69	<0.001		
grad	0.72	0.06	11.25	<0.001	72		0.69	0.06	11.16	<0.001	69		0.61	0.06	10.15	<0.001	61	
postgrad	0.83	0.08	9.88	<0.001	83		0.78	0.08	9.54	<0.001	78		0.65	0.08	8.41	<0.001	65	
head.father							0.21	0.10	2.08	0.04			0.17	0.09	1.89	0.06		
head.mother							0.21	0.07	2.90	<0.001			0.20	0.07	2.95	<0.001		
test.score													0.07	0.02	2.82	<0.001		
fin.know													0.01	0.01	1.56	0.12		
fin.risks													0.02	0.01	2.57	0.01		
saving.legacy													0.26	0.05	5.12	<0.001		
shop.credit													0.03	0.01	3.44	<0.001		
shop.save													0.00	0.01	-0.17	0.87		

Note. N=835.

**Table B2. Regression results for Hispanic respondents in 2016; In adjusted income.**

Variable Names	b	SE	t-stat	p-value	Premium	R <sup>2</sup>	b	SE	t-stat	p-value	Premium	R <sup>2</sup>	b	SE	t-stat	p-value	Premium	R <sup>2</sup>
(Intercept)	7.99	0.51	15.64	<0.001		0.18	7.98	0.51	15.75	<0.001		0.18	6.63	0.51	12.99	<0.001		0.27
age	0.11	0.03	3.17	<0.001			0.10	0.03	3.17	<0.001			0.14	0.03	4.51	<0.001		
age2	0.00	0.00	-2.40	0.02			0.00	0.00	-2.39	0.02			0.00	0.00	-3.63	<0.001		
age3	0.00	0.00	1.65	0.10			0.00	0.00	1.62	0.11			0.00	0.00	2.80	0.01		
grad	0.53	0.08	6.60	<0.001	53		0.48	0.09	5.52	<0.001	48		0.34	0.10	3.46	<0.001	34	
postgrad	1.18	0.13	9.06	<0.001	118		1.11	0.13	8.24	<0.001	111		0.97	0.12	8.29	<0.001	97	
head.father							0.14	0.10	1.42	0.16			0.13	0.09	1.40	0.16		
head.mother							0.10	0.12	0.84	0.40			0.09	0.11	0.80	0.42		
test.score													0.10	0.03	3.75	<0.001		
fin.know													0.04	0.01	5.06	<0.001		
fin.risks													0.02	0.01	2.81	0.01		
saving.legacy													0.27	0.04	6.90	<0.001		
shop.credit													0.01	0.01	1.70	0.09		
shop.save													0.00	0.01	0.43	0.66		

Note. N=612.

**Table B3. Regression results for other race respondents in 2016; ln adjusted income.**

Variable Names	b	SE	t-stat	p-value	Premium	R <sup>2</sup>	b	SE	t-stat	p-value	Premium	R <sup>2</sup>	b	SE	t-stat	p-value	Premium	R <sup>2</sup>
(Intercept)	5.14	1.42	3.63	<0.001		0.26	5.26	1.45	3.63	<0.001		0.28	4.34	1.41	3.07	<0.001		0.36
age	0.27	0.09	2.99	<0.001			0.26	0.09	2.84	<0.001			0.25	0.09	2.97	<0.001		
age2	0.00	0.00	-2.59	0.01			0.00	0.00	-2.44	0.02			0.00	0.00	-2.56	0.01		
age3	0.00	0.00	2.24	0.03			0.00	0.00	2.11	0.04			0.00	0.00	2.25	0.03		
grad	0.67	0.18	3.79	<0.001	67		0.55	0.19	2.86	<0.001	55		0.32	0.19	1.67	0.10	32	
postgrad	1.19	0.12	9.92	<0.001	119		1.06	0.12	8.70	<0.001	106		0.71	0.15	4.85	<0.001	71	
head.father							0.43	0.13	3.25	<0.001			0.43	0.14	3.21	<0.001		
head.mother							-0.12	0.15	-0.77	0.44			-0.17	0.13	-1.23	0.22		
test.score													0.15	0.05	3.05	<0.001		
fin.know													0.09	0.04	2.02	0.04		
fin.risks													0.04	0.02	2.43	0.02		
saving.legacy													0.34	0.09	4.02	<0.001		
shop.credit													-0.01	0.02	-0.46	0.65		
shop.save													0.00	0.02	0.14	0.89		

Note. N=321.

**Table B4. Regression results for black race respondents in 2016; IHS adjusted net worth.**

Variable Names	b	SE	t-stat	p-value	Premium	R <sup>2</sup>	b	SE	t-stat	p-value	Premium	R <sup>2</sup>	b	SE	t-stat	p-value	Premium	R <sup>2</sup>
(Intercept)	-4346.36	10365.93	-	0.68		0.17	-2972.27	10567.74	0.28	0.78		0.17	-16182.56	10070.40	1.61	0.11		0.25
age	-9.48	652.90	0.01	0.99			-75.74	656.88	0.12	0.91			69.01	660.96	0.10	0.92		
age2	10.66	12.68	0.84	0.40			11.63	12.71	0.91	0.36			6.61	12.83	0.51	0.61		
age3	-0.08	0.08	1.00	0.32			-0.08	0.08	1.05	0.29			-0.03	0.08	0.44	0.66		
grad	6813.88	1509.22	4.51	<0.001	98		6982.75	1552.60	4.50	<0.001	101		5019.19	1530.95	3.28	<0.001	65	
postgrad	3589.88	2580.83	1.39	0.16	43		3530.93	2499.10	1.41	0.16	42		569.38	2401.40	0.24	0.81	6	
head.father							3814.31	1939.39	1.97	0.05			3148.97	1909.18	1.65	0.10		
head.mother							-3945.61	1948.25	2.03	0.04			-4213.47	1926.34	2.19	0.03		
test.score													581.84	455.55	1.28	0.20		
fin.know													253.19	193.29	1.31	0.19		
fin.risks													632.24	140.32	4.51	<0.001		
saving.legacy													7151.70	825.42	8.66	<0.001		
shop.credit													343.97	159.49	2.16	0.03		
shop.save													253.25	162.25	1.56	0.12		

Note. N=835.

**Table B5. Regression results for Hispanic race respondents in 2016; IHS adjusted net worth.**

Variable Names	b	SE	t-stat	p-value	Premium	R <sup>2</sup>	b	SE	t-stat	p-value	Premium	R <sup>2</sup>	b	SE	t-stat	p-value	Premium	R <sup>2</sup>
(Intercept)	-9968.17	8406.20	1.19	0.24		0.11	-9766.00	8376.44	1.17	0.24		0.12	-34350.32	8151.32	4.21	<0.001		0.22
age	569.58	548.26	1.04	0.30			527.66	542.86	0.97	0.33			1172.43	502.42	2.33	0.02		
age2	1.46	11.24	0.13	0.90			2.35	11.10	0.21	0.83			-9.41	10.14	0.93	0.35		
age3	-0.05	0.07	0.73	0.47			-0.06	0.07	0.80	0.42			0.02	0.06	0.23	0.81		
grad	6341.16	1627.57	3.90	<0.001	89		5342.68	1732.31	3.08	<0.001	71		2660.53	1686.92	1.58	0.12	30	
postgrad	8631.67	4667.27	1.85	0.06	137		7011.99	4438.49	1.58	0.11	102		4820.74	3716.21	1.30	0.20	62	
head.father							4044.14	2400.20	1.68	0.09			3994.99	2367.94	1.69	0.09		
head.mother							1125.43	2378.69	0.47	0.64			859.56	2166.66	0.40	0.69		
test.score													1342.13	470.43	2.85	<0.001		
fin.know													723.50	190.11	3.81	<0.001		
fin.risks													606.93	124.68	4.87	<0.001		
saving.legacy													8256.53	965.55	8.55	<0.001		
shop.credit													32.80	148.48	0.22	0.83		
shop.save													-30.26	230.02	0.13	0.90		

Note. N=612.

**Table B6. Regression results for other race respondents in 2016; IHS adjusted net worth.**

Variable Names	b	SE	t-stat	p-value	Premium	R <sup>2</sup>	b	SE	t-stat	p-value	Premium	R <sup>2</sup>	b	SE	t-stat	p-value	Premium	R <sup>2</sup>
(Intercept)	-72385.02	17420.44	4.16	<0.001		0.33	-70916.26	18362.67	3.86	<0.001		0.33	-88611.19	17742.23	4.99	<0.001		0.40
age	4453.71	1198.68	3.72	<0.001			4319.27	1250.02	3.46	<0.001			4495.01	1223.33	3.67	<0.001		
age2	-71.80	25.39	2.83	<0.001			-69.44	26.48	2.62	0.01			-75.56	26.29	2.87	<0.001		
age3	0.41	0.17	2.46	0.01			0.40	0.18	2.29	0.02			0.46	0.18	2.61	0.01		
grad	11973.06	2383.78	5.02	<0.001	231		10692.62	2514.04	4.25	<0.001	191		6613.49	2670.83	2.48	0.01	94	
postgrad	16155.14	2650.27	6.10	<0.001	403		14737.54	2701.30	5.46	<0.001	337		8572.56	3098.15	2.77	0.01	136	
head.father							4764.08	2620.72	1.82	0.07			4713.21	2587.83	1.82	0.07		
head.mother							-1361.11	2821.11	0.48	0.63			-1540.56	2602.83	0.59	0.55		
test.score													1739.89	1019.07	1.71	0.09		
fin.know													451.38	398.56	1.13	0.26		
fin.risks													787.35	382.52	2.06	0.04		
saving.legacy													7196.01	1826.27	3.94	<0.001		
shop.credit													361.39	304.98	1.18	0.24		
shop.save													378.06	278.38	1.36	0.18		

**Table B7. Mediation results for black respondents, mother's education.**

**A Path (dependent variable: own education).**

	<i>b</i>	<i>SE</i>	<i>t</i>	<i>p</i>	<i>R</i> <sup>2</sup>
Intercept	-0.84	0.04	-19.53	<0.001	0.02
Mother's Education	0.50	0.13	3.68	<0.001	

**C Path (dependent variable: log income).**

	<i>b</i>	<i>SE</i>	<i>t</i>	<i>p</i>	<i>R</i> <sup>2</sup>
Intercept	10.14	0.02	412.00	<0.001	0.02
Mother's Education	0.31	0.07	4.43	<0.001	

**B and C' Paths (dependent variable: log income).**

	<i>b</i>	<i>SE</i>	<i>t</i>	<i>p</i>	<i>R</i> <sup>2</sup>	Sobel <i>z</i>	<i>p</i>	Indirect Effect	Proportion Mediated
Intercept	9.99	0.03	372.56	<0.001	0.15	3.60	<0.001	0.38	40.1%
Mother's Education	0.19	0.07	2.70	0.01					
Own Education	0.76	0.04	17.06	<0.001					

**C Path (dependent variable: IHS net worth).**

	<i>b</i>	<i>SE</i>	<i>t</i>	<i>p</i>	<i>R</i> <sup>2</sup>
Intercept	13785.74	492.98	27.96	<0.001	0.02
Mother's Education	-6815.70	1782.67	-3.82	<0.001	

**B and C' Paths (dependent variable: IHS net worth).**

	<i>b</i>	<i>SE</i>	<i>t</i>	<i>p</i>	<i>R</i> <sup>2</sup>	Sobel <i>z</i>	<i>p</i>	Indirect Effect
Intercept	12725.13	493.32	25.80	<0.001	0.03	2.78	0.01	2616.63
Mother's Education	-7693.16	1839.55	-4.18	<0.001				
Own Education	5277.81	1244.66	4.24	<0.001				

**Table B8. Mediation results for black respondents, father's education.**

**A Path (dependent variable: own education).**

	<i>b</i>	<i>SE</i>	<i>t</i>	<i>p</i>	<i>R</i> <sup>2</sup>
Intercept	-0.82	0.04	-22.10	<0.001	0.01
Father's Education	0.43	0.15	2.75	0.01	

**C Path (dependent variable: log income).**

	<i>b</i>	<i>SE</i>	<i>t</i>	<i>p</i>	<i>R</i> <sup>2</sup>
Intercept	10.14	0.03	389.77	<0.001	0.02
Father's Education	0.34	0.08	4.19	<0.001	

**B and C' Paths (dependent variable: log income).**

	<i>b</i>	<i>SE</i>	<i>t</i>	<i>p</i>	<i>R</i> <sup>2</sup>	Sobel <i>z</i>	<i>p</i>	Indirect Effect	Proportion Mediated
Intercept	9.98	0.03	387.63	<0.001	0.16	2.71	0.01	0.32	31.3%
Father's Education	0.23	0.09	2.62	0.01					
Own Education	0.76	0.05	16.03	<0.001					

**C Path (dependent variable: IHS net worth).**

	<i>b</i>	<i>SE</i>	<i>t</i>	<i>p</i>	<i>R</i> <sup>2</sup>
Intercept	12983.68	426.98	30.41	<0.001	0.00
Father's Education	-672.30	1771.20	-0.38	0.70	

**B and C' Paths (dependent variable: IHS net worth).**

	<i>b</i>	<i>SE</i>	<i>t</i>	<i>p</i>	<i>R</i> <sup>2</sup>	Sobel <i>z</i>	<i>p</i>	Indirect Effect
Intercept	12049.21	458.62	26.27	<0.001	0.01	2.21	0.03	1940.46
Father's Education	-1314.38	1800.94	-0.73	0.47				
Own Education	4564.24	1223.59	3.73	<0.001				

**Table B9. Mediation results for Hispanic respondents, mother's education.**

**A Path (dependent variable: own education).**

	<i>b</i>	<i>SE</i>	<i>t</i>	<i>p</i>	<i>R</i> <sup>2</sup>
Intercept	-1.08	0.06	-19.02	<0.001	0.07
Mother's Education	1.20	0.17	7.14	<0.001	

**C Path (dependent variable: log income).**

	<i>b</i>	<i>SE</i>	<i>t</i>	<i>p</i>	<i>R</i> <sup>2</sup>
Intercept	10.05	0.02	429.54	<0.001	0.02
Mother's Education	0.45	0.13	3.43	0.001	

**B and C' Paths (dependent variable: log income).**

	<i>b</i>	<i>SE</i>	<i>t</i>	<i>p</i>	<i>R</i> <sup>2</sup>	Sobel <i>z</i>	<i>p</i>	Indirect Effect	Proportion Mediated
Intercept	9.96	0.02	442.65	<0.001	0.12	5.89	<0.001	0.83	63.2%
Mother's Education	0.16	0.12	1.33	0.18					
Own Education	0.69	0.07	10.44	<0.001					

**C Path (dependent variable: IHS net worth).**

	<i>b</i>	<i>SE</i>	<i>t</i>	<i>p</i>	<i>R</i> <sup>2</sup>
Intercept	13714.99	484.67	28.30	<0.001	0.00
Mother's Education	3328.52	2657.77	1.25	0.21	

**B and C' Paths (dependent variable: IHS net worth).**

	<i>b</i>	<i>SE</i>	<i>t</i>	<i>p</i>	<i>R</i> <sup>2</sup>	Sobel <i>z</i>	<i>p</i>	Indirect Effect
Intercept	12703.68	478.17	26.57	<0.001	0.03	4.15	<0.001	8636.15
Mother's Education	394.22	2428.24	0.16	0.87				
Own Education	7218.65	1415.56	5.10	<0.001				

**Table B10. Mediation results for Hispanic respondents, father's education.**

**A Path (dependent variable: own education).**

	<i>b</i>	<i>SE</i>	<i>t</i>	<i>p</i>	<i>R</i> <sup>2</sup>
Intercept	-1.11	0.06	-19.93	<0.001	0.07
Father's Education	1.11	0.13	8.32	<0.001	

**C Path (dependent variable: log income).**

	<i>b</i>	<i>SE</i>	<i>t</i>	<i>p</i>	<i>R</i> <sup>2</sup>
Intercept	10.04	0.02	465.79	<0.001	0.03
Father's Education	0.46	0.11	4.31	<0.001	

**B and C' Paths (dependent variable: log income).**

	<i>b</i>	<i>SE</i>	<i>t</i>	<i>p</i>	<i>R</i> <sup>2</sup>	Sobel <i>z</i>	<i>p</i>	Indirect Effect	Proportion Mediated
Intercept	9.95	0.02	462.11	<0.001	0.12	6.17	<0.001	0.75	53.8%
Father's Education	0.21	0.10	2.10	0.04					
Own Education	0.68	0.07	9.21	<0.001					

**C Path (dependent variable: IHS net worth).**

	<i>b</i>	<i>SE</i>	<i>t</i>	<i>p</i>	<i>R</i> <sup>2</sup>
Intercept	13371.96	575.27	23.24	<0.001	0.01
Father's Education	5957.08	2426.16	2.46	0.01	

**B and C' Paths (dependent variable: IHS net worth).**

	<i>b</i>	<i>SE</i>	<i>t</i>	<i>p</i>	<i>R</i> <sup>2</sup>	Sobel <i>z</i>	<i>p</i>	Indirect Effect	Proportion Mediated
Intercept	12502.64	545.65	22.91	<0.001	0.03	3.71	<0.001	7150.52	39.7%
Father's Education	3593.08	2437.70	1.47	0.14					
Own Education	6460.66	1559.15	4.14	<0.001					

**Table B11. Mediation results for Other race respondents, mother's education.**

**A Path (dependent variable: own education).**

	<i>b</i>	<i>SE</i>	<i>t</i>	<i>p</i>	<i>R</i> <sup>2</sup>
Intercept	-0.10	0.07	-1.31	0.19	0.04
Mother's Education	0.62	0.15	4.02	<0.001	

**C Path (dependent variable: log income).**

	<i>b</i>	<i>SE</i>	<i>t</i>	<i>p</i>	<i>R</i> <sup>2</sup>
Intercept	10.46	0.08	126.40	<0.001	0.01
Mother's Education	0.20	0.14	1.42	0.16	

**B and C' Paths (dependent variable: log income).**

	<i>b</i>	<i>SE</i>	<i>t</i>	<i>p</i>	<i>R</i> <sup>2</sup>	Sobel <i>z</i>	<i>p</i>	Indirect Effect
Intercept	9.99	0.08	127.59	<0.001	0.16	3.65	<0.001	0.64
Mother's Education	-0.05	0.14	-0.32	0.75				
Own Education	1.03	0.12	8.66	<0.001				

**C Path (dependent variable: IHS net worth).**

	<i>b</i>	<i>SE</i>	<i>t</i>	<i>p</i>	<i>R</i> <sup>2</sup>
Intercept	25010.89	1175.87	21.27	<0.001	0.00
Mother's Education	-53.93	2658.90	-0.02	0.98	

**B and C' Paths (dependent variable: IHS net worth).**

	<i>b</i>	<i>SE</i>	<i>t</i>	<i>p</i>	<i>R</i> <sup>2</sup>	Sobel <i>z</i>	<i>p</i>	Indirect Effect
Intercept	17443.98	1281.98	13.61	<0.001	0.12	3.55	<0.001	10213.13
Mother's Education	-3972.58	2717.76	-1.46	0.15				
Own Education	16414.93	2165.41	7.58	<0.001				

**Table B12. Mediation results for Other race respondents, father's education.**

**A Path (dependent variable: own education).**

	<i>b</i>	<i>SE</i>	<i>t</i>	<i>p</i>	<i>R</i> <sup>2</sup>
Intercept	-0.25	0.08	-3.26	0.001	0.10
Father's Education	0.99	0.14	7.19	<0.001	

**C Path (dependent variable: log income).**

	<i>b</i>	<i>SE</i>	<i>t</i>	<i>p</i>	<i>R</i> <sup>2</sup>
Intercept	10.27	0.08	124.04	<0.001	0.07
Father's Education	0.67	0.13	5.12	<0.001	

**B and C' Paths (dependent variable: log income).**

	<i>b</i>	<i>SE</i>	<i>t</i>	<i>p</i>	<i>R</i> <sup>2</sup>	Sobel <i>z</i>	<i>p</i>	Indirect Effect	Proportion Mediated
Intercept	9.91	0.08	130.50	<0.001	0.18	5.11	<0.001	0.89	49.6%
Father's Education	0.34	0.14	2.40	0.02					
Own Education	0.90	0.12	7.27	<0.001					

**C Path (dependent variable: IHS net worth).**

	<i>b</i>	<i>SE</i>	<i>t</i>	<i>p</i>	<i>R</i> <sup>2</sup>
Intercept	22196.36	1273.00	17.44	<0.001	0.02
Father's Education	7177.55	2524.40	2.84	0.01	

**B and C' Paths (dependent variable: IHS net worth).**

	<i>b</i>	<i>SE</i>	<i>t</i>	<i>p</i>	<i>R</i> <sup>2</sup>	Sobel <i>z</i>	<i>p</i>	Indirect Effect	Proportion Mediated
Intercept	16197.24	1276.99	12.68	<0.001	0.11	4.82	<0.001	14882.74	77.3%
Father's Education	1632.27	2792.29	0.58	0.56					
Own Education	14964.95	2303.33	6.50	<0.001					