You Raise Me Up: Role Models and U.S. Women's Socioeconomic Mobility*

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Abstract

This paper analyzes multigenerational trends in U.S. socioeconomic mobility using NLSY79 and NLSY97 data, with a focus on maternal role models. First, relative mobility results are sensitive to how we proxy for lifetime income; however, absolute upward mobility has risen by 2–4 ranks since the 1960s. Black Americans are the only group whose mobility has declined. Second, the mother's employment role model effect on daughters' mobility strengthens across generations and is robust across income definitions. An employed mother increases her daughter's lifetime employment likelihood by 4–6 percentage points, driven by black and white women. However, in the NLSY97 cohort, it is linked to a nearly three-rank decline in daughters' upward mobility.

Keywords: Intergenerational Mobility, Role Model, Gender
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1 Introduction

World War II, social justice movements, and numerous other developments in the latter half of the 20th century significantly expanded economic opportunities for American women. A widely studied outcome of these changes was the dramatic increase in women's workforce participation, attributed to technological advancements, economic growth, cultural shifts, and habit formation (Goldin, 2006; Goldin and Joshua, 2017; Goldin and Olivetti, 2013). However, the magnitude and specific impact of these factors on women's economic advancement is less understood, particularly for non-white women (Bellou and Cardia, 2021).

Research on intergenerational mobility has surged in recent decades, yet women are often underrepresented in these studies. Much of the existing literature focuses on father-to-son relationships, largely due to challenges in obtaining longitudinal data and modeling women's labor force participation (Paul et al., 2019; Nancy, 2021). Raj Chetty and his coauthors have addressed this gap in their seminal studies (2014a, 2014b, 2019), that utilize U.S. administrative earnings records from 1971–1983 birth cohorts to provide a comprehensive analysis of mobility by region, race, and gender. Their findings, along with those of other researchers, highlight that the most significant determinants of upward mobility are the circumstances of one's birth and upbringing.

A smaller body of literature has concurrently suggested that role model effects play a significant role in shaping individuals' preferences and choices (Kofoed and McGovney, 2019; Humlum et al., 2012). This study seeks to bridge these literatures by examining the impact of maternal role models on daughters' mobility. Building on recent evidence from Galassi et al. (2024), we define a maternal role model as one who resides with and is employed during her daughter's teenage years. Given the substantial growth in women's labor force participation across generations, we hypothesize that this association has strengthened over time.

This study leverages data from both primary waves of the National Longitudinal Survey of Youth (NLSY79 and NLSY97) to examine (1) multigenerational trends in U.S. socioeconomic mobility across the two surveys and (2) the generational correlation between maternal role models and daughters' intergenerational mobility. To address potential sample selection bias stemming from older women's birth cohorts and distinguish between the role model effect on employment and upward mobility, we employ Heckman two-step correction models (Heckman, 1979; Mulligan and Rubinstein, 2008). Additionally, we utilize census income microdata from IPUMS CPS to construct nationally representative income percentile bins. To our knowledge, this is the first study to (1) explore the relationship between role-model effects and intergenerational mobility and (2) provide comprehensive intergenerational mobility estimates for a U.S. birth cohort from the early 1960s.

Our analysis yields three key findings. First, we observe a robust increase in expected U.S. intergenerational mobility between the two survey samples. Absolute upward mobility rises by 5–10% on average across most samples. Relative mobility, however, is more sensitive to income rank construction, showing a 20% decline, negligible change, or slight increase depending on the definition used. Second, The maternal role model effect positively influences daughters' lifetime employment in both cohorts, increasing their likelihood of employment by 4–6 percentage points, primarily driven by black and white women. Third, the relationship between a maternal role model and daughters' mobility has changed significantly over time. In the recent cohort it is associated with reducing daughters' mobility: relative mobility by 0.04 and upward mobility by approximately 3 ranks. Our role model analysis is robust to the changing income definitions.

This study builds upon two primary strands of literature. The first is the literature on intergenerational socioeconomic mobility, primarily those utilizing intergenerational rank association (IRA).[1]. Raj Chetty and his coauthors have employed this measure using entire U.S. cohorts. In their 2014a study, they find that mobility differences within the U.S. depend greatly on one's commuter zone. Additionally, intermediate outcomes (such as education and teen birth rate) are not significantly different across zones; thus, mobility differences arise before they enter the workforce. In their accompanying 2014b study, they find that these trends are similar across birth year cohorts, as rates of intergenerational mobility have remained stagnant since the early 1970s. Chetty et al. (2019) investigate differences in U.S. mobility based on race, finding that black Americans and American Indians have noticeably lower rates of upward mobility compared to white Americans, with these disparities prevalent at the highest socioeconomic levels. The exception is black women, who they find are consistently 1 income percentile point above white women for all parent percentile income levels.[2]

The second strand of literature we build upon is related to the impact of role

[1]For an in depth discussion of IRA, see Dahl and Deleire (2008) and Chetty et al. (2014a)

[2]Also pertinent is Abramitzky et al. (2021). Additionally, for studies of intergenerational mobility on less-represented groups that do not use IRA, see Piotrowska and Kośny (2017) and Jajtner (2020).

models. While the literature on role-model effects in education is broad[3], research on their impact on employment is less studied (West et al., 2009). Galassi et al. (2024), using NLSY79 and the NLSY79 Children and Young Adults surveys, find a strong intergenerational correlation of employment status between mothers and their offspring. This relationship is stronger when isolated between mothers and daughter's, increasing from 11 to 17 percentage points. Kofoed and McGovney (2019), show that having a role model with a similar gender or race influenced West Point cadets choice of occupation post-training.

Role model effects have also been shown to have a significant impact when looking at generational trends. Neumark and Gardecki (1996) found that female Ph.D. candidates in economics completed their dissertation quicker with female faculty members, but this did not translate into job placements. However, Hilmer and Hilmer (2007) study finds no evidence of differences in female Ph.D. students time to completion when having a female or male advisor. They also find the number of female students working with female advisors in the early 2000s was double that compared to the early 1990s.

We contribute to the existing literature by (1) using different data to replicate previous findings for an early 1980s U.S. cohort, (2) providing new mobility estimates for a U.S. cohort born between 1961 and 1965, (3) examining the correlation between a mother's role-model effect and their daughter's intergenerational mobility, and (4) analyzing two generational cohorts to assess trends in U.S. mobility and the evolving strength of the role-model effect over this timeframe.

[3]See Cunha and Heckman (2007) for an overview of this literature.

The next section describes the data and details the construction of key variables, while Section 3 outlines the methodology. Section 4 situates our findings within the context of the existing literature, presents multigenerational trends in U.S. mobility, and examines the correlations between maternal role models and mobility outcomes. Section 5 concludes.

2 Data

The NLSY79 (NLSY97) longitudinal survey follows 12,686 (8,989) individuals born between 1957 and 1965 (1981 and 1985), whose age in the initial survey date (1979; 1997) ranged from 14 to 22 (12 to 18). In this section we discuss the construction of our key income and role model variables. Appendix A provides detailed descriptions of other variables.

Individual Parent Income: For the NLSY97 survey, parental income is constructed using the respondent's household income updates from 1997 to 2001. These variables capture individual income from all sources for the respondent's parent and spouse during the calendar year. We assign zero income for a specific source if the parent or spouse reports receiving no income from that source in a given year. If the respondent's parent has a self-identified spouse or partner, following Chetty et al. (2014a), we divide the total parental income by two for that year.

For the NLSY79 survey, no equivalent variable is recorded, and individual household members' incomes were not collected. Therefore, we approximate parental income using the Net Family Income (NFI) variable from the early survey years. This variable provides a composite income figure from various sources for all household members related to the respondent by blood or marriage during the prior calendar year.[4] In the early NLSY79 survey rounds, parental income was captured if respondents lived with their parents (when survey version A was administered). To ensure consistency, we exclude respondents over the age of 18 at the initial survey date.[5] We then use NFI data from the first five survey years (1979–1984).

Using the survey's household roster, if we identify two parents in the household (mother/father, grandma/grandpa, aunt/uncle), we divide NFI by two. Additionally, where applicable, we adjust NFI by multiplying it by 1.5 to account for survey top-coding practices.[6] NFI data is included in our analysis only if survey version A (which captures parental income) was administered that year.[7] As a robustness check, we re-estimate our NLSY79 analysis using total household income definitions, presented in Appendix D.

Respondent Income: To maintain consistency across the survey samples, the income years were determined based on the youngest members of each cohort. Respondent income for the NLSY79 (NLSY97) is taken from 1989 to 1999 (2008 to 2018), corresponding to ages 24 to 34 (23 to 33) for the youngest cohort members and 32 to 42 (27 to 37) for the oldest. In both surveys, respondent income is defined as the total annual income derived from four sources: (1) wages and salaries,

[4] Income from the respondent's partner or spouse is excluded from these calculations.

[5] This exclusion also reduces the likelihood of capturing respondents who may already be contributing to household income, thereby affecting the NFI construction.

[6] From 1979 to 1984, NLSY79 income responses above \$75,000 were truncated to \$75,001, while from 1985 to 1988, the threshold increased to \$100,000 and \$100,001, respectively. To correct for this, we multiply top-coded NFI values by 1.5. This adjustment applies only to our NFI variables.

[7] To account for respondents who may move back in with their parents, any years following a break in co-residence after the initial survey are excluded from the income construction.

(2) business and farm income, (3) unemployment insurance, and (4) government aid programs.[8]

Income Percentile Rank Construction: We source IPUMS Current Population Survey (CPS) annual income microdata[9] along with the CPS annual social and economic supplement weights to construct income percentile bins. These bins are subsequently used to assign NLSY79 and NLSY97 respondents, as well as their parents, to their respective percentile income ranks by year. To approximate lifetime income rank, we average the respondent and parent percentile ranks over the specified years, resulting in the average respondent and parent percentile income ranks used in our analysis.

Role Model Effect: To ensure consistency between the NLSY surveys despite data limitations, we define the role model effect proxy as whether a female respondent's mother was employed when the respondent was around age 14. In the initial NLSY79 survey, respondents were asked if the adult female in their household worked for pay when they were 14. For the NLSY97, we construct a comparable variable based on household members' characteristics in the initial 1997 survey, when respondents' average age was 14.

Due to the aforementioned restrictions, general attrition, and missing observations, our estimation sample[10] for the NLSY79 (NLSY97) cohort consists of 5,991

[8]The specific "government aid" income variables differ between surveys. In the NLSY79, this measure is derived from the 'Total Welfare Income' variable, whereas in the NLSY97, it is taken from the 'Other Government Assistance' variable.

[9]Due to older top-coding practices, we separately adjust each component of the 'total personal income' variable by multiplying all top-coded values by 1.5 and then re-summing them. Consequently, our income percentile bins are constructed using this adjusted version of the 'total personal income' variable.

[10]Due to our focused analysis on race, The 83 respondent's of mixed race who were non-Hispanic,

(7,706) respondents. Tables 1 and 2 report the mean of respondent and parent percentile income ranks along with sample sizes for all groups analyzed.

These tables show that both generational survey samples are comprised of similar proportions of regional, racial, and gender groups. As expected, the NLSY79 parent ranks are noticeably higher than the NLSY97 parent ranks due to the increased income sources in the NFI variables.[11] The largest disparities in parent ranks are observed across racial groups (white vs. black), while gender differences account for the greatest variation in respondent ranks. Between the two survey generations, respondent ranks decreased slightly on average, with white women as the exception. Table 3 reports the summary statistics for our NLSY79 and NLSY97 women samples used to investigate the correlation between the role model proxy and daughter mobility. We discuss these tables more in Section 3.

3 Methodology

This study follows the methodologies of Chetty et al. (2014a; 2014b; 2019). We assume a discrete-time setting where $t \in [1,2]$ denotes the NLSY cohort generation sample and i represents an individual in each generation. In this framework, intergenerational rank association (IRA) is estimated using an ordinary least squares (OLS) regression of the respondent's income percentile rank (R_i) on their parent's

present in the NLSY97 survey but not in the NLSY79, were dropped.

[11] Again, see Appendix D for a robust check where we use an alternative income definition (total household income) in constructing our NFI percentile income ranks.

income percentile rank during their childhood (P_i).

$$R_{i,t} = \beta + \lambda P_{i,t} + \varepsilon_{i,t} \quad (1)$$

Equation 1 produces two measures of mobility: a relative and an absolute. Relative mobility (λ) captures how much of one's parents' socioeconomic status is translated to their children. Absolute mobility (β), which we will refer to as baseline mobility, captures the expected income rank of a theoretical child born to parents with no income.

We follow the previous literature and report absolute upward mobility, which captures the expected rank of a child born to parents in the 25th percentile ($\beta+\lambda*25$). In addition to overall U.S. mobility measures, we split our pooled NLSY79 and NLSY97 samples into sub-samples by adolescence region, sex, race, and sex by race. The mobility measurements for these sub-samples are estimated identically to the overall sample using Equation 1. These sub-samples help further situate our results within the existing literature, and provide context for multigenerational changes in U.S. mobility.

With the large growth in economic opportunities for women since the 1950s, we would expect that their absolute upward mobility would have increased (Goldin, 2006). What is less certain is the change in importance of parent's income in their daughters mobility; however, previous literature has found that both U.S. women's relative and absolute upward mobility have remained stagnant since the 1970's birth cohorts (Chetty et al., 2014b).

Combining the evidence that mobility outcomes are largely determined prior to entering the labor market (Chetty et al., 2014a; Neal and Johnson, 1996; Cameron and Heckman, 2001) with recent findings of the association between mother role models and their daughters employment (Galassi et al., 2024), we investigate the relationship of same sex role model's on women's intergenertaional mobility. We estimate Heckman selection models for all samples involving U.S. women (pooled and by race) to test this association.

We choose to use two-step Heckman corrected models as, (1) we use women's income data which may be susceptible to selection bias and (2) the two-step process permits us to estimate the correlation of the role model effect on both women's employment and their mobility measurements. Following the literature, we estimate our first step probit equation for each female respondent's likelihood of employment as,

$$E_{i,t} = \beta + \lambda P_{i,t} + \gamma RME_{i,t} + \alpha N_{i,t} + \zeta X_{i,t} + e_{i,t} \tag{2}$$

where $E_{i,t}$ is a proxy for the female respondent's lifetime employment. Since we average income ranks over many years, we construct $E_{i,t} = 1$ if the respondent worked 30 or more weeks[12] for 5 or more of the 8 years we average income data[13].

[12]Adjusting the cutoff week value does not affect the increasing correlation of γ or τ across survey generations but does influence their magnitude. Raising the cutoff to 40 weeks increases γ (first step) correlation in the NLSY97 sample while reducing it in the NLSY79 sample, without altering its correlation with γ or τ in the second step. Lowering the cutoff to 20 weeks reduces γ's correlation and magnitude (to 0.23) in the NLSY79 sample and decreases γ's magnitude in the NLSY97 sample to 0.38, maintaining statistical significance. It also weakens γ and τ's correlation in the second step for the NLSY97 sample. At a 10-week cutoff, γ regains statistical significance in the NLSY79, rising from 2.9 to 3.3 percentage points across surveys. It also strengthens the correlation for both γ and (especially) τ in the second step compared to 20 weeks. The signs of γ and τ in the second step never change.

[13]We choose 5 out of the 8 years as it roughly maps to 60%, which is the average amount one usually works in their life (assuming working ages are from 18 to 65, and people live on average 75 years).

$P_{i,t}$ still represents parent rank. $RME_{i,t}$ is our dummy role model effect proxy, where $RME = 1$ if a female respondent's mother worked when they were 14. Vector $N_{i,t}$ contains variables unique to our first step probit model, including dummies for if the daughter's mother obtained a high school and/or college degree, the respondent's average number of children in their household and percent of time they were married during the years averaged, and their interaction (Heckman 1979, Mulligan and Rubinstein 2008). Lastly, $X_{i,t}$ contains respondent controls, including their cognitive ability, whether they obtained a high school and/or college degree, respondent's age at initial survey date, and employment region of residence.[14] As mentioned, the summary statistics for all these sample are reported in Table 3.[15] Our second step OLS is of the form,

$$R_{i,t} = \beta + \lambda P_{i,t} + \gamma RME_{i,t} + \tau(RME_{i,t} * P_{i,t}) + \zeta X_{i,t} + IMR_{i,t} + e_{i,t} \tag{3}$$

where the the new term, $(RME_{i,t} * P_{i,t})$, is an interaction between the role model effect and parent rank and $IMR_{i,t}$ is the respondent's inverse mills ratio from the first step. The addition of these many variables to Equation (1) means we do not interpret the relative and baseline mobilities in the exact manner as before. Instead, for our Heckman corrected models (termed 'corrected models' moving forward), we are primarily interested in γ and τ, the coefficients that involve our role model variable. In our first step, γ signifies the correlation between our role model proxy

[14]See Appendix A for complete descriptions of these variable constructions.

[15]With the addition of these variables, due to non-response we lose roughly 100 observations from the NLSY79 women's sample, and 500 from the NLSY97 samples. We lose more observations in the NLSY97 sample due to the inclusion of respondent ability (ASVAB math-verbal score percentile), where around 1,000 respondents opted out of taking the test in the initial survey year.

and female respondent's lifetime employment proxy. In the second step, γ represents the correlation between having a role model and the female respondent's expected mobility, while the coefficient on the interaction term (τ) is the correlation between having a role model and the female respondent's relative mobility. We are most interested in the strength of these coefficient relationships.

Before turning to our results, we discuss crucial assumptions when modeling intergenerational socioeconomic mobility. First we check that mobility can be modeled linearly in our samples. Figure 1 shows the linear relationship using a binned scatter plot between parent and child rank for our overall samples. While we see some divergence the NLSY79 sample near the lower extreme of the income distribution, both samples generally present strong linear relationships. Our sub-sample linearity checks are in Appendix B.

Intergenerational socioeconomic mobility research can be susceptible to life-cycle and attenuation biases. Life-cycle bias may arise if respondent income is measured early in their careers, potentially understating intergenerational income persistence, as individuals with higher lifetime incomes tend to have steeper early-career earnings profiles (Haider and Solon, 2006). Attenuation bias occurs when income is measured in a single year, making it vulnerable to fluctuations. While we take steps to mitigate these biases, limitations of the NLSY surveys, particularly due to attrition, make complete avoidance—especially of attenuation bias—difficult. We run multiple robustness checks to address these biases in Appendix C. We briefly discuss how our results are affected in the beginning of the next section.

4 Results

Our results are split into three main sections. Section 4.1 compares our NLSY97 mobility estimates to the previous literature. Section 4.2 discusses the multigenerational trends between the two NLSY samples. Section 4.3 analyzes the corrected models and the correlation between the role model effect and U.S. women's mobility.

Our results in Sections 4.1 and 4.2 are sensitive to the construction of respondent and parent income percentile ranks. Appendix C presents a robustness check for life-cycle bias, using only the last two years of respondent income data. Restricting respondent income increases our relative and upward mobility measurements, making our upward measurements closer to Chetty et al.'s, while our relative measurements diverge more. In reference to 5.2, these restricted results show smaller generational changes in relative mobility, with similar changes in upward mobility.

The results in Section 4.2 suggest smaller generational changes in relative mobility while maintaining similar increases in upward mobility . However, this restriction reduces our sample sizes by 19% (NLSY79) and 24% (NLSY97).

Appendix D reconstructs NLSY79 parent ranks using "total household income" definitions to better align with the collected survey data. Compared to our primary NLSY97 analysis, this alternative income construction leads to small increases in relative mobility and slight upward mobility gains (2–3 ranks on average) since the 1960s. Combining the NLSY79 parent THHI income construction with restricting respondent income to their final two survey years produces similar results. The notable exception is larger decreases in Black Americans relative mobility.

The income proxy choice does not meaningfully impact our role model effect analysis (Section 4.3). Thus, moving forward we utilize our primary parent and respondent income definitions, as they provide the largest sample size.

4.1 Findings Compared to the Previous Literature

We compare our NLSY97 results to Chetty et al.'s 2014a, 2014b, and 2019 studies because they are similar in sample (women, racial minorities), time frame (1980-1982 and 1978-1983 birth cohorts), and geography (US).[16]

We first test for linearity in our samples. Figure 1 panels (a) and (b) present the relationship between the mean percentile income rank of a respondent and their parents for our two overall samples. The graphs (presented as binned scatter plots) show strong linearity, with slightly more dispersion present in our NLSY79 sample. All other sample linearity checks are presented in Appendix B.

Table 3[17] reports the relative and baseline mobility estimates for our NLSY79 and NLSY97 samples alongside Chetty et al.'s[18] estimates. Table 4 does the same for absolute upward mobility. All reported Chetty et al. estimates use their 'child individual income rank' definition, as it is closest to our respondent's income construction.

Overall, our NLSY97 relative mobility estimates are quite similar to Chetty et al.'s previous findings, while our baseline estimates are lower.[19] On average, our relative

[16]Chetty et al. (2014a) do not provide absolute mobility measurements at the national level, and Chetty et al. (2019) focus their analysis primarily on black and white Americans. For these reasons, in Tables 3 and 4, we do not have baseline/absolute upward mobility comparison estimates for our women and men samples, and we have no comparisons for our Hispanic men and women samples.

[17]Appendix E presents the detailed individual regression results for all our samples.

[18]Table 3 and 4's notes indicate from which study Chetty et al.'s estimates originate.

[19]This could be due to life-cycle bias. See the end of section 3 and/or Appendix C for further discussion.

mobility estimates deviate by 0.05-0.01, with the largest deviation (0.10), being black women. Meanwhile, our absolute upward mobility estimates are uniformly lower, usually by 6 ranks, with black women again deviating the most (12 ranks).

As a final comparison, we investigate an intermediate outcome. We test for the effect that parent rank has on their children's likelihood of attending college (defined as completing one year or more of college). For our NLSY97 overall sample, we find that moving from the 0th to the 100th percentile increases one's likelihood of attending college by roughly 57%.[20] This result is lower than Chetty et al.'s (2014a) finding of 67.5%. When testing this relationship using our Race by Sex samples, we find some small variation, with all groups college attendance likelihood increasing between 51-62% as one moves from the 0-100th rank.[21] These findings support the idea that for most groups the main factors influencing mobility arise before respondents enter the labor market.

4.2 US Multigenerational Trends Since the 1960s

We next discuss the generational changes in our mobility estimates between the NLSY79 and NLSY97 samples. We begin with our largest samples, subdividing by region, gender, and racial identities as we progress. All sample's relative, baseline, and upward mobility estimates are presented in Tables 3 and 4.[22] As discussed in

[20]These models are identical to equation 1 with educational attainment, defined as if the respondent has completed one year of college, as the dependent variable. See Appendix E, section 5.6 for detailed results

[21]The exact percents are: 60% for black women, 62% for black men, 61% for Hispanic women, 60% for Hispanic men, 51% for white women, and 55% for white men.

[22]Appendix E contains the individual detailed regression tables for all estimates reported in Tables 3 and 4.

Section 3, we focus our discussion on relative and absolute upward mobility.

Overall: Between the two cohorts, the relative mobility estimate decreased by 0.06 (17%), while absolute upward mobility increased by 2.5 (8%). Figure 2 visualizes this generational change. These trends imply that the relative importance of parental wealth has declined while the expected income rank for Americans born into families at the 25th income percentile rank (and across most ranks) has slightly increased. Thus, when analyzing a cohort born a decade earlier than previous research, we find evidence that U.S. intergenerational socioeconomic mobility has increased.

By Region: Multigenerational mobility trends by region tell a similar story. All four regions experienced increases in mobility, with the U.S. South seeing the least. The North Central U.S. saw the largest decrease in relative mobility, 0.09 (24%), and its absolute upward mobilities increased by 3.54 (11%). The North Eastern and Western U.S. saw slightly smaller mobility increases, with their relative mobilities decreasing by 0.08 (22%; 26%), while their upward mobilities increased by 2.41 (7%) and 3.45 (10%), respectively. Meanwhile, the Southern US's relative mobility decreased by 0.02 (6%), while its upward mobility increased by 1.26 (4%). When looking by U.S. region, we see that since the 1960s, mobility has increased for the whole country.

By Sex: U.S. women's relative mobility decreased by 0.01 (3%), and their upward mobility increased by 3.25 (12%). U.S. men saw similar trends, as their relative mobility dropped by 0.11 (26%), while their upward mobility increased by 1.86 (5%). Therefore, both sexes experienced mobility gains.

By Race: Black American's relative mobility increased by 0.06 (21%) and their upward mobility decreased by 0.85 (3%). White Americans saw large changes, with their relative mobility declining by 0.13 (38%) and upward mobility increasing by 4.57 (13%). Hispanic Americans experienced similar changes; their relative mobility decreased by 0.11 (30%) while their upward mobility increased by 3.92 (12%). Comparing races, we can see that the gap in absolute upward mobility between Hispanic and white Americans increased negligibly (by 0.65) between generations, while the gap between black and white Americans more than doubled from 4.4 to 9.8.[23]

Sex By Race: These results provide further insight into our previous findings. First, both Hispanic men and women contributed to the increase in mobility for Hispanic Americans. Hispanic women's relative mobility decreased by 0.06 (19%) and their upward mobility increased by 3.58 (13%); the decrease in relative mobility for Hispanic men was 0.18 (44%), while their upward mobility increase was slightly greater (4.15; 11%). Second, white American's relative mobility decrease was driven by white men, while their expected mobility increase was attributed to white women. White men's relative mobility decreased by 0.19 (49%), while their upward mobility increased by 4.08 (10%). White women's relative mobility decreased less (0.06; 20%), and their upward mobility increased more (5.31; 20%). Third, the decrease in black American's mobility is driven by both sexes. Black women's relative mobility increased by 0.06 (21%) and their upward mobility increased by 1.49 (5%). Meanwhile, black men's relative (upward) mobility increased (decreased) by 0.04 (14%) (3.02; (9%)).

Turning to the racial gaps by sex, for the NLSY79 samples, black men are around

[23]Chetty et al. (2019) similarly observe a persistent mobility disparity between black and white Americans, though they report a gap of 5-percentile ranks at all levels of parent income rank.

11 to 15 ranks below white men, at the lower half of the socioeconomic distribution, while black women are around 2 ranks above white women.[24] In the NLSY97 samples, the gap between black and white men is roughly 6 ranks at the 25th percentile, equaling each other around the 75th percentile. The NLSY97 gap between black and white women flips, with a gap where white women are above black women by around 5 at the baseline, which drops to 2 at the 25th rank, and black women overtake white women at the 46th. Our results suggest that the growth in the black-white mobility gap since the 1960s follows from the growing black-white gaps for both sexes, while the large magnitude of the gap is largely attributed to the black-white male difference.[25]

In summary, relative mobility estimates in the U.S. have declined by an average of 20% across most samples, suggesting a reduced influence of parental socioeconomic status across generations. At the same time, absolute upward mobility has increased by 2–4 ranks on average, with the most significant gains among white women. Black Americans are the only group to experience declining mobility, with slight increases in relative mobility but decreases in upward mobility. These trends suggest that, apart from Black Americans, intergenerational socioeconomic mobility in the U.S. has improved since the 1960s.

[24] Black men are below white men by roughly 20, 17, 13, 10, and 7 ranks at the 0th, 25th, 50th, 75th, and 100th parent ranks. Meanwhile, black women are roughly 2 and 1 rank above white women at the 25th and 80th parent ranks.

[25] Chetty et al. (2019) find that black men are consistently 10 income percentile ranks below white men, while black women are consistently 1 income percentile rank higher than white women. For the most part, our estimated gaps agree with the previous literature, except for our NLSY97 black-white women gap, where we find white women marginally above black women throughout the socioeconomic distribution.

4.3 Role Model Effects

We now investigate the correlation between role model effects and U.S. women's intergenerational socioeconomic mobility. Discerning the correct channels through which parental choices influence their child's preferences is difficult. However, recent evidence from Galassi et al. (2024) suggests that working mothers have a significant impact on their daughters' lifetime employment. Using the NLSY79 and NLSY79 Child/Young Adults Surveys, Galassi et al. (2024) find that daughters of mothers who were permanently employed (compared to those whose mothers were not) saw a 17 percentage point higher likelihood of employment every year, which is roughly nine weeks. Additionally, they provide convincing evidence that this increased employment is due to a role model effect, where daughters emulate their working mothers.[26]

These findings, alongside previous evidence that (1) intergenerational mobility is largely determined by factors prior to entering the labor market (Chetty et al., 2014a; Neal and Johnson, 1996; Cameron and Heckman, 2001), and (2) women's labor force participation grew significantly in the latter half of the 20th century (Goldin, 2006), point to role model effects as a possible factor for the increase in women's intergenerational mobility between our two cohorts.

[26]Specifically, Galassi et al. (2024) test multiple methods through which the role model effect impacts intergenerational employment correlation. These include constructing measures for the disutility of work, which they find has minimal impact on the offspring's employment; they proxy for a mothers' work preference, controlling for employment both before the daughters birth and when the mother does not cohabit with her daughter. They find that the correlation is primarily driven by periods after the daughter's birth or in periods of cohabitation, times when the daughter is actually observing her mother. They also check for the intergenerational correlation of working long hours (40+ hours a week), which they find as still positively correlated, indicating daughters emulating their mothers working tendencies. Their results are robust across checks for the effect of networks, occupation-specific human capital, and local labor market conditions.

We use our first step probit, Equation 2, to estimate the intergenerational correlation between our role model effect proxy and the respondent's proxied lifetime employment.[27] Table 6 reports these results for our pooled women's samples, where columns (1) and (2) present the average marginal effects for the respective sample. Table 7 does the same for our women by race sub-samples.

These results show that our role model proxy is correlated with our proxy for female respondent's lifetime employment in both generations. For U.S. women in the NLSY79 cohort, the role model effect contributed to a roughly 4 percentage point (pp) greater likelihood of being employed for one's entire life, which increased to almost 6 pp by the NLSY97 cohort. Our sub-samples by race show that black and white women have driven this association, as the role model effect has been least correlated with Hispanic women's employment. For both black and white women, the role model effect is more efficiently estimated in the latter generation, growing from 3.6 to 8.1 pp and from 3.2 to 6.4 pp, respectively. Overall, the association between the mother role model effect and intergenerational employment is significant for the pooled women samples across generations, with its growth being driven by white and black women.

Turning to analyzing the role model's correlation on these groups intergenerational mobility, we use Equations 2 and 3 from our Heckman two-step analysis. Tables 8 and 9 present these estimates for our pooled and by-race women's samples, respectively. We first see that our inverse mills ratio (IMR) is statistically significant for all samples except NLSY97 Hispanic women. These results support modeling

[27]See section 3 and Appendix A for a full discussion and definitions of these proxys, respectively

this relationship using Heckman corrected models.

Turning to our coefficients of interest, Table 8 shows that for our pooled samples, both γ (the role model dummy coefficient) and τ (the role model interaction coefficient) are much more efficiently estimated for our NLSY97 sample. We also observe a reversal in γ's sign between generations. Interpreting the NLSY97 sample's coefficients, the negative γ implies a role model reduces expected mobility, while the positive τ decreases relative mobility. Both coefficients indicate that role model mothers are negatively correlated with their daughter's mobility.

Figures 3 graphs this relationship between two hypothetical NLSY97 sample women, who are identical except that one has a role model mother (blue line) and the other does not (red line). The magnitude of the absolute mobility difference between these two hypothetical women is almost 3 income percentile ranks. When we investigate women by racial group, Table 9 reveals that this trend is again driven by black and white women, as the role model effect has been most strongly associated with their mobility. For white women, both γ and τ change signs between the generations.

Based on these results, we test whether this decrease is being driven by single mothers. We observe a sharp rise in single mothers between the NLSY Heckman model pooled women's samples, from 144 (5%) to 902 (30%). To assess whether this decrease is driven by single mothers, we add a dummy into our models.[28] However, the included dummy has little impact on our results, as it remains highly uncorrelated across samples, and the general strength of the role model correlations persist.

[28]See Appendix F for detailed results

In summary, the correlation between a working mother role model and their daughter's economic outcomes has exhibited generational shifts since the 1960s. Its association with daughters' lifetime employment has increased significantly across the generations for both white and black women. Meanwhile, the role model effect has only been correlated with white women's intergenerational mobility, most strongly associated with reducing white daughters mobility in the NLSY97 cohort. This correlation is not driven by the increase in single motherhood across the generations.

5 Conclusion

This study uses public-access NLSY79 and NLSY97 data to examine U.S. intergenerational mobility trends along with the role model effect on women's mobility since the 1960s. Our findings suggest that parental socioeconomic status has become less influential, with relative mobility declining by 20% across most samples. Meanwhile, absolute upward mobility increased by an average of 10%. Black Americans are the only group to experience declining mobility. However, the magnitude of these trends are sensitive to the definitions and construction of NLSY respondent and parent income.

We also find that over generations, the female role model effect has become increasingly correlated with white and black daughters' likelihood of lifetime employment, rising by 4 to 6 percentage points. Simultaneously, its association with daughters' mobility has strengthened, though in a way that reduces mobility. This relationship remains robust across NLSY parent/income definitions and when controlling for single mother households.

Future research can enhance our study by utilizing restricted NLSY data, which includes zip codes, to more accurately measure regional mobility. While NLSY samples are smaller than those in other studies, their mobility estimates align closely with prior literature. Researchers should leverage this, along with the rich NLSY childhood survey data, to examine the correlation between previously unexplored aspects of one's upbringing and intergenerational socioeconomic mobility.

Climbing the U.S. socioeconomic ladder is still heavily influenced by birth circumstances. Although economic, social, and cultural movements have advanced opportunities for historically disenfranchised groups, progress has been uneven. Hispanic and white women have experienced significant mobility gains, whereas Black women and men have not. While our findings are consistent with past studies that maternal role models increase their daughter's likelihood of being employed, we also find that there may be a cost to this influence in less upward mobility.

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Tables

Table 1: NLSY79 Sample Summary Satistics

	Parent Pctl Rank (1)	Resp. Pctl Rank (2)	N (3)
Overall	52.10	41.92	5,991 (100%)
Region			
NE	54.18	45.72	1,150 (19.20%)
NC	57.10	43.14	1,492 (24.90%)
W	54.03	42.49	1,050 (17.53%)
S	46.73	38.91	2,204 (36.79%)
Sex			
Women	52.07	34.85	2,883 (48.12%)
Men	52.13	48.48	3,108 (51.88%)
Race			
Black	44.20	35.36	1,688 (28.18%)
Hispanic	47.45	41.25	1,077 (17.98%)
White	57.78	45.58	3,226 (53.85%)
Sex by Race			
Black Women	44.16	32.88	816 (13.62%)
Black Men	44.24	37.68	872 (14.56%)
Hispanic Women	46.88	34.66	525 (8.76%)
Hispanic Men	47.99	47.52	552 (9.21%)
White Women	58.02	35.96	1,542 (25.74%)
White Men	57.57	54.39	1,684 (28.11%)

Note: Columns (1) and (2) report the respective variable mean of the samples, while column (3) reports that samples total observations and its percent of the overall sample in brackets. All numbers are calculated from the taken sample of the 1979 National Longitudinal Survey of the Youth described in Section 3. The Region samples do not sum to 100% due to around 200 NAs in the original survey data.

Table 2: NLSY97 Sample Summary Statistics

	Parent Pctl Rank (1)	Respondent Pctl Rank (2)	N (3)
Overall	41.62	39.53	7,706 (100%)
Region			
NE	42.69	42.38	1,320 (17.13%)
NC	47.79	41.18	1,754 (22.76%)
W	42.49	41.02	1,707 (22.15%)
S	36.93	36.38	2,925 (37.96%)
Sex			
Women	41.11	34.64	3,761 (48.81%)
Men	42.11	44.19	3,945 (51.19%)
Race			
Black	28.55	30.26	2,074 (26.91%)
Hispanic	31.03	38.44	1,667 (21.63%)
White	52.91	44.83	3,965 (51.45%)
Sex by Race			
Black Women	28.51	30.11	1,045 (13.56%)
Black Men	28.60	30.41	1,029 (13.35%)
Hispanic Women	29.63	32.59	819 (10.63%)
Hispanic Men	32.39	44.08	848 (11.00%)
White Women	53.01	38.02	1,897 (24.62%)
White Men	52.82	51.09	2,068 (26.84%)

Note: Columns (1) and (2) report the respective variable mean of the samples, while column (3) reports that samples total observations and its percent of the overall sample in brackets. All numbers are calculated from the taken sample of the 1997 National Longitudinal Survey of the Youth described in Section 3.

Table 3: Corrected Model's Summary Statistics

	NLSY79				NLSY97			
	Pooled (1)	Black (2)	Hispanic (3)	White (4)	Pooled (5)	Black (6)	Hispanic (7)	White (8)
Sample Size	2721	784	492	1445	3014	844	589	1581
RME	1486	455	241	790	1913	499	323	1091
Avg Fam Pctl	52.29	43.98	47.17	58.55	42.86	29.95	31.68	53.91
Avg Resp. Pctl	46.01	42.97	45.64	47.84	45.18	40.04	43.21	48.36
N lifetime Emp.	1567	457	294	816	1942	518	362	1062
Avg % Married	0.47	0.32	0.52	0.53	0.37	0.20	0.39	0.46
Avg Num. Children	1.37	1.58	1.55	1.20	1.25	1.50	1.36	1.07
Avg Resp. Ability	40.74	25.35	31.44	52.25	45.96	30.95	35.99	57.70
Avg Resp. Initial Age	16.01	16.11	15.97	15.98	14.23	14.29	14.20	14.21
Resp. HighS Dg	2492	735	439	1318	2832	781	535	1516
Resp. College Dg	657	171	80	406	1164	251	154	759
Moth. HighS Dg	1359	326	122	911	2205	601	279	1325
Moth. College Dg	159	33	12	114	503	81	39	383
Resp. Region (N)								
North East	452	107	78	267	467	115	90	262
North Central	635	136	37	462	627	133	51	443
West	530	62	218	250	645	43	266	336
South	1104	479	159	466	1275	553	182	540

Table 5 provides summary statistics for the two-step Heckman corrected women's models. Columns (1)–(4) summarize the NLSY79 women's sample, while columns (5)–(6) present the NLSY97 sample. "RME (N)" indicates the number of respondents with a role model. "Avg Fam/Resp Pctl" refer to the respective groups average percentile income rank. "Lifetime Emp. (N)" refers to respondents employed for at least 40 weeks in 5 out of 8 years of income data collection. "Avg % Married" represents the average percentage of years respondents were married during income data collection. "Avg Num. Children" is the average number of children respondents had during the analyzed years. "Avg Resp. Ability" captures the mean score on the selected childhood aptitude test. Avg Resp. Init. Age is the average age of respondent's when they were initally surveyed. "HighS Dg" and "College Dg" represent the number of respondents and mothers who have obtained high school and/or college degree. "Resp. Region (N)" reports the region where respondents lived most frequently during the analyzed years. See Appendix A for detailed variable descriptions.

Table 4: Mobility Estimates: NLSY Samples and Chetty Comparison

	Relative Mobility			Baseline Mobility		
	NLSY79 (1)	NLSY97 (2)	Chetty (3)	NLSY79 (4)	NLSY97 (5)	Chetty (6)
Overall	0.36	0.30	0.29	23.17	27.22	33.00
Region						
NE	0.37	0.29	0.34†	25.46	29.94	34.96†
NC	0.37	0.28	0.36†	22.09	27.89	32.56†
W	0.31	0.23	0.26†	25.98	31.43	36.75†
S	0.36	0.34	0.35†	22.14	23.97	30.78†
Sex						
Women	0.29	0.28	0.26	19.69	23.35	
Men	0.42	0.31	0.32	26.46	31.11	
Race						
Black	0.28	0.34	0.28	22.83	20.71	25.43
Hispanic	0.37	0.26	0.26	23.75	30.48	36.14
White	0.34	0.21	0.32	25.70	33.53	36.83
Sex by Race						
Black Women	0.29	0.35	0.25	20.23	20.13	34.86
Black Men	0.28	0.32	0.27	25.30	21.33	31.80
Hispanic Women	0.31	0.25		20.07	25.18	
Hispanic Men	0.41	0.23		28.08	36.53	
White Women	0.30	0.24	0.25	18.34	25.20	33.30
White Men	0.39	0.20	0.29	32.07	41.13	41.36

Note: Table 3 Columns (1) and (2) report the respective NLSY sample's relative mobility estimate, while columns (4) and (5) do the same for the sample's baseline mobility estimate. Columns (3) and (6) report Chetty et al.'s (2014a for Overall, Region, and Sex; 2019 for Race and Race-by-Sex samples) reported relative and baseline mobility, respectively. * All estimated coefficient p-values are statistically significant ($p<0.001$). † Chetty et al.'s 'region' mobility estimates are weighted averages from their public CZ level results pooled by the NLSY state region definitions described in Appendix A. For empty Chetty et al. comparison cells, see footnote 5.

Table 5: Mobility Estimates: NLSY Samples and Chetty Comparison

	Absolute Upward Mobility		
	NLSY79 (1)	NLSY97 (2)	Chetty (3)
Overall	32.17	34.61	40.25
Region			
NE	34.81	37.22	43.56†
NC	31.31	34.85	41.62†
W	33.62	37.07	43.17†
S	31.11	32.37	39.65†
Sex			
Women	26.97	30.22	
Men	37.02	38.88	
Race			
Black	29.92	29.07	32.43
Hispanic	32.97	36.89	42.64
White	34.30	38.87	44.84
Sex by Race			
Black Women	27.39	28.88	41.11
Black Men	32.29	29.27	38.55
Hispanic Women	27.85	31.43	
Hispanic Men	38.21	42.36	
White Women	25.94	31.25	39.55
White Men	41.76	45.84	48.61

Note: Columns (1) and (2) report the respective NLSY sample's absolute upward mobility estimate, while column (3) reports Chetty et al.'s (2014a for Overall, Region, and Sex; 2019 for Race and Race by Sex samples) reported absolute upward mobility. All estimated coefficient p-values are statistically significant ($p<0.001$). † Chetty et al.'s 'region' mobility estimates are weighted averages from their public CZ level results pooled by the NLSY state region definitions described in Appendix A. For empty Chetty et al. comparison cells, see footnote 5.

Table 6: NLSY79 and NLSY97 First Stage Probit Marginal Effects for US Women

	NLSY79 Women (1)	NLSY97 Women (2)
RME	0.041**	0.058***
	(0.018)	(0.019)
Pct Married	0.218***	0.095***
	(0.038)	(0.037)
Num. Children	−0.093***	−0.027**
	(0.012)	(0.011)
Avg Fam Inc Pctl	0.002***	0.0005
	(0.0005)	(0.0004)
Resp. HS Dg	0.283***	0.209***
	(0.034)	(0.041)
Resp. Coll Dg	0.105***	0.131***
	(0.023)	(0.020)
Moth. HS Dg	−0.002	0.007
	(0.020)	(0.021)
Moth. Coll Dg	−0.089**	−0.042*
	(0.042)	(0.026)
Resp. Ability	0.0004	0.002***
	(0.0004)	(0.0004)
Resp. Reg NE	−0.026	−0.017
	(0.027)	(0.028)
Resp. Reg S	0.060***	−0.032
	(0.023)	(0.022)
Resp. Reg W	−0.025	−0.065**
	(0.026)	(0.026)
Resp. Age	−0.0001	0.001
	(0.007)	(0.006)
Marr*Children	0.007	−0.052***
	(0.020)	(0.020)
Observations	2,721	3,014

*p<0.1; **p<0.05; ***p<0.01

Note: Columns (1) and (2) of Table report the average probit marginal effect estimates for the NLSY79 and NLSY97 women (pooled by race) samples respectively. RME signifies our role model effect dummy (γ). Robust standard errors for the point estimates (not reported) are in brackets below the average marginal effect.

Table 7: Probit Marginal Effects for US Women by Race

	79 BW (1)	79 HW (2)	79 WW (3)	97 BW (4)	97 HW (5)	97 WW (6)
RME	0.036 (0.034)	0.054 (0.042)	0.032 (0.023)	0.081^{*} (0.036)	0.014 (0.041)	0.064^{*} (0.025)
Pct Married	0.049 (0.088)	0.150 (0.092)	0.301^{***} (0.046)	0.022 (0.086)	0.021 (0.088)	0.174^{***} (0.046)
Num. Children	-0.091^{***} (0.016)	-0.097^{***} (0.027)	-0.132^{***} (0.022)	-0.031^{+} (0.016)	−0.025 (0.026)	−0.024 (0.019)
Avg Fam Inc Pctl	0.002^{+} (0.001)	0.002^{+} (0.001)	0.004^{***} (0.001)	0.001 (0.001)	0.002 (0.001)	0.001 (0.001)
Resp. HS Dg	0.273^{***} (0.072)	0.305^{***} (0.072)	0.146^{**} (0.049)	0.213^{**} (0.067)	0.215^{**} (0.075)	0.159^{*} (0.074)
Resp. Coll Dg	0.129^{**} (0.043)	0.068 (0.058)	0.026 (0.031)	0.156^{***} (0.043)	0.080 (0.049)	0.117^{***} (0.027)
Moth. HS Dg	0.021 (0.035)	−0.080 (0.055)	0.034 (0.027)	−0.013 (0.038)	−0.012 (0.045)	0.052 (0.033)
Moth. Coll Dg	−0.136 (0.094)	-0.245^{+} (0.142)	−0.065 (0.047)	−0.021 (0.062)	−0.090 (0.083)	-0.054^{+} (0.030)
Resp. Ability	0.004^{***} (0.001)	0.002^{*} (0.001)	0.001^{*} (0.001)	0.003^{***} (0.001)	0.001 (0.001)	0.002^{***} (0.0005)
Resp. Reg NE	−0.081 (0.059)	−0.015 (0.089)	−0.028 (0.033)	−0.046 (0.057)	−0.053 (0.087)	−0.015 (0.035)
Resp. Reg S	0.135^{**} (0.043)	0.075 (0.084)	−0.040 (0.028)	−0.005 (0.044)	−0.116 (0.077)	-0.062^{*} (0.029)
Resp. Reg W	−0.049 (0.067)	0.011 (0.081)	-0.073^{*} (0.036)	−0.083 (0.080)	-0.137^{+} (0.073)	-0.071^{*} (0.032)
Resp. Age	−0.006 (0.012)	−0.011 (0.016)	0.007 (0.009)	−0.005 (0.010)	0.017 (0.014)	0.00003 (0.008)
Marr*Children	0.051 (0.038)	0.005 (0.047)	0.020 (0.033)	0.027 (0.039)	−0.020 (0.044)	-0.104^{***} (0.031)
Observations	784	492	1,445	844	589	1,581

+ p<0.1; * p<0.05; ** p<0.01; *** p<0.001

Note: Table 9 reports the average marginal effects estimates for the NLSY79 black, Hispanic, and white women in columns (1), (2), and (3) respectively. Columns (4), (5), and (6) are the similar statistics for the NLSY97 samples. RME signifies our role model effect dummy (γ). Robust standard errors for the point estimates (not reported) are in brackets below the average marginal effect.

Table 8: Role Model Effects on Women's Intergenerational Mobility

	NLSY79 Women	NLSY97 Women
	(1)	(2)
Avg Fam Inc Pctl	0.076*	0.010
	(0.035)	(0.029)
RME	1.337	−3.271+
	(2.561)	(1.741)
Resp. HS Dg	0.365	−3.649
	(3.186)	(3.525)
Resp. Coll Dg	10.523***	8.102***
	(1.184)	(1.543)
Resp. Reg NE	5.339***	5.526***
	(1.493)	(1.531)
Resp. Reg S	−0.891	2.645*
	(1.248)	(1.274)
Resp. Reg W	4.050**	6.561***
	(1.438)	(1.504)
Resp. Ability	0.136***	0.117***
	(0.021)	(0.025)
Resp. Age	0.530	1.260***
	(0.359)	(0.319)
RME Interaction	−0.004	0.040
	(0.042)	(0.030)
Constant	26.285***	29.326***
	(7.956)	(8.568)
Observations	2,721	3,014
R^2	0.252	0.309
Adjusted R^2	0.246	0.305
Inverse Mills Ratio	−8.8*** (2.6)	−21.8*** (5.3)

+ p<0.1; * p<0.05; ** p<0.01; *** p<0.001

Note: Table presents the Heckman-corrected OLS models described in section 4 for both NLSY79 and NLSY97 pooled women samples. Standard errors are in parentheses. RME signifies our role model effect dummy (γ). $RME\,Interaction$ is the interaction effect between our role model dummy, and averaged parent income percentile rank (τ). Full descriptions of variable constructions and definitions are in Appendix A.

Table 9: Role Model Effects on Women's Intergenerational Mobility by Race

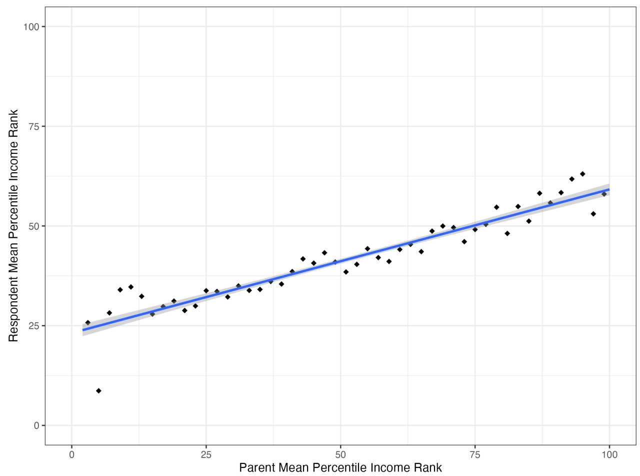
	79 BW	79 HW	79 WW	97 BW	97 HW	97 WW
	(1)	(2)	(3)	(4)	(5)	(6)
Avg Fam Inc Pctl	0.080	0.123	0.049	0.108	−0.031	0.001
	(0.067)	(0.080)	(0.056)	(0.066)	(0.074)	(0.042)
RME	−0.311	−1.276	4.356	−3.201	−1.559	−2.542
	(3.701)	(5.297)	(4.763)	(3.518)	(3.188)	(3.012)
Resp. HS Dg	−2.218	−7.363	−1.207	−11.632	−2.903	2.612
	(6.329)	(6.393)	(4.345)	(7.619)	(7.203)	(5.116)
Resp. Coll Dg	7.684***	7.845*	12.430***	3.288	8.300**	11.469***
	(2.113)	(3.137)	(1.701)	(4.430)	(2.891)	(1.650)
Resp. Reg NE	5.197+	10.079+	2.474	6.397+	11.106**	3.692*
	(3.022)	(5.187)	(1.962)	(3.872)	(4.045)	(1.793)
Resp. Reg S	−8.690***	−2.909	0.794	−0.943	8.514+	3.463*
	(2.490)	(4.796)	(1.708)	(2.867)	(4.335)	(1.589)
Resp. Reg W	−3.926	0.285	7.136***	8.640	11.234*	4.888**
	(3.388)	(4.598)	(2.131)	(5.615)	(4.437)	(1.770)
Resp. Ability	0.218***	0.114*	0.112***	0.105	0.223***	0.080*
	(0.050)	(0.058)	(0.034)	(0.083)	(0.054)	(0.031)
Resp. Age	1.199*	0.563	0.216	1.401*	−0.701	1.780***
	(0.581)	(0.931)	(0.536)	(0.685)	(0.756)	(0.412)
RME Interaction	0.054	0.004	−0.061	−0.078	0.018	0.055
	(0.076)	(0.096)	(0.070)	(0.062)	(0.077)	(0.048)
Constant	23.051	43.022*	35.578**	44.422*	47.623*	12.356
	(13.998)	(17.829)	(11.721)	(21.027)	(21.994)	(9.900)
Observations	784	492	1,445	844	589	1,581
R^2	0.376	0.286	0.240	0.403	0.328	0.250
Adjusted R^2	0.361	0.258	0.229	0.390	0.307	0.242
Inverse Mills Ratio	−10.7* (4.9)	−20.5** (6.2)	−12.0*** (3.1)	−33.5* (14.6)	−18.7 (13.9)	−14.1** (4.9)

+ p<0.1; * p<0.05; ** p<0.01; *** p<0.001

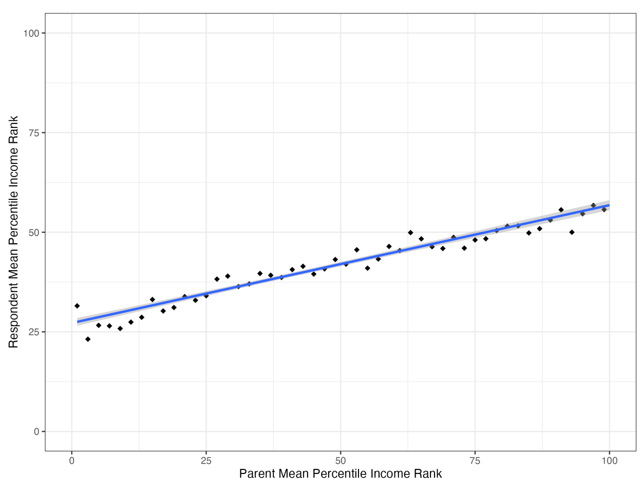
Note: Table presents the Heckman-corrected OLS models described in section 4 for both NLSY79 and NLSY97 pooled women samples. Standard errors are in parentheses. *RME* signifies our role model effect dummy (γ). *RME Interaction* is the interaction effect between our role model dummy, and averaged parent income percentile rank (τ). Full descriptions of variable constructions and definitions are in Appendix A.

Figures

Figure 1: NLSY79 and NLSY97 Overall Sample Linear Relationships



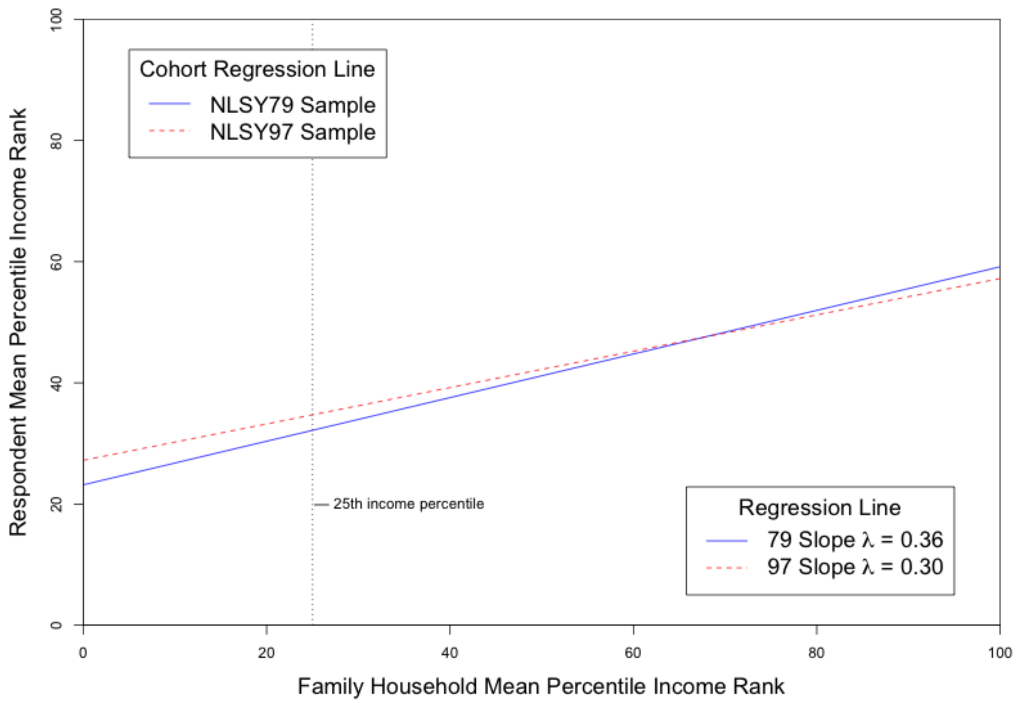
(a) NLSY79 Overall Sample



(b) NLSY97 Overall Sample

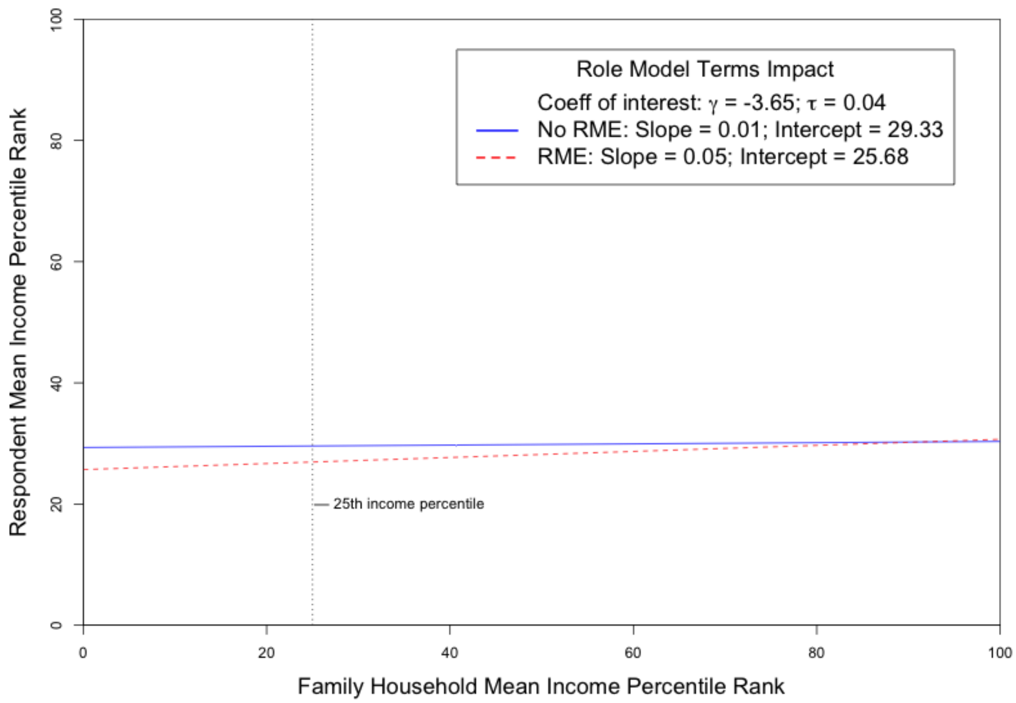
Note: Figure presents the linear relationships between the respondent's averaged percentile income rank and their parents average percentile income rank. Panel (a) shows this linear relationship for the overall NSLY79 Sample, while panel (b) does the same for the overall NSLY97 Sample.

Figure 2: NLSY79 and NLSY97 Overall Regressions



Note: Figure presents the expected mobility regression lines for the NLSY79 and NLSY97 overall samples of the relationship between family mean household income and their child respondent's mean income percentile rank. The blue, solid (red, dashed) line corresponds to the NLSY79 (NLSY97) sample.

Figure 3: NLSY97 Women Role Model Effect Visualization



Note: Figure presents the difference between two hypothetical NLSY97 women, who are identical except that one had a role model mother (red dashed line) and the other did not (blue line). The x-axis is the respondent parent's income percentile rank, while the y-axis is the respondent daughter's income percentile rank. The difference at the 25th parent percentile income rank is almost 3 income ranks.

Appendix A: Variable Definitions

Appendix A contains all the definitions, descriptions, and explanations of how the variables utilized in this study were obtained and constructed.

Average Respondent Income Percentile Rank: The NLSY79 respondent income data was constructed by combining the following variables: "Total Income From Wages and Salary," "Total Income From Farm and Business," "Total Amount of Unemployment Received," and "Total Amount of AFDC, Food Stamps, or Other Welfare/SSI Received." These were aggregated for the years 1990–1994, 1996, 1998, and 2000 for past calendar year variables, and 1989–1993, 1995, 1997, and 1999 for during calendar year variables. Similarly, NLSY97 respondent income was created by combining "Total Income From Wages and Salary," "Total Income From Farm and Business,"[29] "Total Amount of Unemployment Received," and "Total Amount From Government Programs" for 2009–2011, 2013, 2015, 2017, and 2019 (past calendar year) and 2008–2010, 2012, 2014, 2016, and 2018 (during calendar year).

We used IPUMS CPS microdata to obtain the components of total income ('tot-inc') for all years corresponding to the NLSY survey income data. The components were top-coded (see footnote 6) and then re-combined. Percentile ranks were calculated for each year using the IPUMS data. In cases of ties, the higher value was used for direct ties, while the mean was assigned for ties involving multiple values. NLSY respondent income variables were then matched to these percentile brackets for each respective year, and the annual percentiles were averaged for each respondent. Zeros were included in the calculations, while refusals (-1), "don't know" (-2), invalid skips (-3), valid skips (-4), and non-responses (-5) were treated as NA and excluded from the analysis.

Average family Income Percentile Rank: For the NLSY97 samples, parent income was obtained from "Amount of parents own income," "Amount of parent's spouse/partner income," and "Amount of parent/spouse other income" from 1997 to 2001. For each of these variables, a respective lead in question asked if the responding parent or their spouse had recieved any of the respective income source. If they responded yes, the respective 'amount' vairable is used as their income. If they

[29]For the NLSY97 wages and salary and farm and business incomes, when a respondent reported an amount within a defined range, we use the average of the 'estimated' range as the respective year income amount. Additionally, all respondents who indicate they recieved no form of income for either of the two variables in one year and are assigned a 'valid skip' value (-4) are coded as having 0 income.

responded no and had a ”valid skip” (-4) for the income amount variable, they were assigned 0 income. We then sum these three variables by year. All other refusals (-1), “don’t know” (-2), invalid skips (-3), valid skips (-4), and non-responses (-5) were coded as NA and not included in this construction. Next, if the responding parent indicated they had a spouse in that specific year (partner/spouse income has an indicator (3) if there is no partner/spouse present), we divide that yearly income by 2.

For the NLSY79 smaples, parental income data was sourced from the “Net Family Income” (NFI) variable from 1979–1983. Parental income was only included for years when respondents parents filled out the survey (Version A), as this meant parental income was captured in NFI. If a break occurred in the survey version administered, subsequent years where version A was re-administered were excluded. For years where both ’parent figures’ were present (mother/father, grandma/grandpa, or aunt/uncle), NFI was halved. Zeros were included in the calculations, while refusals (-1), “don’t know” (-2), invalid skips (-3), valid skips (-4), and non-responses (-5) were coded as NA and excluded.

Lastly, using the IPUMS constructed percentile bins, NLSY parental income was assigned a rank for each respective year. Following the restrictions described above, valid (up to five) years of household income percentiles were then averaged for each respondent’s parents.

Respondent’s Mother Employed (Role Model Effect): For the NLSY79 sample, this information was sourced directly from the binary variable, “Did Adult Female Present in Household at Age 14 Work for Pay?” In contrast, for the NLSY97 sample, the variable had to be constructed. Within the “Household Member Specific Variables” category for 1997, we identified the employment status of all household members. Using the ”relationship to youth in the household” variable, we determined the mother of each respondent and coded her employment status accordingly.

Respondent Employment: For the NLSY79 sample, employment data was derived from the “Number of Weeks Worked in Past Calendar Year” variable for the income observation years (1990–1994, 1996, 1998, and 2000). For the NLSY97 sample, it was obtained from the “Weeks R Worked Any Job Year X” variable for the corresponding income years (2008–2010, 2012, 2014, 2016, and 2018). Respondents were coded as employed (1) if they worked 30 or more weeks in a given year and unemployed (0) if they worked fewer than 30 weeks. Overall, respondents were classified as employed if they were employed during at least 5 of the observed years, representing 63% or more of the total observed income and work history period.

Respondent Married Percent: For the NLSY79 samples, marital status data was derived from the "Marital Status" variable in the income observation years (1990–1994, 1996, 1998, and 2000). For the NLSY97 samples, it was sourced from the same variable during the corresponding income years (2009–2011, 2013, 2015, 2017, and 2019). In each year, respondents were coded as married (1) if they were currently married or remarried, and as unmarried (0) otherwise. Finally, a percentage was calculated based on the total number of years their marital status was observed (8 years for the NLSY79 and 7 years for the NLSY97).

Respondent's Average Number of Children in Household: For both the NLSY79 and NLSY97 samples, this data was obtained from the "Number of Children R has in household" for the year we take respondent income data. These variables were then averaged.

Respondent Region During Adolescence: For the NLSY79 samples, the data was obtained from the NLSY79 "Region of Current Residence" variable in 1979. For the NLSY97 samples, it was obtained from the "Census Region of Residence" variable in 1997. The breakdown of the U.S. states that compose each region is below (same region definitions for each NLSY samples):

Respondent Region During Employment: For the NLSY79 samples, the data was obtained from the NLSY79 "Region of Current Residence" variable from 1989 to 2000. Their region of employment was then coded as the region for which they were lived in the longest during those years. For the NLSY97 samples, it was obtained from the "Census Region of Residence" variable from 2008-2018. It was similarly coded as the max of the region during that time. The breakdown of the U.S. states that compose each region is below (same region definitions for each NLSY samples):

***Northeast*:** CT, ME, MA, NH, NJ, NY, PA, RI, VT
North Central: IL, IN, IA, KS, MI, MN, MO, NE, OH, ND, SD, WI
South: AL, AR, DE, District of Columbia, FL, GA, KY, LA, MD, MS, NC, OK, SC, TN, TX, VA, WV
West: AK, AZ, CA, CO, HI, ID, MT, NV, NM, OR, UT, WA, WY

Respondent Ability: For the NLSY79 sample, we use the respondent's "Armed Forces Qualification Test (AFQT) Percentile Score (revised 2006)" as our measurement of respondent ability. For the NLSY97 sample, we use the respondent's "ASVAB Math Verbal Score Percentile Score" as the measurement for their ability.

Respondent Age: This is the respondent's recorded age during the intial survey date (1979 for the NLSY79 and 1997 for the NLSY97). As mentioned, we exclude all NLSY79 respondents older than 18 years of age at the initial survey date.

Respondent College Attendance: For the NLSY79 sample, the data was obtained from the NLSY79 "R Highest Grade Ever Completed" variable. For the NLSY97 sample, it was similarly obtained from the "R's Highest Grade Ever Completed". For both surveys, a respondent was coded of having attended college for at least one year if they have a value of 13 or higher

Respondent High School and/or College Degree: For the NLSY79 sample, educational attainment was determined using the "Highest Degree Ever Received" variable. Respondents were coded as having a high school degree if they earned a high school diploma or associate degree. Those with a bachelor's degree or higher were coded as having a college degree. Valid skips (-4) were coded as not having obtained a high school degree. Similarly, for the NLSY97 sample, we used the "R's Highest Degree Ever Received" variable. Respondents with a GED, high school diploma, or associate/junior college degree were coded as having a high school degree, while those with a BA or higher were coded as having a college degree.

Mother High School and/or College Degree: Because we do not have a 'mothers highest degree' variable in the NLSY79, for consistency, for both surveys we use respondent's "Mother's Highest Grade Completed" variable. For both datasets, if they have completed 12 or more grades, they are coded has having a high school diploma. If they have completed 4 or more years of college, they are coded as having a college degree.

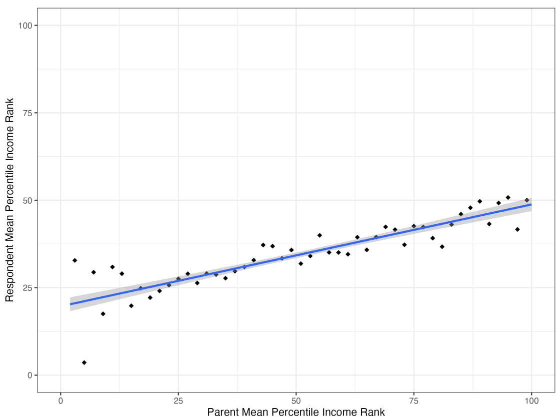
Single Mother: In the NLSY79 survey, we use the "With Whom Did R Live At Age 14?" variable, and coded they had a single mother if they lived with any mother figure and no man (51-54). In the NLSY97 sample, we used the "R's Relationship to Household Figure" in 1997, when they lived with their biological mother only (value of 4).

Appendix B: Linear Relationships

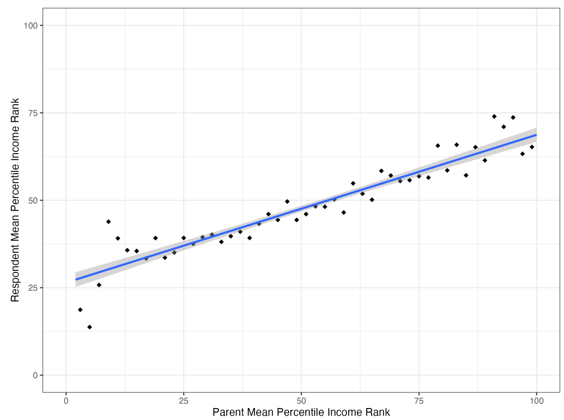
Appendix B contains all graphs and checks for the strength of the linear relationships between average respondent percentile income rank and their parents household percentile income rank[30]. All graphs present binned scatter plots of the relationship between respondent's and their parent's percentile income ranks. We use bins of 50. Generally, we observe linear relationships for our sub-samples. However, as a general trend, as our subsamples decline in observations, the strength of the linear relationships decrease. Our race-by-sex samples of Hispanic men and Hispanic women have the least strong linear relationship of all our samples.

[30]The graphs that portray the linear relationship strength for the overall NLSY79 and NLSY97 samples are located in the initial figures section.

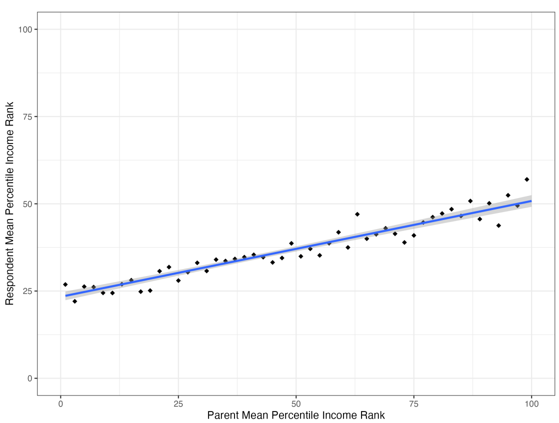
Figure 4: NLSY79 and NLSY97 Linear Relationships by Sex



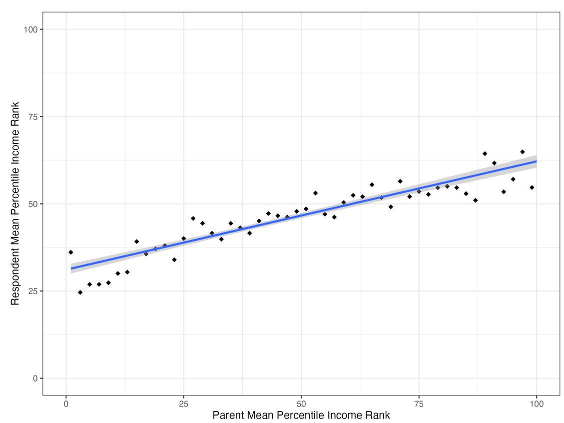
(a) NLSY79 Women



(b) NLSY79 Men



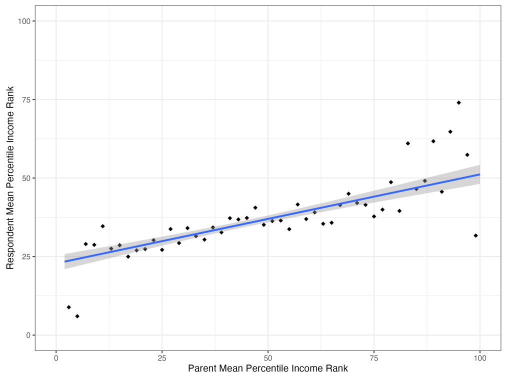
(c) NLSY97 Women



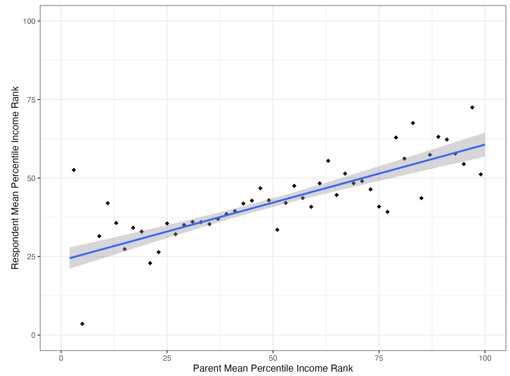
(d) NLSY97 Men

Note: Figure 8 panels (a) and (b) show the linear relationship between the respondent and their parent's average percentile income rank for the NSLY79 women and men samples, respectively. Similarly, panels (c) and (d) show the same relationship for the NSLY97 women and men samples, respectively.

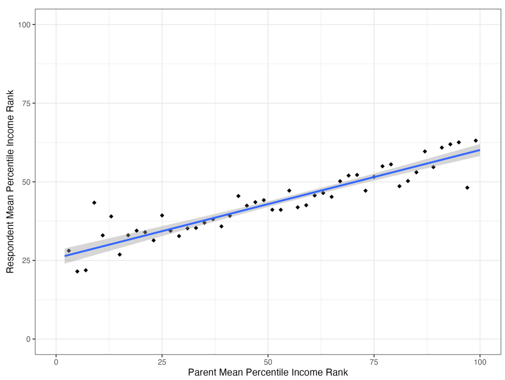
Figure 5: NLSY79 and NLSY97 Linear Relationships by Race



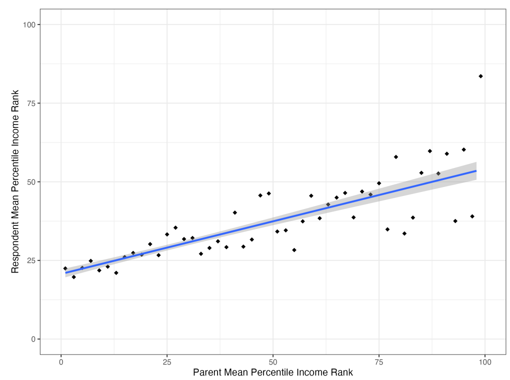
(a) NLSY79 Black



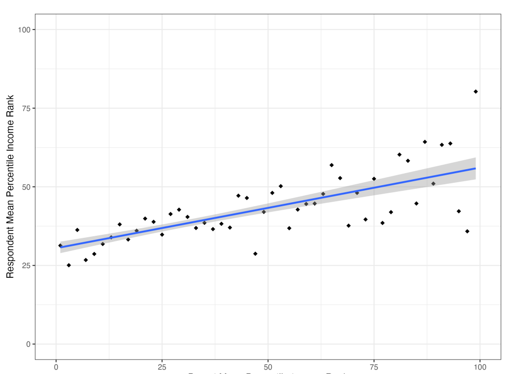
(b) NLSY79 Hispanic



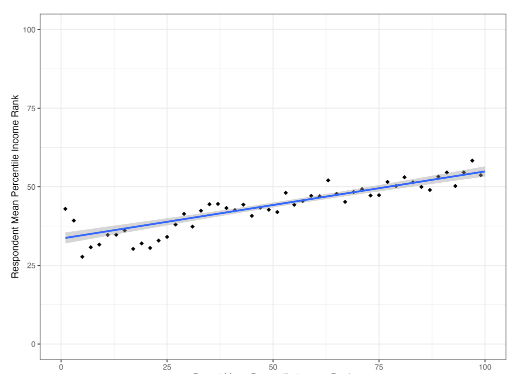
(c) NLSY79 White



(d) NLSY97 Black



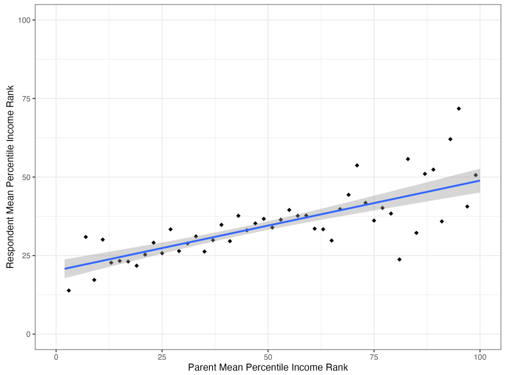
(e) NLSY97 Hispanic



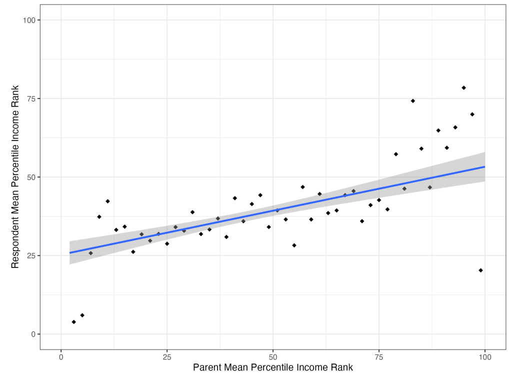
(f) NLSY97 White

Note: Figure panels (a), (b), and (c) show the linear relationship between the respondent and parent's average percentile income ranks for the NSLY79 black, Hispanic, and white samples. Similarly panels (d), (e), and (f) do the same for the NSLY97 black, Hispanic, and white samples.

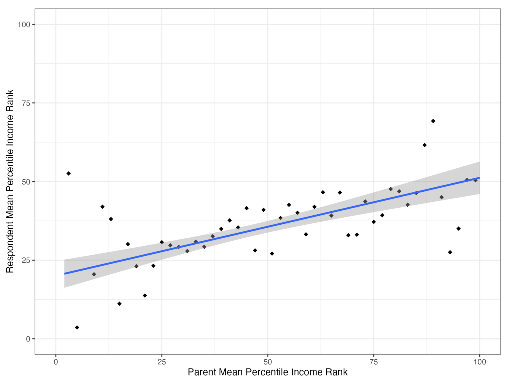
Figure 6: NLSY79 Linear Relationships by Race and Sex



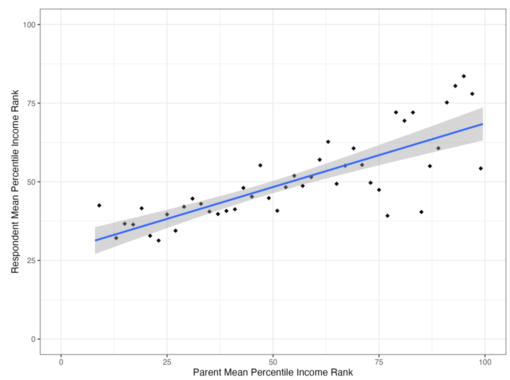
(a) NLSY79 Black Women



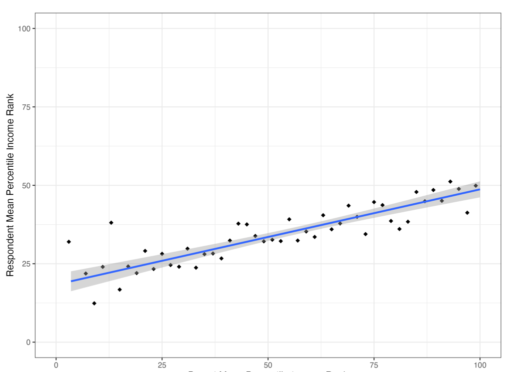
(b) NLSY79 Black men



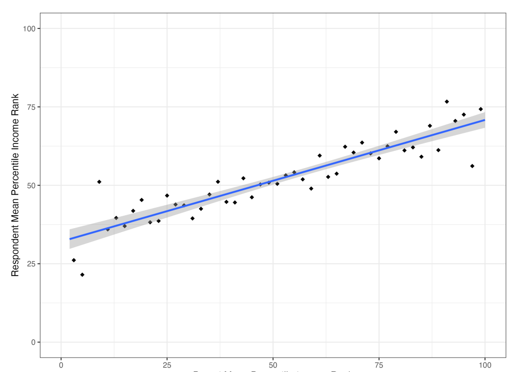
(c) NLSY79 Hispanic Women



(d) NLSY79 Hispanic Men



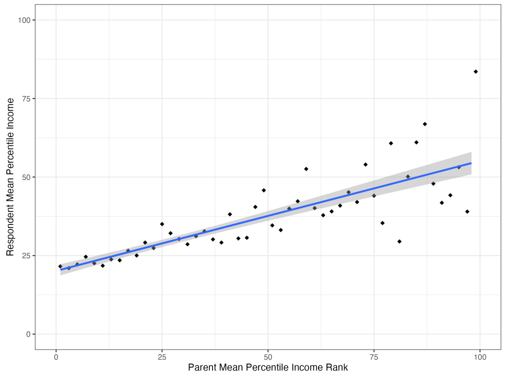
(e) NLSY79 White Women



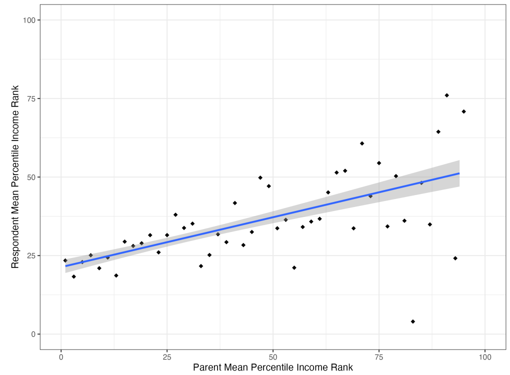
(f) NLSY79 White Men

Note: Figure presents linear relationships between the respondent and their parent's average percentile income rank for the NSLY79 samples split by race and sex. Panels (a) and (b) correspond to black women and men, (c) and (d) correspond to Hispanic women and men, and lastly (e) and (f) correspond to white women and men, respectively.

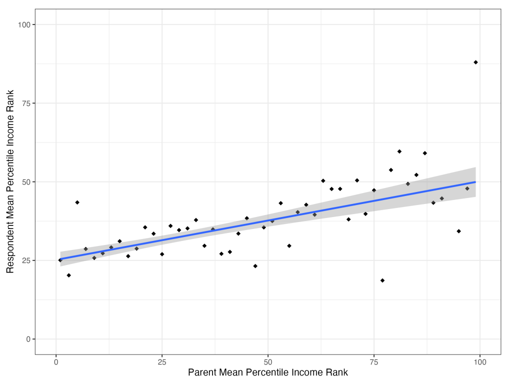
Figure 7: NLSY97 Linear Relationships by Race and Sex



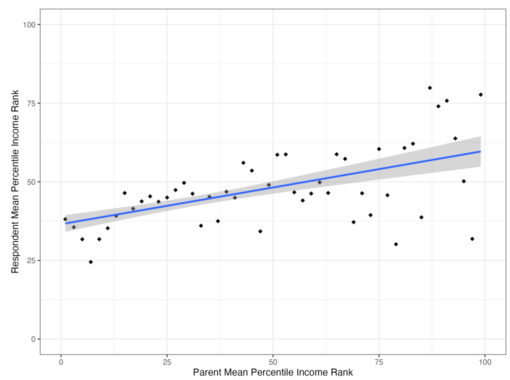
(a) NLSY97 Black Women



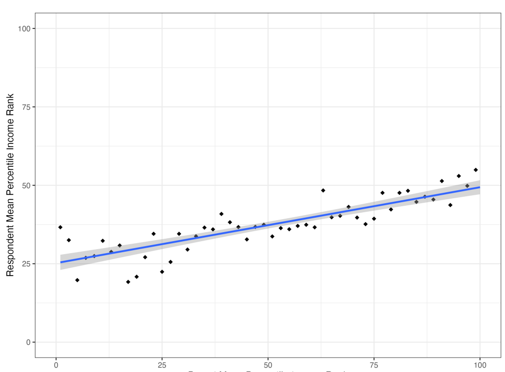
(b) NLSY97 Black Men



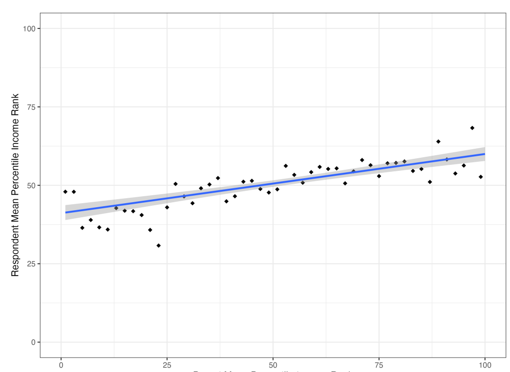
(c) NLSY97 Hispanic Women



(d) NLSY97 Hispanic Men



(e) NLSY97 White Women



(f) NLSY97 White Men

Note: Figure presents linear relationship between the respondent and their parent's average percentile income rank for the NSLY97 samples split by race and sex. Panels (a) and (b) correspond to black women and men, (c) and (d) correspond to Hispanic women and men, respectively, and (e) and (f) correspond to white women and men, respectively.

Appendix C: Life-Cycle and Attenuation Bias

In this appendix, we address potential life-cycle and attenuation biases in our data. Life-cycle bias occurs when income is measured only in early career years, underestimating lifetime earnings (Haider & Solon, 2006). We average respondents' income, where the youngest are ages 24–34 (NLSY79) and 23–33 (NLSY97). However, attrition in the NLSY surveys may still affect our analysis.

Figure 8 panels (a) and (b) depict the average respondent income percentile by age, while panels (c) and (d) show this distribution by age for the NLSY79 (blue) and NLSY97 (orange) samples, respectively. In panel (a), the average rank in NLSY79 increases from approximately 37 at age 24 to 43 at age 30, oscillating between 43 and 46 thereafter. In NLSY97, it has a stronger growth, rising from nearly 31 at age 24 to 41 by age 31, where it oscillates between 42 and 45 till age 39, where it drops to 39.[31]

Panels (c) and (d) show consistent income data observations for respondents aged 27 to 31 in both surveys, though these ages slightly precede the income plateau. As a result, our findings, particularly for the NLSY97 sample, may be subject to minor life-cycle bias.

Recognizing this bias, we re-estimate all sample mobility measures using only the last two years of respondents' survey income data. The results, presented in Table 10, show that compared to Tables 3 and 4, (1) relative mobility estimates increase by 0.01 to 0.05, more severly for our NLSY97 samples, and (2) baseline mobility rises notably. In NLSY79, baseline mobility increases by an average of 4-5 ranks, with the largest gains among white Americans, while in NLSY97, it rises by an average of 6 ranks with more uniform increases across groups. It does bring our NLSY97 samples upward mobility estimates closer to those in previous the previous literature (Chetty et al. 2014a; 2014b; 2019). However, restricting income data in this way reduces sample sizes, excluding 1,168 (1,850) observations from the NLSY79 (NLSY97).

Restricting respondent income has a minimal effect on our role model analysis. The intergenerational correlation between a role model mother and her daughter's employment remains unchanged. While it slightly weakens the association between γ and the respondent's rank, it noticeably strengthens the relationship between τ and the respondent's rank. This restriction only marginally reduces sample sizes.

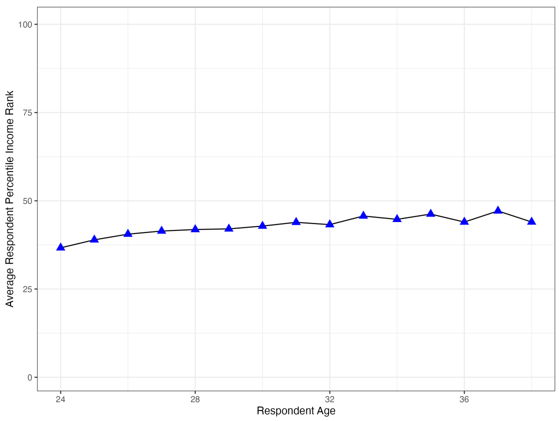
Attenuation bias may arise from measuring parental income in a single year. Figure 9 panels (a) and (b) show the average parental income percentile rank by year for both NLSY samples, while panels (c) and (d) display the number of income years included in the calculation. Panels (a) and (b) indicate that parental income

[31]This drop is due to only 15 observations at this data point.

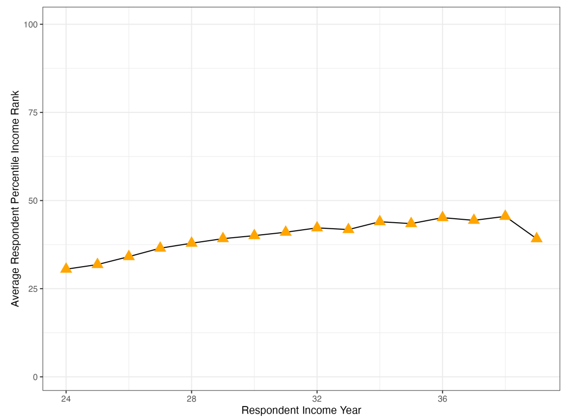
varies by about five ranks: in NLSY79, it starts at 50, peaks at 55, and ends at 53, while in NLSY97, it rises from 40 to 47 over four years. However, as panels (c) and (d) reveal, these estimates are affected by significant attrition, with NLSY79 losing approximately 1,000 and 1,500 observations after the first and second years, and NLSY97 losing about 1,300 and 1,600.[32] The extent to which attrition drives the increase in average parental rank is unclear, but some attenuation bias is likely unavoidable given the survey's limitations.

[32] As discussed in Section 2 and Appendix A, parental income is primarily coded sequentially from the initial survey onward.

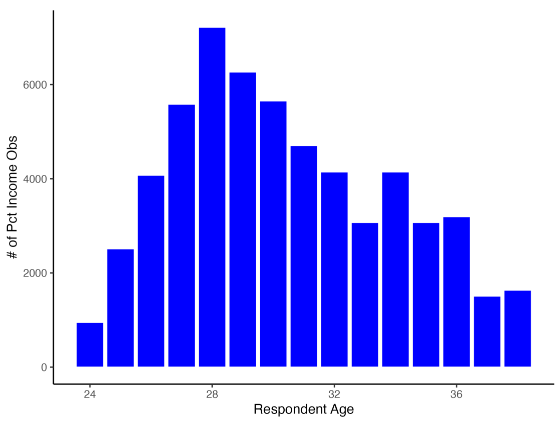
Figure 8: NLSY79 and NLSY97 Life-Cycle Bias



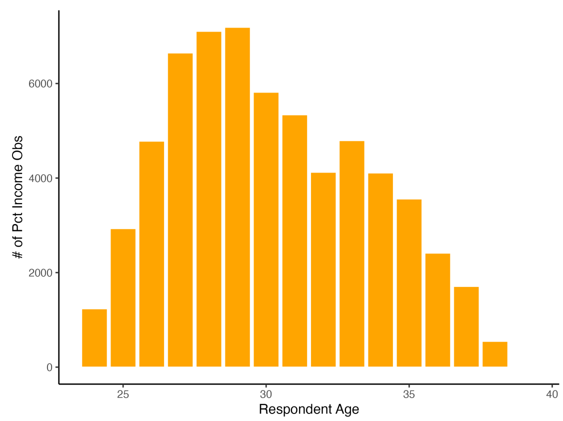
(a) NLSY79 Avg Resp Inc Pctl by Age



(b) NLSY97 Avg Resp Inc Pctl by Age



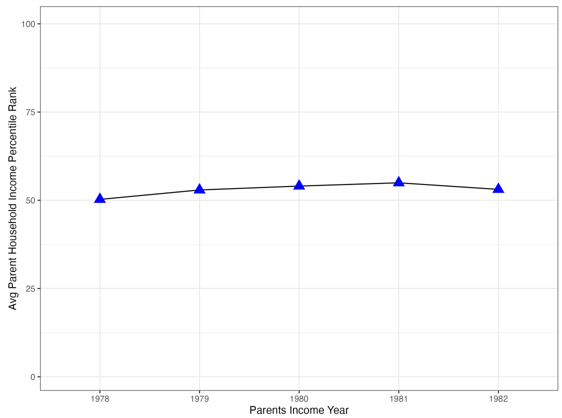
(c) NLSY79 Resp. Inc. Pctl. Dist. by Age



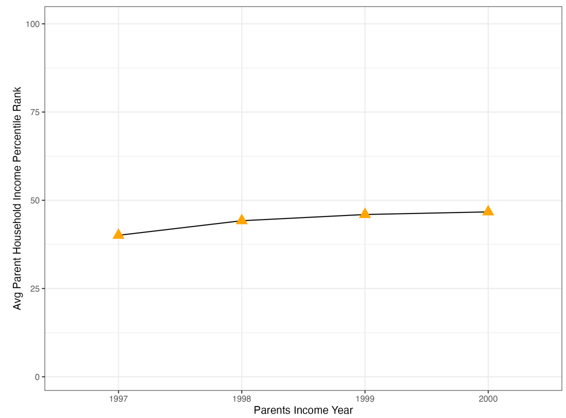
(d) NLSY97 Resp. Inc. Pctl. Dist. by Age

Note: Figure panels (a) and (b) show the average respondent percentile income rank by respondent age for the NLSY79 and NLSY97 overall samples, respectively. Panels (c) and (d) show the distribution of respondent income observations by age in the NLSY79 (blue) and NLSY97 (orange) overall sample average mean calculation. For specifics of the yearly respondent/parent percentile income rank construction, see Section 2 and Appendix A.

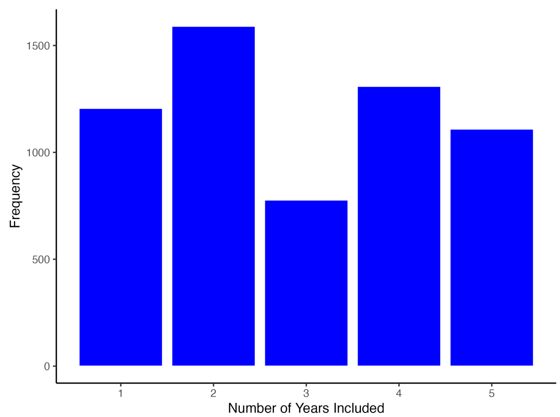
Figure 9: NLSY79 and NLSY97 Attenuation Bias



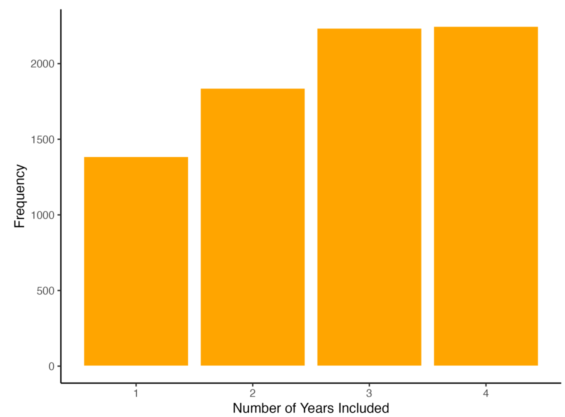
(a) NLSY79 Avg. Parent Inc. Pctl. by Year



(b) NLSY97 Avg. Parent Inc. Pctl. by Year



(c) NLSY79 Parent Inc. Pctl. Obs. Included



(d) NLSY97 Parent Inc. Pctl. Obs. Included

Note: Figure panels (a) and (b) present the average parent percentile income rank by year for the NLSY79 (blue) and NLSY97 (orange) overall samples, respectively. Panels (c) and (d) show the number of years included in the average parent percentile income rank calculation for the NLSY79 (blue) and NLSY97 (orange) overall samples, respectively. For specifics of the yearly respondent/parent percentile income rank construction and mean inclusion requirements, see Section 2 and Appendix A.

Table 10: Mobility Estimates: NLSY Samples, 30s Income Only

	Relative Mobility		Baseline Mobility		Upward Mobility	
	NLSY79 (1)	NLSY97 (2)	NLSY79 (3)	NLSY97 (4)	NLSY79 (5)	NLSY97 (6)
Overall	0.36	0.34	25.76	29.59	34.77	38.03
Region						
NE	0.43	0.32	22.96	32.58	33.61	40.62
NC	0.36	0.33	26.84	30.10	35.70	38.42
W	0.24	0.24	32.11	35.29	38.05	41.25
S	0.37	0.39	24.43	25.80	33.74	35.42
Sex						
Women	0.27	0.29	22.58	25.29	29.26	32.48
Men	0.45	0.38	28.89	34.39	40.08	43.77
Race						
Black	0.31	0.37	23.85	23.36	31.66	32.68
Hispanic	0.36	0.30	26.11	33.12	35.18	40.52
White	0.28	0.26	33.48	35.58	40.37	42.06
Sex by Race						
Black Women	0.31	0.39	20.34	21.83	28.19	31.52
Black Men	0.31	0.36	27.37	25.07	35.11	33.94
Hispanic Women	0.29	0.27	22.18	26.67	29.53	33.48
Hispanic Men	0.41	0.26	30.95	41.69	41.14	48.30
White Women	0.23	0.25	24.75	27.42	30.49	33.57
White Men	0.34	0.27	40.37	43.61	48.87	50.32

Note: All Table estimates use only the final two observation years of respondent's income (1997 and 1999 or 2016 and 2018) from both surveys to create respondent percentile income ranks. This is when the youngest were in or closest to their thirties. Columns (1) and (2) report the respective NLSY sample's relative mobility estimate, columns (3) and (4) do the same for the sample's baseline mobility estimate, and columns (5) and (6) do so for absolute upward mobility estimates. All estimated coefficient p-values are statistically significant ($p<0.001$).

Appendix D: NLSY79 Parent Income Alternative Construction

In this appendix, we re-estimate our NLSY79 models using total household income definitions. As discussed in the main text, the NLSY79 does not provide specific income measures for respondents' parents or individual household members. Therefore, we approximate parental income by altering the Net Family Income variable based on respondent household member information when respondents' parents participated in the survey.[33]

As a robustness check, we re-estimate our models using the top-coded version of the NLSY79 Net Family Income variables and construct CPS percentile bins based on top-coded household income rather than individual income. Table 10 presents the relative, baseline, and absolute upward mobility estimates in columns (1), (2), and (3), respectively.

Compared to our main analysis, using THHI definitions results in: (1) relative mobility estimates that are 0.03 to 0.09 lower, (2) baseline mobility estimates that are 3 to 4 ranks higher, and (3) absolute upward mobility estimates that are 1 to 3 ranks higher. These adjustments moderate the extent to which our main specification suggests increased mobility trends since the 1960s, especially when looking at our largest samples.

Table 12 combines the parent THHI construction with restricting NLSY79 respondent income to their final two years of survey data (see Appendix C). Comparing these mobility estimates to the NLSY97 estimates in Table 10, we generally see negligible relative mobility changes, aside from black Americans, whose relative mobility increased notably. We still observe slight increases (2-3 ranks on average) in upward mobility.

Additionally, we re-do our role model analysis with these new total household income defined estimates.[34] Overall, the results are consistent with our main specification. The main difference is that the correlation between a role model mother and hers daughters' lifetime employment strengthened marginally. For the NLSY79 overall women's sample, the average probit effect on the RME coefficient increased from 4.1 to 4.5 pp. For white women, the correlation become statistically significant at the 0.1 level, and increased from 3.2 to 3.8 pp.

[33]For a more detailed explanation of the construction of these variable for our main specification, see Section 2.

[34]We do not present the table or report the entire analysis. If curios, please reach out to the author.

Table 11: Mobility Estimates: NLSY79 Samples THHI Definitions

	Relative Mobility (1)	Baseline Mobility (2)	Upward Mobility (3)
Overall	0.31	25.87	33.59
Region			
NE	0.32	28.75	36.70
NC	0.32	24.29	32.35
W	0.27	27.60	34.42
S	0.30	25.10	32.67
Sex			
Women	0.24	22.64	28.52
Men	0.38	28.85	38.27
Race			
Black	0.26	25.27	31.67
Hispanic	0.29	27.69	34.92
White	0.30	27.37	34.93
Sex by Race			
Black Women	0.25	23.00	29.33
Black Men	0.26	27.52	33.90
Hispanic Women	0.24	23.34	29.39
Hispanic Men	0.33	31.90	40.21
White Women	0.25	20.91	27.14
White Men	0.36	32.99	41.90

Note: Columns (1), (2), and (3) report the respective NLSY79 sample's relative, baseline, and absolute upward mobility estimates using the Total Household Income definitions for our respondents parent's income and the utilized CPS percentile bins.

Table 12: Mobility Estimates: NLSY79 Sample THHI and Resp 30s Income Definitions

	Relative Mobility (1)	Baseline Mobility (2)	Upward Mobility (3)
Overall	0.31	28.32	36.06
Region			
NE	0.34	27.86	36.37
NC	0.32	28.11	36.12
W	0.21	33.58	38.76
S	0.32	27.24	35.18
Sex			
Women	0.22	25.21	30.63
Men	0.40	31.32	41.27
Race			
Black	0.28	26.45	33.53
Hispanic	0.29	29.80	36.99
White	0.25	34.04	40.29
Sex by Race			
Black Women	0.29	23.00	30.16
Black Men	0.27	30.10	36.94
Hispanic Women	0.23	25.36	31.01
Hispanic Men	0.35	34.22	42.87
White Women	0.19	26.70	31.35
White Men	0.32	39.97	48.07

Note: Columns (1), (2), and (3) report the respective NLSY79 sample's relative, baseline, and absolute upward mobility estimates using the Total Household Income definitions for our respondents parent's income and the utilized CPS percentile bins, as well as respondent income restricted to final two survey years.

Appendix E: Individual Model Results

Tables 3 contains the consolidated results of many different individual regression models and samples. Here in Appendix E, we provide detailed, individual regression tables for all samples included in those tables with observation counts, R^2 and adjusted R^2 values, and estimate significance levels. Additionally, all absolute upward mobility estimates in Table 4 are calculated from these tables.

5.1 Overall Samples

Table 13: Overall Sample OLS IRA Estimates

	NLSY79 Sample	NLSY97 Sample
	(1)	(2)
Avg Fam Inc Pctl	0.360***	0.296***
	(0.014)	(0.010)
Constant	23.165***	27.215***
	(0.759)	(0.487)
Observations	5,991	7,706
R^2	0.097	0.102
Adjusted R^2	0.097	0.101

+ p<0.1; * p<0.05; ** p<0.01; *** p<0.001

Note: The Table reports the relative and baseline mobility estimates for (1) the overall NLSY79 and (2) the overall NSLY97 samples. These numbers are similarly reported in Table 3. Robust standard errors are reported in parentheses.

5.2 By Region Samples

Table 14: NLSY79 Mobility Estimates by Region

	NLSY79 NE	NLSY79 NC	NLSY79 W	NLSY79 S
	(1)	(2)	(3)	(4)
Avg Fam Inc Pctl	0.374***	0.369***	0.306***	0.359***
	(0.035)	(0.030)	(0.034)	(0.022)
Constant	25.463***	22.090***	25.980***	22.142***
	(1.974)	(1.708)	(1.935)	(1.081)
Observations	1,150	1,492	1,050	2,204
R^2	0.093	0.094	0.066	0.104
Adjusted R^2	0.092	0.093	0.065	0.104

+ p<0.1; * p<0.05; ** p<0.01; *** p<0.001

Note: The Table reports the relative mobility (net family income) and baseline mobility (constant) estimates for the NLSY79 samples split by the four US regions: North East, North Central, West, and South. Robust standard errors are reported in parentheses. These numbers are similarly reported in Table 3.

Table 15: NLSY97 Mobility Estimates by Region

	NLSY97 NE	NLSY97 NC	NLSY97 W	NLSY97 S
	(1)	(2)	(3)	(4)
Avg Fam Inc Pctl	0.292***	0.278***	0.226***	0.336***
	(0.025)	(0.022)	(0.023)	(0.016)
Constant	29.936***	27.894***	31.430***	23.971***
	(1.254)	(1.139)	(1.086)	(0.704)
Observations	1,320	1,754	1,707	2,925
R^2	0.096	0.088	0.058	0.132
Adjusted R^2	0.095	0.087	0.057	0.131

+ p<0.1; * p<0.05; ** p<0.01; *** p<0.001

Note: The Table reports the relative mobility (gross household income) and baseline mobility (Constant) estimates for the NLSY97 samples split by the four U.S. regions: North East, North Central, West, and South. Robust standard errors are reported in parentheses. These numbers are similarly reported in Table 3.

5.3 By Sex Samples

Table 16: NLSY79 and NLSY97 Mobility by Sex

	NLSY79 women	NLSY79 men	NLSY97 women	NLSY97 men
	(1)	(2)	(3)	(4)
Avg Fam Inc Pctl	0.291***	0.422***	0.275***	0.310***
	(0.018)	(0.019)	(0.014)	(0.015)
Constant	19.689***	26.457***	23.354***	31.113***
	(0.958)	(1.086)	(0.626)	(0.731)
Observations	2,883	3,108	3,761	3,945
R^2	0.079	0.128	0.104	0.103
Adjusted R^2	0.079	0.128	0.103	0.103

+ p<0.1; * p<0.05; ** p<0.01; *** p<0.001

Note: The Table reports the relative mobility (Net Family Income and Gross Household Income) and baseline mobility estimates for the NLSY79 and NLSY97 samples by sex. Robust standard errors are reported in parentheses. These numbers are similarly reported in Table 3.

5.4 By Race Samples

Table 17: NLSY79 and NLSY97 Mobility by Race

	79 Black	79 Hispan	79 White	97 Black	97 Hispan	97 White
	(1)	(2)	(3)	(4)	(5)	(6)
Avg Fam Inc Pctl	0.283***	0.369***	0.344***	0.335***	0.256***	0.214***
	(0.027)	(0.034)	(0.020)	(0.021)	(0.025)	(0.016)
Constant	22.833***	23.746***	25.701***	20.709***	30.484***	33.532***
	(1.222)	(1.678)	(1.233)	(0.693)	(0.944)	(0.937)
Observations	1,688	1,077	3,226	2,074	1,667	3,965
R^2	0.065	0.095	0.080	0.121	0.060	0.046
Adjusted R^2	0.065	0.094	0.080	0.121	0.059	0.045

+ p<0.1; * p<0.05; ** p<0.01; *** p<0.001

Note: The Table reports the relative mobility (Net Family Income and Gross Household Income) and baseline mobility estimates for the NLSY79 and NLSY97 samples by race. Robust standard errors are reported in parentheses. These numbers are similarly reported in Table 3.

5.5 Sex by Race Samples

Table 18: NLSY79 and NLSY97 Women by Race Mobility

	79 BW	79 HW	79 WW	97 BW	97 HW	97 WW
	(1)	(2)	(3)	(4)	(5)	(6)
Avg Fam Inc Pctl	0.286***	0.311***	0.304***	0.350***	0.250***	0.242***
	(0.033)	(0.044)	(0.027)	(0.026)	(0.032)	(0.022)
Constant	20.228***	20.065***	18.343***	20.129***	25.178***	25.201***
	(1.460)	(2.166)	(1.581)	(0.874)	(1.184)	(1.292)
Observations	816	525	1,542	1,045	819	1,897
R^2	0.087	0.080	0.073	0.159	0.065	0.064
Adjusted R^2	0.086	0.078	0.072	0.158	0.064	0.064

+ p<0.1; * p<0.05; ** p<0.01; *** p<0.001

Note: The Table reports the relative mobility (Net Family Income and Gross Household Income) and baseline mobility estimates for the NLSY79 and NLSY97 women samples by race. Robust standard errors are reported in parentheses. These numbers are similarly reported in Table 3.

Table 19: NLSY79 and NLSY97 Men by Race Mobility

	79 BM	79 HM	79 WM	97 BM	97 HM	97 WM
	(1)	(2)	(3)	(4)	(5)	(6)
Avg Fam Inc Pctl	0.280***	0.405***	0.388***	0.318***	0.233***	0.189***
	(0.043)	(0.045)	(0.026)	(0.033)	(0.037)	(0.022)
Constant	25.298***	28.079***	32.072***	21.326***	36.526***	41.126***
	(1.929)	(2.336)	(1.657)	(1.087)	(1.425)	(1.272)
Observations	872	552	1,684	1,029	848	2,068
R^2	0.053	0.114	0.112	0.093	0.050	0.037
Adjusted R^2	0.052	0.112	0.112	0.092	0.049	0.037

+ p<0.1; * p<0.05; ** p<0.01; *** p<0.001

Note: The Table reports the relative mobility (Net Family Income and Gross Household Income) and baseline mobility estimates for the NLSY79 and NLSY97 men samples by race. Robust standard errors are reported in parentheses. These numbers are similarly reported in Table 3.

5.6 Education Samples

Table 20: NLSY Samples Mobility: College Attendance

	NLSY79 Sample	NLSY97 Sample
	(1)	(2)
Avg Fam Inc Pctl	0.006***	0.006***
	(0.0003)	(0.0002)
Constant	0.123***	0.353***
	(0.015)	(0.010)
Observations	6,281	8,152
R^2	0.067	0.096
Adjusted R^2	0.067	0.096

+ p<0.1; * p<0.05; ** p<0.01; *** p<0.001

Note: The Table reports the impact that parental percentile income rank has on respondents college attendance (defined as completing at least one year of college) for the overall pooled NLSY Samples. Robust standard errors are reported in parentheses.

Table 21: NLSY79 Americans Mobility by Race: College Attendance

	79 BW	79 BM	79 HW	79 HM	79 WW	79 WM
	(1)	(2)	(3)	(4)	(5)	(6)
Avg Fam Inc Pctl	0.005***	0.005***	0.004***	0.005***	0.007***	0.007***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.0005)
Constant	0.282***	0.106**	0.279***	0.102*	0.038	0.012
	(0.039)	(0.035)	(0.053)	(0.045)	(0.032)	(0.028)
Observations	848	910	545	579	1,613	1,786
R^2	0.045	0.048	0.028	0.048	0.101	0.095
Adjusted R^2	0.044	0.047	0.026	0.046	0.100	0.094

+ p<0.1; * p<0.05; ** p<0.01; *** p<0.001

Note: The Table reports the impact that parental percentile income rank has on respondents respondents college attendance (defined as completing at least one year of college) for the NLSY79 samples by sex and race. Robust standard errors are reported in parentheses.

Table 22: NLSY97 Americans Mobility by Race: College Attendance

	97 BW	97 BM	97 HW	97 HM	97 WW	97 WM
	(1)	(2)	(3)	(4)	(5)	(6)
Avg Fam Inc Pctl	0.006***	0.006***	0.006***	0.006***	0.005***	0.006***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.0004)	(0.0004)
Constant	0.463***	0.229***	0.381***	0.277***	0.438***	0.314***
	(0.023)	(0.022)	(0.027)	(0.027)	(0.024)	(0.024)
Observations	1,069	1,066	844	897	2,049	2,227
R^2	0.087	0.083	0.076	0.075	0.082	0.081
Adjusted R^2	0.087	0.082	0.075	0.074	0.082	0.080

+ p<0.1; * p<0.05; ** p<0.01; *** p<0.001

Note: The Table reports the impact that parental percentile income rank has on responents educational outcomes (defined as their highest grade achieved) for the NLSY97 samples by sex and race. Robust standard errors are reported in parentheses.

Appendix F: Single Mother Regressions

This appendix outlines the two-step Heckman-corrected regressions that account for respondent women raised by single mothers. As noted in the main text, the proportion of single mothers rises substantially between samples, with 144 (5%) of women in the pooled NLSY79 sample and 899 (30%) in the pooled NLSY97 sample. This increase is relatively uniform across racial groups. Table 22 presents results for the pooled women's samples and breakdowns by race.

Including the single mother dummy variable has minimal impact on our results, as it remains largely uncorrelated across all samples. In the pooled women's sample, the correlation strength of γ and τ (the role model effect coefficients) persists, and this holds true across racial subgroups as well.

Table 23: NLSY Heckman Corrected Models with Single Mother Dummy

	79 PW (1)	97 PW (2)	79 BW (3)	79 HW (4)	79 WW (5)	97 BW (6)	97 HW (7)	97 WW (8)
Avg Fam Inc Pctl	0.075^{*}	0.013	0.079	0.123	0.048	0.120^{+}	-0.018	0.001
	(0.035)	(0.029)	(0.067)	(0.080)	(0.056)	(0.067)	(0.073)	(0.042)
RME	1.312	-3.297^{+}	-0.338	-1.369	4.222	-3.650	-1.636	-2.499
	(2.561)	(1.751)	(3.700)	(5.297)	(4.769)	(3.663)	(3.192)	(3.017)
Resp. HS Dg	0.323	-3.455	-2.344	-7.573	-1.214	-11.865	-2.670	2.713
	(3.190)	(3.515)	(6.319)	(6.404)	(4.346)	(7.647)	(7.009)	(5.114)
Resp. Coll Dg	10.508^{***}	8.179^{***}	7.630^{***}	7.781^{*}	12.426^{***}	3.239	8.231^{**}	11.476^{***}
	(1.185)	(1.534)	(2.119)	(3.144)	(1.700)	(4.441)	(2.901)	(1.646)
Resp. Reg NE	5.343^{***}	5.477^{***}	5.231^{+}	10.234^{*}	2.469	6.193	11.084^{**}	3.687^{*}
	(1.494)	(1.523)	(3.034)	(5.205)	(1.962)	(3.906)	(4.023)	(1.789)
Resp. Reg S	-0.890	2.587^{*}	-8.733^{***}	-2.842	0.782	-0.975	8.589^{*}	3.436^{*}
	(1.249)	(1.266)	(2.496)	(4.801)	(1.710)	(2.903)	(4.335)	(1.586)
Resp. Reg W	4.056^{**}	6.522^{***}	-3.924	0.399	7.122^{***}	8.983	11.307^{*}	4.869^{**}
	(1.439)	(1.498)	(3.398)	(4.606)	(2.129)	(5.732)	(4.433)	(1.766)
Resp. Ability	0.136^{***}	0.119^{***}	0.217^{***}	0.113^{+}	0.112^{***}	0.101	0.224^{***}	0.080^{*}
	(0.021)	(0.025)	(0.050)	(0.058)	(0.034)	(0.084)	(0.053)	(0.031)
Resp. Age	0.532	1.257^{***}	1.209^{*}	0.577	0.224	1.375^{*}	-0.674	1.777^{***}
	(0.359)	(0.318)	(0.584)	(0.933)	(0.535)	(0.692)	(0.747)	(0.411)
Single Mom	0.177	0.571	0.763	-3.273	-0.483	1.994	2.129	-0.302
	(2.409)	(1.098)	(2.868)	(6.196)	(4.904)	(2.355)	(2.645)	(1.537)
RME Interaction	-0.004	0.040	0.055	0.006	-0.059	-0.078	0.016	0.055
	(0.042)	(0.030)	(0.076)	(0.096)	(0.070)	(0.063)	(0.077)	(0.048)
Constant	26.362^{***}	28.667^{***}	23.230^{+}	43.098^{*}	35.523^{**}	44.571^{*}	45.942^{*}	12.210
	(7.951)	(8.484)	(13.968)	(17.850)	(11.702)	(20.996)	(20.917)	(9.877)
Observations	2,721	3,014	784	492	1,445	844	589	1,581
R^2	0.252	0.308	0.376	0.287	0.240	0.404	0.328	0.250
Adjusted R^2	0.246	0.304	0.360	0.257	0.228	0.389	0.305	0.241
Inverse Mills Ratio	-8.8^{***} (2.7)	-21.5^{***} (5.3)	-11.0^{*} (5.0)	-20.6^{**} (6.2)	-11.9^{***} (3.2)	-34.2^{*} (14.7)	-18.5 (13.6)	-13.9^{**} (4.9)

Note: Table presents the Heckman-corrected OLS models described in section 4 but with the added single mother dummy for both NLSY79 and NLSY97 pooled women samples (columns (1) and (2)) and women by race samples (columns (3) - (8)). Standard errors are in parentheses. All variables are the same as in tables 6-9, except *Single mother*, which is the single mother dummy.