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THE EVOLVING MARRIAGE GAP IN CHILDREN'S OUTCOMES:
FAMILY STRUCTURE AND YOUNG ADULT OUTCOMES REVISITED

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The Evolving Marriage Gap in Children's Outcomes: Family Structure and Young Adult Outcomes
Revisited

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ABSTRACT

Much of the existing research on the relationship between family structure and children's outcomes has focused on average effects. Kearney and Levine (2017) instead proposed a heterogeneous framework in which the gap in outcomes between children of married and unmarried parents varies according to the resource context, namely a mother's own resources, the net resources that a partner would contribute, and the outcome-specific returns to those resources. Using data from the 2013 Panel Study of Income Dynamics (PSID), they found evidence consistent with the model's predictions. We revisit this question using the 2023 PSID to examine how these relationships have changed over the past decade. We find that the association between childhood family structure and young adult poverty has greatly diminished, whereas the association with college completion persists and is concentrated among children of mothers with higher levels of education. These findings suggest that although the economic circumstances of single mothers and their children have generally improved in recent decades, disparities in household resources and higher-order educational outcomes by family structure remain.

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Introduction

It is widely documented that children raised in married-parent homes have better measurable outcomes than children who grow up in single-parent homes, on average. But the extent to which parental marriage is likely to benefit children depends critically on parental circumstances and varies by outcomes. Kearney and Levine (2017) introduced the concept of a heterogeneous “marriage premium” for children’s outcomes and proposed that the premium or gains to marriage from a child’s perspective depend on a mother’s own level of resources, the additional net resources that her partner would bring, and the outcome-specific returns to resources. Using longitudinal data from the *Panel Study of Income Dynamics* (PSID) to examine regression-adjusted gaps in outcomes, that 2017 study confirmed the heterogeneous predictions of this framework for children born between 1960 and 1989.

Namely, Kearney and Levine (2017) showed that the gap in primary outcomes – including obtaining a high school degree and having income above the poverty line in early adulthood – between children born to unmarried versus married mothers for primary outcomes followed an inverted U-shaped pattern in terms of a mother’s level of resources as captured by her education or age at birth; the gap was largest for children with high-school educated mothers and mothers in their mid-20s. For harder-to-achieve outcomes including earning a four-year college degree or having high income in young adulthood, the observed marriage gap in outcomes increased with maternal age and education.

This study revisits the marriage premium framework with PSID data from 2015-2023 to examine how gaps in outcomes by family structure have changed for more recent birth cohorts. We examine the differences in the so-called marriage premium across cohorts, also making use of the fact that the more recent data allows us to observe long-term outcomes for children born in the 1980s and 1990s.

We begin by examining transitions in children’s living arrangements between birth and age 14 for those born in different decades. We confirm that a mother’s marital status at birth is highly predictive of the child’s living arrangement at age 14 and that children born to unmarried mothers in recent decades are less likely to live in a married parent home at age 14 than in the past. We also document that the (real) absolute levels of household income are higher among unmarried mother households in more recent years, but that the gaps in household income between married and unmarried mother households have widened.

We briefly summarize the theoretical underpinning of Kearney and Levine (2017) and then present new evidence into how the marriage premium has evolved for more recent cohorts of children. The gap in young adult poverty (measured at age 25) between children born to married and unmarried mothers is narrower for children born in the 1990s as compared to children born in the 1970s and 1980s. In contrast, the college completion gap persists. The patterns in these data also reveal that while increases in the material resources of unmarried mothers have been associated with improved basic outcomes for children born to unmarried mothers (in both an

absolute and relative sense), those improvements appear insufficient to eliminate gaps in more advanced outcomes – specifically, four-year college degree attainment.

I. Transitions in living arrangements between birth and age 14

We begin our descriptive analysis by examining children’s living arrangements at the time of birth and at age 14. This allows us to examine how marital status at the time of birth has changed across cohorts, as well as how transitions between living arrangements at birth and in adolescence have evolved over time. (These numbers can be found in Appendix Table 1, which reports the share of children in various living arrangements at age 14 based on the marital status of their mother at the time of the child’s birth, separately by birth decade.)

A first pattern that emerges from the data is the general stickiness of family structure. Most children born to married parents live with married parents at age 14; the shares are between 73 and 82 percent across birth cohorts. Similarly, across birth cohorts, between 48 and 57 percent of children born to mother only households are observed to be in mother only households at age 14. This stickiness should be kept in mind when interpreting the main analyses below, which categorize family structure based on a mother’s marital status at the time of birth.

In terms of trends in family structure at birth, the data reveal a steady decline in the share of children born into married parent households. In the 1970s, 75 percent of children were born into a married parent household; that share remained relatively constant at 74 percent for children born in the 1980s and 73 percent for children born in the 1990s and then fell to 66 percent for children born in the 2000s.

The share of children born to unmarried, cohabiting biological parents has risen steadily across cohorts, from two percent in the 1970s to five percent in the 1980s, 11 percent in the 1990s, and to 15 percent among those born between 2000-2009. The data also show that these cohabiting arrangements are substantially less stable than parental marriages. Children with cohabiting parents at birth are much more likely to experience a family transition in which at least one biological parent is absent by age 14.¹ Among children born in the 2000s, only 32 percent of children with cohabiting parents at birth are living with married biological parents at age 14; nine percent remain with cohabiting biological parents.

Most children born to cohabiting parents in the 2000s live with only one biological parent at age 14: 27 percent are in a mother only household, 12 percent live with only their father, and 15 percent live with their mother and another adult (10 percent through remarriage and 5 percent through cohabitation with another adult). This same pattern is present for children born in the 1980s and 1990s – the share of children born to cohabiting parents who end up living with only one biological parent at age 14 is 48 percent and 55 percent, respectively.

¹ Manning (2015) documents high rates of family instability experienced by children born to cohabiting parents.

The instability of cohabiting parental unions implies that it would be inappropriate to conceptually consider this family structure akin to parental marriage. For this reason, as in Kearney and Levine (2017), in our analysis of gaps in outcomes, we categorize children born to cohabiting parents with unmarried mothers rather than with married parents. This choice means that to the extent cohabiting parents act like married parents in terms of combining resources and jointly investing in child development, the observed gaps between married and unmarried parents will be smaller.

II. Mother's Characteristics at the Time of Birth

We now turn our attention to the characteristics of children's mothers and households at the time of birth. Table 1 Panel A reports maternal characteristics. The data show that married mothers tend to be older, more educated, and have higher household income, as compared to unmarried mothers. We compare these characteristics across three birth cohorts – 1970-1989, 1990-2009, and 2010-2019. We pool the data from the 1970s and 1980s and the 1990s and 2000s to generate more stable estimates, given the relatively small sample sizes of the PSID.

For all three cohorts, married mothers are between four to six years older than unmarried mothers. They also have between one to two years more of schooling – with the gap in education increasing over time. Unmarried mothers are also far more likely to be living with a parent at the time of the child's birth than married mothers, though that share has declined across cohorts, falling by roughly 11.5 percentage points from the earliest cohort to the most recent one.

Table 1 Panel B reports median household income and poverty status at birth. As can be seen in the table, the gap in household income between married and unmarried mothers has *increased* across decades, rising from \$38,747 (in 1970s/80s) to \$52,512 (in 1990s/2000s) to \$59,708 (in 2010s), all in real year 2023 dollars. While both unmarried and married mother households have experienced steady gains in income across time, the growth in the household income of married mothers has outpaced that of unmarried mothers.

As can be seen in Panel B, children born to unmarried mothers are substantially more likely to be in poverty at birth. However, in contrast to the gap in household income, the gap in poverty rates has narrowed: the share of unmarried children *not* in poverty increased from 55% to 66%, while the share among married children remained relatively stable at around 93%. This trend is consistent with improved material resources among unmarried mothers, reflecting both changes in composition and changes in economic and policy conditions.²

As can be seen in Panel C, considering household income and years not in poverty during a child's early life (ages 0–5) and adolescence (ages 0–16) yields similar patterns to what is observed at the time of birth. The income gap between married and unmarried mothers remains

² See, for example, Meyer and Rosenbaum (2001), which shows that welfare and tax reform in the 1980s and 1990s led to an increase in the employment of unmarried mothers and Meyer and Sullivan (2008), which documents improvements in the material circumstances of unmarried mother households over these decades.

large and has grown across cohorts, while the gap in the share of years children spent in poverty has narrowed over time.

III. Gaps in Early Adult Outcomes, Across Cohorts

Building on our examination in resource gaps in childhood, we now turn to examining outcome gaps in early adulthood. Using the most recent wave of PSID data, we report on outcomes for young adult children at age 25 who were born between 1970 and 1999. Figure 1 documents the marriage premium for two key outcomes: being above the poverty line at age 25 and achieving a four-year college degree by age 25. In Appendix Table 2, we also report gaps for the primary outcome of obtaining a high school degree by age 20. Similarly to above, we stratify by birth decade to examine changes over time.

The first notable result from this figure is that the marriage premium exists for both outcomes across all decades: children born to married parents are more likely to be above the poverty line and obtain a college degree than children born to unmarried mothers. The poverty gap is at least 10 percentage points in every cohort, while the college completion gap ranges from 21 to 30 percentage points. The premium for obtaining a high school degree has also persisted across all three decades, consistently falling between 10 and 12 percentage points (see Appendix Table 2).

While the marriage premium persists across cohorts, the trend differs by outcome. For poverty status at age 25, the gap narrows over time. This convergence mirrors reductions in poverty among children born to unmarried mothers, while poverty rates among children born to married mothers remain relatively low across cohorts. In contrast, the marriage premium for college completion widens substantially over time. Much of this divergence is driven by rising college attainment among children born to married mothers in the 1980s and 1990s birth cohorts – a pattern not observed among children born to unmarried mothers.

The next section draws on the theoretical model of Kearney and Levine (2017) to explain why these diverging trends are expected to produce differing heterogeneous marriage premiums across the maternal resource distribution.

IV. Review of Theoretical Framework

Kearney and Levine (2017) develop a theoretical framework for understanding how and in what circumstances parental marriage would yield a premium to children in terms of improved later life outcomes. Specifically, they propose that the marriage premium for children will depend on three core elements: a mother's own level of resources, the additional resources that her partner would bring to the household, and the returns to those additional resources.

First, a mother brings her own financial and non-financial resources to a household, providing a baseline ability to produce child-specific outcomes. A higher-resourced mother – say, an older mother or a mother with a college degree – is much more likely to be able to keep her child out of poverty or help propel them through high school, as compared to a teen mother or a mother without a high school degree. The highly resourced mother probably wouldn't gain very much from marriage in terms of poverty reduction. In this sense, the marriage premium depends on a mother's own level of resources.

Second, the benefits that accrue to a child from having the resources of a second parent in the household depend crucially on the extent of those resources and the specific outcome in question. Assortative mating plays a critical role in determining the resources that a second parent would bring. Women tend to partner with men of similar economic standing (see, for instance, Hirschl, Schwartz, and Boschetti, 2024; Chambers, Goldman, and Winkelmann, 2026), so higher-resourced mothers are likely to have higher-resourced partners and therefore stand to gain more from marriage in absolute terms than lower-resourced partners.

Third, the extent to which the resource gains of a second parent translate into better outcomes for children depends on the outcome in question, and how hard it is to attain. Specifically, the additional resources that a father brings to a household headed by a mother with limited resources might help when it comes to primary outcomes like poverty avoidance, but still not be enough to appreciably increase the likelihood of achieving an advanced outcome like college completion. In contrast, the additional resources the partner of a college-educated mother would bring to a household might be both necessary and sufficient to help propel a child through college.

This framework predicts the following: for poverty avoidance, the children of lower-resourced mothers will experience the largest relative benefit from marriage, provided fathers have non-negligible resources to contribute to the household. For an advanced outcome like college completion, the children of higher-resourced mothers will experience the largest relative benefit from marriage. Kearney and Levine (2017) empirically confirmed these patterns with data from the 2013 PSID.

The following two sections revisit this analysis with more recent data, examining how the marriage premium for children's young adult outcomes has evolved over recent decades.

V. Poverty Gaps in Early Adulthood, by Birth Cohort

We begin our analysis of heterogeneity by examining the marriage premium for the primary outcome of having household income above the poverty line at age 25. Figure 2a reports the unadjusted marriage gap in poverty at age 25 for two birth cohorts, stratified by maternal education. We pool the sample of children born in the 1970s and 1980s to maintain sample size while we split by maternal education. We separate children born in the 1990s – rather than dividing the years in half – because of the well-documented changes in the employment and economic well-being of single mothers over the 1990s (see, for instance, Meyer and Rosenbaum, 2001; Meyer and Sullivan, 2008.) Appendix Table 3 reports the corresponding numbers.

Two distinct patterns stand out in Figure 2a. First, the marriage premium is present for both college and non-college educated groups across both birth cohorts. Even among older and college-educated mothers, children born to unmarried mothers tend to have lower rates of poverty avoidance at age 25 than children born to married mothers.

Second, the marriage premium for young adult poverty narrows over time among both groups, dropping by 7 percentage points for children with mothers who do not have a college degree and 16 percentage points for children with mothers who have a BA or higher. For both maternal

education groups, the driving force behind the diminishing marriage premium appears to be the increasing share of children born to unmarried mothers that are able to avoid poverty in adulthood in the later cohort. By contrast, the share of children not in poverty at age 25 for children born to married mothers has remained relatively high across both cohorts for both education groups.³

We expand our analysis by examining regression-adjusted estimates of the heterogeneous marriage premium. We estimate linear probability models that include the following explanatory variables: maternal education at birth (in years), mother's marital status at birth, their interaction, and child sex, race/ethnicity, and birth year fixed effects. To flexibly capture nonlinearity, we include quadratic and cubic terms in maternal education and allow the marriage premium to vary nonlinearly with education by including quadratic and cubic interactions between marital status and education. We then compute, for each year of completed education from 10 to 16, the predicted difference in outcome probability between children born to married versus unmarried mothers as a linear combination of the estimated coefficients, with 95% confidence intervals obtained via the delta method.

Figure 3 plots the regression-adjusted marriage premium over maternal education for the outcome of being above the poverty line at age 25.⁴ Panel A shows that the marriage premium for the 1970-1989 birth cohort follows a slightly downward sloping line, with mothers at the low-end and middle of the education distribution gaining the most from marriage. Children born in those years to mothers with 10-13 years of completed education are approximately 7-12 percentage points more likely to be above the poverty line at age 25 if their mother is married at the time of birth, as compared to children born to unmarried mothers. This departs slightly from our theoretical model and findings from Kearney and Levine (2017), suggesting that the resource gains from marriage for mothers at the low-end of the resource distribution in these decades may be sufficient to enable their children to avoid poverty in early adulthood. Panel C reports the marriage premium for the 1970-1989 birth cohort with regression controls for childhood household income. This adjustment leads to only a small reduction in the estimated marriage gap, signifying that the disparities in outcomes cannot be explained simply by differences in household income.

³ Appendix Figures 1 and 2 show that same general pattern holds when looking at mothers by age instead of education for poverty avoidance and college completion respectively. Appendix Table 4 reports point estimates and their standard errors.

⁴ The regression coefficients and their standard errors are reported in Appendix Tables 5 and 6.

Figure 3 Panels B and D plot the marriage premium for children born in 1990-1999 with and without income controls, respectively. For this more recent cohort, the estimated marriage premium, although U-shaped, is not statistically significant across the maternal education distribution. These regression-adjusted estimates confirm that children born in the 1990s to married mothers are no more likely to be above the poverty line at age 25 than children born to unmarried mothers.⁵

Appendix Figure 5 plots the primary outcome of obtaining a high school degree (or equivalent) by age 20, over maternal education for both birth cohorts. Similarly to the poverty premium, the premium for high school completion is insignificant for mothers with higher levels of education and modestly significant at the middle and lower end of the distribution. Appendix Figure 6 plots this over maternal age at birth and finds that the premium is largest for mothers in their late-teens to early-to-mid-20s (approximately 5-11 percentage points for those born in 1970-1989 when controlling for childhood income). While the premium remains relatively constant across decades when graphed over maternal education at birth, using maternal age at birth shows that the premium has become insignificant for those born in the 1990s.

Taken together, these results suggest that differences in poverty avoidance at age 25 between children born to married and unmarried mothers have narrowed in recent birth cohorts, driven by a reduction in early adult poverty among children born to unmarried mothers.

VI. College Completion Gaps in Early Adulthood, by Birth Cohort

We next examine gaps between children born to married and unmarried mothers in terms of four-year college degree completion by age 25. Kearney and Levine (2017) documented a monotonic relationship between mother's resources – as proxied by age and education – and the gap in college completion. In this update, we find that a wide marriage premium in college completion persists.⁶

Figure 2b shows the (unadjusted) share of children born to married and unmarried mothers who earn a four-year college degree by age 25, stratified by mother's education. In contrast to the poverty gap, the marriage premium for college completion remains large across the two birth cohorts. While children born to unmarried mothers with and without college degrees have seen increased college completion rates over time (4 percentage points and 13 percentage points respectively), this rate of growth has failed to even remotely keep pace with the college completion rates of children born to married mothers. The result of this is a marriage premium of 19 percentage points for mothers without a college degree and 17 percentage points for mothers with a college degree in the most recent cohort.

⁵ Appendix Figures 3 and 4 and Appendix Tables 7 and 8 report similar patterns using maternal age instead of maternal education.

⁶ Blandin and Herrington (2022) similarly find an important role of family structure in predicting educational attainment in recent decades, also using PSID data.

Appendix Figure 2 illustrates the premium for college completion by maternal age groups, showing that the marriage premium has grown for children born to mothers aged 25-29 and 30 or older at birth by 5 and 12 percentage points respectively. In both figures, it is evident that children born to married mothers who are highest on the resource distribution (mothers with college degrees or mothers age 30+ at birth) exhibit the highest college completion rates across birth cohorts.

Figure 4 plots the estimated marriage premium for college completion by age 25 across levels of maternal education, across birth cohorts, and with and without controls for household income. All panels show that the marriage premium in college completion increases in a roughly linear manner with maternal education – this is true for both the 1970-1989 birth cohorts and the 1990-1999 birth cohort.⁷ Appendix Figure 4 shows analogous patterns using maternal age at birth instead of maternal education, where the monotonic relationship is more pronounced.⁸ At most resource levels, the college completion premium remains significant at approximately 5-20 percentage points over maternal education and approximately 5-35 percentage points over maternal age at birth.

VII. Final Discussion

Kearney and Levine (2017) showed that the benefits to children from parental marriage depend on a mother's baseline level of resources. This paper revisits the framework and empirical findings from that earlier paper with data from more recent cohorts of children, comparing marital gaps in young adult outcomes for children born in the 1990s to those born in the 1970s and 1980s. Our findings point to two distinct trajectories. First, the marriage premium for poverty avoidance has lessened for children born in the 1990s. This convergence has happened alongside broad-based gains in economic living standards among unmarried mother families.⁹

College completion shows no such trend. The marriage premium for four-year degree attainment persists and increases with maternal education and age at birth. This pattern is consistent with the outcome of a four-year college degree requiring an especially large investment of parental resources, which is more likely to be experienced by children who have the benefit of two highly resourced parents in the home. The general trend of assortative mating (see Chambers, Goldman, and Winkelmann, 2026) means that in general, marriage compounds the resource advantage of highly resourced partners.

Together, these results highlight an important asymmetry in how the link between childhood family structure and young adult outcomes has changed over time. The gap in young adult poverty between children born to married and unmarried mothers still exists but is small for children born in the 1990s. But a wide gap in young adult college completion persists, revealing that crucial gaps in children's long-run outcomes by family structure remain.

⁷ See Appendix Tables 5 and 6 for coefficient estimates and standard errors.

⁸ See Appendix Tables 7 and 8 for coefficient estimates and standard errors.

⁹ Kearney and Sullivan (2025) document – using multiple measures of poverty – a sizable decline in poverty rates among single mother families over recent decades, reflecting both increased earnings and transfer income.

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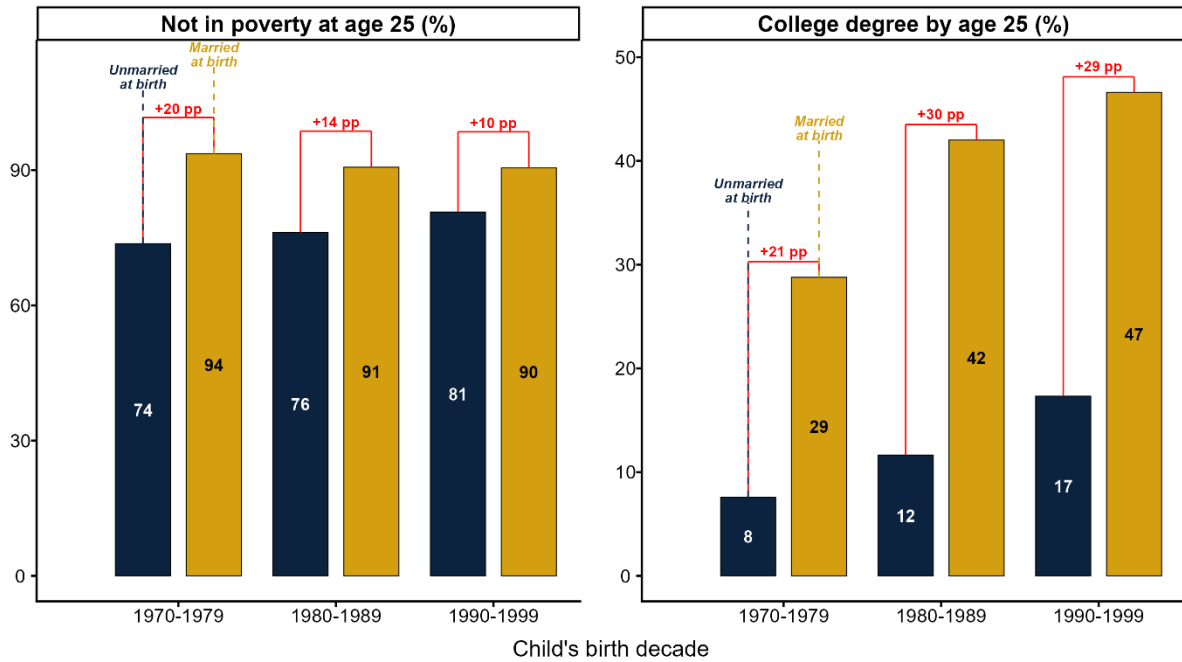
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Table 1: Mother and Household Characteristics in Year of Birth, Across Birth Cohorts

	1st Birth 1970-1989			1st Birth 1990-2009			1st Birth 2010-2019		
	Married	Not Married	Gap (M-NM)	Married	Not Married	Gap (M-NM)	Married	Not Married	Gap (M-NM)
Panel A:									
<u>Mother's Characteristics</u>									
Age at Birth	26.8	22.7	4.0	29.7	23.6	6.1	30.9	26.0	4.9
Years of Education	12.9	11.5	1.5	14.0	12.0	2.1	14.9	12.8	2.1
Mother Living with Parents	1.3	30.7	-29.4	2.1	26.9	-24.9	3.5	19.2	-15.7
Panel B:									
<u>Household Income and Poverty at Birth</u>									
Median Income (2023\$)	\$65,895	\$27,148	\$38,747	\$91,339	\$38,828	\$52,512	\$103,850	\$44,141	\$59,708
Percent Not in Poverty	92.7	55.2	37.4	93.4	65.7	27.7	92.3	65.6	26.7
Panel C:									
<u>Household Income and Poverty in Childhood</u>									
Median Income, Ages 0-5 (2023\$)	\$72,703	\$31,568	\$41,134	\$98,439	\$43,210	\$55,229	\$112,209	\$46,999	\$65,210
% of Years Not in Poverty, Ages 0-5	91.2	55.2	36.0	91.9	65.5	26.4	92.2	68.0	24.2
Median Income, Ages 0-16 (2023\$)	\$83,851	\$36,367	\$47,484	\$111,178	\$48,552	\$62,626	\$116,183	\$49,585	\$66,598
% of Years Not in Pov., Ages 0-16	91.3	58.5	32.8	92.4	68.6	23.8	92.5	68.9	23.6
Observations	5,409	2,061	—	4,327	3,046	—	1,924	1,620	—

Notes: An observation is a child born in the stated years in the Panel Study of Income Dynamics (PSID) with an identified mother. Each observation is weighted by the mother's individual-level PSID sampling weight for personal characteristics and by the household PSID sampling weight for household-level measures. Maternal education is measured at the time of her child's birth. Household income is reported in 2023 dollars, adjusted using the PCE price index. Median income is defined as the median of annual household income averaged over all available years for a child's household between the ages of 0 and 5 or 0 and 16. For measures averaging over ages 0-16, the 2010-2019 cohort only contains children up to 14 years old and averages across all years where the child is observed.

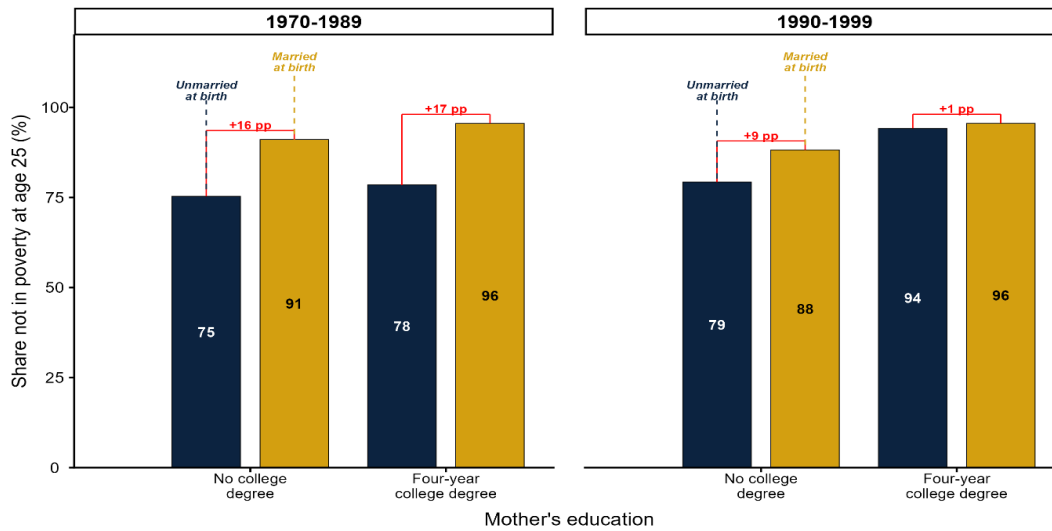
Figure 1: Children's long-term outcomes by child's year of birth and mother's marital status at birth



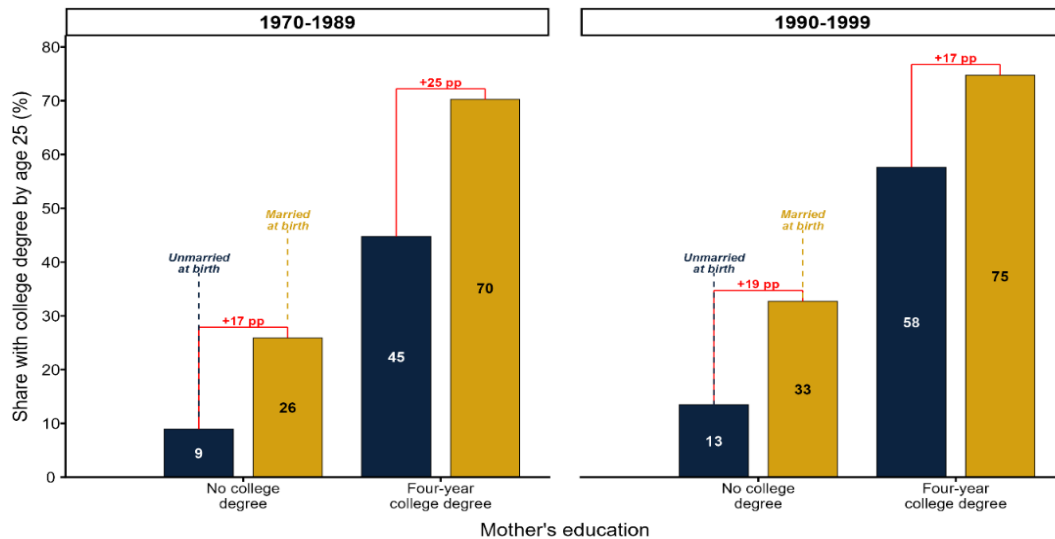
Notes: An observation is a child born between 1970 and 1999 in the PSID. Each observation is weighted by the child's individual level PSID sampling weight in the year the outcome is observed. Exact point estimates and their corresponding standard errors are reported in Appendix Table 2.

Figure 2: Young adult outcomes, by mother's marital status and education

(a) Share of children not in poverty at age 25

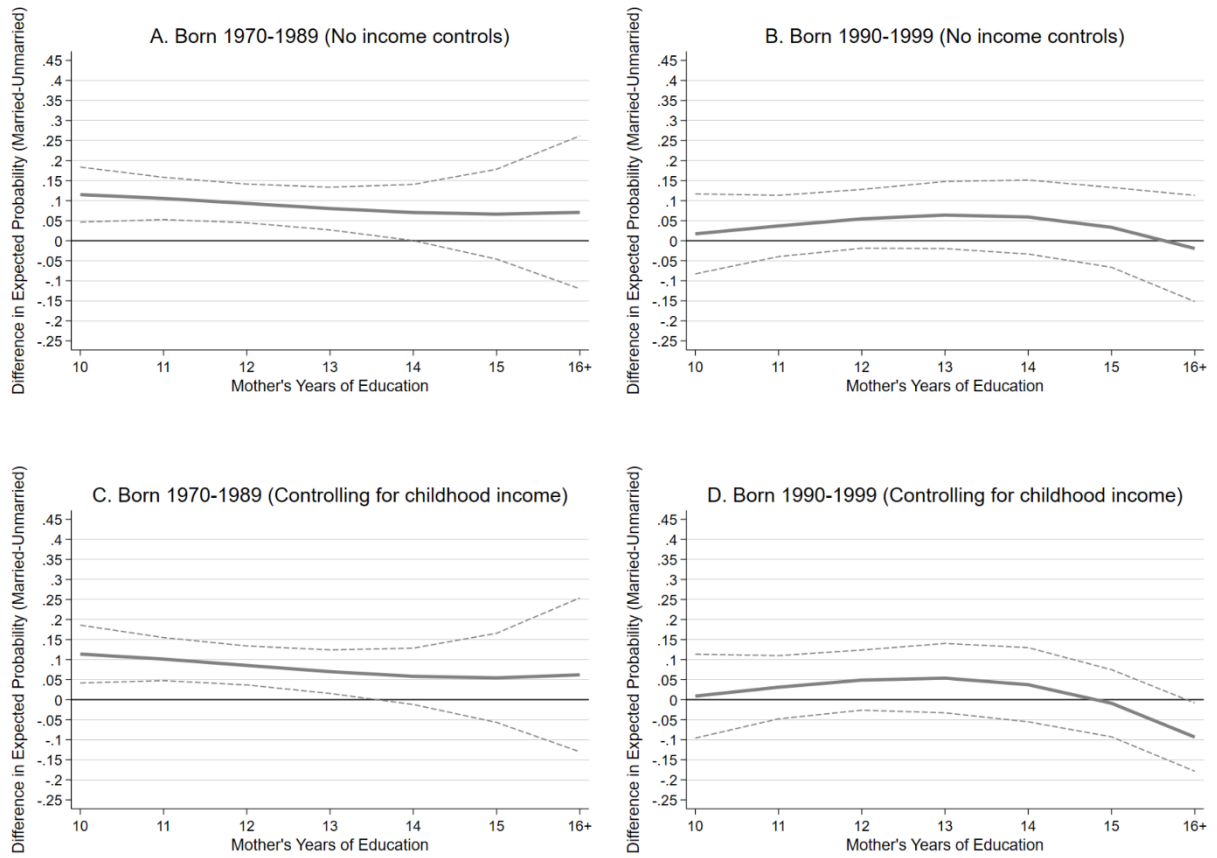


(b) Share of children with a 4-year college degree by age 25



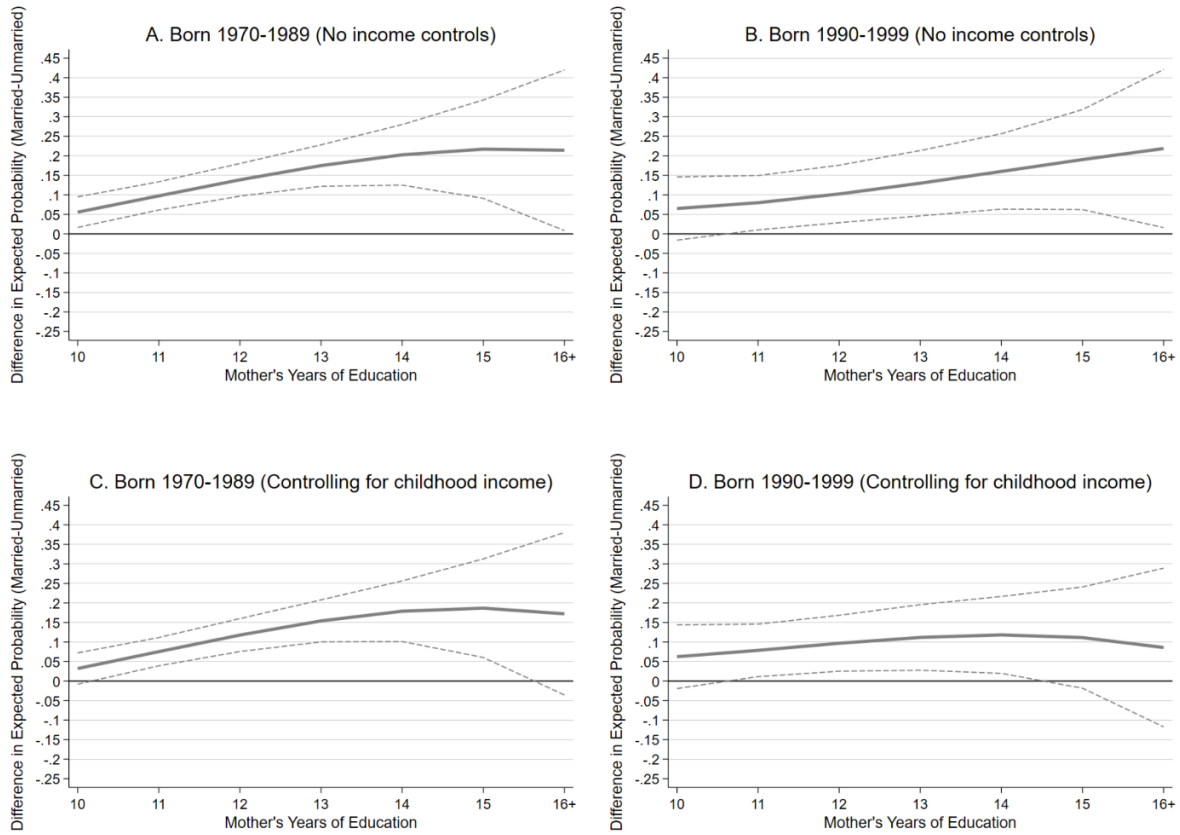
Notes: Each observation is a child born between 1970 and 1999 in the PSID. Each observation is weighted by the child's individual level PSID sampling weight in the year the outcome is observed. In the 1970-1989 sample, 83.0% of births were to mothers without a college degree, 16.9% of births were to mothers with a college degree or higher, and 0.1% of births were to mothers without a recorded education. In the 1990-1999 sample, 74.8% of births were to mothers without a college degree, 24.6% of births were to mothers with a college degree or higher, and 0.6% of births were to mothers without a recorded education.

Figure 3: Marriage gaps in poverty at age 25, by mother's years of education



Notes: An observation is a child born between 1970 and 1999 in the PSID. Each observation is weighted by the child's individual level PSID sampling weight in the year the outcome is observed. "16+" years of education refers to mothers with a college degree and mothers with post-graduate education. Income controls include the average household income for years when the child was aged 0-16. Children born to mothers aged 14 or younger and 45 or older are excluded from the model due to low sample size.

Figure 4: Marriage premium for obtaining a 4-year college degree by age 25



Notes: An observation is a child born between 1970 and 1999 in the PSID. Each observation is weighted by the child's individual level PSID sampling weight in the year the outcome is observed. "16+" years of education refers to mothers with a college degree and mothers with post-graduate education. Income controls include the average household income for years when the child was aged 0-16. Children born to mothers aged 14 or younger and 45 or older are excluded from the model due to low sample size.

APPENDICES

Appendix Table 1: Family Structure Transition Rates between Birth and Age 14

	<u>Born 1970-1979</u>			<u>Born 1980-1989</u>			<u>Born 1990-1999</u>			<u>Born 2000-2009</u>		
	<i>Family Structure at Birth</i>											
	Married Parents	Cohabiting	Mother Only	Married Parents	Cohabiting	Mother Only	Married Parents	Cohabiting	Mother Only	Married Parents	Cohabiting	Mother Only
<i>Share of children at birth</i>	75.0	2.0	23.0	73.5	4.8	21.5	73.4	10.9	15.4	66.3	15.2	17.7
<i>Family Structure at Age 14 (row), by Family Structure at Birth (column)</i>												
<i>Married Bio.</i>	81.6	39.1	7.7	72.9	34.3	7.7	76.3	24.4	11.7	74.9	31.9	7.4
<i>Cohabiting Bio.</i>	0.1	14.9	1.7	0.1	5.7	1.0	0.1	14.2	0.2	0.5	8.7	0.8
<i>Mom Only</i>	9.0	15.6	47.7	13.3	28.1	55.3	10.6	26.7	51.5	11.6	27.2	57.2
<i>Mom Remarried</i>	5.7	4.0	34.9	7.1	6.4	26.4	6.0	11.6	18.8	4.1	10.1	19.6
<i>Mom Cohabiting w/ Other</i>	0.5	0.0	3.7	0.7	5.3	1.2	1.1	3.0	3.4	1.4	4.6	3.1
<i>Dad Only, Remar, Cohabiting</i>	3.0	17.1	0.0	5.2	8.4	1.8	5.3	13.5	3.9	6.7	11.9	5.8
<i>No Parents</i>	0.2	9.4	4.4	0.7	11.8	6.6	0.6	6.6	10.4	0.8	5.5	6.2
Observations	29,454	775	9,039	22,665	1,478	6,620	16,407	2,445	3,440	16,897	3,872	4,502

Notes: An observation refers to a child in the PSID sample who is observed at birth and at age 14. Each observation is weighted by the child's individual-level PSID sampling weight. Family structure at birth is based on data from the first survey after the child was born. See Data Appendix for additional details about family type construction.

Appendix Table 2: Children's Young Adult Outcomes by Mother's Marital Status and Decade of Birth

	Married	Not Married	Gap (M-NM)	Number of Observations
Percent not in Poverty at 25				
All Sample Years	91.6 (0.51)	77.3 (1.47)	14.4 (1.56)	6,172
Born 1970--1979	93.6 (0.69)	73.7 (3.40)	20.0 (3.46)	1,839
Born 1980--1989	90.6 (0.81)	76.2 (2.31)	14.5 (2.45)	2,584
Born 1990--1999	90.5 (1.19)	80.7 (2.25)	9.8 (2.54)	1,749
Percent College Degree by 25				
All Sample Years	38.9 (0.87)	13.0 (1.19)	25.8 (1.48)	6,422
Born 1970--1979	28.8 (1.40)	7.6 (1.93)	21.2 (2.38)	1,888
Born 1980--1989	42.0 (1.37)	11.6 (1.68)	30.4 (2.17)	2,598
Born 1990--1999	46.6 (1.77)	17.3 (2.26)	29.3 (2.87)	1,936
Percent High School Degree by 20				
All Sample Years	89.2 (0.59)	78.6 (1.34)	10.5 (1.46)	6,235
Born 1970--1979	87.0 (1.09)	76.0 (2.94)	11.0 (3.14)	1,960
Born 1980--1989	90.5 (0.91)	78.7 (2.16)	11.8 (2.35)	2,313
Born 1990--1999	90.1 (1.06)	79.9 (2.08)	10.2 (2.33)	1,962

Notes: Each observation is a child born between 1970 and 1999 in the PSID, weighted by the child's individual level PSID sampling weight in the year the outcome is observed.

Appendix Table 3: Children's Young Adult Outcomes by Mother's Marital Status and Mother's Level of Education

Mother's Education	Born 1970-1989				Born 1990-1999			
	Married	Not Married	Gap (M-NM)	Number of Observations	Married	Not Married	Gap (M-NM)	Number of Observations
Percent not in Poverty at 25								
No college degree	91.1 (0.70)	75.3 (2.05)	15.8 (2.17)	3766	88.2 (1.78)	79.3 (2.52)	8.9 (3.09)	1433
4-year college degree	95.6 (0.91)	78.5 (10.13)	17.1 (10.17)	646	95.6 (1.37)	94.2 (5.42)	1.4 (5.59)	313
Percent College Degree by 25								
No college degree	25.9 (1.03)	8.9 (1.21)	16.9 (1.59)	3828	32.7 (1.98)	13.5 (2.13)	19.2 (2.91)	1576
4-year college degree	70.2 (2.03)	44.8 (12.58)	25.5 (12.75)	647	74.7 (2.76)	57.6 (9.48)	17.1 (9.87)	351
Percent High School Degree by 20								
No college degree	87.3 (0.83)	77.4 (1.79)	9.9 (1.97)	3863	88.3 (1.30)	78.6 (2.20)	9.7 (2.55)	1724
4-year college degree	97.8 (0.79)	92.4 (5.88)	5.4 (5.93)	397	96.2 (1.41)	99.7 (0.20)	-3.6 (1.42)	233

Notes: Each observation is a child born between 1970 and 1999 in the PSID, weighted by the child's individual level PSID sampling weight in the year the outcome is observed. In the 1970-1989 sample, 83.0% of births were to mothers without a college degree, 16.9% of births were to mothers with a college degree or higher, and 0.1% of births were to mothers without a recorded education. In the 1990-1999 sample, 74.8% of births were to mothers without a college degree, 24.6% of births were to mothers with a college degree or higher, and 0.6% of births were to mothers without a recorded education.

Appendix Table 4: Children's Young Adult Outcomes by Mother's Marital Status and Age at Birth of Child

Mother's age at child's birth	Born 1970-1989				Born 1990-1999			
	Married	Not Married	Gap (M-NM)	Number of Observations	Married	Not Married	Gap (M-NM)	Number of Observations
Percent not in Poverty at 25								
Less than 24 at birth	90.4 (0.93)	71.8 (2.47)	18.7 (2.64)	2072	84.1 (2.88)	76.5 (3.04)	7.6 (4.19)	689
25--29 at birth	93.2 (0.87)	81.7 (4.03)	11.5 (4.12)	1352	91.2 (2.18)	82.6 (5.39)	8.6 (5.81)	439
30+ at birth	93.0 (0.97)	77.1 (5.79)	15.9 (5.87)	937	92.8 (1.61)	88.0 (4.61)	4.8 (4.89)	592
Percent College Degree by 25								
Less than 24 at birth	21.7 (1.37)	5.6 (1.05)	16.1 (1.72)	2110	24.5 (3.16)	14.8 (2.72)	9.6 (4.17)	780
25--29 at birth	39.8 (1.69)	14.3 (3.70)	25.5 (4.06)	1359	45.7 (3.30)	15.1 (5.20)	30.7 (6.16)	478
30+ at birth	46.5 (2.00)	22.9 (5.41)	23.7 (5.77)	953	55.6 (2.54)	20.4 (5.56)	35.2 (6.11)	640
Percent High School Degree by 20								
Less than 24 at birth	86.3 (1.14)	73.9 (2.29)	12.4 (2.56)	2198	86.8 (2.46)	76.3 (2.62)	10.6 (3.60)	880
25--29 at birth	90.5 (1.18)	83.2 (3.76)	7.3 (3.95)	1217	91.0 (1.79)	83.4 (5.68)	7.6 (5.96)	472
30+ at birth	90.4 (1.38)	83.8 (4.74)	6.6 (4.94)	792	91.1 (1.51)	85.2 (5.32)	6.0 (5.53)	571

Notes: Each observation is a child born between 1970 and 1999 in the PSID, weighted by the individual-level PSID sampling weight from the year the outcome is observed. Among births in the 1970–1989 sample, 41.4% were to mothers aged 24 or younger, 32.6% to mothers aged 25–29, 25.7% to mothers aged 30 or older, and 0.4% to mothers without a recorded age. Among births in the 1990–1999 sample, 31.4% were to mothers aged 24 or younger, 27.2% to mothers aged 25–29, 40.7% to mothers aged 30 or older, and 0.7% to mothers without a recorded age.

Appendix Table 5: Mother's Education and the Marriage Premium for Children Regression Coefficients: 1970-1989

	(1) No Poverty at 25	(2) College Degree by 25	(3) High School Degree by 20	(4) No Poverty at 25	(5) College Degree by 25	(6) High School Degree by 20
Married at Birth	-0.601* (0.3549)	0.528** (0.2488)	-0.175 (0.6003)	-0.767 (0.4955)	0.740** (0.3206)	0.057 (0.6539)
Married*Mother's Education	0.199 (0.1394)	-0.205** (0.1001)	0.053 (0.1934)	0.248 (0.1762)	-0.273** (0.1189)	-0.017 (0.2063)
Married*Mother's Education ²	-0.018 (0.0157)	0.023* (0.0118)	-0.003 (0.0194)	-0.022 (0.0188)	0.029** (0.0134)	0.004 (0.0204)
Married*Mother's Education ³	0.000 (0.0005)	-0.001 (0.0004)	0.000 (0.0006)	0.001 (0.0006)	-0.001* (0.0005)	-0.000 (0.0006)
Mother's Education	-0.316** (0.1324)	0.137 (0.0858)	-0.141 (0.1808)	-0.353** (0.1645)	0.176* (0.0978)	-0.115 (0.1943)
Mother's Education ²	0.032** (0.0149)	-0.019* (0.0104)	0.016 (0.0181)	0.036** (0.0177)	-0.022* (0.0115)	0.014 (0.0192)
Mother's Education ³	-0.001* (0.0005)	0.001** (0.0004)	-0.000 (0.0006)	-0.001* (0.0006)	0.001** (0.0004)	-0.000 (0.0006)
Avg. HH Inc. from 0-16				0.003*** (0.0006)	0.009*** (0.0013)	0.007*** (0.0014)
Constant	1.675*** (0.3424)	-0.197 (0.2097)	0.973* (0.5663)	1.767*** (0.4630)	-0.386 (0.2512)	0.865 (0.6205)
Observations	4347	4411	4192	4233	4299	4119

Notes: Outcomes weighted by the child's PSID individual weights in the year the outcome is observed. Sample restricted to children born 1970-1989 with identified mothers aged 14-45 with non-missing education. Columns 1-3: no income controls. Columns 4-6: include average childhood household income for years where the child is observed at ages 0-16. Controls include gender, household race, and year-of-birth fixed effects. Robust standard errors in parentheses.

* p<0.10, ** p<0.05, *** p<0.01.

Appendix Table 6: Mother's Education and the Marriage Premium for Children Regression Coefficients: 1990-1999

	(1) No Poverty at 25	(2) College Degree by 25	(3) High School Degree by 20	(4) No Poverty at 25	(5) College Degree by 25	(6) High School Degree by 20
Married at Birth	1.086 (0.7040)	0.860* (0.5049)	-0.432 (0.5826)	1.400 (0.9281)	1.128* (0.5770)	-0.530 (0.6141)
Married*Mother's Education	-0.337 (0.2302)	-0.210 (0.1852)	0.167 (0.1956)	-0.441 (0.2853)	-0.312 (0.2057)	0.189 (0.2029)
Married*Mother's Education ²	0.033 (0.0232)	0.017 (0.0201)	-0.016 (0.0199)	0.044 (0.0275)	0.029 (0.0219)	-0.018 (0.0204)
Married*Mother's Education ³	-0.001 (0.0007)	-0.000 (0.0007)	0.000 (0.0006)	-0.001* (0.0008)	-0.001 (0.0007)	0.001 (0.0006)
Mother's Education	0.100 (0.2063)	0.028 (0.1195)	-0.254 (0.1635)	0.193 (0.2662)	0.116 (0.1476)	-0.284* (0.1587)
Mother's Education ²	-0.008 (0.0204)	-0.005 (0.0143)	0.025 (0.0169)	-0.017 (0.0252)	-0.016 (0.0166)	0.027* (0.0164)
Mother's Education ³	0.000 (0.0006)	0.000 (0.0005)	-0.001 (0.0005)	0.001 (0.0008)	0.001 (0.0006)	-0.001 (0.0005)
Avg. HH Inc. from 0-16				0.002 (0.0014)	0.007** (0.0027)	0.004*** (0.0012)
Constant	0.280 (0.6569)	0.038 (0.2789)	1.523*** (0.4843)	-0.054 (0.8927)	-0.192 (0.3889)	1.613*** (0.4715)
Observations	1716	1892	1918	1677	1849	1893

Notes: Outcomes weighted by the child's PSID individual weights in the year the outcome is observed. Sample restricted to children born 1990-1999 with identified mothers aged 14-45 with non-missing education. Columns 1-3: no income controls. Columns 4-6: include average childhood household income for years where the child is observed at ages 0-16. Controls include gender, household race, and year-of-birth fixed effects. Robust standard errors in parentheses.

* p<0.10, ** p<0.05, *** p<0.01.

*Appendix Table 7: Mother's Age at Birth of Child and the Marriage Premium for Children
Regression Coefficients: 1970-1989*

	(1) No Poverty at 25	(2) College Degree by 25	(3) High School Degree by 20	(4) No Poverty at 25	(5) College Degree by 25	(6) High School Degree by 20
Married at Birth	-1.602 (1.1833)	-1.213 (1.2334)	-2.945*** (0.9986)	-1.578 (1.2013)	-1.399 (1.1757)	-3.047*** (1.0014)
Married*Mother Age	0.183 (0.1339)	0.114 (0.1485)	0.362*** (0.1156)	0.181 (0.1359)	0.146 (0.1407)	0.379*** (0.1159)
Married*Mother Age ²	-0.006 (0.0049)	-0.003 (0.0058)	-0.014*** (0.0043)	-0.006 (0.0049)	-0.005 (0.0055)	-0.015*** (0.0043)
Married*Mother Age ³	0.000 (0.0001)	0.000 (0.0001)	0.000*** (0.0001)	0.000 (0.0001)	0.000 (0.0001)	0.000*** (0.0001)
Mother Age	-0.061 (0.1252)	-0.132 (0.1156)	-0.295*** (0.0997)	-0.046 (0.1266)	-0.114 (0.1071)	-0.294*** (0.0997)
Mother Age ²	0.002 (0.0046)	0.005 (0.0047)	0.012*** (0.0038)	0.002 (0.0046)	0.005 (0.0044)	0.012*** (0.0038)
Mother Age ³	-0.000 (0.0001)	-0.000 (0.0001)	-0.000*** (0.0000)	-0.000 (0.0001)	-0.000 (0.0001)	-0.000*** (0.0000)
Avg. HH Inc. from 0-16				0.004*** (0.0007)	0.016*** (0.0018)	0.010*** (0.0016)
Constant	1.283 (1.0909)	1.151 (0.9101)	3.098*** (0.8392)	1.145 (1.1027)	0.926 (0.8463)	3.050*** (0.8381)
Observations	4347	4411	4192	4233	4299	4119

Notes: Outcomes weighted by the child's PSID individual weights in the year the outcome is observed. Sample restricted to children born 1970-1989 with identified mothers aged 14-45 with non-missing education. Columns 1-3: no income controls. Columns 4-6: include average childhood household income for years where the child is observed at ages 0-16. Controls include gender, household race, and year-of-birth fixed effects. Robust standard errors in parentheses.

* p<0.10, ** p<0.05, *** p<0.01.

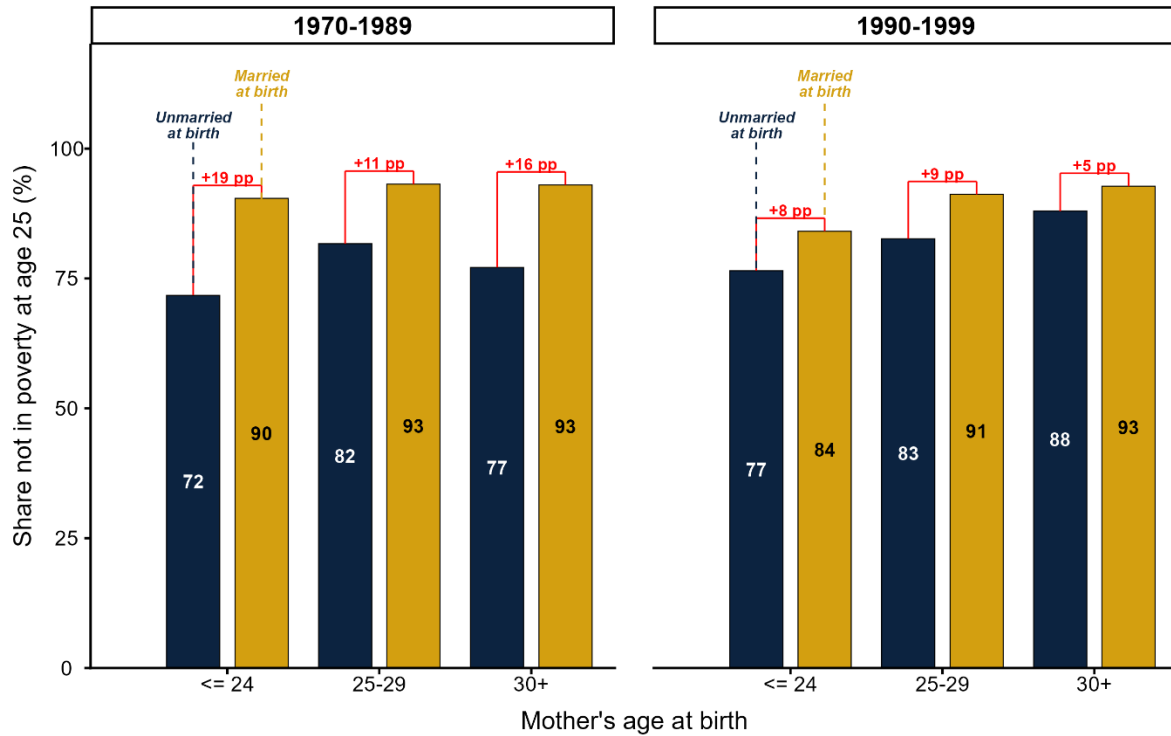
*Appendix Table 8: Mother's Age at Birth of Child and the Marriage Premium for Children
Regression Coefficients: 1990-1999*

	(1) No Poverty at 25	(2) College Degree by 25	(3) High School Degree by 20	(4) No Poverty at 25	(5) College Degree by 25	(6) High School Degree by 20
Married at Birth	0.521 (2.1068)	0.350 (1.9960)	0.257 (1.7484)	-0.029 (2.1867)	0.262 (1.9634)	0.242 (1.7632)
Married*Mother Age	-0.059 (0.2326)	-0.075 (0.2178)	-0.035 (0.1913)	0.000 (0.2415)	-0.057 (0.2130)	-0.032 (0.1926)
Married*Mother Age ²	0.002 (0.0084)	0.004 (0.0077)	0.002 (0.0068)	0.000 (0.0087)	0.003 (0.0075)	0.002 (0.0068)
Married*Mother Age ³	-0.000 (0.0001)	-0.000 (0.0001)	-0.000 (0.0001)	-0.000 (0.0001)	-0.000 (0.0001)	-0.000 (0.0001)
Mother Age	0.069 (0.1614)	0.075 (0.1188)	0.187 (0.1437)	0.061 (0.1646)	0.091 (0.1089)	0.198 (0.1445)
Mother Age ²	-0.001 (0.0061)	-0.002 (0.0045)	-0.007 (0.0053)	-0.001 (0.0063)	-0.003 (0.0041)	-0.007 (0.0053)
Mother Age ³	0.000 (0.0001)	0.000 (0.0001)	0.000 (0.0001)	-0.000 (0.0001)	0.000 (0.0001)	0.000 (0.0001)
Avg. HH Inc. from 0-16				0.003** (0.0015)	0.010*** (0.0038)	0.005*** (0.0014)
Constant	-0.104 (1.3756)	-0.529 (0.9922)	-0.890 (1.2502)	-0.058 (1.4037)	-0.716 (0.9117)	-1.017 (1.2557)
Observations	1716	1892	1918	1677	1849	1893

Notes: Outcomes weighted by the child's PSID individual weights in the year the outcome is observed. Sample restricted to children born 1990-1999 with identified mothers aged 14-45 with non-missing education. Columns 1-3: no income controls. Columns 4-6: include average childhood household income for years where the child is observed at ages 0-16. Controls include gender, household race, and year-of-birth fixed effects. Robust standard errors in parentheses.

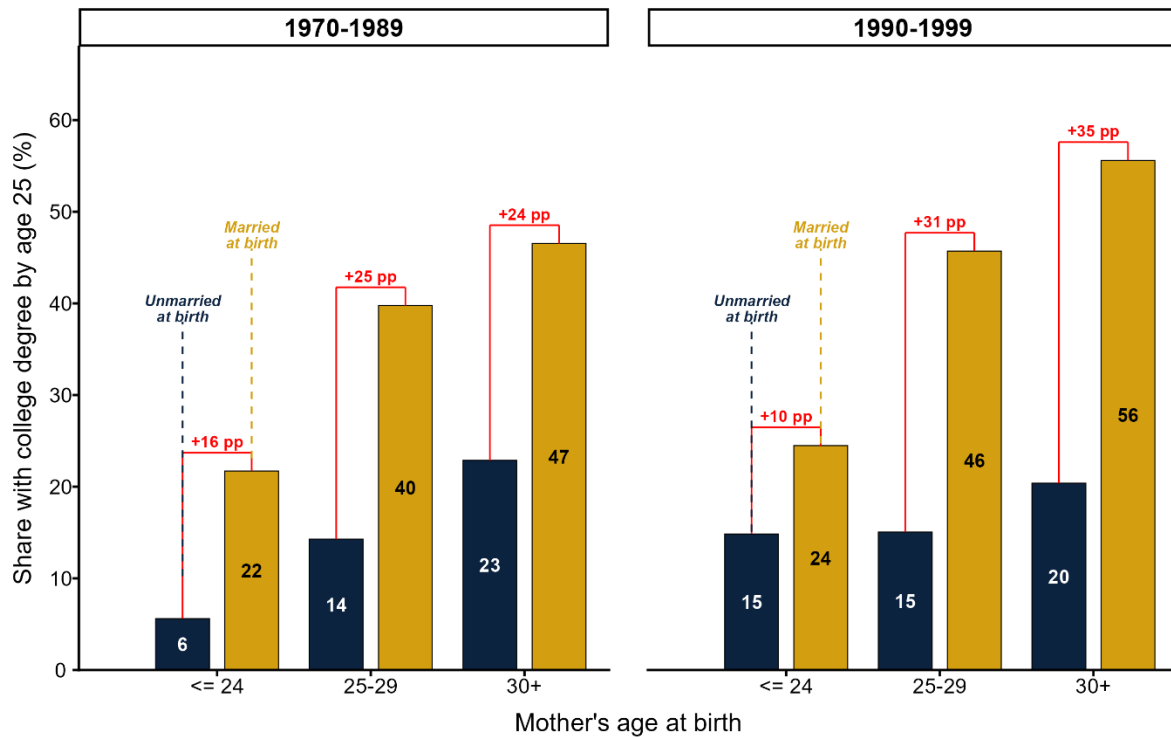
* p<0.10, ** p<0.05, *** p<0.01.

Appendix Figure 1: Share of children not in poverty at age 25 by mother's marital status and age at birth



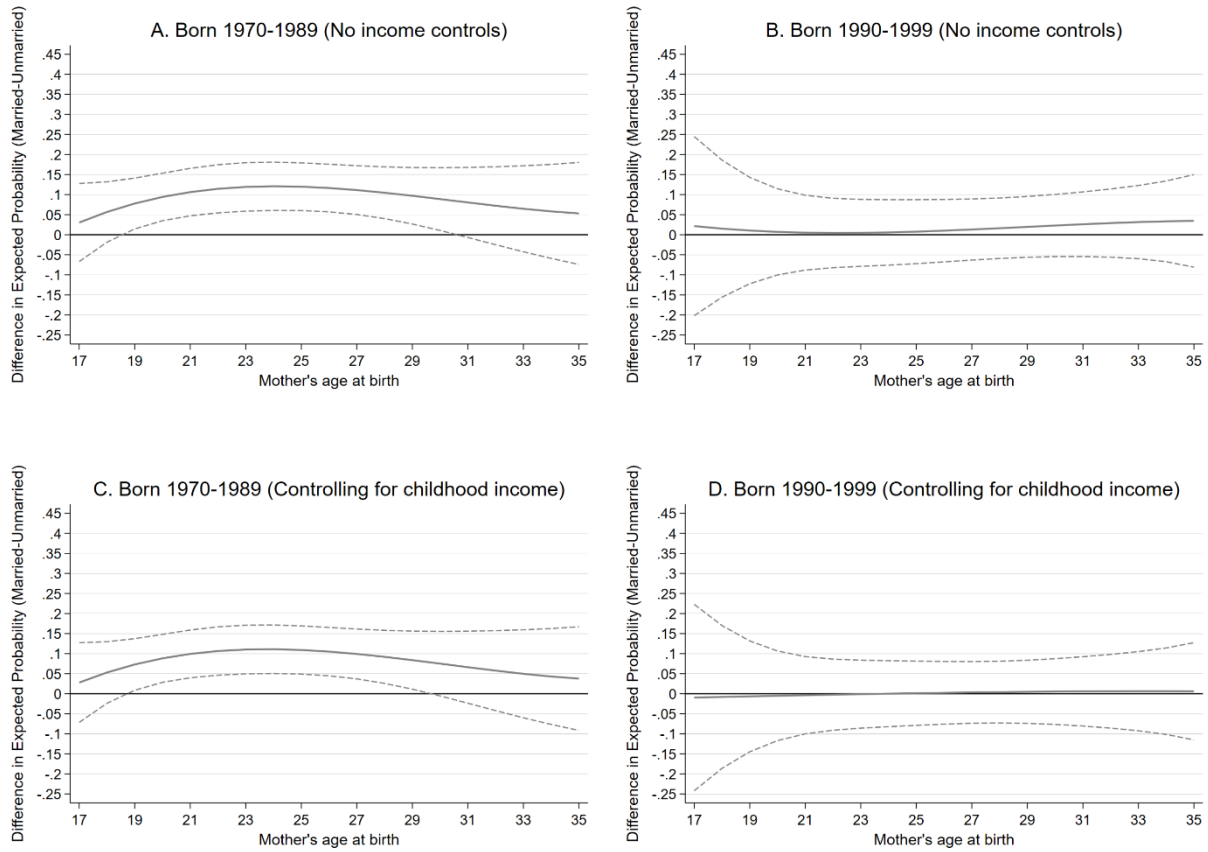
Notes: Each observation is a child born between 1970 and 1999 in the PSID, weighted by the individual-level PSID sampling weight from the year the outcome is observed. Exact point estimates and their corresponding standard errors are reported in Appendix Table 4. Among births in the 1970–1989 sample, 41.4% were to mothers aged 24 or younger, 32.6% to mothers aged 25–29, 25.7% to mothers aged 30 or older, and 0.4% to mothers without a recorded age. Among births in the 1990–1999 sample, 31.4% were to mothers aged 24 or younger, 27.2% to mothers aged 25–29, 40.7% to mothers aged 30 or older, and 0.7% to mothers without a recorded age.

Appendix Figure 2: Share of children with a 4-year college degree by age 25 by mother's marital status and age at birth



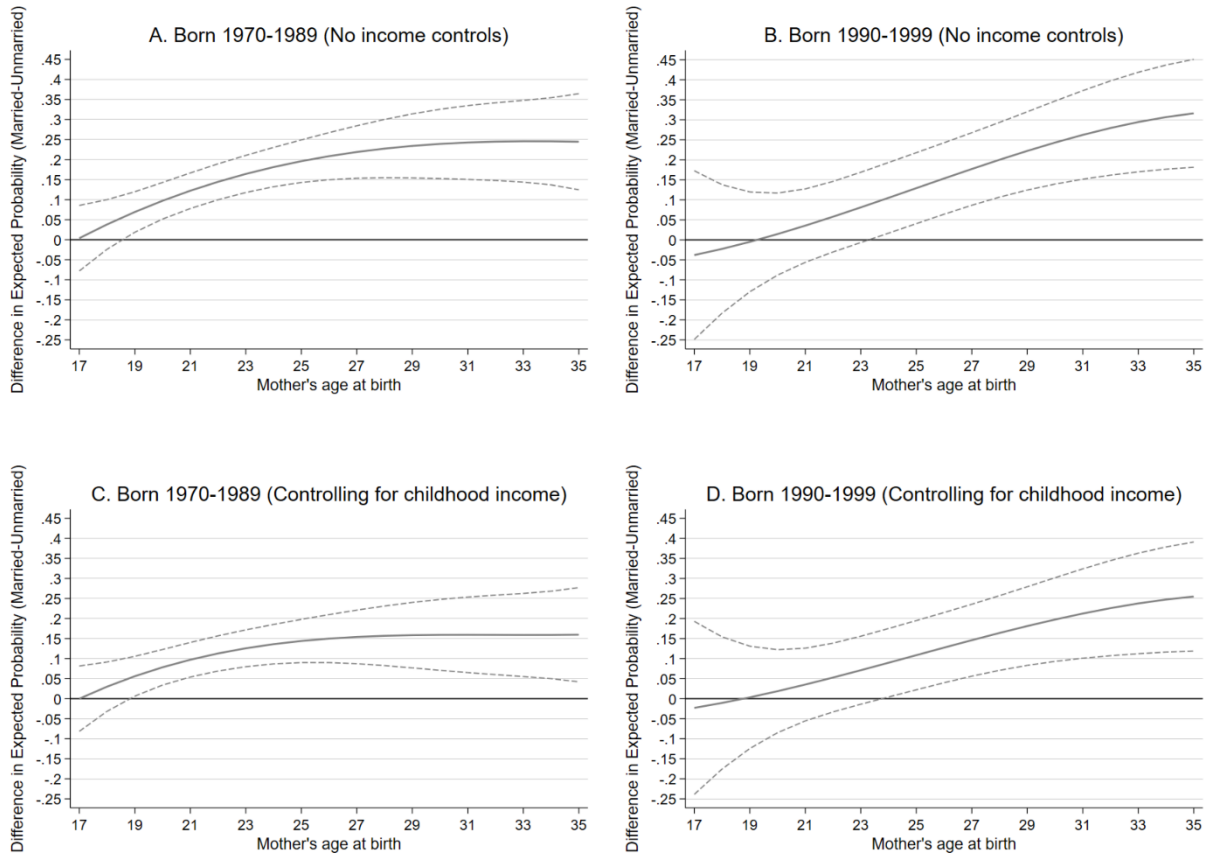
Notes: Each observation is a child born between 1970 and 1999 in the PSID, weighted by the individual-level PSID sampling weight from the year the outcome is observed. Exact point estimates and their corresponding standard errors are reported in Appendix Table 4. Among births in the 1970–1989 sample, 41.4% were to mothers aged 24 or younger, 32.6% to mothers aged 25–29, 25.7% to mothers aged 30 or older, and 0.4% to mothers without a recorded age. Among births in the 1990–1999 sample, 31.4% were to mothers aged 24 or younger, 27.2% to mothers aged 25–29, 40.7% to mothers aged 30 or older, and 0.7% to mothers without a recorded age.

Appendix Figure 3: Marriage premium for being out of poverty at age 25 (mother's age at birth)



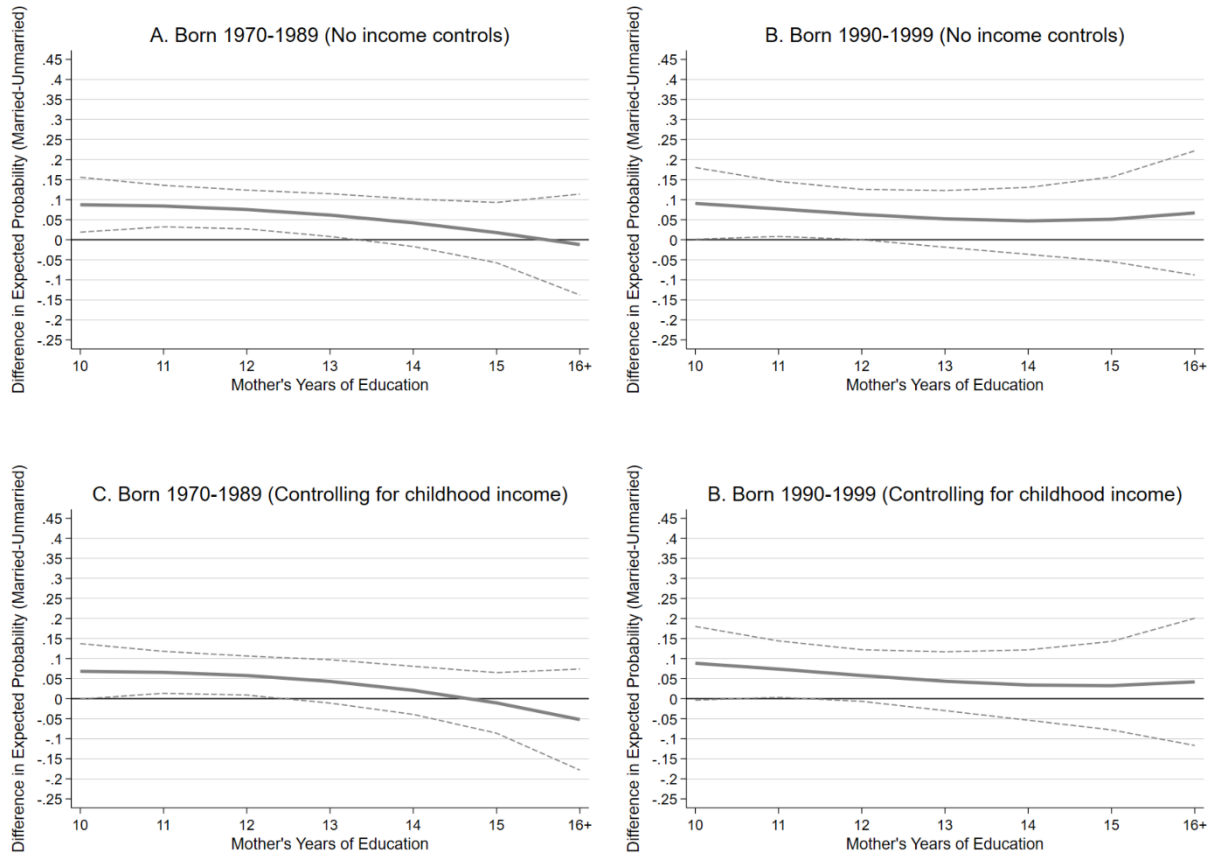
Notes: An observation is a child born between 1970 and 1999 in the PSID. Each observation is weighted by the child's individual level PSID sampling weight in the year the outcome is observed. Income controls include the average household income for years when the child was aged 0-16. Children born to mothers aged 14 or younger and 45 or older are excluded from the model due to low sample size.

Appendix Figure 4: Marriage premium for obtaining a 4-year college degree by age 25 (mother's age at birth)



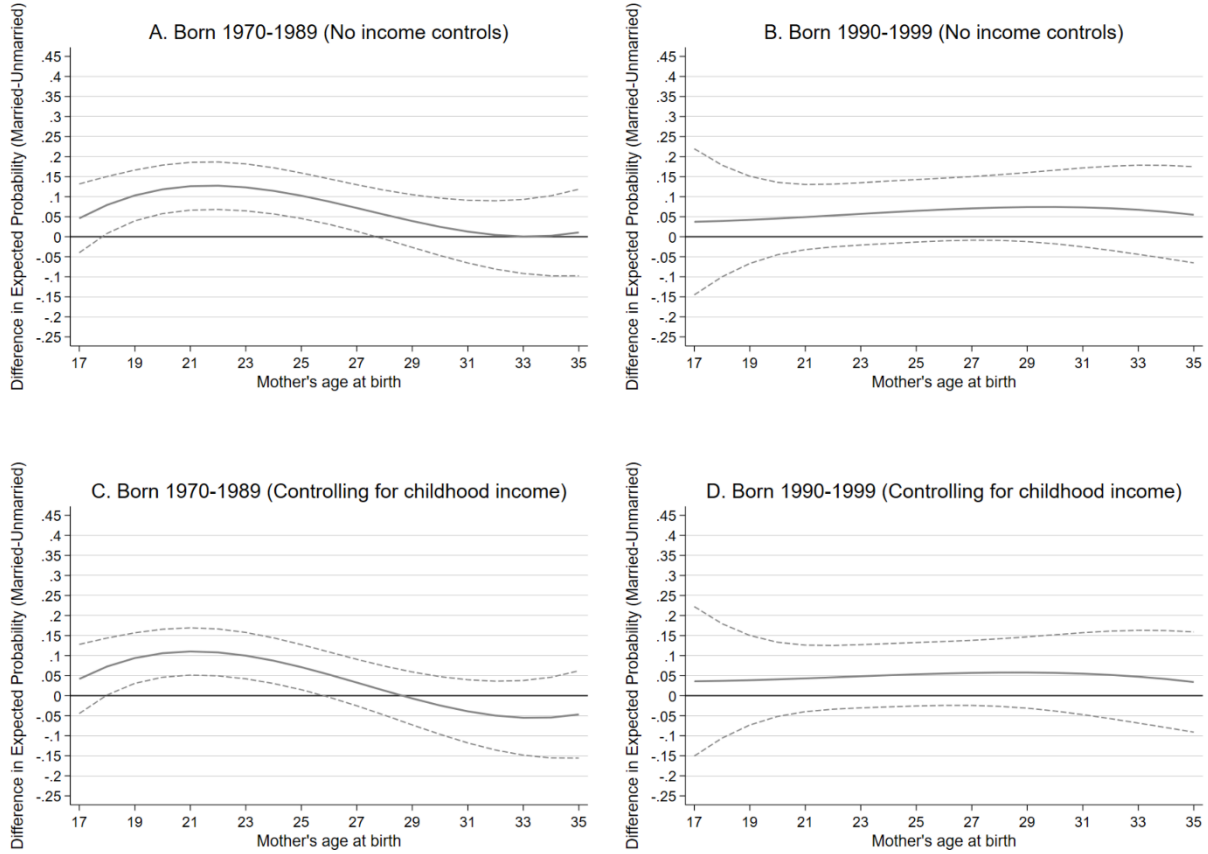
Notes: An observation is a child born between 1970 and 1999 in the PSID. Each observation is weighted by the child's individual level PSID sampling weight in the year the outcome is observed. Income controls include the average household income for years when the child was aged 0-16. Children born to mothers aged 14 or younger and 45 or older are excluded from the model due to low sample size.

Appendix Figure 5: Marriage premium for obtaining a high school degree (or equivalent) by age 20 (mother's education at birth)



Notes: An observation is a child born between 1970 and 1999 in the PSID. Each observation is weighted by the child's individual level PSID sampling weight in the year the outcome is observed. "16+" years of education refers to mothers with a college degree and mothers with post-graduate education. Income controls include the average household income for years when the child was aged 0-16. Children born to mothers aged 14 or younger and 45 or older are excluded from the model due to low sample size.

Appendix Figure 6: Marriage premium for obtaining a high school degree (or equivalent) by age 20 (mother's age at birth)



Notes: An observation is a child born between 1970 and 1999 in the PSID. Each observation is weighted by the child's individual level PSID sampling weight in the year the outcome is observed. Income controls include the average household income for years when the child was aged 0-16. Children born to mothers aged 14 or younger and 45 or older are excluded from the model due to low sample size.

Data Appendix

A.1 Data and Sample Construction

Our analysis uses data from the Panel Study of Income Dynamics (PSID), a nationally representative longitudinal survey that has followed U.S. individuals and their descendants since 1968. We obtained data from the PSID website hosted by the Survey Research Center at the Institute for Social Research at the University of Michigan. Data from PSID is publicly available provided users agree to the PSID website licensing terms. Users can register to access the PSID here: <https://psidonline.isr.umich.edu/GettingStarted.aspx>

We combine information from the core PSID individual- and family-level files with three supplemental files: the 2023 Parent Identification File (PID), the 2023 Marriage History File, and the 2021 Family Relationship Matrix. Together, these data allow us to link children to their biological parents, characterize parents' union status over time, and construct measures of family structure, childhood economic circumstances, and adult outcomes.

We begin with all individuals observed in the 2023 PSID individual file and use the permanent 1968 family and person identifiers to recover each individual's complete longitudinal history. These permanent identifiers uniquely identify respondents across all survey waves and allow individuals to be linked to their parents and to contemporaneous family records. Person-level records are merged with the corresponding family-level interview using the interview and sequence identifiers for each survey year. Individuals who were institutionalized, had died before the interview, or were otherwise not present in the family unit are excluded. The resulting longitudinal file contains one observation per individual in each year that he or she is observed in the PSID.

Several demographic characteristics require harmonization across waves because of occasional reporting inconsistencies. We treat year of birth as time invariant and assign each individual the modal year of birth reported across all interviews. Age is then calculated mechanically by comparing the individual's month and year of birth with the month and year of the interview, rather than relying on the age reported in a given survey wave. This procedure yields a consistent measure of age throughout the panel and avoids discrepancies arising from interview timing or reporting error. Educational attainment is measured as the maximum level of completed schooling ever reported for an individual.

The Parent Identification File is used to link each child to his or her biological mother and father whenever parent identifiers are available. Maternal characteristics, including age at birth and educational attainment, are merged onto each child's longitudinal record using the mother's permanent PSID identifier.

Measures of household income, poverty status, race and ethnicity, and other household characteristics are obtained from the family-level interview. Because the PSID has been conducted biennially since 1997, these measures are observed every other year during the later portion of the sample. For variables defined over childhood, such as average household income between ages 0 and 5, we average all available observations within the relevant age interval.

Monetary variables are converted to constant 2023 dollars using the Personal Consumption Expenditures (PCE) price index.

Most analyses are conducted using a person-level dataset that contains one observation per individual. After constructing the longitudinal person-year file and all age-specific measures, we collapse the data to the individual level while preserving outcome-specific sampling weights. For each analysis, we use the PSID longitudinal weight corresponding to the age at which the outcome is measured. This approach follows standard PSID practice and ensures that estimates remain representative despite differential sample attrition over the life of the panel.

A.2 Family Structure Measures

A central objective of the analysis is to characterize children's family structure at birth and throughout childhood. We combine information from the PSID Parent Identification File, Marriage History File, and Family Relationship Matrix to construct a longitudinal record of each child's parental union status and living arrangements.

The Parent Identification File (PID) provides permanent identifiers for each individual's biological and adoptive parents. We use these identifiers to link children to their biological mothers and fathers and to merge parental characteristics onto each child's longitudinal record. Throughout the analysis, we restrict attention to children whose biological mother can be identified in the PSID. Information on the biological father is available for most children and is used to distinguish marriages and cohabiting unions involving the child's biological father from those involving another partner.

We determine mothers' marital status using the PSID Marriage History File, which records the dates of marriages, divorces, widowhood, and remarriage. By comparing the timing of each child's birth with the mother's marital history, we construct indicators for whether the mother was married at the time of the child's birth and at subsequent ages. We similarly determine whether the mother's spouse was the child's biological father by comparing the permanent identifier of the mother's spouse with the biological father's identifier obtained from the Parent Identification File. This distinction allows us to differentiate births occurring within marriages to the biological father from those occurring within marriages to a stepfather or another partner.

The updated analysis also incorporates information on cohabiting unions using the PSID Family Relationship Matrix, which records the relationship between every pair of individuals residing in the same family unit. We use these data to identify whether a child's mother is living with an unmarried partner during each survey wave and to determine the identity of that partner. Combining these records with the Parent Identification File allows us to distinguish cohabitation with the child's biological father from cohabitation with another adult partner.

Unlike the Marriage History File, the Family Relationship Matrix does not record the exact dates on which cohabiting unions begin or end. We therefore infer the duration of each cohabitation spell from the sequence of survey waves in which a cohabiting partner is observed. A child is classified as living with a cohabiting mother at a given age if the mother's cohabitation spell includes the survey year corresponding to that age. Because the Marriage History File provides

more precise information on legal marital status, marital status takes precedence whenever the two sources conflict. Thus, mothers identified as married are classified as married even if the Relationship Matrix simultaneously records a cohabiting partner, a discrepancy that typically reflects periods of marital separation or reporting inconsistencies.

The parental union measures are combined with information on whether the child's biological mother and father reside in the household to construct the family structure variables used throughout the analysis. These measures distinguish children living with two married biological parents, two cohabiting biological parents, a married parent and stepparent, a cohabiting parent and non-biological partner, a single parent, or neither biological parent. We use these measures to characterize children's family circumstances at birth, at age 14, and throughout childhood, as well as to identify transitions in family structure over time.

A.3 Income and Outcome Measures

Measures of household economic resources are constructed from the family-level PSID interview, which reports total family income for the calendar year preceding each survey. Because the PSID has been conducted biennially since 1997, income is observed every other year during the latter portion of the sample. All monetary variables are converted to constant 2023 dollars using the Personal Consumption Expenditures (PCE) price index, obtained from the Bureau of Economic Analysis (U.S. Bureau of Economic Analysis, 2024).

Our primary measure of childhood economic resources is average household income between ages 0 and 16. Poverty status is determined by comparing total family income with the poverty thresholds assigned by the PSID. We classify a child as living in poverty in a given survey year if family income falls below the corresponding threshold. Measures of childhood poverty are constructed from these annual indicators, while our principal adult outcome identifies whether an individual is living in poverty at age 25.

Mother's education is measured by taking her maximum reported education at or prior to each child's birth year. In instances where a mother's reported education is unavailable at or before her child's birth year, we take her minimum reported education in the years following the child's birth year. Our primary education outcome is an indicator for completing a four-year college degree by age 25, defined as completing at least sixteen years of schooling by that age. Because educational attainment is observed repeatedly over the life cycle, we use information from adjacent survey waves when necessary to classify individuals whose educational status is not directly observed at exactly age 25. For example, an individual who has completed sixteen years of schooling by age 24 is classified as a college graduate by age 25, whereas an individual reporting fewer than sixteen years of schooling after age 25 is classified as not having completed college by that age. Similarly, we construct a secondary educational outcome, obtaining a high school degree by age 20, by creating an indicator for individuals who have completed at least twelve years of schooling at or before age 20.

Unless otherwise noted, analyses are conducted using one observation per individual after constructing all longitudinal measures. We apply the PSID longitudinal individual sampling weight corresponding to the age at which each outcome is measured, following standard PSID

practice. Household-level analyses use the corresponding PSID family weights. These weights account for the complex survey design and differential sample attrition, ensuring that estimates remain representative of the national population represented by the PSID.

A.4. Definition of Key Analysis Variables

Variable	Definition
<i>Mother married at birth</i>	Indicator equal to one if the child's biological mother was legally married at the time of the child's birth, determined using the mother's marriage history.
<i>Mother married at age 14</i>	Indicator equal to one if the child's biological mother was legally married when the child was age 14.
<i>Mother married to biological father</i>	Indicator equal to one if the mother's spouse at the child's birth (or at age 14, depending on the analysis) is identified as the child's biological father using the Parent Identification File.
<i>Mother cohabiting</i>	Indicator equal to one if the child's biological mother was living with an unmarried partner during the relevant survey year, identified from the PSID Family Relationship Matrix.
<i>Mother cohabiting with biological father</i>	Indicator equal to one if the mother's cohabiting partner is identified as the child's biological father.
<i>Mother cohabiting with another partner</i>	Indicator equal to one if the mother is cohabiting with an unmarried partner other than the child's biological father.
<i>Living with mother</i>	Indicator equal to one if the child's biological mother resides in the same household as the child in the relevant survey year.
<i>Living with father</i>	Indicator equal to one if the child's biological father resides in the same household as the child in the relevant survey year.
<i>Mother's age at birth</i>	Mother's age, in years, at the child's birth, calculated by comparing the mother's year and month of birth with the survey year and month at the child's birth year.
<i>Mother's educational attainment</i>	Highest level of completed schooling ever reported for the child's biological mother in the PSID at or prior to the child's birth year. For mother's who do not report their educational attainment during this timeframe, we use the minimum reported level of schooling completed in the years following the child's birth.

<i>Mother living with parent(s) at birth</i>	Indicator equal to one if the child's mother resided with one or both of her own parents when the child was born.
<i>Race and ethnicity</i>	Household race/ethnicity classification based on the race and Hispanic ethnicity of the household reference person. Individuals are classified as non-Hispanic White, non-Hispanic Black, Hispanic, or non-Hispanic Other.
<i>Household income</i>	Total pre-tax family income reported in the PSID family interview for the calendar year preceding the survey, expressed in constant 2023 dollars.
<i>Childhood income (ages 0–5)</i>	Mean household income between the child's birth and fifth birthday. We construct this using survey years when the child's age is between one and six because we are using reported family income from the calendar year prior to the survey year.
<i>Childhood income (ages 0–16)</i>	Mean household income between the child's birth and sixteenth birthday. We construct this using survey years when the child's age is between one and seventeen because we are using reported family income from the calendar year prior to the survey year.
<i>Poverty status</i>	Indicator equal to one if family income falls below the PSID poverty threshold applicable to the family's composition in a given year.
<i>Poverty at age 25</i>	Indicator equal to one if the individual is living in a family with income below the applicable PSID poverty threshold at age 25.
<i>High school degree by age 20</i>	Indicator equal to one if the individual completed at least twelve years of schooling by age 20. Educational attainment is determined using information from adjacent survey waves when necessary.
<i>College degree by age 25</i>	Indicator equal to one if the individual completed at least sixteen years of schooling by age 25. Educational attainment is determined using information from adjacent survey waves when necessary.
<i>Individual longitudinal weight</i>	PSID longitudinal sampling weight corresponding to the age at which the outcome is measured. Used in all individual-level analyses.
<i>Household weight</i>	PSID family sampling weight used for analyses in which the household is the unit of observation.

Data Appendix References

Panel Study of Income Dynamics, public use dataset. Produced and distributed by the Institute for Social Research, University of Michigan, Ann Arbor, MI (2023)

U.S. Bureau of Economic Analysis, Personal Consumption Expenditures: Chain-type Price Index [PCEPI], retrieved from FRED, Federal Reserve Bank of St. Louis;
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