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Male Wage Inequality and Characteristics of "Early Mover" Marriages

Abstract

Previous work shows that higher male wage inequality decreases the share of ever married women in their 20s, consistent with the theoretical prediction that greater male wage dispersion increases the return to marital search. Consequently, male wage inequality should be associated with higher husband quality among those "early-mover" women who choose to forgo these higher returns to search. We confirm using U.S. decennial Census and American Community Survey (ACS) data from 1980-2018 that married women ages 22-30 in marriage markets with greater male wage inequality are more likely to marry up in education and in husband's occupation. We additionally consider whether male wage inequality increases wage uncertainty, leading women to prefer older husbands who can send stronger signals of lifetime earnings. We confirm that higher male wage inequality is also associated with a larger marital age gap.

JEL-Codes: J120, J240.

Keywords: marriage, marital search, marital sorting, inequality, male wages.

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1. Introduction

A major demographic trend over the last half century in the U.S. is the rise in age of first marriage (Stevenson and Wolfers, 2007). For example, share ever married among women ages 22-30 fell from 73% in the 1980 Decennial Census to 39% in the 2014-2018 combined waves of the American Community Survey. Male wage inequality has been shown to be a contributing factor to marital delays.[1] Several papers document that the share ever married among women in their 20s is lower in markets with greater male wage inequality (Loughran, 2002; Gould and Paserman, 2003; Coughlin and Drewianka, 2011). This literature argues that greater male wage dispersion increases the returns to search for women in the marriage market, resulting in delayed marriage.

Previous studies, however, have not considered how marital delays generated by increased male wage dispersion affect the composition of marriages that form among young women. Understanding the implications of higher male wage inequality on "early" matches provides important insights on the relevance of the returns to search explanation, and on the mechanisms through which male wage inequality impacts marital decisions.

In this paper, we study whether the characteristics of spouses among women who marry at younger ages are different between marriage markets with high and low male wage inequality. Specifically, if more women delay their marriage because of greater returns to search, those who choose to be "early movers" in the marriage market presumably received a particularly advantageous draw from the search pool, one of sufficiently high quality to forgo the benefits of

[1] A large literature has focused on changing incentives for high-ability, high-wage women to explain the decline in marriage rates among young women (Goldin and Katz, 2002; Caucutt, Guner and Knowles, 2002; Wang and Wang, 2017).

continued search. We therefore expect that greater share of those who marry early will marry up in husband's education in higher inequality marriage markets, and fewer will marry down.

Another important implication that has not been previously considered in the literature is that greater male wage dispersion likely increases uncertainty about the lifetime earnings of potential husbands. Thus, women in high inequality markets may become more reluctant to marry men with little labor market experience for whom the signal about expected lifetime earnings is noisy. This, in turn, impacts the marital age gap in two important ways. First, women who marry early may shift to preferring older spouses with a stronger labor market signal. Second, women who prefer to marry similarly-aged spouses may delay marriage until later ages to observe husbands' realized earnings potential. Both effects will change the composition of marital age gaps among early marriages towards a larger age gap between husband and wife.

We use data from five time periods: the 1980, 1990 and 2000 U.S. decennial Censuses, the 2006-2010 waves of the American Community Survey (ACS), and the 2014-2018 waves of the ACS to estimate the relationship between male wage dispersion in the marriage market and the characteristics of "early mover" marriages among women ages 22-30. We define marriage markets by state, four education groups, and three racial/ethnic groups. The estimation strategy controls for marriage market fixed effects, thus utilizing within-marriage market variation in male wage inequality over time. We include state-by-year fixed effects to control for state-level time-varying factors that may influence marital formation and race-by-year fixed effects and education-by-year fixed effects to control for national trends in marital sorting. We control for the average male wage and the sex ratio in all regressions to capture time-varying changes in marriage market conditions. Because rising female wages are also predicted to increase women's reservation value for husband quality, we test the robustness of results by controlling for measures of women's labor market outcomes. Specifically, we control for the male to female wage ratio and the shares of full or part-time employed women, though these controls are arguably jointly determined with marital status and spouse characteristics.

Our results confirm the findings in previous literature that an increase in male wage inequality decreases the share of women ages 22-30 who ever married. We contribute to the existing literature by showing that this result is robust to the inclusion of state-by-year fixed effects. Gould and Paserman (2003) and Coughlin and Drewianka (2011) measure inequality at the state-year level, while Loughran (2002) uses within-state variation in inequality by race and education but does not control for state-by-year fixed effects.

We are also the first paper to consider whether the marital delays generated by male wage inequality prompt substitution into cohabitation or non-partnered status. We find that higher male wage inequality is also associated with a smaller share of women ages 22-30 who are never married but currently cohabiting, suggesting that the substitution is into non-partnered status. This suggests that cohabitation reduces the ability to search for alternative mates sufficiently that women also raise their reservation value for cohabiting partner quality in response to greater male wage dispersion.

For the analysis of partner characteristics among early mover marriages, the education gap results indicate that early mover women in markets with greater male wage inequality are more likely to have married up in education and less likely to have married similarly-educated or less-educated spouses, consistent with women in high dispersion markets having raised their reservation wage in response to increased returns to search. We additionally find that greater male wage inequality is associated with a shift in the average early mover marriage towards husbands from higher earning occupations.

We also find a more positive age difference between husband and wife for early mover women in markets with greater male wage inequality. This finding is robust to including age of marriage controls, suggesting it is not driven by the positive correlation between age of marriage and marital age gap but reflects a more fundamental compositional change in the pool of early marriages. Consequently, these results indicate that male wage inequality does not just affect the marriage market by changing the dispersion of offers received by women, but also by increasing uncertainty over lifetime earnings of potential partners.

2. Inequality, Marital Search and Spouse Characteristics

2.1 Inequality and Marital Delay

Loughran (2002) uses a partial equilibrium sequential search model of female marital search in which women draw marriage proposals from the distribution of male wages in the marriage market and decide whether to accept that proposal or to continue to search in the same male wage distribution. In such a model, there exists a reservation value for husband's wage at which a woman is just indifferent between accepting the current prospective spouse and continuing to search in the next period. Loughran (2002) demonstrates that a mean-preserving increase in male wage inequality will increase the reservation wage of women in that marriage market. For any such reservation wage, a mean-preserving increase in wage dispersion increases the expected value of outcomes, and therefore returns to search, above that reservation value. The reservation wage must then rise to equate the utility of the wage value that ends search with the value of continued search.[2]

[2] Gould and Paserman (2003) and Coughlin and Drewianka (2011) both point out that it is possible for the reservation wage to increase in this case without prolonging search. If the reservation wage previously exceeded the

Loughran (2002) and Gould and Paserman (2003) both estimate the relationship between male wage inequality and the marital status of women using data from the 1970, 1980, and 1990 Decennial Censuses. Loughran (2002) defines marriage markets based on metropolitan area, education, and race, and finds that male wage inequality reduces the share of women ages 22-30 who are ever married. Gould and Paserman (2003) define marriage markets based on metropolitan area and find that male wage inequality increases the probability white women ages 21-30 are never married.

More recently, Coughlin and Drewianka (2011) confirm the same relationship in 1977-2005 Current Population Survey (CPS) data, defining marriage markets based on state of residence. Their additional analysis of individual-level marriage hazard models using 1981-1997 Panel Study of Income Dynamics (PSID) data suggests that the negative effect of inequality on the marriage hazard is largely confined to women in their 20s. This is consistent with women changing their search behavior in their 30s as their search pool evolves and they face biological constraints (Akin and Platt, 2016). The basic prediction of the effect of male wage inequality on reservation quality is generated assuming a stable search pool and ignoring biological constraints. In this paper we focus on "early mover" marriages of women ages 22-30, where the basic model predictions are more likely applicable.

2.2 Husband's Education

Interestingly, while multiple papers have found evidence that male wage inequality affects search duration and reduces the marriage rates of women in their 20s, no papers have

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average male wage, then the increased upper tail wage inequality could increase the probability of a draw above even the new higher reservation wage value, reducing search duration. The literature has confirmed a positive relationship between male wage inequality and search duration suggesting that this upper tail probability effect has not dominated.

analyzed the characteristic of the "early mover" marriages that do form at these ages. When comparing women ages 30 and under across high inequality and low inequality markets, the predicted lower share ever married in the high inequality market can be explained by the fact that fewer of these women have found a prospective spouse above their (higher) reservation wage compared to women in lower inequality markets. The same explanation applied for women in higher inequality markets who marry by 30 implies they do so because their search has yielded a spouse above their (higher) reservation wage. Therefore, early mover women in high inequality markets should, on average, have higher quality spouses than early mover women in lower inequality markets.

The analysis in this paper defines marriage markets by geography, education, and race, following Loughran (2002). When considering the predicted effect of male wage inequality on the characteristics of observed matches, it is important to distinguish between increases in within education group inequality and increased inequality across education groups. A widening gap in average earnings *across* education groups should increase assortative matching by education (Fernández, Guner, and Knowles, 2005; Schwartz, 2013). An increase in returns to education will increase the cost of "marrying down" in education for high education women. With fewer high education women marrying down, there is less opportunity for low education women to marry up. The result is increased matching on educational attainment. Fernández et al. (2005) confirm this relationship between returns to education and marital sorting using data on 34 countries. Cornelson and Siow (2016) also confirm this relationship using data on US states.[3]

Our analysis, however, considers instead the effect of *within* education group inequality on match characteristics, which has not been studied before. Because women in high inequality

[3] There is also a related literature studying how changes in assortative matching affect between-household income inequality (e.g. Ciscato and Weber, 2020).

markets will only marry early if they find a match above their reservation value, we expect early mover women in high inequality markets to be more likely to have "married up" in education and less likely to have "married down" in education compared to early mover women in low inequality markets.

2.3 Husband's Occupational Wage

An increase in male wage inequality should increase women's reservation value for husband's predicted lifetime earnings. Education is one predictor of lifetime earnings. As another measure of husband's lifetime earnings potential, we consider whether husband's current occupation has high predicted wages for prime-age males.

We prefer using education and occupation as measures of lifetime earnings potential rather than using current wages among men with limited labor market experience. This is because, by increasing the reservation value for husband's lifetime earnings, greater male wage inequality should increase the share of early mover married women matched with men who invest in human capital early in the lifecycle, through both schooling and training, in order to raise lifetime earnings potential. To the extent that the husbands of early mover women in high inequality markets sacrifice current wages for future earnings, analysis of husband's wages for women ages 22-30 is a less reliable test of the theoretical prediction.

2.4 Husband's Age

In the search model in Loughran (2002), an increase in male wage dispersion increases the spread of marriage offers women receive as they search in the marriage market, but husband's wages are known with certainty. It has not previously been considered in this literature that male wage inequality could also generate greater uncertainty about the lifetime earnings of a prospective husband, particularly for men with limited labor market experience.

Such uncertainty could affect the marital age gaps observed in early mover marriages through two mechanisms. The first is that women may change their marital age gap preferences towards older men who can send a stronger signal of lifetime earnings. The second is that women who prefer to marry similarly-aged husbands may delay marriage until the lifetime earnings of similarly-aged men are known with less uncertainty.[4] If women who marry similarly-aged spouses delay marriage, the composition of early mover marriages will shift towards women who marry older men. Both of these mechanisms are predicted to increase the marital age gap between husband and wife in higher inequality markets.

It is important to point out that the existing literature suggests that in the absence of this uncertainty, women do not receive greater utility from marrying older men. Lee and McKinnish (2017) document that the marital satisfaction of married women is lower when married to older husbands. Structural estimates of Choo and Siow (2006) imply that women maximize net gains from marriage with slightly older husbands. Mansour and Mckinnish (2014) find that a larger marital age gap is associated with lower cognitive ability and lower earnings, implying negative selection into marriages with larger age gaps. These findings imply that, in the absence of uncertainty, an increase in women's reservation value for husband quality is expected to *decrease* marital age gaps among early mover marriages because similarly-aged men are considered to be of higher quality. The introduction of uncertainty in men's lifetime earnings is thus required to explain a positive relationship between male wage dispersion and age gaps in early mover marriages.

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[4] Bergstrom and Bagnoli (1993) develop a related model of the marital age gap in which high ability men delay marriage to reveal their higher potential earnings, but low ability men do not delay because their signal will not improve with time. No women delay marriage, as delay does not improve the value of their household production, but high value women marry older high-ability men and low value women marry younger low-ability women. In this model, search is costless, but uncertainty about men's potential earnings generates marriage delays for high quality men and larger age gaps for high quality spouses.

2.5 Female Wages and Husband's Characteristics

Rising female wages are also predicted to increase women's reservation value for husband quality. Autor, Dorn and Hanson (2019) and Shenhav (2021) both show that increases in female wages relative to male wages reduce marriage rates. Shenhav (2021) documents that a higher female to male potential wage ratio is associated with a higher propensity to marry up in education and lower propensity to marry down in education among married women ages 22-44, consistent with a higher reservation value for husband quality. For this reason, we present regression estimates that include controls for the wage ratio and women's labor supply, despite the concern that these variables are jointly determined with marriage.[5]

We still may fail to adequately control for female labor market conditions that affect marital search, including, for example, returns to experience. We argue, however, that our age gap results reduce the concern that our husband quality results are due to omitted female labor market characteristics. Shenhav (2021) finds that a higher wage ratio reduces the probability a woman marries a man older than herself, which, consistent with previous findings on the marital age gap, she interprets as increased husband quality. In contrast, our prediction and finding is that the male wage inequality increases the age gap between husband and wife, which, barring concerns about male wage uncertainty, would signal a decrease in husband quality. Our finding that male wage inequality *both* increases in husband's education and the age gap is not consistent with bias due to omitted female labor opportunities.

[5] Shenhav (2021) predicts potential wages for women and men by marriage market using industry and occupation composition to avoid this potential bias. Autor, Dorn and Hanson (2019) similarly use differential exposure to industry-level Chinese trade shocks by location.

2.6 Two-Sided Marital Search

Loughran (2002) uses a one-sided model of marital search, while a two-sided model would allow the search behavior of prospective husbands to adapt to changes in marriage market conditions. Men could respond to the increase in female reservation wages by lowering their own reservation wages, and this offsetting behavior could reduce or eliminate the marital delays predicted by the one-sided model. We, along with the prior literature, however, find that male wage inequality is associated with marital delays, suggesting that any such offsetting behavior is not sufficient to completely counter-act the effect on women's reservation wage.[6] Our marital status estimates can be interpreted as the net effect of rising wage inequality on marital formation through shifts in reservations wages on both sides of the market.

3. Methodology

3.1 Data

We use data from the U.S. Decennial Census and American Community Survey Integrated Public Use Microdata Series (IPUMS) (Ruggles et al., 2017) for five time periods: 1980, 1990, 2000, 2006-2010, and 2014-2018. Marriage markets are defined by state, education, and race/ethnicity. [7] We use four education categories (less than high school, high school, some college, college) and three race/ethnicity categories (white non-Hispanic, non-Hispanic black, Hispanic) to define marriage markets.

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[6] If men in high inequality markets respond by becoming less picky, early mover women in the higher inequality markets could be marrying at the same rates as those in lower quality markets because they are adequately compensated in husband quality for foregoing the greater returns to search in their market. Early mover women in high inequality markets should still therefore on average be accepting higher quality offers than those in low inequality markets.

[7] Loughran (2002) and Gould and Paserman (2003) define marriage markets based on metropolitan areas. Coughlin and Drewianka (2011) define marriage markets at the state level and find that their estimates are very similar to those of Loughran (2002) and Gould and Paserman (2003) when they restrict their sample to the same years analyzed in those earlier papers. We also define the market at the state level to avoid issues with consistent definitions of metro areas over time. State-level definitions for marriage markets have been common in recent work (e.g. Bertrand, Kamenica and Pan, 2015; Shenhav, forthcoming).

For each marriage market and time period, the sample of male workers ages 25-45 is used to calculate measures of male wage inequality.[8] Specifically, we calculate the standard deviation of log wages, the gini coefficient, the 90th-50th percentile difference in log wages and the 50th-10th percentile difference in log wages. The standard deviation of log wages and the 50th-10th percentile difference are both most sensitive to changes in the bottom of the wage distribution, the gini coefficient is most sensitive to changes in the middle of the wage distribution, and the 90th-50th is most responsive to changes in the upper part of the wage distribution. Markets with fewer than 50 observations of male workers ages 25-45 available to calculate the inequality measure are excluded from analysis.[9]

We do not assume that women only match within their marriage market as defined by location, education, and race/ethnicity, only that the male wage characteristics of this market are the most salient for determining their reservation wage and search behavior.[10]

Figure 1 graphs the distribution of marriage market level standard deviations of log male wage using all five time periods. Figures 2A and 2B show the distribution of changes in the marriage market standard deviations for 1980-2000 and 2000-2018, respectively. The vast majority of marriage markets experienced increases in male wage inequality between 1980 and 2000. While inequality also increases in the majority of marriage markets between 2000 and 2018, a larger share experience declining inequality compared to the earlier time periods.

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[8] Hourly wages are calculated for each worker by dividing annual earnings by annual hours. Annual hours are calculated by multiplying weeks worked last year times usual hours per week. Because weeks of work are reported in intervals in 2006-2018, weeks of work are taken as the midpoint of the reported interval. Specifically, weeks values of 7, 20, 33, 44, 48. and 51, are used, respectively, for the reported intervals 1-13, 14-26, 27-39, 40-47, 48-49, and 50-52.

[9] This restriction results in dropping 260 marriage markets which is about 0.18% of analysis sample of women ages 22-30.

[10] For example, Furtado and Theodoropolous (2011) demonstrate that endogamous matching on race/ethnicity becomes somewhat less common as education increases. This means that male wage dispersion by race/ethnicity may be slightly less salient for highly-educated women. This would attenuate our estimates but would not bias the results towards finding a positive effect of male wage dispersion in own marriage market on husband's education.

We calculate outcome variables by marriage market for women ages 22-30. The first outcome we consider is the share of ever married women. We also investigate whether the predicted decrease in the share of ever married women results from substitution to cohabitation or to non-partnered status.

The effect of male wage inequality on cohabitation is theoretically ambiguous. One result of the increased reservation wage for marriage could be greater use of cohabitating trial periods prior to marriage. On the other hand, to the extent that male wage inequality increases the return to continued search, women may become pickier about entering any relationship, marriage or cohabitation, that substantially reduces the effort they can devote to continued search.

While cohabitation cannot be measured in the 1980 Census, cohabiting couples can be identified in the 1990 Census and forward. Ideally, we would be able to categorize women ages 22-30 into 3 groups: 1) ever married, 2) never married, but ever cohabitated, and 3) never partnered. However, we only observe current cohabitation status, so instead we calculate the share of women who are never married, but currently cohabitating, as an approximation of the second group.

To measure husband quality, we calculate the shares of currently married women ages 22-30 in each marriage market whose husbands have more education, the same education, and less education than they do (using the same four education categories used to define marriage markets). As an additional measure of husband's quality, we consider the earnings potential in his current occupation by calculating the predicted prime-age male wage in his 3-digit occupation. This occupational wage is calculated separately for each time period using the national sample of male workers ages 30-50.

Finally, we calculate the average spousal age gap (the difference between husband's age and wife's age) in each marriage market. The partner's education, occupational wage and age outcomes are also calculated for currently cohabitating women for years 1990 forward. For both the samples of married couples and cohabiting couples, same-sex couples are not included in the sample.

Table 1 reports means of the marriage market level variables broken out into two groups of time periods: 1980-2000 and the post-2000 time periods. Consistent with Figures 1 and 2, the descriptive statistics in Table 1 confirm that male wage inequality increases over time for all of our inequality measures. The share of women who are ever married declines over time and, consistent with national trends in educational attainment of women relative to men, the share of married women ages 22-30 who are married to husbands with more education is also declining.

3.2 *Regression Specification*

We estimate the following Ordinary Least Squares (OLS) specification:

$$\begin{aligned} Y_{serta} &= \beta_o + \beta_1 StDevLogMaleWage_{sert} + \beta_2 AvgMaleWage_{sert} + \beta_3 SexRatio_{sert} \\ &\quad + \theta_a + \lambda_{ser} + \delta_{s*t} + \gamma_{r*t} + \phi_{e*t} + \varepsilon_{serta} \end{aligned} \qquad (1)$$

where Y is an outcome variable for women age a in state s, education group e, race/ethnicity group r, and time period t. To adjust for any differences in age distribution across marriage markets, Y is calculated separately by age (restricted to ages 22-30) and age fixed effects, θ_a, are included as controls.[11]

StDevLogMaleWage is the standard deviation of logged male hourly wages in the woman's marriage market, calculated using all male workers ages 25-45. An additional

[11] If the age distribution for women ages 22-30 is sufficiently similar across marriage markets and time periods, then it is not necessary stratify by woman's age and control for age fixed-effects. But, because marital status is strongly related to age in this age range, it is important to adequately control for any differences in the age distribution.

regression specification uses the gini coefficient of male wages as an alternative inequality measure. A final regression specification includes instead both the 90^{th}-50^{th} percentile difference and the 50^{th}-10^{th} percentile difference in log male wages as measures of inequality.

All regressions control for the average logged wage for male workers ages 25-40 in the marriage market and the sex ratio of men to women ages 22-30 in the marriage market. In some specifications, we additionally control for the ratio of average logged male wage to average logged female wage for workers ages 25-45, the share of women ages 22-30 who are employed, and the share of women ages 22-30 who are employed full-time (at least 35 hours per week). These female labor market characteristics are likely endogenous, as marital status and female labor supply are jointly determined. We therefore exclude these controls for our baseline regressions, but also report specifications with these additional (endogenous) controls to address the concern that male wage inequality is correlated with labor market conditions for female workers.

The specification includes marriage market (state*race*education) fixed effects, state*time period fixed effects, race*time period fixed effects, and education*time period fixed effects. Our estimates are therefore identified using within-state differences in the time series variation in male wage inequality across marriage markets. While Loughran (2002) also used race and education level variation in marriage market conditions, he only controlled separately for location, race, and education fixed effects. We instead include a much more detailed set of fixed-effects to control for potential state-level time-varying omitted variables such as state-level policies and housing markets, as well as national trends in marital sorting by education and race group. Regressions are weighted by cell size and standard errors are clustered at the state level.

4. Results

4.1 Share Ever Married and Share Currently Cohabitating

Table 2 reports results for share ever married using all five time periods from 1980-2018. Three separate regressions use different measures of male wage inequality. The first regression uses the standard deviation of log male wages, the second regression uses the gini coefficient, and the third regression uses both the 90th-50th percentile and 50th-10th percentile differences in log male wages. The specification in column 1 includes marriage market (state*education*race) fixed effects and time period fixed effects. Column 2 adds state*time period fixed effects. Column 3 adds race*time period fixed effects and education*time period fixed effects. Column 4 adds marriage market controls for share of women working, share of women working full-time, and male to female wage ratio.

The results in Table 2 confirm a negative relationship between male wage inequality and the share ever married for all inequality measures.[12] The coefficients on the standard deviation of log wages in the final two columns of the top panel of Table 2 are -0.44 (without female labor controls) and -0.35 (with female labor controls). The histograms in Figure 2 indicate that 0.1 is a sizeable, but observed, change in the standard deviation. Thus, a 0.1 increase in this inequality measure would be associated with a 3.5 to 4.4 percentage point decrease in the share of woman ages 22-30 who are ever married. The remainder of the tables will report all results using just

[12] Appendix Table A2 reports the coefficients on the control variables for the Table 1 regressions using standard deviation of log wages as the inequality measure. In the first two columns, a higher average male wage and a higher ratio of men to women are both associated with a larger share of women ever married, consistent with expectations, but these effects become small and statistically insignificant when we add the full set of fixed effects in column 3. In column 4, where we add controls for female wages and employment, a higher ratio of average male wage to female wage is associated with a higher share ever married, also consistent with expectations. Perhaps counterintuitively, however, a higher share of women ages 22-30 employed full-time is associated with a higher share ever married.

the columns 3 and 4 specifications: including all fixed effects but not the female labor controls and then adding in the female labor controls.

Table 3 reports results using the share of women who are never married but currently cohabiting as the outcome variable, which is only available starting in 1990. The negative coefficient estimates in Table 3 indicate that marital delays generated by higher male wage inequality do not result in substitution towards cohabitation, but rather towards non-partnered status. While the coefficient estimates in Table 3 are smaller than in Table 2, the mean share currently cohabiting (but never married) is only 0.09, quite a bit smaller than the mean share ever married in Table 2, so these effects are quite large in percentage terms.

These cohabitation results suggest that cohabitation reduces search opportunities sufficiently that the increases in returns to search generated by rising male inequality result in higher reservation values for cohabitating partner quality as well as for spousal quality.[13] An alternative explanation is that increased lower tail male wage dispersion compels some women to abandoning search for partners altogether because of the low quality of the search pool. In Table 3, the coefficients on the 90th-50th percentile difference are slightly larger in magnitude than the 50th-10th percentile difference for our preferred specifications in columns 3 and 4 with the complete set of fixed effects. Because cohabitation is decreasing in response to measures sensitive to upper and middle distribution dispersion (90th-50th percentile difference and gini coefficient) as well as measures sensitive to lower tail dispersion (standard deviation of log wages, 50th-10th percentile difference), we argue that this relationship more likely reflects women forgoing current partnership for continued search rather than cessation of search.

[13] Shenhav (2021) finds that higher wages for women relative to men reduce marriage but have no effect on cohabitation. Our coefficient estimates for the male-female wage ratio are consistent with Shenhav's findings. The coefficient estimate is positive and significant in the shared ever married regression (shown in Appendix Table A2) but insignificant in the share cohabiting regression.

We report estimates for the share ever married separately for 1980-2000 and 2000-2018 periods in Table 4. All estimates for both 1980-2000 and 2000-2018 are negative and statistically significant, though the post-2000 estimates are somewhat smaller in magnitude. Coughlin and Drewianka (2011) also found effect sizes were smaller post-1990. Analysis for share cohabiting is not broken out by time period since cohabitation status is only available starting in 1990.

4.2 Husband's Education

Table 5 reports results for shares of married women (ages 22-30) in which the husband has more education, same education or less education than the wife. The coefficient estimates indicate that greater male wage dispersion is associated with a larger share of the married women ages 22-30 having married up in education and fewer having either married down in education or married similarly educated husbands. This is consistent with the theoretical prediction that increased male wage dispersion raises the reservation wage of women in the marriage market, so that the "early movers" who forfeit returns to further search do so because they have received a particularly attractive draw among prospective spouses. The coefficient estimates indicate that a 0.1 increase in the standard deviation of logged male wages is associated with a 3.6 to 4.2 percentage point increase in the share of married women ages 22-30 with more educated husbands.

Table 6 reports result from analysis of partner's education for cohabiting couples. Similar to Table 5, the results in Table 6 are consistent with women raising their reservation value for cohabiting partner quality. For cohabiting couples, the partner's education effects are mainly statistically significant for the inequality measures that are most responsive to changes lower in the wage distribution: the standard deviation of log wages and the 50^{th}-10^{th} percentile difference.

We report the results on husband's education separately for 1980-2000 and 2000-2018 in Table 7. Estimates in both sets of time periods are consistent with a shift towards more educated husbands in early mover marriages. However, the estimates for the more recent set of time periods are mostly statistically significant for those inequality measures more sensitive to changes in the lower part of the wage distribution.

Because the data analyzed in this paper are repeated cross-sections, rather than martial histories, they provide only a snapshot of married couples in a given survey year. If male wage inequality increased marital instability, then surviving marriages in higher inequality marriage markets could be more positively selected on husband's education. This would generate the same prediction we test, but through a different mechanism. Instead, Bellou (2017) documents a negative relationship between male wage inequality and divorce risk in Current Population Survey (CPS) and National Longitudinal Survey of Youth 1979 Cohort (NLSY79) data. This implies that the marriages observed in high inequality markets should be less selected on marital survival than those in low inequality markets. Thus, our finding that greater inequality is associated with higher husband quality in early marriages cannot be explained by higher marital dissolution in these markets

4.3 Husband's Occupational Wage

We next consider the relationship between male wage inequality and the earnings potential in husband's occupation, as measured by the predicted logged prime-age male wage in husband's 3-digit occupation. The first two columns in Table 8 report the results using all marriages for married women ages 22-30 and the remaining two columns report the results for cohabiting women ages 22-30. The coefficients on the standard deviation of logged wages, the gini coefficient, and 50^{th}-10^{th} percentile difference are, as predicted, positive and mostly statistically significant. This is consistent with women raising their reservation value for husband's expected lifetime wage in response to greater male wage inequality and therefore a larger share of early mover marriages is formed with partners from higher-earning occupations.

The coefficient estimates for the 90^{th}-50^{th} percentile differences, however, are mostly small, negative, and statistically insignificant. The 90^{th}-50^{th} percentile difference is associated with delayed marriage and higher husband's education. Thus, it is not clear why this measure does not impact husband's occupational wage, but it appears that this measure of husband quality is not as sensitive to upper tail inequality as increased dispersion in the bottom and middle of the income distribution.

4.4 Husband's Age

Table 9 reports results for the average difference in husband's and wife's age. The first two columns of Table 9 report the results for all married women (ages 22-30). The estimates in these columns indicate that increased male wage dispersion is associated a larger average marital age gap in early mover marriages. The coefficient estimates indicate that a 0.1 increase in the standard deviation of logged male wages is associated with a 0.12 to 0.16 increase in the average age gap between husband and wife, an increase of 4 to 5.3 percent relative to the mean age gap of 2.97.

One concern with the marital age gap results reported in the first two columns of Table 9 is that the marital age gap is positively correlated with age of marriage. To the extent that greater male wage dispersion increases age of marriage for women, these age gap results could be a mechanical result of increased age of marriage. It is therefore preferable to control for age of marriage in the analysis. Unfortunately, age of marriage is reported inconsistently across our time periods of study. Age of marriage is not reported at all in the 1990 or 2000 Decennial Censuses. Age of first marriage is reported in the 1980 Census, and age of current marriage is reported in the ACS data from 2008 onward. We therefore use the average age gap in first marriages only in the 1980 Census, 2008-2010 ACS, and 2014-2018 ACS to perform an additional robustness check.

Columns 3 and 4 of Table 9 analyze the martial age gap in first marriages, restricted to the time periods in which age of marriage is reported. Column 3 reports the results for this sample without adding the age of marriage controls, keeping the same fixed effects and female labor controls as were used in Column 2. Comparing Columns 2 and 3, there is some loss of significance from dropping 1990 and 2000 from the analysis, but the estimates in the two columns are fairly similar. Column 4 adds a cubic for age of marriage to the specification used in Column 3. The estimates are robust to the addition of the age of marriage controls, suggesting that the positive estimates in the first two columns were not the result of a mechanical effect through delayed age of marriage. These results are consistent with the idea that greater male wage inequality is associated with a greater uncertainty in male lifetime wages, affecting women's willingness to marry husbands who are too young to send a strong signal of future labor earnings. The final two columns in Table 9 report age gap estimates for cohabiting couples. While the point estimates are all positive, consistent with the results for married couples, none of the estimates are statistically significant.

These age gap results are also important for helping rule out an alternative explanation for the husband quality results. If male wage inequality is correlated with female labor market opportunities, the increased reservation value for husband quality and marital delays could be driven by unobserved changes in female labor market conditions, rather than male wage dispersion itself. However, as discussed above in Section 2.5, if the husband's education and and husband's occupational wage results were instead due to unobserved improvements in returns to women's work and experience, then we would expect to observe instead a negative relationship between male wage inequality and the marital age gap. While we cannot rule out the possibility that estimates of the effect of male wage inequality on husband's education and occupational wage reflect some bias due to unobserved female labor market conditions, the age gap results suggest that this bias is not driving our results.

5. Conclusions

Our results confirm findings in the existing literature that male wage inequality is associated with marital delays, which we show are robust to a much more details set of fixed effects controls than the prior literature. We further investigate whether these marital delays are associated with substitution towards cohabitation and instead find that higher male wage inequality is associated with decreased cohabitation as well. This suggests that cohabitation limits search opportunities sufficiently that an increase in returns to search will also raise the reservation value for cohabiting partner quality.

In analyzing how male wage inequality changes the composition of early mover marriages, we confirm that greater male wage inequality in a marriage market is associated with a greater share of early mover marriages involving women who marry more educated husbands. This is consistent with greater male wage inequality raising the reservation value for husband quality.

We further add to the literature by considering the possibility that greater male wage inequality is associated with greater lifetime wage uncertainty, particularly for younger men, which should affect the spousal age gap in early mover marriages. Our estimates are consistent with this prediction, finding a positive relationship between male wage dispersion and the marital age gap. This suggests that male wage inequality does not just alter marital search behavior by changing the dispersion of offers women receive, but also by changing the quality of signals young men can send about their future earnings.

References

Akin, S. Nuray, and Brennan C. Platt. 2016. "Accounting for Age in Marital Search Decisions." *European Economic Review* 85: 245–271.

Autor, David, David Dorn, and Gordon Hanson. 2019. "When work disappears: Manufacturing decline and the falling marriage market value of young men." *American Economic Review: Insights* 1(2): 161-78.

Bellou, Andrea. 2017. "Male Wage Inequality and Marital Dissolution: Is There a Link?" *Canadian Journal of Economics* 50(1): 40-71.

Bertrand, M., Kamenica, E., & Pan, J. 2015. Gender identity and relative income within households. *The Quarterly Journal of Economics, 130*(2), 571-614.

Bergstrom, Theodore, and Mark Bagnoli. 1993. "Courtship as a Waiting Game," *Journal of Political Economy* 101: 185-201.

Caucutt, Elizaeth, Nezih Guner and John Knowles. 2002. "Why Do Women Wait? Matching, Wage Inequality, and the Incentives for Fertility Delay?" *Review of Economic Dynamics* 4(5): 815-855.

Choo, Eugene, and Aloysius Siow. 2006. "Who Marries Whom and Why." *Journal of Political Economy* 114 (1): 175-201.

Ciscato, Edoardo and Simon Weber. 2020. "The Role of Evolving Marital Preferences in Growing Income Inequality." *Journal of Population Economics* 33(1): 307-347.

Cornelson, Kirsten, and Aloysius Siow. 2016. "A Quantitative Review of Marriage Markets: How Inequality Is Remaking the American Family by Carbone and Cahn." *Journal of Economic Literature* 54 (1): 193-207.

Coughlin, Tristan and Scott D. Drewianka . 2011. "Can Rising Inequality Explain Aggregate Trends in Marriage? Evidence from U.S. States, 1977-2005," *The B.E. Journal of Economic Analysis & Policy*: Vol. 11: Iss. 1 (Topics), Article 3.

Fernández, Raquel, Nezih Guner, and John Knowles. 2005. "Love and Money: A Theoretical and Empirical Analysis of Household Sorting and Inequality." *Quarterly Journal of Economics* 120 (1): 273–344.

Furtado, Delia, and Nikolaos Theodoropolous. 2011. "Interethnic Marriage: A Choice between Ethnic and Educational Similarities." *Journal of Population Economics* 24 (4): 1257-1279.

Goldin, Claudia and Lawrence Katz. 2002. "The Power of the Pill: Oral Contraceptives and Women's Career and Marriage Decisions." *Journal of Political Economy* 110(4): 730-770.

Gould, Eric D., and Daniele M. Paserman. 2003. "Waiting for Mr. Right: Rising Inequality and Declining Marriage Rates." *Journal of Urban Economics* 53 (2): 257-281.

Lee, Wang Sheng and Terra McKinnish. 2018. "The Marital Satisfaction of Differently-Aged Couples" *Journal of Population Economics* 31(2):337-362.

Loughran, David S. 2002. "The Effect of Male Wage Inequality on Female Age at First Marriage." *The Review of Economics and Statistics* 84 (2): 237-250.

Mansour, Hani and Terra McKinnish. 2014. "Who Marries Differently-Aged Spouses? Ability, Education, Occupation, Earnings, and Appearance" *Review of Economics and Statistics* 96(3): 577-580.

Ruggles, Steven, Katie Genadek, Ronald Goeken, Josiah Grover, and Matthew Sobek. 2017. "Integrated Public Use Microdata Series: Version 7.0. [dataset] ".

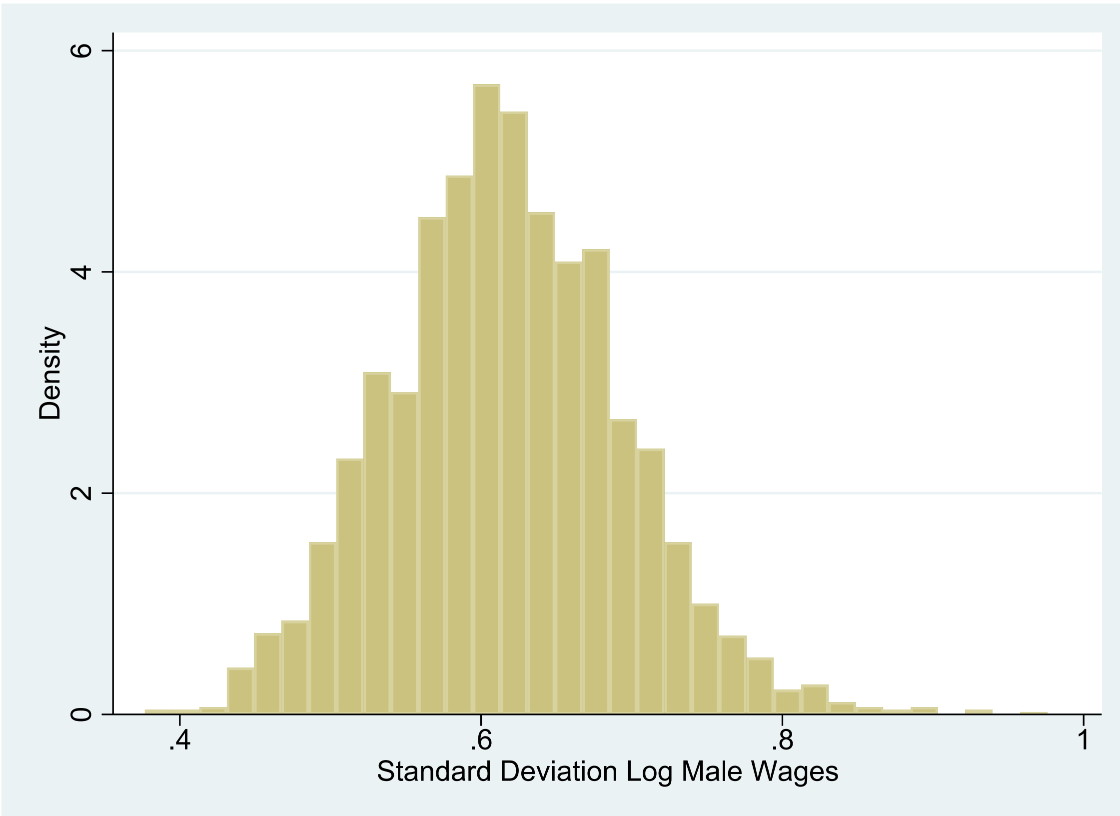
Schwartz, Christine R. 2013. "Trends and Variation in Assortative Mating: Causes and Consequences." *Annual Review of Sociology* 39 (July): 451–470.

Shenhav, Na-ama. 2021. "Lowering Standards to Wed? Spouse Quality, Marriage and Labor Market Responses to the Gender Gap." *Review of Economics and Statistics* 103(2): 265-279.

Stevenson, Betsey and Justin Wolfers. 2007. "Marriage and Divorce: Changes and Their Driving Forces." *Journal of Economic Perspectives* 21(2): 27-52.

Wang, Chunbei and Le Wang. 2017. "Knot Yet: Minimum Marriage Age Law, Marriage Delay, and Earnings." *Journal of Population Economics* 30(3): 771-804.

Fig 1: Standard deviation of logged male hourly wages, by marriage market and year.

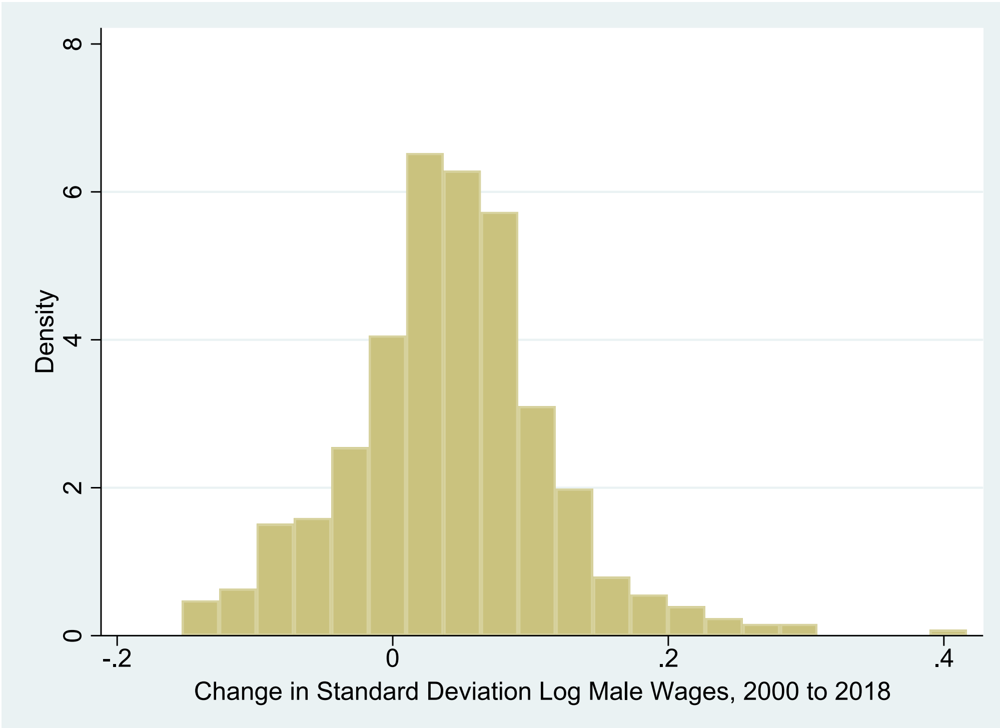


Marriage markets are defined by state, race, and education. Education is stratified into four categories (less than high school, high school, some college, college) and race/ethnicity is stratified into three categories (white non-Hispanic, non-Hispanic black, Hispanic). Men are ages 25-45.

Fig 2A: Change in standard deviation log male wages, by marriage market, 1980 to 2000.

See definition of marriage markets in Figure 1.

Fig 2B: Change in standard deviation log male wages, by marriage market, 2000 to 2018.



See definition of marriage markets in Figure 1.

Table 1: Variable means

	1980-2000	2006-2010 & 2014-2018
Share ever married, women ages 22-30	0.732 (0.116)	0.563 (0.117)
Share husband more education, married women ages 22-30	0.235 (0.178)	0.197 (0.177)
Share husband less Education, married women ages 22-30	0.221 (0.133)	0.248 (0.138)
Husband's age-wife's age, married women ages 22-30	2.750 (0.514)	2.876 (0.716)
Average logged husband's wage, married women ages 22-30	2.089 (0.600)	3.233 (0.285)
Standard deviation logged wage, men ages 25-45	0.558 (0.043)	0.673 (0.042)
Gini coefficient, wage, men ages 25-45	0.346 (0.039)	0.356 (0.031)
90-50 Percentile diff, log wage, men ages 25-45	0.634 (0.103)	0.723 (0.085)
50-10 Percentile diff, log wage, men ages 25-45	0.689 (0.072)	0.791 (0.076)
Average log wage, men ages 25-45	2.098 (0.617)	3.247 (0.346)
Sex ratio, ages 22-30	1.012 (0.172)	1.068 (0.310)
Wage ratio, ages 25-45	1.325 (0.333)	1.089 (0.031)
Share employed, women ages 22-30	0.870 (0.053)	0.912 (0.037)
Share employed full time, women ages 22-30	0.676 (0.069)	0.700 (0.079)
N	1436	1040

Notes: Marriage markets are defined by state, race, and education. Education is stratified into four categories (less than high school, high school, some college, college) and race/ethnicity is stratified into three categories (white non-Hispanic, non-Hispanic black, Hispanic). The means of average marriage market characteristics are weighted by cell size. Standard deviations are shown in parentheses.

Table 2: Male wage inequality and share of women ages 22-30 ever married, 1980-2018

St dev log wage	-0.918***	-0.938***	-0.439***	-0.347***
	(0.197)	(0.155)	(0.060)	(0.059)
Gini coefficient	-0.681***	-0.993***	-0.356***	-0.246***
	(0.201)	(0.181)	(0.070)	(0.059)
90-50 Percentile diff	-0.280***	-0.286***	-0.163***	-0.131***
	(0.084)	(0.070)	(0.027)	(0.027)
50-10 Percentile diff	-0.435***	-0.369***	-0.193***	-0.162***
	(0.093)	(0.075)	(0.030)	(0.032)
Marriage market FE	Yes	Yes	Yes	Yes
Time period FE	Yes	No	No	No
State by time period FE	No	Yes	Yes	Yes
Education by time period FE	No	No	Yes	Yes
Race by time period FE	No	No	Yes	Yes
Female labor controls	No	No	No	Yes
Mean of dependent variable	.563	.563	.563	.563
Sample size	22226	22226	22226	22226

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

Notes: Table reports results from three separate regressions in which the measure of male wage inequality is the standard deviation, the gini coefficient, or both the 90-50 percentile difference and the 50-10 percentile difference. Dependent variable is share of women ever married in marriage market × age × time period cell (ages 22-30). All regressions control for avg log male wage, sex ratio, and age fixed effects. Female labor controls include male-female wage ratio, share women employed, and share women employed FT. Standard errors clustered at the state level are shown in parentheses.

Table 3: Male wage inequality and share of women ages 22-30 never married but currently cohabitating, 1990-2018

St dev log wage	-0.102***	-0.109***	-0.080***	-0.065***
	(0.023)	(0.024)	(0.022)	(0.023)
Gini coefficient	-0.085**	-0.118***	-0.087***	-0.063**
	(0.036)	(0.041)	(0.029)	(0.029)
90-50 Percentile diff	-0.008	-0.020	-0.040***	-0.032**
	(0.018)	(0.014)	(0.014)	(0.015)
50-10 Percentile diff	-0.075***	-0.070***	-0.0310***	-0.029**
	(0.016)	(0.012)	(0.010)	(0.011)
Marriage market FE	Yes	Yes	Yes	Yes
Time period FE	Yes	No	No	No
State by time period FE	No	Yes	Yes	Yes
Education by time period FE	No	No	Yes	Yes
Race by time period FE	No	No	Yes	Yes
Female labor controls	No	No	No	Yes
Mean of dependent variable	.090	.090	.090	.090
Sample size	18157	18157	18157	18157

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

Notes: Table reports results from three separate regressions in which the measure of male wage inequality is the standard deviation, the gini coefficient, or both the 90-50 percentile difference and the 50-10 percentile difference. Dependent variable is share of women who are both currently cohabitating and never married in marriage market × age × time period cell (ages 22-30). All regressions control for avg log male wage, sex ratio, and age fixed effects. Female labor controls include male-female wage ratio, share women employed, and share women employed FT. Standard errors clustered at the state level are shown in parentheses.

Table 4: Male wage inequality and share of women ages 22-30 ever married, time period heterogeneity

	1980-2000		2000-2018	
St dev log wage	-0.415***	-0.369***	-0.264***	-0.203***
	(0.093)	(0.088)	(0.085)	(0.074)
Gini coefficient	-0.214**	-0.175**	-0.236**	-0.136*
	(0.084)	(0.076)	(0.101)	(0.081)
90-50 Percentile diff	-0.182***	-0.168***	-0.086***	-0.065**
	(0.050)	(0.051)	(0.031)	(0.027)
50-10 Percentile diff	-0.219***	-0.207***	-0.129***	-0.110***
	(0.048)	(0.046)	(0.041)	(0.038)
Marriage market FE	Yes	Yes	Yes	Yes
State by time period FE	Yes	Yes	Yes	Yes
Education by time period FE	Yes	Yes	Yes	Yes
Race by time period FE	Yes	Yes	Yes	Yes
Female labor controls	No	Yes	No	Yes
Mean of dependent variable	.643	.643	.492	.492
Sample size	12891	12891	13898	13898

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

Notes: Table reports results from three separate regressions in which the measure of male wage inequality is the standard deviation, the gini coefficient, or both the 90-50 percentile difference and the 50-10 percentile difference. Dependent variable is share of women ever married in marriage market x age x time period cell (ages 22-30). All regressions control for avg log male wage, sex ratio, and age fixed effects. Female labor controls include male-female wage ratio, share women employed, and share women employed FT. Standard errors clustered at state level are shown in parentheses. * p < 0.1; ** p < 0.05; *** p < 0.01.

Table 5: Male wage inequality and husband's education, 1980-2018

	More education		Same education		Less education	
St dev log wage	0.418***	0.358***	-0.284***	-0.282***	-0.134**	-0.077
	(0.099)	(0.093)	(0.079)	(0.092)	(0.063)	(0.051)
Gini coefficient	0.230***	0.135*	-0.083	-0.036	-0.147**	-0.099*
	(0.081)	(0.071)	(0.084)	(0.084)	(0.067)	(0.054)
90-50 Percentile diff	0.076**	0.062**	0.028	0.023	-0.104***	-0.085***
	(0.036)	(0.029)	(0.037)	(0.033)	(0.030)	(0.026)
50-10 Percentile diff	0.316***	0.305***	-0.306***	-0.318***	-0.010	0.013
	(0.064)	(0.068)	(0.080)	(0.090)	(0.039)	(0.039)
Marriage market FE	Yes	Yes	Yes	Yes	Yes	Yes
State by time period FE	Yes	Yes	Yes	Yes	Yes	Yes
Education by time period FE	Yes	Yes	Yes	Yes	Yes	Yes
Race by time period FE	Yes	Yes	Yes	Yes	Yes	Yes
Female labor controls	No	Yes	No	Yes	No	Yes
Mean of dependent variable	.206	.206	.546	.546	.249	.249
Sample size	20938	20938	20938	20938	20938	20938

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

Notes: Table reports results from three separate regressions in which the measure of male wage inequality is the standard deviation, the gini coefficient, or both the 90-50 percentile difference and the 50-10 percentile difference. Dependent variable is share of married women in marriage market × age × time period cell (ages 22-30) whose husband has more, same, or less education. All regressions control for avg log male wage, sex ratio, and age fixed effects. Female labor controls include male-female wage ratio, share women employed, and share women employed FT. Regressions weighted by cell size. Standard errors clustered at the state level are shown in parentheses.

Table 6: Male wage inequality and cohabitating partner's education, 1990-2018

	More education		Same education		Less Education	
St dev log wage	0.366***	0.322***	-0.134	-0.152	-0.232**	-0.170*
	(0.090)	(0.091)	(0.114)	(0.138)	(0.095)	(0.098)
Gini coefficient	0.194**	0.103	0.059	0.076	-0.253**	-0.178
	(0.088)	(0.089)	(0.155)	(0.172)	(0.120)	(0.119)
90-50 Percentile diff	0.056	0.053	-0.068	-0.093	0.012	0.041
	(0.034)	(0.039)	(0.059)	(0.060)	(0.052)	(0.050)
50-10 Percentile diff	0.239***	0.222***	-0.140*	-0.159*	-0.099*	-0.063
	(0.059)	(0.060)	(0.073)	(0.080)	(0.051)	(0.053)
Marriage market FE	Yes	Yes	Yes	Yes	Yes	Yes
State by time period FE	Yes	Yes	Yes	Yes	Yes	Yes
Education by time period FE	Yes	Yes	Yes	Yes	Yes	Yes
Race by time period FE	Yes	Yes	Yes	Yes	Yes	Yes
Female labor controls	No	Yes	No	Yes	No	Yes
Mean of dependent variable	.188	.188	.508	.508	.305	.305
Sample size	14282	14282	14282	14282	14282	14282

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

Notes: Table reports results from three separate regressions in which the measure of male wage inequality is the standard deviation, the gini coefficient, or both the 90-50 percentile difference and the 50-10 percentile difference. Dependent variable is share of cohabiting women (with male partner) in marriage market × age × time period cell (ages 22-30) whose partner has more, same, or less education. All regressions control for avg log male wage, sex ratio, and age fixed effects. Female labor controls include male-female wage ratio, share women employed, and share women employed FT. Regressions weighted by cell size. Standard errors clustered at the state level are shown in parentheses.

Table 7: Male wage inequality and husband's education, time period heterogeneity

	More education		Same education		Less education	
	1980-2000					
St dev log wage	0.257***	0.262***	-0.015	-0.088	-0.242***	-0.174**
	(0.061)	(0.071)	(0.086)	(0.091)	(0.083)	(0.073)
Gini coefficient	0.042	0.025	0.142	0.119	-0.184**	-0.145**
	(0.066)	(0.066)	(0.093)	(0.090)	(0.073)	(0.065)
90-50 Percentile diff	0.058*	0.065**	0.073	0.041	-0.130***	-0.105**
	(0.034)	(0.030)	(0.056)	(0.046)	(0.043)	(0.039)
50-10 Percentile diff	0.268***	0.275***	-0.193**	-0.226***	-0.075	-0.049
	(0.059)	(0.071)	(0.072)	(0.083)	(0.046)	(0.044)
Mean of dep variable	.22	.22	.542	.542	.238	.238
Sample size	12362	12362	12362	12362	12362	12362
	2000-2018					
St dev log wage	0.303**	0.241**	-0.256*	-0.186	-0.047	-0.055
	(0.125)	(0.103)	(0.131)	(0.138)	(0.071)	(0.076)
Gini coefficient	0.105	-0.018	-0.036	0.097	-0.070	-0.080
	(0.135)	(0.113)	(0.151)	(0.169)	(0.091)	(0.099)
90-50 Percentile diff	0.050	0.051	0.024	0.030	-0.074	-0.081*
	(0.049)	(0.046)	(0.066)	(0.071)	(0.044)	(0.047)
50-10 Percentile diff	0.270***	0.251***	-0.287***	-0.266***	0.017	0.015
	(0.058)	(0.055)	(0.070)	(0.069)	(0.034)	(0.032)
Mean of dep variable	.189	.189	.548	.548	.263	.263
Sample size	12883	12883	12883	12883	12883	12883
Marriage market FE	Yes	Yes	Yes	Yes	Yes	Yes
State by year FE	Yes	Yes	Yes	Yes	Yes	Yes
Education by year FE	Yes	Yes	Yes	Yes	Yes	Yes
Race by year FE	Yes	Yes	Yes	Yes	Yes	Yes
Female labor controls	No	Yes	No	Yes	No	Yes

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

Notes: Table reports results from three separate regressions in which the measure of male wage inequality is the standard deviation, the gini coefficient, or both the 90-50 percentile difference and the 50-10 percentile difference. Dependent variable is share of married marriage market x age x time period cell (ages 22-30) whose husband has more, same, or less education. All regressions control for avg log male wage, sex ratio, and age fixed effects. Female labor controls include male-female wage ratio, share women employed, and share women employed FT. Regressions weighted by cell size. Standard errors clustered at the state level are shown in parentheses.

Table 8: Male wage inequality and partner's occupational wage, 1980-2018

	Married women ages 22-30		Cohabiting women ages 22-30	
St dev log Wage	0.165***	0.124***	0.180***	0.103*
	(0.034)	(0.035)	(0.047)	(0.057)
Gini coefficient	0.096***	0.045	0.129*	0.052
	(0.034)	(0.030)	(0.069)	(0.075)
90-50 Percentile diff	0.001	-0.022	-0.014	-0.046
	(0.028)	(0.028)	(0.041)	(0.038)
50-10 Percentile diff	0.158***	0.143***	0.143***	0.098***
	(0.029)	(0.030)	(0.034)	(0.035)
Marriage market FE	Yes	Yes	Yes	Yes
State by time period FE	Yes	Yes	Yes	Yes
Education by time period FE	Yes	Yes	Yes	Yes
Race by time period FE	Yes	Yes	Yes	Yes
Female labor controls	No	Yes	No	Yes
Sample size	20938	20938	14909	14909

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

Notes: Table reports results from three separate regressions in which the measure of male wage inequality is the standard deviation, the gini coefficient, or both the 90-50 percentile difference and the 50-10 percentile difference. Dependent variable is average partner's logged occupational wage in marriage market × age × time period cell. The occupational wage is the predicted prime age male wage in partner's 3-digit occupation calculated separately by time period using the national sample of male workers ages 30-50. All regressions control for avg log male wage, sex ratio, and age fixed effects. Female labor controls include male-female wage ratio, share women employed, and share women employed FT. Regressions weighted by cell size. Standard errors clustered at state level are shown in parentheses.

Table 9: Male wage inequality and spousal age gap

	1980-2018 All marriages		1980 & 2008-2018 First marriages		1990-2018 Cohabiting couples	
St dev log wage	1.208*	1.612***	1.894*	2.019*	0.420	0.557
	(0.652)	(0.578)	(1.029)	(1.015)	(0.827)	(0.997)
Gini coefficient	0.910	1.194**	1.024	1.127	0.325	0.495
	(0.590)	(0.573)	(1.143)	(1.126)	(1.162)	(1.343)
90-50 Percentile diff	0.326	0.544**	0.977	1.041	0.019	0.117
	(0.279)	(0.263)	(0.777)	(0.762)	(0.398)	(0.468)
50-10 Percentile diff	0.729**	0.871***	0.743**	0.773**	0.197	0.180
	(0.291)	(0.250)	(0.351)	(0.346)	(0.449)	(0.508)
Marriage market FE	Yes	Yes	Yes	Yes	Yes	Yes
State by time period FE	Yes	Yes	Yes	Yes	Yes	Yes
Educ by time period FE	Yes	Yes	Yes	Yes	Yes	Yes
Race by time period FE	Yes	Yes	Yes	Yes	Yes	Yes
Female labor controls	No	Yes	Yes	Yes	No	Yes
Cubic age at 1st Marriage	No	No	No	Yes	No	No
Mean of dep variable	2.97	2.97	2.91	2.91	3.05	3.05
Sample size	20938	20938	12280	12280	14909	14909

* p < 0.1; ** p < 0.05; *** p < 0.01Notes: Table reports results from three separate regressions in which the measure of male wage inequality is the standard deviation, the gini coefficient, or both the 90-50 percentile difference and the 50-10 percentile difference. Dependent variable is average age difference between spouses/partners in marriage market × age × time period cell (ages 22-30). All regressions control for avg log male wage, sex ratio, and age fixed effects. Female labor controls include male-female wage ratio, share women employed, and share women employed FT. Regressions weighted by cell size. Standard errors clustered at state level are shown in parentheses.

Table A1: Variable means, high inequality vs low inequality markets

	High inequality markets	Low inequality markets
Share ever married, women ages 22-30	0.734 (0.116)	0.579 (0.126)
Share husband more education, married women ages 22-30	0.264 (0.144)	0.166 (0.200)
Share husband less education, married women ages 22-30	0.209 (0.128)	0.260 (0.139)
Husband's age-wife's age, married women ages 22-30	2.832 (0.505)	2.763 (0.709)
Average logged husband's wage, married women ages 22-30	2.127 (0.678)	3.063 (0.456)
Standard deviation log wage, men ages 25-45	0.558 (0.043)	0.673 (0.042)
Gini coefficient, wage, men ages 25-45	0.330 (0.027)	0.375 (0.030)
90-50 Percentile diff, log wage, men ages 25-45	0.603 (0.070)	0.751 (0.081)
50-10 Percentile diff, log wage, men ages 25-45	0.676 (0.062)	0.795 (0.071)
Average log wage, men ages 25-45	2.115 (0.668)	3.101 (0.489)
Sex ratio, ages 22-30	1.060 (0.198)	1.005 (0.278)
Wage ratio, ages 25-45	1.338 (0.341)	1.100 (0.074)
Share employed, women ages 22-30	0.873 (0.044)	0.903 (0.055)
Share employed full time, women ages 22-30	0.668 (0.061)	0.708 (0.081)
N	1238	1238

Notes: Marriage markets defined by state × race × education. Column 1 reports means for marriage markets above median standard deviation of log male wages, and column 2 reports means for markets below median. Means of marriage market characteristics weighted by cell size. Standard deviations are shown in parentheses.

Table A2: Male wage inequality and share of women ages 22-30 ever married, 1980-2018

St dev log male wage	-0.918***	-0.938***	-0.439***	-0.347***
	(0.197)	(0.155)	(0.060)	(0.059)
Avg log male wage	0.141***	0.738***	-0.001	-0.036
	(0.050)	(0.087)	(0.048)	(0.051)
Male-female sex ratio	0.009	0.091***	0.002	0.001
	(0.037)	(0.031)	(0.013)	(0.014)
Male-female wage ratio				0.069***
				(0.022)
Share women employed				0.126
				(0.101)
Share women employed FT				0.205**
				(0.082)
Marriage market FE	Yes	Yes	Yes	Yes
Time period FE	Yes	No	No	No
State by time period FE	No	Yes	Yes	Yes
Education by time period FE	No	No	Yes	Yes
Race by time period FE	No	No	Yes	Yes
Female labor controls	No	No	No	Yes
Mean of dependent variable	.563	.563	.563	.563
Sample size	22226	22226	22226	22226

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

Notes: Table reports results from three separate regressions in which the measure of male wage inequality is the standard deviation, the gini coefficient, or both the 90-50 percentile difference and the 50-10 percentile difference. Dependent variable is share of women ever married in marriage market × age × year cell (ages 22-30). All regressions control for age fixed effects. Regressions weighted by cell size. Standard errors clustered at the state level are shown in parentheses.