

Men's Labor-Market Decline and the Rising Correlation between Spouses' Earnings in the United States

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Abstract: This study examines the role of deterioration in men's labor-market conditions in explaining the rising correlation between spouses' earnings in the United States. Prior research treats the growth of married women's employment as the primary driver of this trend, leaving men's declining economic position largely unexamined. Drawing on U.S. Census and American Community Survey data from 1960 to 2019 covering 722 commuting zones, I apply two-way fixed-effects models and a shift-share instrumental-variable design that exploits local variation in exposure to Chinese import competition across male- and female-intensive industries. Both approaches indicate that deterioration in men's labor-market conditions raises the spousal earnings correlation within local labor markets, with the increase concentrated among couples with children. The pattern is class-stratified: where men's conditions worsen, mothers' work hours rise among those married to higher-earning men but little among those married to lower-earning men. This rising correlation thus reflects not only the growth of wives' employment but also the unequally distributed capacity of families to adapt to men's labor-market decline—an adaptation that itself amplifies inequality between households.

Keywords: spousal earnings correlation; men's labor-market decline; commuting zone; United States; China shock

Reproducibility Package: The replication package contains the Stata code that reproduces every table and figure from the IPUMS census/ACS microdata, all third-party input data, and documentation describing how to download the IPUMS microdata (samples and variables) required as input data. It is available at <https://doi.org/10.3886/E251260V1>

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OVER the past half-century, spouses' earnings have become increasingly correlated in the United States: high-ranking men and high-ranking women are more often found in the same households, as are low-ranking men and women. This rise in spousal earnings correlation (SEC) has important consequences for family income inequality because it concentrates economic advantage and disadvantage within the same families (Schwartz 2010). Although the trend itself is well documented, its underlying causes and sociological meaning remain less fully understood (Shen and Liao 2026a).

Existing literature explains the rising correlation between spouses' earnings primarily through women's increased labor force participation. As married women have entered paid employment in growing numbers, women's earnings have become more commensurate with their husbands' over a larger portion of married lives, thereby raising the correlation between spouses' earnings (Gonalons-Pons and Schwartz 2017; Gonalons-Pons, Schwartz, and Musick 2021). In this explanation, women's employment growth is treated as the predominant driver of rising SEC,

reflecting changes in gender norms around family division of labor and expansion of women's educational and occupational opportunities.

A focus on women's labor-market gains alone, however, leaves the role of men's economic position largely unexamined. Families experience labor-market change jointly rather than individually, and changes in women's labor supply do not occur independently of changes in men's economic position. Over the same period in which married women's employment expanded, men experienced significant labor-market deterioration—declining earnings growth, increasing employment precarity, and rising economic risk (Autor, Katz, and Kearney 2008; Binder and Bound 2019). These trends have been especially pronounced among less-educated men, but they have also extended into higher-educated and professional occupations (Damaske 2021; Hollister 2011). Prior research shows that men's worsening labor-market conditions have reshaped family formation, contributing to delayed marriage, declining marriage rates, and rising nonmarital fertility (Cherlin, Ribar, and Yasutake 2016; Killewald 2016; Schneider, Harknett, and Stimpson 2018). Yet these changes among men may also matter for how paid work is organized within marriage, a possibility that has received much less attention.

From a family-level perspective, women's increased labor force participation can be understood, in part, as a household-level adjustment to structural changes in men's economic opportunities (Grotti, Gritti, and Scherer 2026; Oppenheimer 1994). This perspective does not diminish the importance of women's expanding economic role. Rather, it foregrounds a basic but often-overlooked feature of household life: because spouses share an economic unit, men's and women's labor-market positions are not independent—changes on either side reshape the conditions under which the other side works. Single-gender accounts of rising spousal earnings' correlation, however well-grounded in women's labor-force gains, can therefore miss the joint dynamics through which households actually adapt to labor-market change. Households differ, however, in their capacity to undertake such adaptation (Esping-Andersen 2009). Sustained attachment to paid work is more feasible for women with higher levels of education, more stable occupations, and access to supportive resources—characteristics that are themselves unequally distributed across families (Damaske 2021). As a result, broad-based deterioration in men's labor-market conditions may strengthen labor-supply responses primarily among women in more advantaged households—especially those married to higher-earning men—while families already facing economic disadvantage have more limited scope for adjustment (Landivar 2012). In this way, family strategies designed to cope with labor-market risk may inadvertently amplify inequality between households.

Most existing research on rising SEC has been built on demographic decomposition methods, which partition the trend into components associated with changes in assortative mating, the division of paid labor after marriage, and other compositional shifts. These methods have established the empirical contours of the rise but, by design, are better suited to describing how compositions have shifted than to identifying the underlying causal forces driving those shifts.

This study addresses this gap by examining the role of changes in men's labor-market conditions in explaining the rising correlation between spouses' earnings in

the United States. Rather than focusing on national trends, I shift the level of analysis to geographically defined local labor markets, using data from the U.S. Census and the American Community Survey from 1960 to 2019 across 722 commuting zones (CZs) (VanHeuvelen 2018). I employ two complementary empirical strategies. First, two-way fixed-effects (TWFE) models estimate the relationship between changes in local male and female labor-market conditions and changes in local SEC, net of time-invariant regional characteristics, national shocks, and a rich set of time-varying covariates. Second, to strengthen causal identification, I use a shift-share instrumental-variable (SSIV) design that exploits differential exposure of local labor markets to rising Chinese import competition in male- and female-intensive industries, leveraging the fact that men and women are unevenly distributed across industries (Autor, Dorn, and Hanson 2013, 2019). Following China's accession to the World Trade Organization in 2001, its share of U.S. manufacturing imports increased rapidly, generating large, persistent, and geographically concentrated declines in employment and earnings. Importantly, these effects extended beyond manufacturing through local spillovers, thereby producing broad-based deterioration in local labor-market conditions (Autor, Dorn, and Hanson 2015). The magnitude and durability of this shock are further reflected in its political salience, including trade policies that explicitly targeted Chinese imports in recent years.

To preview the results, local declines in men's labor-market conditions are associated with significant future increases in local SEC, with effects concentrated among couples with children under age 18. Additional evidence suggests that this relationship operates through stratified wives' labor-supply responses to worsening conditions on the male side. Together, these findings indicate that men's labor-market decline has been an important yet largely neglected driver of rising SEC in the United States.

Literature Background

Sociological Significance of SEC

SEC sits at the intersection of several core traditions in sociology. Scholarship on gender and work highlights how the organization of paid labor within households reflects evolving gender norms, institutional constraints, and life-course dynamics surrounding marriage and parenthood (England 2010; Goldin 2006). Research on assortative mating has long emphasized that men and women tend to partner with others with similar education, occupation, and earnings potential, with implications for social closure and stratification (Mare 1991). A third tradition—research on the changing institution of marriage—emphasizes that marriage itself has become increasingly contingent on economic conditions, including men's capacity to provide stable earnings, and that labor-market inequality reshapes the timing, meaning, and organization of marital relationships (Cherlin 2014; Oppenheimer 1994). Taken together, these literatures suggest that changes in SEC bear on broader questions about the role of families in mediating the relationship between labor markets and inequality.

Before turning to explanations for rising SEC, it is important to clarify what SEC captures conceptually. As Schwartz (2010) emphasizes, SEC is a correlation measure that reflects the extent to which men who rank higher in the male earnings distribution tend to have wives who also rank higher within the female earnings distribution. SEC therefore captures the association between spouses' relative positions in *gender-specific* earnings distributions, not the similarity of their earnings in absolute terms. A common source of confusion is to interpret a higher SEC as indicating greater similarity in spouses' earnings levels. Yet these are analytically distinct concepts. As in the distinction between relative and absolute mobility in intergenerational research (Bloome 2025), the two need not move together. A brief hypothetical example illustrates this distinction.

Suppose a society has only three married couples. Husbands earn [100, 80, 60], whereas wives earn less overall, [10, 20, 30]. In the first scenario, the highest-earning man is paired with the lowest-earning woman, and the lowest-earning man is paired with the highest-earning woman: (100,10), (80,20), (60,30). The correlation between husbands' and wives' earnings is -1.00 . Spouses' earnings are dissimilar in absolute terms, and their relative earnings positions are negatively associated. Family incomes are [110, 100, 90], with a Gini coefficient (the common measure of income inequality) of 0.044.

Now suppose all wives' earnings increase by 50, substantially increasing the similarity of spouses' earnings in dollar terms: (100,60), (80,70), (60,80). Spouses' earnings are now much closer in absolute terms. Yet the correlation remains -1.00 , because the relative ordering of husbands and wives is unchanged: men who rank higher among men are still paired with women who rank lower among women. Family incomes now rise to [160, 150, 140], and the Gini coefficient declines to 0.030, suggesting that overall increases in wives' employment and earnings tend to reduce rather than increase family income inequality (McCall and Percheski 2010). Greater similarity in spouses' earnings, in other words, does not necessarily imply a higher SEC or greater inequality between couples (Boertien and Bouchet-Valat 2022).

By contrast, holding wives' earnings at their original levels, suppose only the association between spouses' relative earnings positions changes so that the highest-earning man is now paired with the highest-earning woman: (100,30), (80,20), (60,10). The correlation becomes $+1.00$, even though wives' earnings remain far below husbands' in absolute terms. Family incomes are [130, 100, 70], and the Gini coefficient rises to 0.133 (from 0.044). This comparison makes clear that rising family income inequality is driven primarily by stronger correlation between spouses' earnings rather than by greater similarity in spouses' earnings levels. Explaining rising SEC thus requires attention to forces that reshape the association between spouses' relative earnings positions, rather than to forces that merely reduce the gap between spouses' earnings in absolute terms (Shen 2021). In addition, throughout this article the SEC serves as a descriptive measure of the association between spouses' relative earnings positions, not, by itself, an indicator of who marries whom. A change in this association may reflect a change in assortative mating, but it may equally reflect a change in how couples divide paid work during marriage.

Women's Employment as a Proximate Determinant of SEC

Much of the existing empirical work on SEC follows a proximate-determinants framework. In demographic research, proximate determinants are the immediate behaviors through which broader social and economic forces shape an outcome. A familiar example comes from fertility: education, labor-market conditions, and gender norms affect fertility rates through proximate determinants such as partnership formation and contraceptive use (Bongaarts 1978). Identifying proximate determinants clarifies how an outcome changes, but it does not, by itself, explain the deeper social forces that generate those changes.

Existing research on SEC largely treats women's employment in this proximate sense. Existing empirical work attributes the rise in SEC primarily to changes in the division of paid labor within marriage, especially women's increased labor force participation (Billingsley, Gonalons-Pons, and Duvander 2024; Gonalons-Pons and Schwartz 2017; Gonalons-Pons et al. 2021), although recent studies show that change in assortative mating has also played a nontrivial role (Gonalons-Pons and Schwartz 2026; Shen and Liao 2026a, 2026b). The logic is straightforward: SEC is higher among dual-earner couples than among couples that include a nonemployed spouse, and increases in wives' employment raise the share of dual-earner couples in the married population (Schwartz 2010). Recent work further suggests that, since 1990, increases in SEC have arisen disproportionately during the childrearing stage of marriage rather than at marriage entry (Billingsley et al. 2024; Gonalons-Pons et al. 2021). In this sense, post-1990 growth in SEC appears to reflect not only who marries whom, but also how couples reorganize paid work after children arrive.

These findings establish women's employment as a key proximate contributor to contemporary SEC. However, they leave a deeper question unresolved: what broader social and economic forces reshaped women's employment in ways that systematically strengthened the association between spouses' earnings? To answer that question, it is necessary to move beyond proximate determinants and examine the more remote sociological forces that reshape how families organize paid work. In particular, whether deterioration in men's labor-market conditions has contributed to women's sustained employment—and thereby rising SEC—remains insufficiently understood.

Family Adaptation to Men's Labor-Market Decline

A family-sociological perspective emphasizes that households experience labor-market change jointly rather than individually. This insight is central to Oppenheimer (1994, 1997)'s account of family change under rising economic uncertainty, which argues that explanations focused only on women risk obscuring how men's deteriorating labor-market conditions reshape family behavior. As men's earnings stagnate and job precarity rises, families may rely more heavily on a dual-earner arrangement to reduce economic risk and maintain living standards. Wives' employment, from this perspective, can serve as part of a family strategy for coping with labor-market uncertainty on the male side.

To understand women's employment as part of a family-level risk-management strategy, it is useful to distinguish long-run adaptations from short-run labor-supply

responses among wives, typically described as “added-worker effects.” In its classic formulation, the added-worker effect refers to a temporary and compensatory increase in wives’ labor supply following adverse shocks to husbands’ earnings or employment (Lundberg 1985; Mattingly and Smith 2010; Mincer 1962; Stephens 2002). Such responses often smooth family income volatility. If increases in wives’ employment were primarily of this temporary nature, they would be unlikely to generate the sustained, population-level rise in SEC observed over the past half-century and might even weaken SEC by increasing wives’ labor supply when husbands’ earnings fall (Western et al. 2012).

The long-run rise in SEC therefore points to a different, more structural process, consistent with Oppenheimer’s (1988, 1994) theory of family change. Long-term deterioration in men’s labor-market conditions—driven by structural transformations of the economy—forces families to rely more systematically on wives’ sustained employment rather than temporary labor-supply adjustments. Anticipation of a durable dual-earner arrangement may also reshape behaviors prior to marriage, increasing the weight placed on both partners’ long-run economic potential and contributing to delayed marriage as men and women wait to establish stable career trajectories (Sweeney 2002).

Families, however, differ in their capacity to sustain a dual-earner mode of division of labor. Stable dual-earner employment depends on resources that are unequally distributed, including education, prior work experience, occupational stability, and the capacity to afford market-provided daycare (Rao 2020). As a result, wives’ sustained employment often reflects differences in families’ underlying capacity to deploy a second earner as a long-run strategy, rather than differences in need alone. Grotti, Gritti, and Scherer (2026), analyzing 31 European countries, find that the family consequences of male earnings loss are mitigated mainly by mothers’ prior, sustained employment rather than by reactive entry into work after the shock, and that the capacity for such sustained employment depends on household resources. Consistent with this view, Halla, Schmieder, and Weber (2020) find that in Austria, following husbands’ job displacement, wives’ labor-supply responses were strongest among those with higher education or premarital wages. Landivar (2012) shows that during the Great Recession in the United States, mothers’ increases in employment were larger in more advantaged households and were smaller among women married to lower-earning men. This stratified pattern suggests a plausible pathway through which men’s labor-market deterioration may strengthen wives’ sustained employment more among advantaged than disadvantaged families, thereby increasing SEC.

Need for Causal Evidence

The decomposition methods on which most of prior studies rely (Billingsley et al. 2024; Breen and Salazar 2011; Gonalons-Pons and Schwartz 2017; Gonalons-Pons et al. 2021) show that shifts in wives’ employment are a major proximate contributor to rising SEC. They further interpret the shifts in wives’ employment as being driven by changes among women—expanded labor-market opportunities, changing norms, and rising educational attainment (Gonalons-Pons et al. 2021). Yet this does not imply that changes in men’s economic position are not important. Even work

emphasizing women's employment acknowledges that the expansion of dual-earner couples may partly reflect deterioration in men's earnings prospects (Gonalons-Pons and Schwartz 2017). However, this possibility is difficult to evaluate with decomposition methods, which are well suited to describing compositional change but less able to identify behavioral responses—namely, whether worsening men's labor-market conditions reshape wives' labor supply and, in turn, SEC (Billingsley et al. 2024; Breen and Salazar 2011).

A related limitation is that prior research has focused primarily on national trends. At that level of aggregation, annual data provide only one observation per year (SEC calculated at the national level), making it difficult to estimate the relationship between SEC and multiple contemporaneous changes in labor markets, institutions, and population composition (Autor et al. 2015; VanHeuvelen 2018). In particular, national-level descriptive analyses cannot readily disentangle the effects of men's labor-market deterioration from concurrent changes in women's employment opportunities and other correlated social processes. Consequently, despite repeated conjectures that men's worsening economic position may underlie part of the rise in SEC, direct evidence remains scarce.

This study addresses these limitations by shifting the analysis from national trends to local labor markets. I examine changes in SEC across 722 CZs over time, which provides substantially greater statistical leverage and allows men's and women's labor-market conditions to be examined within a unified framework. This shift is also substantively important because deterioration in men's labor-market conditions has unfolded unevenly across space, and national averages obscure that heterogeneity (VanHeuvelen 2023). To address the endogeneity of observed changes in men's and women's labor-market positions, I then exploit differential local exposure to Chinese import competition as a source of plausibly exogenous variation in gender-specific labor demand (Autor et al. 2019). This design moves beyond descriptive accounting to test, under assumptions I make explicit below, whether declines in men's economic position causally reshape SEC.

Data and Measures

I use data from the Integrated Public Use Microdata Series (IPUMS), including the U.S. Census 5 percent samples (1960, 1980, 1990, and 2000), the 1 percent samples from the 1970 Form 1 and Form 2 metro files, and selected years of the American Community Survey (ACS, 2001–2019). Respondents are assigned to 722 CZs—time-consistent county groupings that approximate local labor markets with relatively intense within-zone commuting.

I conduct two analyses. First, TWFE models describe how local trends in male and female labor-market conditions are correlated with local trends in SEC. Within-CZ variation dominates: regressing SEC on CZ indicators yields $R^2 = 0.25$, indicating that 75 percent of the variation occurs within CZs over time. Second, a SSIV strategy addresses endogeneity.

SEC is measured as the rank correlation between spouses' annual earnings among heterosexual married couples in which both spouses are aged 18–54. Earnings ranks are computed within gender among individuals residing in the same CZ

and year, rather than nationally. Because earnings may contain ties, each individual is assigned a fractional rank equal to the average of the ranks that the tied observations would otherwise occupy, so that individuals with identical earnings receive the same percentile position (Van Kerm 2009). This local, gender-specific ranking ensures that the measure does not reflect differences in the level or shape of male or female earnings distributions across places or over time, and instead captures the alignment of spouses' relative earnings positions within local gender-specific distributions. Earnings include incomes from wages and salaries, self-employment, and farming. Following standard practice (e.g., Grossbard et al. 2022; Schwartz 2010), zero-earners are retained in the calculation of SEC. To confirm that the findings do not depend on any particular measure of SEC, I re-estimate my main models using alternative measures of SEC that rank spouses nationally rather than within CZs (using either annual or weekly earnings) and that replace the rank correlation with a uniform-association parameter from a log-linear model of spouses' earnings categories (Goodman 1979; Schwartz 2010); the results are robust across all of these measures in both the TWFE and SSIV designs (Tables S4 and S5 in the online supplement).

In TWFE models, *male and female labor market conditions* are measured as the natural logarithm of CZ-level median earnings among men and women aged 18–54. Calculation of median earnings includes zero earners to capture both extensive (employment, hours) and intensive (wage rates) margins (Card and Hyslop 2021). I include male and female earnings as *separate covariates* rather than as a gender earnings ratio. As Oppenheimer (1994) emphasizes, a change in the female-to-male earnings ratio can come from gains on the women's side or losses on the men's side, and these two cases have very different family-level meanings. A ratio specification cannot distinguish them. Including male and female earnings separately allows me to estimate the effect of changes in men's labor-market conditions while holding women's labor-market conditions constant—which is precisely the comparison this article requires. I also examine alternative measures separating extensive and intensive components of earnings; results are similar (see *Results* section). Measures of trade-induced, gender-specific labor-demand shocks used in the SSIV analysis are detailed with the SSIV design below.

TWFE models include time-varying CZ- and state-level controls measured among individuals aged 18–54, including demographic composition (proportions of residents who are black, Hispanic, foreign born, college-educated); availability of low-education immigrant labor (ratio of number of residents who have not completed college and are foreign-born over number of residents who are in the labor force and are not in school; see Cortés and Tessada 2011), population density, mean and coefficient of variation of age, heterogeneity of educational distribution (measured by Theil's entropy formula; see VanHeuvelen 2018), proportion of owner-occupied households; median house value (logged), total transfer income per capita (state level), and state-level social and economic conservatism (Caughey and Warshaw 2018). SSIV models follow the original setting in Autor et al. (2019) and include the following start-of-period CZ-level covariates: indices of employment in routine and in offshorable occupations, a period indicator for 2000–2014, shares of the CZ population that is Hispanic, Black, Asian, other race, foreign-born, college-educated, as well as the fraction of women employed.

Analytic Strategy

TWFE Model

My TWFE model predicts SEC measured in year $t+10$ in CZ i as follows:

$$SEC_{i,t+10} = \alpha + \beta_1 ME_{it} + \beta_2 FE_{it} + \beta_k X_{it} + CZ_i + Year_t + \epsilon_{it+10}. \quad (1)$$

In this model, ME_{it} and FE_{it} represent male and female labor market outcomes (logged median earnings) in CZ i in year t , respectively. The model includes CZ and year fixed effects to remove bias from stable local factors (e.g., local cultural norms) and national trends (e.g., economic recessions). To reduce simultaneity bias, I use ten-year-lead SEC as the dependent variable and include time-varying controls (X_{it}) capturing demographic, economic, and cultural changes at the CZ and state levels. Results are similar if I do not use lead measures of SEC (see *Results* section). Robust standard errors are clustered at the CZ level, and observations are weighted by each CZ's share of married couples in the national married-couple population in that year. Identification here rests on an assumption that cannot be directly verified: conditional on commuting-zone and year fixed effects and the included time-varying controls, changes in local male and female labor-market conditions are uncorrelated with unobserved, and time-varying factors that also affect future local SEC.

SSIV Model

Although the TWFE models substantially reduce confounding by time-invariant local characteristics and national shocks, they cannot fully rule out bias from unobserved, time-varying factors. Ideally, I want to identify the effects of changes in men's and women's labor-market positions on SEC in an experimental setting: commuting zones would be randomly assigned exogenous shocks to male and female labor-market conditions, with the intensity ("dose") of those shocks randomized across CZs. To approximate this experimental ideal, I adopt a SSIV design that exploits plausibly exogenous variation in local labor demand generated by the rapid rise of Chinese import competition.

Intuition of the design. Between 1990 and 2015, imports from China into United States expanded sharply (see Figure 1). Because CZs differed in their industrial composition prior to this trade expansion, they experienced different degrees of exposure to the China shock. Local labor markets that were initially specialized in industries later facing greater Chinese import growth experienced larger declines in labor demand than those specialized in less exposed industries.

Import competition and technological change such as automation are often cited together as major forces reshaping work, family life, and inequality in the United States (Cherlin 2014). However, their effects on labor markets differ in an important way. Automation often reallocates labor demand: it displaces less-educated workers while increasing demand for better-educated labor. By contrast, rising exposure to Chinese import competition operates as a broader contraction

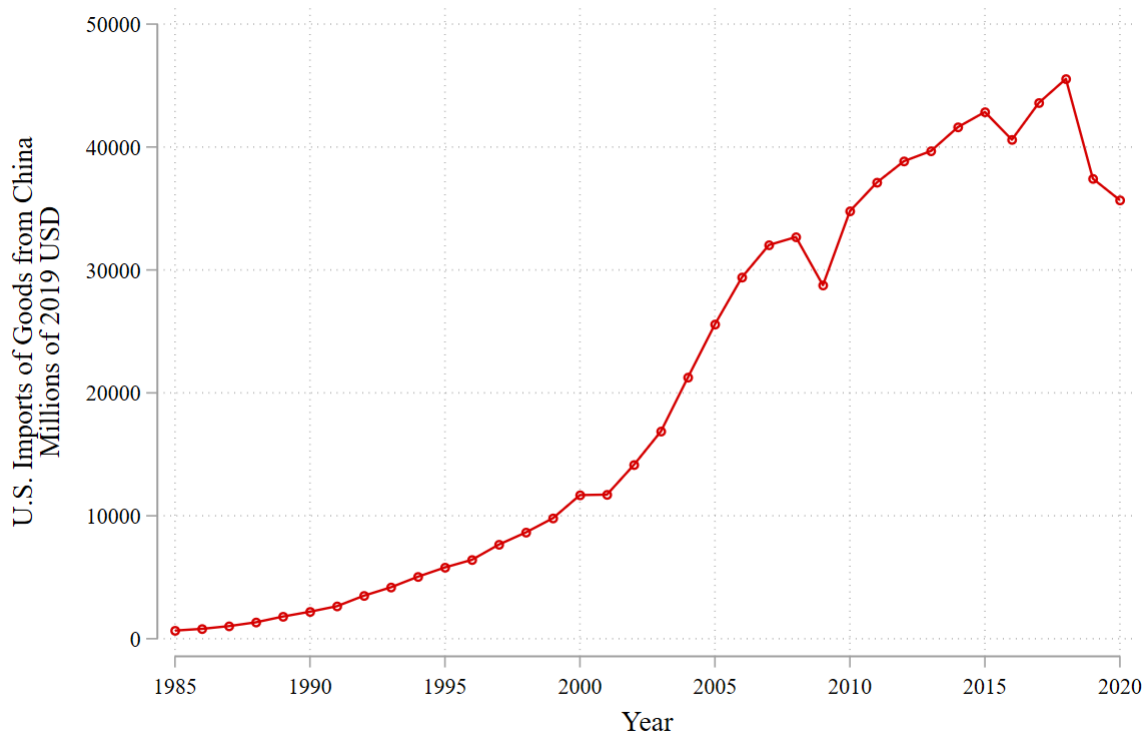


Figure 1: U.S. Imports of goods from China by Customs Basis (2019 USD, millions), 1985–2020.

Source: U.S. Census Bureau and U.S. Bureau of Economic Analysis.

of labor demand. When import competition weakens core industries in a local economy, employment and earnings decline not only among production workers but also among managers, technicians, and workers in nonmanufacturing sectors. For this reason, China import exposure is best understood as a *general* deterioration of local labor-market opportunities rather than a shock narrowly confined to middle- and low-skilled manufacturing employment (Autor et al. 2015). I illustrate this point empirically in the *Results* section.

Constructing exogenous labor-demand shocks. Observed Chinese imports to the United States could still reflect endogenous U.S.-specific demand or supply conditions. For example, a region may increase imports of labor-saving consumer goods produced in China—such as washers and dryers—because wives in that region want to increase their labor force participation. Such local shifts in demand for Chinese imports could confound the association between local changes in both male and female labor-market positions and local trends in SEC. To isolate the exogenous component of trade-induced labor demand shocks, I follow Autor et al. (2013) and construct a shift–share instrument that combines two elements:

1. Global supply shocks: growth in Chinese exports to eight other high-income countries, capturing changes in China's productive capacity and export orientation that are unrelated to U.S.-specific labor-market trends.

2. Predetermined local exposure: commuting-zone employment shares by industry measured prior to the trade shock (i.e., in 1980), which determine how strongly each CZ is affected by industry-level import growth.

The instrument therefore predicts how much import competition a local labor market would face given global Chinese export growth and its preexisting industrial structure. Because industries differ in gender composition (e.g., mining is relatively male-dominated, whereas textiles are relatively female-dominated), I further decompose import exposure into male-specific and female-specific labor-demand shocks, weighting industry-level exposure by the share of men and women employed in each CZ–industry cell (Autor et al. 2019). This decomposition allows me to estimate how trade-induced changes in labor demand for men and women differentially affect SEC. A CZ can be exposed to both male- and female-specific shocks; the distinction lies in whether the CZ's preexisting industry structure concentrates employment in industries employing relatively more men or relatively more women.

Formally, gender-specific trade shocks for CZ i are constructed as

$$\Delta Shock_i^m = \sum_j (1 - f_{ij,90}) \frac{L_{ij,90}}{L_{i,90}} \Delta Z_{ij}^u \quad \text{and} \quad \Delta Shock_i^f = \sum_j f_{ij,90} \frac{L_{ij,90}}{L_{i,90}} \Delta Z_{ij}^u, \quad (2)$$

where $L_{ij,90}/L_{i,90}$ denotes share of industry j in CZ i 's total employment in 1990, $f_{ij,90}$ and $(1 - f_{ij,90})$ indicate the female and male share of employment in industry j in CZ i , and ΔZ_{ij}^u indicates the observed change in U.S. imports per worker in CZ i from China in industry j over a given period. Outcomes and key regressors are constructed as ten-year-equivalent first differences for the two periods (1990 to 2000, and 2000 to 2013–2015).

I then instrument ΔZ_{ij}^u with the contemporaneous Chinese export growth to eight other high-income countries interacted with 1980 local industry shares:

$$\Delta Z_{ij}^o = \sum_j \frac{L_{ij,80}}{L_{i,80}} \Delta Z_j^o. \quad (3)$$

Gender-specific components of this instrument are constructed by multiplying Equation (3) with $f_{ij,90}$ or $(1 - f_{ij,90})$.

Estimation and interpretation. The SSIV approach proceeds in two steps. In the first stage, predicted trade exposure—based on global Chinese export growth and historical local industry structure—is used to isolate exogenous shocks to gender-specific labor demand across CZs. In the second stage, these exogenous labor demand shocks are used to predict changes in SEC:

$$\Delta SEC_i = \beta_m \Delta Shock_i^m + \beta_f \Delta Shock_i^f + X_{i,90} \gamma + \varepsilon_i, \quad (4)$$

where $X_{i,90}$ collects control variables (period and census division dummies, CZ-level start-of-period characteristics, etc.). The coefficients β_m and β_f are interpreted as the average effects of exogenous, trade-induced changes in labor demand for men and women on changes in SEC in a CZ. For example, a positive β_m implies

that greater exposure to trade shocks in male-intensive industries—shocks that reduce men's employment and earnings—raises SEC. Because both male- and female-specific shocks are included in the model simultaneously, β_m captures the effect of a shock concentrated in male-intensive industries *holding constant trade shocks to female-intensive industries*, and β_f is interpreted analogously. In this sense, the estimates identify how deterioration in men's versus women's labor-market conditions *independently* affects SEC.

A causal reading of these coefficients rests on assumptions that, apart from instrument relevance, cannot be directly verified. Relevance—that the instruments predict local trade exposure—is testable and confirmed by the first stage (Table 2). The key untestable assumption is the exclusion restriction: that the instruments affect future local SEC only through their effects on local gender-specific labor-market conditions. In this shift-share setting, that restriction is underpinned by the assumption that the global, non-U.S. component of Chinese export growth is as good as randomly assigned with respect to local determinants of SEC, conditional on the controls (Borusyak, Hull, and Jaravel 2022). I assess the plausibility of these assumptions in the *Discussion* section.

A final clarification concerns the estimand. The outcome is the SEC measured at the commuting-zone level—ten years in the future for the fixed-effects models, and as a subsequent decadal change for the shift-share models. What I estimate is therefore the effect of local labor-market change on the future local SEC, an aggregate property of a place's married population. Because the Census and ACS are repeated cross-sections, the design does not follow the same couples over time and does not directly identify behavioral responses within individual families. Where I describe results in terms of families "adapting" or mothers adjusting their labor supply, these are interpretations of aggregate, place-level relationships—supported by the analyses of maternal labor supply in Tables 5–6—rather than direct measurements of individual couples' behavior.

Results

Descriptive Patterns

Figure 2A presents two parallel trends in SEC among U.S. married couples from 1960 to 2019: one calculated at the national level and the other calculated as the population-weighted average of SEC across CZs. Although these two series are not numerically identical—because correlation coefficients are not additively decomposable—their close alignment over time indicates that the national rise in SEC is not driven by a small number of atypical places. Instead, it reflects broadly shared changes occurring across local labor markets. This correspondence motivates the article's analytical strategy: examining variation in SEC at the CZ level does not shift attention away from the national trend but rather provides a way to unpack the social and economic processes that collectively produced it. Both series show a pronounced increase beginning in the 1970s, accelerating through the 1980s, and continuing—at a slower pace—after 1990.

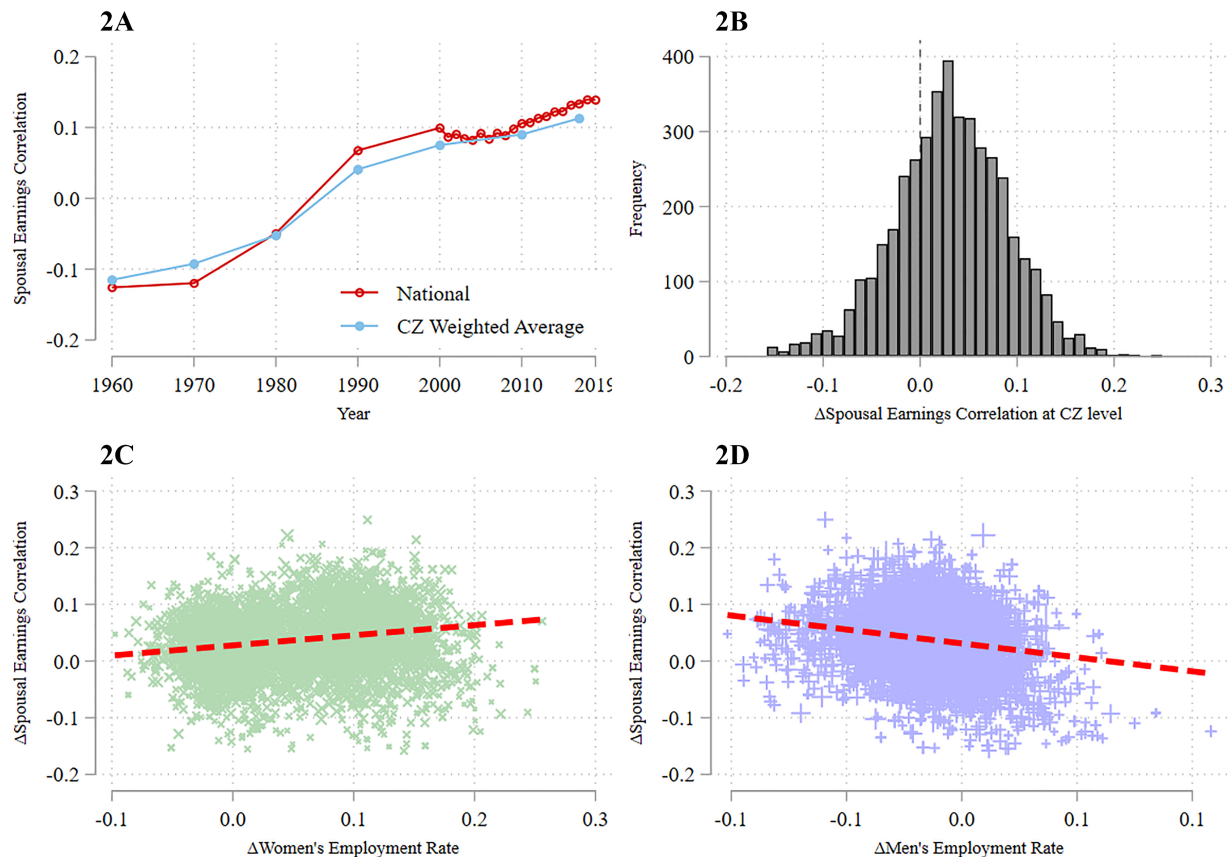


Figure 2: Change in spousal earnings correlation versus changes in male and female employment rate. (A) National and CZ average (weighted by CZ population) trends in spousal earnings correlation. (B) The unweighted frequency distribution of decadal changes in spousal earnings correlation across commuting zones (CZ) over six ten-year intervals (1960–1970, 1970–1980, . . . , 2010–2015/2019). (C,D) Decadal changes in local spousal earnings correlation against decadal changes in local women's and men's employment rate (OLS fitted line in red).

Sources: IPUMS U.S. Census 1960–2000, ACS 2008–2012, 2015–2019.

Figure 2B plots the distribution of decadal changes in SEC across the 722 CZs over six intervals (1960–1970, 1970–1980, . . . , 2010–2015/2019). The distribution is approximately normal, with more CZs experiencing increases than declines and with sizable dispersion across places. This heterogeneity provides the cross-time, within-CZ variation leveraged by the TWFE models. Figure 2C relates decadal changes in SEC to changes in women's employment; the association is positive, consistent with prior work. By contrast, Figure 2D shows a negative relationship between changes in SEC and changes in men's employment: CZs with larger male-employment declines tend to see larger SEC increases, suggesting a potential role for deteriorating male labor-market conditions.

Table 1: Two-Way Fixed Effect Models Predicting Spousal Earnings Correlation.

	Model 1	Model 2	Model 3	Model 4
	(1)	(2)	(3)	(4)
Male median annual earnings	−0.04** (0.01)			
Female median annual earnings	−0.001 (0.001)			
Male median weekly earnings (among full-time workers)		−0.07** (0.02)		−0.05* (0.02)
Female median weekly earnings (among full-time workers)		0.07** (0.02)		0.06** (0.02)
Male employment rate			−0.30** (0.09)	−0.28** (0.10)
Female employment rate			0.12** (0.04)	0.09* (0.04)
CZ and year fixed effects	×	×	×	×
Time-varying controls	×	×	×	×
R-squared	0.90	0.90	0.90	0.90

Source: IPUMS U.S. Census 1960–2000, American Community Survey 2008–2012, 2015–2019. IPUMS sampling weights used.

Dependent variable: spousal earnings correlation, 10-year lead. Observations = 4,332. Robust standard errors in parentheses. Median annual earnings include nonworking individuals; median weekly earnings are based on full-time workers only. All models include time-varying commuting zone (CZ) covariates (see Table S1 in the online supplement).

* $p < 0.05$, ** $p < 0.01$.

Fixed Effects Models

Table 1 reports TWFE estimates. Model 1 includes male and female median earnings as the primary explanatory variables, with time-varying covariates and CZ and year fixed effects. Male median earnings are significantly negatively associated with SEC ten years later; female median earnings show no significant effect.

Models 2–3 replace the main explanatory variables with alternative indicators. Model 2 uses median weekly earnings among full-time workers to capture intensive-margin variation in earnings; Model 3 uses employment rates—the share of adults with nonzero annual earnings—to capture extensive-margin variation in earnings. Model 4 includes both sets of measures. Across Models 2–4, male labor-market indicators are consistently negatively associated with SEC, whereas female indicators are positively associated with SEC. Table S1 in the online supplement reports the full Model 1 results including coefficients on time-varying covariates.

Sensitivity analyses (Table S2 in the online supplement) yield similar results. The negative, statistically significant association between male labor-market conditions and SEC holds when (1) using a contemporaneous rather than a lead measure of SEC, (2) weighting CZs equally instead of by population, (3) adding CZ-specific

linear trends (Angrist and Pischke 2009), and (4) estimating a fractional probit model with time averages of explanatory variables (Papke and Wooldridge 2008) to take into account the bounded nature of the outcome variable (correlation coefficient varies between -1 and 1). Estimates for female labor-market indicators remain generally positive but are not always statistically significant across specifications.

The positive association between women's labor-market conditions and SEC is consistent with existing accounts that emphasize women's rising employment as an important driver of SEC. The negative association for men is a novel finding and is consistent with my working hypothesis that worsening economic prospects among men increase correlation between spouses' earnings.

However, moving from association to causal interpretation requires additional care. Changes in men's labor-market conditions rarely occur in isolation; they may coincide with other local shifts—such as changes in local population composition or unobserved aspects of women's labor-market conditions that are not captured by female median earnings or employment rate—that also shape how strongly spouses' earnings are correlated. Although my fixed-effects models account for stable differences across places and common national trends, they cannot fully isolate change in men's labor-market conditions that is clearly independent of other contemporaneous local changes.

An additional source of ambiguity concerns the interpretation of the negative association between men's labor-market conditions and SEC. My current interpretation views it as reflecting the effect of *declines* in men's economic position on SEC. However, it could also reflect a conventional "husbands' income effect" (Mincer 1962), whereby *increases* in men's economic position reduce wives' labor supply and thus lower SEC. Although plausible, the latter interpretation is more relevant for explaining declines in SEC than the sustained increase that this article seeks to explain.

To address this challenge, I implement a SSIV design that leverages exogenous variation in local male and female labor demands induced by rising Chinese import competition. Because Chinese import competition *depresses* labor-market opportunities, it provides a source of variation in local labor-market conditions that allows for a less ambiguous interpretation of the resulting estimates.

SSIV Analysis

Trade exposure shifts local earnings. Before turning to the second-stage estimates, I confirm that the gender-specific instruments are strong and that they isolate distinct male- and female-specific variation in local trade exposure. Table 2 reports the first-stage regressions of each gender-specific trade shock on both excluded instruments and the full set of second-stage controls. Each instrument is a strong predictor of its own endogenous regressor: the non-U.S. shock to male-intensive (female-intensive) industries raises the corresponding U.S. trade exposure by 0.57 (0.43) ($p < 0.01$), whereas the cross-sex loadings are much smaller (0.13 and 0.09). Because the model contains two endogenous regressors, I report the Sanderson–Windmeijer conditional first-stage F-statistic for each shock—116.8 for the male-specific shock and 127.5 for the female-specific shock—together with the Kleibergen–Paap rk Wald F-statistic (64.4). All three statistics lie well above the conventional weak-instrument

Table 2: First-Stage Estimates and Weak-Instrument Diagnostics for the Gender-Specific Shift-Share Instrumental-Variable.

	Δ Male-specific trade shock (U.S.)	Δ Female-specific trade shock (U.S.)
	(1)	(2)
Δ Male-Specific Trade Shock (non-U.S., instrument)	0.57** (0.06)	0.13** (0.05)
Δ Female-Specific Trade Shock (non-U.S., instrument)	0.09* (0.04)	0.43** (0.05)
First-stage F (Sanderson-Windmeijer)	116.8	127.5
Kleibergen-Paap rk Wald F	64.4	64.4
States (clusters)	48	48
R-squared	0.60	0.55

Sources: IPUMS U.S. Census 1990, 2000, American Community Survey 2013–2015; trade data as in Autor, Dorn, and Hanson (2013).

Dependent variables: the change in U.S. import exposure per worker from China in male- and female-intensive industries (the two endogenous gender-specific trade shocks). Each column is the first-stage regression of one endogenous shock on the two excluded instruments and the full set of second-stage controls. The instruments are the corresponding non-U.S. exposure—the contemporaneous change in import exposure from China in the same industries in eight other high-income countries (lagged one period). Observations = 1,444 (722 CZ $\times$ 2 time periods); weighted as in the main models; robust standard errors in parentheses clustered on state.

Because the model has two endogenous regressors, instrument strength is summarized by the Sanderson–Windmeijer conditional first-stage F for each endogenous shock and the Kleibergen–Paap rk Wald F (cluster-robust joint statistic); all values far exceed the conventional threshold of 10 and the Stock–Yogo critical values.

* $p < 0.05$, ** $p < 0.01$.

threshold of 10 and the corresponding Stock–Yogo critical values, indicating that weak instruments are not a concern.

Table 3 first verifies that the trade-exposure instruments shift local earnings in expected gender-specific ways. In Table 3A, coefficients are interpreted as the predicted change in log median earnings among men and among women resulting from a \$1,000-per-worker increase in Chinese import penetration in male- and female-intensive industries over a period. Here, following Autor et al. (2019), median earnings are calculated for all men and women, including those with zero earnings. This allows the measure to reflect overall labor-market impact—combining changes in employment and changes in earnings. The impacts are largely gender specific: a one-unit increase in male-specific trade shock is associated with 11 percent decline in male median earnings ($\beta = -0.11$, $p < 0.001$) with minimal spillovers to women, whereas a one-unit increase in female-specific trade shock is associated with 10 percent decline in female median earnings ($\beta = -0.10$, $p < 0.05$) while leaving men largely unaffected.

Table 3: Estimated Effects of Gender-Specific Trade Shock on Earnings by Gender, 1990–2014: Shift–Share Instrumental-Variable Estimates.

	Male Earnings			Female Earnings		
	(1)	(2)	(3)	(4)	(5)	(6)
<i>(A) Change in median log earnings</i>						
Δ Male-specific trade shock		–0.11** (0.03)			–0.003 (0.049)	
Δ Female-specific trade shock		0.05 (0.03)			–0.10* (0.05)	
<i>(B) Change in mean log earnings within tercile of the gender-specific earnings distribution</i>						
	Top	Middle	Bottom	Top	Middle	Bottom
Δ Male-specific trade shock	–0.11** (0.02)	–0.11** (0.03)	–0.20* (0.09)	–0.03 (0.02)	–0.04 (0.04)	0.31 (0.36)
Δ Female-specific trade shock	0.06** (0.02)	0.05* (0.03)	–0.01 (0.09)	0.03 (0.02)	–0.07* (0.03)	–0.75* (0.33)

Sources: IPUMS U.S. Census 1990, 2000, American Community Survey 2013–2015.

Observations = 1,444 (722 CZ $\times$ 2 time periods). Dependent variables: in (A), the change in logged median earnings for all men and all women (including those with zero earnings); in (B), the change in logged mean earnings within the top, middle, and bottom tercile of the male (female) earnings distribution. All models include a dummy for the 2000–2014 period, indicators of census divisions, and a set of start-of-period CZ characteristics, and are weighted by the product of period length and CZ share of start-of-period U.S. mainland population. Robust standard errors in parentheses are clustered on state.

Instrument strength: the gender-specific instruments are strong in all columns, with a Sanderson–Windmeijer conditional first-stage F of at least 120 (male shock) and 126 (female shock) and a Kleibergen–Paap rk Wald F of at least 61, all far above the conventional weak-instrument threshold of 10; full first-stage estimates appear in the first-stage table.

* $p < 0.05$, ** $p < 0.01$.

Table 3B shows that these earnings effects are not confined to a single segment of the earnings distribution. Models presented in Table 3B use the mean earnings in the top, middle, and bottom tercile of the local male and female earnings distributions as the dependent variables. Male-specific trade shock leads to a 20 percent decline in men's earnings in the bottom tercile, but it also leads to an 11 percent decline in men's earnings in the top and middle tercile. These results are consistent with prior research on the "China shock," which shows that rising Chinese import penetration generates broad-based deterioration in local labor-market conditions, with the largest losses at the bottom of the earnings distribution but measurable effects extending well beyond the bottom. Female-specific trade shock also leads to an earnings decline but the effect is more concentrated among women in the middle and bottom tercile.

Main SSIV estimates: Male-specific trade exposure predicts increases in SEC. Table 4 reports the main SSIV estimates linking gender-specific local trade shocks to local

Table 4: Estimated Effects of Gender-Specific Trade Shock on Spousal Earnings Correlation, 1990–2014: Shift-Share Instrumental-Variable Estimates.

	All Couples	Couples with Children	Couples without Children
	(1)	(2)	(3)
Δ Male-specific trade shock	0.04** (0.02)	0.06** (0.02)	0.01 (0.02)
Δ Female-specific trade shock	–0.01 (0.01)	–0.02 (0.01)	–0.01 (0.02)

Sources: IPUMS U.S. Census 1990, 2000, American Community Survey 2013–2015.

Observations = 1,444 (722 CZ $\times$ 2 time periods). All models include a dummy for the 2000–2014 period, indicators of census divisions, and a set of start-of-period CZ characteristics. Models are weighted by the product of period length and CZ share of start-of-period U.S. mainland population. Robust standard errors in parentheses are clustered on state.

Instrument strength: the gender-specific instruments are strong in all columns, with a Sanderson–Windmeijer conditional first-stage F of at least 113 (male shock) and 124 (female shock) and a Kleibergen–Paap rk Wald F of at least 62, all far above the conventional weak-instrument threshold of 10; full first-stage estimates appear in the first-stage table.

* $p < 0.05$, ** $p < 0.01$.

changes in SEC. Male-specific trade shock is associated with increases in SEC (Model 1 in Table 4): a larger exogenous rise in male-specific trade shock is associated with a statistically significant increase in SEC ($\beta = 0.04$, $p < 0.05$). By contrast, the corresponding coefficient for female-specific trade shock is small and statistically indistinguishable from zero ($\beta = -0.01$).

Substantively, these results imply that when men's local labor-market conditions deteriorate due to rising Chinese import competition, spouses' earnings become more correlated. Because the trade shock depresses men's earnings across the distribution, the findings weigh against a simple "higher husband earnings $\rightarrow$ lower wife employment" income-effect interpretation and instead point to structural deterioration in men's labor-market opportunities as a contributor to the long-run rise in SEC.

Parenthood as a key site of men's influence on SEC. Recent research shows that the rise in SEC since 1990 has been driven mainly by increases following the transition to parenthood, rather than by increases at marriage entry or during the childless years of marriage. In particular, although increases in SEC prior to 1990 reflected both pre- and post-birth increases, the post-1990 rise has emerged almost exclusively from shifts in couples' earnings trajectories after children are born (Gonalons-Pons, Schwartz, and Musick 2021). This finding identifies parenthood as the central life-course stage through which contemporary spousal earnings correlation has intensified.

If men's labor-market deterioration were important for understanding the post-1990 rise in SEC, its effects should therefore be most visible among couples with children—the group for whom earnings correlations have grown the most according to prior research. Table 4 provides strong support for this expectation. Among

Table 5: Effects of Gender-Specific Trade Shocks on Mothers' Work Hours by Fathers' Earnings Tercile, 1990–2014: Shift–Share Instrumental-Variable Estimates.

	Top Tercile	Middle Tercile	Bottom Tercile
	(1)	(2)	(3)
Δ Male-specific trade shock	120.75** (33.08)	79.15** (23.13)	11.50 (26.70)
Δ Female-specific trade shock	–83.97** (25.59)	–91.44** (22.22)	–65.28** (22.44)

Sources: IPUMS U.S. Census 1990, 2000, American Community Survey 2013–2015.

Dependent variable: change in mothers' annual work hours. Observations = 1,444 (722 CZ $\times$ 2 time periods). All models include a dummy for the 2000–2014 period, indicators of census divisions, and a set of start-of-period CZ characteristics, and are weighted by the product of period length and CZ share of start-of-period U.S. mainland population of married couples with dependent children. Robust standard errors in parentheses are clustered on state.

Instrument strength: the gender-specific instruments are strong in all columns, with a Sanderson–Windmeijer conditional first-stage F of at least 119 (male shock) and 128 (female shock) and a Kleibergen–Paap rk Wald F of at least 65, all far above the conventional weak-instrument threshold of 10; full first-stage estimates appear in the first-stage table.

* $p < 0.05$, ** $p < 0.01$.

couples with children, increases in male-specific trade shock are associated with a substantial and statistically significant rise in SEC (Model 2, Table 4). By contrast, among couples without children, the estimated effect of male-specific trade shock is small and statistically indistinguishable from zero (Model 3, Table 4). Men's labor-market deterioration thus appears to matter most for SEC in the family context that has driven the recent aggregate trend.

To better understand how this effect operates among parents, I next examine the effect of male-specific trade shocks on changes in mothers' labor supply by fathers' earnings tercile. Table 5 shows that male-specific trade shocks increase mothers' annual work hours, but in a sharply stratified manner. Among mothers married to top-tercile earners, a one-unit increase in male-specific trade shock raises annual hours by 120.75 hours ($p < 0.001$). The corresponding increase is smaller but still substantial among mothers married to middle-tercile earners (79.15 hours, $p < 0.001$), and effectively zero among mothers married to bottom-tercile earners (11.5 hours, not statistically significant). As a result, male-specific trade shocks significantly strengthen the correlation between husbands' earnings and wives' work hours among couples with children.

These heterogeneous labor-supply responses point to an important asymmetry in families' capacity to adapt to the trade-induced deterioration in men's labor-market conditions. The pattern is clear: mothers married to higher-earning men increase their work hours substantially, whereas those married to lower-earning men show little response. The data do not allow me to identify precisely why this stratification occurs, but prior research suggests a plausible interpretation. Sustained maternal employment during childrearing years depends on resources such as human capital, prior work experience, and access to childcare—resources

that are more common among women partnered with higher-earning men reflecting positive sorting on spouses' education and earning potential (Gonalons-Pons and Marinescu 2024; Halla et al. 2020; Landivar 2012). If so, the stratified pattern reflects not differences in the need to respond to men's labor-market decline, but differences in the capacity to do so.

The capacity interpretation does not preclude other behavioral mechanisms operating alongside it. Differential capacity to sustain employment may itself be reinforced by several related drivers. Mothers married to higher- and lower-earning men may face different opportunity costs of staying out of the labor market, hold different preferences over parental versus market-provided care, or be differentially exposed to inequality-driven pressures to invest in children's human capital. On this last channel, prior research shows that rising local income inequality widens class gaps in parental financial investment in children, partly through heightened concerns among higher-SES parents about their children's future competitive position (Schneider and Hastings 2017; Schneider, Hastings, and LaBriola 2018). If trade-induced declines in low-skill male earnings raised local inequality and intensified financial investment among higher-SES families, mothers in those families may have increased their labor supply in part to help fund this investment. These mechanisms are potential channels through which differential capacity may operate; my data do not allow me to estimate the relative contribution of each.

Finally, I formally assess whether these stratified changes in mothers' labor supply account for the effect of male-specific trade shocks on SEC among parents. Table 6 presents SSIV models that sequentially introduce potential mediators. Controlling for changes in the overall level of mothers' labor supply (average annual hours among mothers in a CZ) in the model leaves the estimated effect of male-specific trade shock on SEC largely unchanged. By contrast, controlling for changes in the *correlation* between husbands' earnings and wives' hours substantially attenuates the coefficient on male-specific trade shock and renders it statistically insignificant. These results indicate that men's labor-market deterioration raises SEC among parents primarily by strengthening the correlation between fathers' earnings and mothers' labor supply, rather than by uniformly increasing mothers' work hours. Stratified maternal labor-supply responses thus appear to be the primary mechanism linking men's labor-market decline to rising spousal earnings correlation.

Robustness Checks

I conducted several robustness checks to evaluate alternative explanations for the estimated effect of male-specific trade shocks on SEC.

Migration. One concern is that the estimated effect may reflect migration responses rather than changes in marital or labor-supply behavior. For example, trade shocks could induce couples with lower SEC to leave affected CZs or attract couples with higher correlation to move in, generating spurious changes in SEC through compositional shifts. I assess this possibility in two ways. First, I restrict the sample to married couples in which neither spouse holds a college degree, a less geographically mobile population. As shown in Table S3 (Column 1) in the online

Table 6: Gender-Specific Trade Shock on Spousal Earnings Correlation among Couples with Dependent Children before and after Controlling for Potential Mediators, 1990–2014: Shift–Share Instrumental-Variable Estimates.

	Model 1	Model 2	Model 3
	(1)	(2)	(3)
Δ Male-specific trade shock	0.06** (0.02)	0.05** (0.02)	0.01 (0.01)
Δ Female-specific trade shock	–0.02 (0.01)	–0.01 (0.01)	–0.01 (0.01)
Δ Annual work hours among wives with children (1,000s of hours)		0.08* (0.04)	
Δ Correlation between husbands' earnings and wives' hours			0.88** (0.02)

Sources: IPUMS U.S. Census 1990, 2000, American Community Survey 2013–2015.

Dependent variable: change in SEC among couples with dependent children. Observations = 1,444 (722 CZ × 2 time periods). All models include a dummy for the 2000–2014 period, indicators of census divisions, and a set of start-of-period CZ characteristics, and are weighted by the product of period length and CZ share of start-of-period U.S. mainland population of married couples with dependent children. Robust standard errors in parentheses are clustered on state.

Instrument strength: the gender-specific instruments are strong in all columns, with a Sanderson–Windmeijer conditional first-stage F of at least 119 (male shock) and 128 (female shock) and a Kleibergen–Paap rk Wald F of at least 65, all far above the conventional weak-instrument threshold of 10; full first-stage estimates appear in the first-stage table.

* $p < 0.05$, ** $p < 0.01$.

supplement, estimates for this noncollege sample closely resemble those from the full sample. Second, I stratify CZs by migration intensity using county-level net migration data aggregated to the CZ level (Egan-Robertson et al. 2024). Estimating the SSIV model separately for low-, medium-, and high-migration CZs yields similar and statistically significant effects of male-specific trade shocks on SEC in both low- and high-migration CZs (0.04 vs. 0.05). Together, these results reduce concerns that migration responses drive the main findings, although they cannot fully rule out this possibility.

Ceiling effects. A second alternative explanation concerns ceiling effects in women's labor supply. The main results show that male-specific trade shocks increase SEC primarily by generating larger increases in work hours among mothers married to high- and middle-earning men, with little change among those married to low-earning men. My interpretation is that mothers married to higher-earning men have greater human capital and family resources, enabling them to expand labor supply in response to rising economic risk on the husbands' side. By contrast, mothers married to low earners face tighter constraints. An alternative interpretation is that the muted response among mothers married to low earners reflects ceiling effects: if these mothers were already working long hours at baseline, they may have had less room to increase work hours further. Although ceiling

effects may play some role, they are unlikely to be the dominant explanation. As shown in Figure S1 in the online supplement, it was mothers married to middle-earning men—rather than mothers married to low-earning men—who worked the longest hours in 1990. If ceiling effects were driving the results, this group should have shown smaller subsequent increases. Instead, their annual work hours increased substantially—by 166.8 hours—whereas mothers married to low-earning men, who began from lower baseline hours, increased theirs by only 102.2 hours, with virtually no growth between 2000 and 2014. These patterns are more consistent with binding constraints among mothers married to low-earning men than with a simple ceiling-effect account.

Conclusion and Discussion

This study shows that deterioration in men's labor-market conditions has been an important—yet largely overlooked—driver of rising SEC in the United States. Unlike prior research that focuses on national trends, I analyze changes in SEC at the commuting-zone level. TWFE models show that local declines in men's employment and earnings predict subsequent increases in local SEC, net of concurrent changes in women's labor-market conditions. An SSIV design further strengthens this conclusion by exploiting regional differences in exposure to Chinese import competition in male- and female-intensive industries. Results from this approach corroborate the fixed-effects findings: trade-induced deterioration in men's labor-market conditions is associated with increases in SEC, with effects concentrated among couples with dependent children.

Additional analyses shed light on the mechanism underlying this relationship. Trade-induced labor-market decline among men increases mothers' work hours in a sharply stratified manner—most strongly among mothers married to high-earning men, more modestly among those married to middle-earning men, and negligibly among those married to low-earning men. As a result, deterioration in men's labor-market conditions strengthens the association between fathers' earnings and mothers' labor supply, suggesting that rising SEC reflects not a uniform increase but a class-graded pattern of growth in wives' employment. The estimated effects of male-specific trade shocks are not only statistically significant but substantively sizeable. A one-unit increase in male-specific trade exposure raises SEC (among all couples) by 0.04. Given that the average CZ experienced approximately 1.21 units of male-specific trade exposure during this period (Autor et al. 2019), the implied contribution of trade-induced male labor-market decline corresponds to roughly one-fifth of the long-run national rise in spousal earnings correlation between 1960 and 2019 (an increase of about 0.26). The trade shock thus appears to have been a meaningful but partial contributor to the broader long-term increase in the correlation between spouse' earnings.

Several limitations should be noted. First, because women are underrepresented in tradable manufacturing, the instrument may be less effective at capturing meaningful changes in women's labor-market conditions, which may help explain the weaker and statistically insignificant SSIV estimates for women.

Second, trade shocks may affect not only behavior within marriages but also selection into marriage and patterns of assortative mating. Prior research shows that trade-induced deterioration in men's labor-market conditions reduces marriage rates (Autor et al. 2019). If trade shocks shift the composition of the married population—for instance, by discouraging marriage among economically disadvantaged couples or by strengthening positive assortative mating by earnings potential—the observed increase in SEC could partly reflect change in selection into marriage rather than behavioral adaptation within existing unions. The repeated cross-sectional nature of the Census and ACS data does not allow me to fully disentangle these mechanisms.

Third, my SSIV design carries the standard limitations of SSIV strategies (Borusyak, Hull, and Jaravel 2022; Goldsmith-Pinkham, Sorkin, and Swift 2020). The exclusion restriction—that Chinese import exposure affects SEC only through local labor-market conditions—cannot be tested directly, and alternative channels are conceivable. Cheap imported consumer durables could affect household production and gender division of labor independently of labor-market channels; relying on broad import exposure rather than consumer-good exposure specifically mitigates but does not eliminate this concern. Another concern is generalizability: the SSIV identifies the effect of a particular source of male labor-market deterioration—trade-induced manufacturing decline—and effects could differ for other sources such as automation and sectoral restructuring. I take reassurance from the convergence of my SSIV and TWFE estimates: the TWFE results, which do not rely on the China shock and span 1960–2019, reflect many sources of local labor-market change and point in the same direction as the SSIV estimates. Direct examination of the family-level consequences of other types of shocks to men's labor-market position remains an important direction for future research.

Despite these limitations, this article contributes to the literature by offering a new sociological explanation of rising spousal earnings correlation that complements rather than overturns existing explanations. Existing research emphasizes increases in wives' employment as the primary proximate mechanism through which SEC has risen (Gonalons-Pons and Schwartz 2017; Grotti and Scherer 2016). The present findings complement this work by pointing to one of the structural forces operating behind that proximate mechanism: deterioration in men's labor-market conditions, which has reshaped how families organize paid work, and done so unequally. More advantaged households are better able to sustain dual-earner arrangements in response to rising male-side economic risk, whereas less advantaged households are more constrained. From this perspective, rising correlation between spouses' earnings is not merely a contributor to inequality between families; it is also a manifestation of inequality, reflecting unequal access to the resources required to cope with economic uncertainty (Dunatchik 2024). This pattern parallels a growing comparative literature that conceptualizes wives' employment as a household response to economic insecurity (Grotti et al. 2026): where institutional support for maternal employment is limited, as in the United States, coping capacity becomes stratified along household resource lines, channeling men's labor-market deterioration into rising SEC rather than into equalizing protections across families.

In labor economics, a large body of research explains the long-run rise in U.S. married women's labor-force participation primarily in terms of changes on the women's side, including women's rising human capital, expanding opportunities, and shifting motivations and norms, rather than changes in men's labor-market position (Blau and Kahn 2017). The present findings do not conflict with that literature because the outcome examined here is different. This study does not seek to explain the aggregate rise in wives' employment rates. Rather, it explains changes in the correlation between spouses' earnings. As Table 6 shows, the mechanism identified here is not that men's labor-market decline raised married women's overall labor-force participation. Instead, it increased stratification in wives' employment across households, widening differences in the prevalence and durability of maternal employment between more advantaged and less advantaged families. This interpretation is consistent with prior research showing that wives' employment responses to male job loss tend to be stronger among women with higher earnings potential and weaker among wives married to lower-earning men (Halla et al. 2020; Landivar 2012).

More broadly, these findings speak to longstanding debates on the relative importance of women's rising economic independence versus men's declining economic position in shaping family change (Oppenheimer 1997; Ruggles 2015; Schneider, Harknett, et al. 2018). This study suggests that these forces should be understood as interconnected rather than competing. Men's labor-market decline reshapes not only whether families form or dissolve, but also how paid labor is organized within existing unions. Women's employment changes and men's labor-market deterioration can therefore be understood as interconnected elements of a broader process of family adaptation to structural economic change (Oppenheimer 1997). That the resulting adaptations are sharply stratified—with more advantaged families better positioned to sustain dual-earner arrangements—suggests that in contexts where social welfare protections are relatively weak, families absorb labor-market risk unevenly, reinforcing inequality between households (Cherlin 2016).

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